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**TRANSONIC PRESSURE MEASUREMENTS AND  
COMPARISON OF THEORY TO EXPERIMENT  
FOR AN ARROW-WING CONFIGURATION**

**Volume III: Data Report-Comparison of Attached  
Flow Theories to Experiment**

**Marjorie E. Manro, Kenneth J. R. Manning,  
Thomas H. Hallstaff, and John T. Rogers**

**October 1975**

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# **TRANSONIC PRESSURE MEASUREMENTS AND COMPARISON OF THEORY TO EXPERIMENT FOR AN ARROW-WING CONFIGURATION**

## **VOLUME III: DATA REPORT-COMPARISON OF ATTACHED FLOW THEORIES TO EXPERIMENT**

by Marjorie E. Manro, Kenneth J. R. Manning, Thomas H. Hallstaff,  
and John T. Rogers  
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### **SUMMARY**

A wind tunnel test of an arrow-wing body configuration consisting of flat and twisted wings, as well as a variety of leading- and trailing-edge control surface deflections, has been conducted at Mach numbers from 0.4 to 1.1 to provide an experimental pressure data base for comparison with theoretical methods. Theory-to-experiment comparisons of detailed pressure distributions have been made using current state-of-the-art attached and separated flow methods. The purpose of these comparisons was to delineate conditions under which these theories are valid for both flat and twisted wings and to explore the use of empirical methods to correct the theoretical methods where theory is deficient. The results of attempting to make empirical corrections to the theoretical methods and of using two-dimensional separation criteria to predict flow separation are shown.

This volume presents comparisons of the experimental pressure measurements with the predictions of attached flow methods. NASA CR-132727 presents more detailed results of the experimental phase of the program for the base configuration (flat wing) and the effects of wing twist, leading-edge shape, and leading-edge droop. The effects of full- and partial-span trailing-edge control surface deflection and partial-span leading-edge control surface deflection are presented in NASA CR-132728. NASA CR-2610 summarizes the results of the entire investigation and discusses both the experimental results and the theory-to-experiment comparisons.

### **INTRODUCTION**

Accurate analytical techniques for the prediction of the magnitude and distribution of aeroelastic loads are required in order to design, in an optimum manner, the structure of large flexible aircraft. Uncertainties in the characteristics of loads may result in an improper accounting for aeroelastic effects, leading to understrength or overweight designs and unacceptable fatigue life. Moreover, correct prediction of loads and the resultant structural deformations is essential to the determination of the aircraft stability and control characteristics and control power requirements. The alternative to the use of satisfactory analytical techniques is exorbitantly expensive, time-consuming wind tunnel testing for each aircraft configuration.

The problem of accurate load prediction becomes particularly acute for aircraft where critical design conditions occur in the transonic speed regime. In this region, at typical design angles of attack, the predictions are clouded by mixed flow, embedded shocks, separation, and vortex flow. The degree to which the intelligent application of either the best state-of-the-art theoretical techniques or a combination of theory and experiment can account for these flow conditions is known in only a few circumstances. Clearly, if we are to continue to improve the accuracy of our predictive techniques as well as quantify their limitations, detailed comparisons of theoretical and experimental pressures on configurations of interest must be made on a continuing basis.

In the design process, pressure data obtained from wind tunnel tests on a single wing shape (with twist and camber) are translated by means of an aeroelastic solution to the load distributions for the elastically deformed airplane. In this solution, equations are used which relate the changes in local pressure to changes in structural deformation. For typical high aspect ratio configurations at subsonic speeds, methods of incorporating experimental data in the elastic solution are well developed and have been substantiated by flight tests. However, for typical low aspect ratio configurations and/or transonic flight conditions where various nonlinear phenomena become important, no satisfactory methods have been developed for correcting the aeroelastic solutions with experimental data from rigid models. Until such a tool is available, the need will remain for wind tunnel test programs simulating each flight design condition on the flexible airplane.

While analytical methods for loads estimation exist, they do not cover the necessary ranges of configuration and critical flight conditions associated with large supersonic airplanes. The most serious situation is the lack of analytical procedures of verified accuracy for the determination of loads in the critical transonic speed regime. One reason for this situation is the newness of many of the techniques; another is the scarcity of the experimental pressure data required to validate the techniques. One comprehensive set of data for variations of wing twist of a 45° sweep wing was obtained by Mr. John P. Mugler, Jr., of the NASA Langley Research Center (refs. 1 through 5).

The purpose of this study was to obtain some of the required experimental data for a highly swept thin wing at subsonic and transonic Mach numbers and, at the same time, to provide comparisons with analytical predictions using some of the most advanced methods available. The study was viewed as a two-part effort consisting of an experimental task and a theory comparison task.

The objective of the experimental task was to provide measured load distributions on models which are deformed to simulate representative twist distributions and which have deflectable leading- and trailing-edge control surfaces. These load distributions were used in the theoretical task to assess the adequacy of existing analytical methods of estimation and to determine empirical corrections to methods that are not fully adequate in themselves.

The model chosen for this study was a wing-body combination with a leading-edge sweep of 71.2° and a wing thickness of 3.3% (see fig. 1). Model components included both flat and twisted wings, deflectable full-span and half-span leading- and trailing-edge control surfaces, and both rounded and sharp leading edges. The tests were conducted in the Boeing Transonic Wind Tunnel and covered the Mach range from 0.4 to 1.1 with angles of attack

from  $-8^\circ$  to  $+16^\circ$ . The measurements included pressure data on both the wing and body, wing deflection measurements, total force and moment data, and oil flow pictures.

The theoretical calculations were carried out using current state-of-the-art linear and advanced separated-vortex techniques to predict detailed pressures over both the flat and twisted wings. Comparisons of theoretical and experimental pressures for both wings were made as well as for the incremental pressure due to twist. The latter is of interest since the calculation is similar to that required to correct basic wind tunnel results from rigid models for incremental aeroelastic effects. In addition, an empirical prediction of the incremental pressures was attempted by developing correctors to apply to the aerodynamic influence coefficient (AIC) matrix.

Predictions of nonlinear phenomena which are due to separated flow ahead of a deflected trailing-edge control surface were attempted using empirical techniques.

The results of the various aerodynamic calculations and theory-to-experiment comparisons have been used to point out areas where pure theory is inadequate for design, and to examine combined theoretical and empirical approaches to aeroelastic design based on lifting-surface solutions. Some preliminary results of this study were presented at the NASA Conference on Aeroelastic Analyses Requiring Advanced Computers held at the NASA Langley Research Center in March 1975 (ref. 6).

## SYMBOLS

b	wing span, cm
BL	buttock line, cm; distance outboard from model plane of symmetry
c	section chord length, cm
$\bar{c}$ , M.A.C.	mean aerodynamic chord length, cm
$C_B$	surface bending moment coefficient referenced to $y_{ref}$ ; positive wingtip up
$C_C$	surface chord force coefficient; positive aft
$C_c$	section chord force coefficient; positive aft
$C_M$	surface pitching moment coefficient, referenced to 0.25 M.A.C.; positive leading edge up
$C_m$	section pitching moment coefficient referenced to section leading edge; positive leading edge up
$C_{m.25c}$	section pitching moment coefficient referenced to section 0.25c; positive leading edge up
$C_N$	surface normal force coefficient; positive up
$C_n$	section normal force coefficient; positive up
$C_p$	pressure coefficient = $\frac{\text{measured pressure} - \text{reference pressure}}{q}$
D	body diameter, cm
M	Mach number
MS	model station, cm; measured aft along the body centerline from the nose
$p_s$	static pressure, $\text{kN/m}^2$
$p_t$	total pressure, $\text{kN/m}^2$
q	dynamic pressure, $\text{kN/m}^2$
S	reference area used for surface coefficients, $\text{cm}^2$
$S_h$	area of streamwise strip associated with a pressure station, $\text{cm}^2$ ; used in summation of section force coefficients (app. B)

$x,y,z$	general coordinates for distances in the longitudinal, lateral, and vertical directions, respectively
$y_{ref}$	distance outboard of model centerline of the bending moment reference point, cm
$\alpha$	corrected angle of attack, degrees; the angle between the wing root chord and the relative wind measured in the model plane of symmetry; includes compensation for sting deflection, tunnel flow angularities, and wall effects; positive nose up with respect to relative wind
$\alpha_{sec}$	wing twist angle relative to wing reference plane, degrees; positive leading edge up
$\Delta C_p$	increment between adjacent lines on isobars
$\delta$	control surface deflection, degrees; positive leading edge down for leading edge (see exception in app. B) and trailing edge down for trailing edge
$\eta$	fraction of wing semispan, $y/(b/2)$
$\Lambda$	sweep angle, degrees; measured from a line perpendicular to the model centerline, positive aft
$\phi$	angle defining location of pressure orifices on the surface of the cylindrical body at a constant MS, degrees; measured from the top of the body

Subscripts:

L.E.	leading-edge control surface
r	wing root
s	referenced to segment of local chord
T.E.	trailing-edge control surface

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## **EXPERIMENTAL TASK**

### **WIND TUNNEL MODELS**

The configuration chosen for this study was a thin, low aspect ratio, highly swept wing mounted below the centerline of a high fineness ratio body. The general arrangement and characteristics of the model are shown in figure 1. Two complete wings were constructed, one with no camber or twist, and one with no camber but with a spanwise twist variation. Deflectable control surfaces were available on these wings.

#### **FLAT WING**

The mean surface of the flat wing is the wing reference plane. The nondimensional wing thickness distributions, shown in table 1, deviate slightly from a constant for all streamwise sections so that a finite thickness of 0.0254 cm (0.01 in.) could be maintained at the trailing edge (a manufacturing requirement). The wing was designed with a full-span, 25% chord, trailing-edge control surface. Sets of fixed angle brackets allowed streamwise deflections of  $\pm 4.1^\circ$ ,  $\pm 8.3^\circ$ ,  $\pm 17.7^\circ$ , and  $\pm 30.2^\circ$ , as well as  $0.0^\circ$ . A removable full-span leading-edge control surface (15% of streamwise chord) was used in the undeflected position and also drooped  $5.1^\circ$  and  $12.8^\circ$  with fixed angle brackets. Both the leading- and trailing-edge control surfaces extended from the side of body ( $0.087 b/2$ ) to the wingtip, and were split near midspan ( $0.570 b/2$ ). Either the inboard or outboard portion of the control surfaces could be deflected separately and were rotated about points in the wing reference plane. An additional leading-edge control surface for this wing was constructed with a sharp ( $20^\circ$  included angle) leading edge to examine the effects of leading-edge shape. The surface ordinates and slopes of this leading-edge segment were continuous with those of the flat wing at the leading-edge hingeline (table 1). The sharp leading edge was smoothly faired from  $0.180 b/2$  into the fixed portion of the rounded leading edge at  $0.090 b/2$ .

#### **TWISTED WING**

The mean surface of the twisted wing was generated by rotating the streamwise section chord lines about the 75% local chord points (trailing-edge control surface hingeline). The spanwise variation of twist is shown in figure 2. The hingeline was straight and located in the wing reference plane at its inboard end ( $0.087 b/2$ ) and 2.261 cm (0.890 in.) above the wing reference plane at the wingtip. The airfoil thickness distribution (table 1) and the trailing-edge control surface location and available deflections were identical to the flat wing.

#### **BODY**

The body was circular in cross section and had a straight centerline. The body geometry is shown in figure 1. The sting was an integral part of the model body.



Table 1.—Wing Half-Thickness Distribution, Percent Chord

x/c, percent chord	0 b/2	0.09 b/2	0.20 b/2	0.35 b/2	0.50 b/2	0.65 b/2	0.80 b/2	0.93 b/2	1.00 b/2
Flat wing with rounded leading edge and twisted wing									
.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
.1250	.3359	.3359	.3359	.3359	.3360	.3360	.3360	.3362	.3364
.2500	.4506	.4506	.4506	.4506	.4507	.4507	.4508	.4509	.4512
.5000	.6064	.6064	.6064	.6064	.6065	.6065	.6066	.6068	.6072
.7500	.7247	.7247	.7247	.7247	.7248	.7249	.7250	.7253	.7258
1.0000	.8182	.8182	.8182	.8183	.8183	.8184	.8185	.8188	.8194
1.5000	.9520	.9520	.9520	.9521	.9522	.9523	.9525	.9530	.9538
2.5000	1.1191	1.1191	1.1192	1.1192	1.1194	1.1195	1.1199	1.1206	1.1219
5.0000	1.3448	1.3448	1.3449	1.3453	1.3453	1.3456	1.3462	1.3475	1.3497
8.5000	1.4809	1.4809	1.4811	1.4813	1.4816	1.4822	1.4832	1.4855	1.4892
10.0000	1.5195	1.5196	1.5197	1.5200	1.5204	1.5210	1.5222	1.5250	1.5293
12.5000	1.5444	1.5445	1.5447	1.5450	1.5456	1.5463	1.5479	1.5514	1.5568
15.0000	1.5630	1.5631	1.5634	1.5638	1.5644	1.5654	1.5673	1.5715	1.5781
17.5000	1.5720	1.5722	1.5724	1.5729	1.5737	1.5748	1.5770	1.5821	1.5898
20.0000	1.5813	1.5815	1.5818	1.5823	1.5832	1.5845	1.5871	1.5929	1.6018
30.0000	1.6214	1.6217	1.6222	1.6230	1.6242	1.6262	1.6301	1.6389	1.6522
40.0000	1.6398	1.6402	1.6408	1.6419	1.6435	1.6454	1.6514	1.6630	1.6807
45.0000	1.6282	1.6286	1.6293	1.6305	1.6324	1.6354	1.6413	1.6544	1.6742
50.0000	1.5901	1.5906	1.5914	1.5927	1.5948	1.5981	1.6046	1.6192	1.6412
60.0000	1.4344	1.4350	1.4359	1.4375	1.4400	1.4440	1.4518	1.4692	1.4956
65.0000	1.3121	1.3127	1.3137	1.3155	1.3181	1.3225	1.3310	1.3498	1.3784
70.0000	1.1627	1.1634	1.1644	1.1663	1.1739	1.1739	1.1831	1.2034	1.2341
72.5000	1.0792	1.0799	1.0810	1.0830	1.0860	1.0908	1.1003	1.1213	1.1532
75.0000	.9921	.9928	.9940	.9960	.9991	1.0041	1.0139	1.0357	1.0686
77.5000	.9006	.9013	.9025	.9046	.9078	.9129	.9231	.9456	.9796
80.0000	.8069	.8077	.8089	.8111	.8143	.8197	.8302	.8534	.8885
85.0000	.6132	.6140	.6153	.6176	.6211	.6268	.6379	.6626	.6999
90.0000	.4156	.4165	.4178	.4203	.4240	.4300	.4418	.4679	.5074
95.0000	.2153	.2162	.2177	.2202	.2241	.2305	.2430	.2706	.3122
100.0000	.0113	.0123	.0138	.0165	.0206	.0273	.0405	.0695	.1134
Sharp leading edge									
.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
.1250	.3359	.3359	.3359	.3359	.3359	.3364	.3364	.3364	.3364
.2500	.4506	.4506	.4506	.4506	.4506	.4507	.4507	.4507	.4507
.5000	.6064	.6064	.6064	.6064	.6064	.6065	.6065	.6065	.6065
.7500	.7247	.7247	.7247	.7247	.7247	.7248	.7248	.7248	.7248
1.0000	.8182	.8182	.8182	.8182	.8182	.8183	.8183	.8183	.8183
1.5000	.9520	.9520	.9520	.9520	.9520	.9521	.9521	.9521	.9521
2.5000	1.1191	1.1191	1.1191	1.1191	1.1191	1.1192	1.1192	1.1192	1.1192
5.0000	1.3448	1.3448	1.3448	1.3448	1.3448	1.3449	1.3449	1.3449	1.3449
8.5000	1.4809	1.4809	1.4809	1.4809	1.4809	1.4811	1.4811	1.4811	1.4811
10.0000	1.5195	1.5195	1.5195	1.5195	1.5195	1.5197	1.5197	1.5197	1.5197
12.5000	1.5444	1.5444	1.5444	1.5444	1.5444	1.5447	1.5447	1.5447	1.5447
15.0000	1.5630	1.5630	1.5630	1.5630	1.5630	1.5634	1.5634	1.5634	1.5634
17.5000	1.5720	1.5720	1.5720	1.5720	1.5720	1.5724	1.5724	1.5724	1.5724
20.0000	1.5813	1.5813	1.5813	1.5813	1.5813	1.5815	1.5815	1.5815	1.5815
30.0000	1.6214	1.6214	1.6214	1.6214	1.6214	1.6217	1.6217	1.6217	1.6217
40.0000	1.6398	1.6398	1.6398	1.6398	1.6398	1.6402	1.6402	1.6402	1.6402
45.0000	1.6282	1.6282	1.6282	1.6282	1.6282	1.6286	1.6286	1.6286	1.6286
50.0000	1.5901	1.5901	1.5901	1.5901	1.5901	1.5906	1.5906	1.5906	1.5906
60.0000	1.4344	1.4344	1.4344	1.4344	1.4344	1.4350	1.4350	1.4350	1.4350
65.0000	1.3121	1.3121	1.3121	1.3121	1.3121	1.3127	1.3127	1.3127	1.3127
70.0000	1.1627	1.1627	1.1627	1.1627	1.1627	1.1634	1.1634	1.1634	1.1634
72.5000	1.0792	1.0792	1.0792	1.0792	1.0792	1.0799	1.0799	1.0799	1.0799
75.0000	.9921	.9921	.9921	.9921	.9921	.9928	.9928	.9928	.9928
77.5000	.9006	.9006	.9006	.9006	.9006	.9013	.9013	.9013	.9013
80.0000	.8069	.8069	.8069	.8069	.8069	.8077	.8077	.8077	.8077
85.0000	.6132	.6132	.6132	.6132	.6132	.6140	.6140	.6140	.6140
90.0000	.4156	.4156	.4156	.4156	.4156	.4165	.4165	.4165	.4165
95.0000	.2153	.2153	.2153	.2153	.2153	.2162	.2162	.2162	.2162
100.0000	.0113	.0113	.0113	.0113	.0113	.0123	.0123	.0123	.0123

## WING-BODY INTERSECTION

The wing reference plane was located 3.149 cm (1.240 in.) below and parallel to (zero incidence) the body centerline. The apex of the wing was located 33.496 cm (13.187 in.) aft of the model nose.

## PRESSURE ORIFICE LOCATIONS

All pressure orifices were located on the left side of the model and distributed as shown in figure 3 and tables 2 and 3. Both the flat wing with round leading edge and the twisted wing had 214 orifices with seven streamwise pressure stations of 31 or 30 orifices each. One of these orifices was located at the leading edge; the remainder were distributed so that upper and lower surface orifices were located at the same chordwise locations. The orifice locations on the sharp leading edge were identical except that the leading-edge orifices were omitted. The 83 orifices on the body were located at 15 stations along the length of the model. At each station, orifices were located at angles of  $0^\circ$ ,  $45^\circ$ ,  $90^\circ$ ,  $135^\circ$ , and  $180^\circ$  measured from the top of the body. In the area of the wing-body intersection, the orifices which are nominally identified as being at  $135^\circ$  and  $180^\circ$  were located on the wing lower surface at the same lateral location as the orifices at  $45^\circ$  and  $0^\circ$ , respectively, at that body station. Eight additional orifices were placed close to the juncture of the body with the wing upper surface.

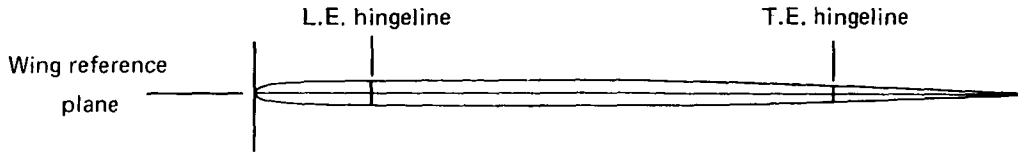
## DESIGN AND CONSTRUCTION

The objectives of this study dictated that the contours and physical characteristics of the flat and twisted wings be as nearly identical as possible. The model was constructed of steel to minimize aeroelastic deflections and to provide strength for potential future testing to a Mach number of 3.0. The aft body was flared approximately  $4^\circ$  from 194.310 cm (76.500 in.) aft of the nose to provide the required safety factor on predicted loads (see fig. 1). The model size was selected as the best compromise between potential tunnel blockage and adequate room to install orifices in the model.

A computerized lofting program was used to provide the wing definition. This definition was then used to machine the model components using numerically controlled machines. The tolerance on the contour was  $+0.1524$ ,  $-0.0$  mm ( $+0.006$ ,  $-0.0$  in.). The leading- and trailing-edge control surfaces were cut from the wings after they had been machined to final contour. Cuts were made along the 15% chord line of the twisted wing to simulate the removable leading edge of the flat wing in order to duplicate more closely the elastic characteristics of the flat wing (see fig. 4). Fixed angle brackets, arranged as shown in figure 4, were used to obtain the required control surface deflections with all pivot points located midway between the upper and lower surfaces at the hingelines. The brackets were also machined on numerically controlled machines. The same sets of trailing-edge brackets were used on both the flat and twisted wings, and the same sets of leading-edge brackets were used for both the rounded and sharp leading edges. Tests were conducted with the twisted trailing-edge control surface combined with the flat wing. For this configuration with the trailing-edge control surface deflection defined as  $0.0^\circ$ , a straight chord line was obtained only at  $0.75 b/2$ . The relative spanwise twist distribution is shown in figure 2.

Table 2.—Wing Pressure Orifice Locations, Percent Local Chord

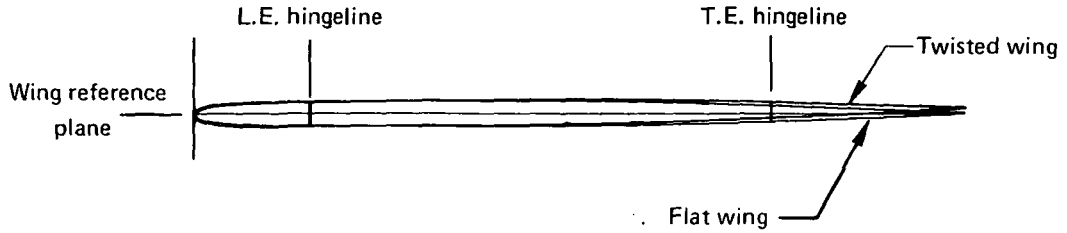
(a) Section at  $0.09 \frac{b}{2}$ , chord = 102.89 cm



Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -0.01^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		----	----	0.00	
2.50	2.45	2.59	2.61	2.54	2.26	2.26
5.00	4.95	5.07	5.06	5.03	4.76	4.76
8.50	8.45	8.53	8.59	8.58	8.40	8.26
11.30	----	----	----	11.31	----	----
12.25	----	----	----	----	12.23	12.27
12.50	12.45	12.55	12.58	----	----	----
17.50	17.49	17.62			17.59	17.66
20.00	19.94	20.08			20.03	20.03
30.00	29.92	30.09			29.98	29.89
45.00	45.00	45.07			44.96	44.89
60.00	59.98	60.08			60.01	59.97
70.00	70.03	70.13			70.05	69.95
72.50	72.55	72.60			72.58	72.51
77.50	77.53	77.62			77.56	77.51
85.00	85.11	85.14			85.03	85.00
90.00	90.10	90.10			90.04	89.98
95.00	95.09	95.05			94.96	94.98

Table 2.—(Continued)

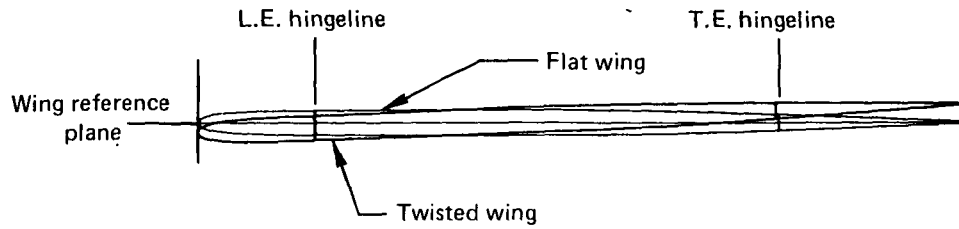
(b) Section at  $0.20 \frac{b}{2}$ , chord = 91.80 cm



Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -0.47^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		---	---	0.00	
2.50	2.59	2.69	2.62	2.65	2.52	2.42
5.00	5.05	5.00	5.14	5.14	5.00	4.93
8.50	8.54	8.59	8.67	8.62	8.52	8.40
11.40	---	---	---	11.37	---	---
12.50	12.54	12.49	12.63	---	12.53	12.42
17.50	17.63	17.61			17.65	17.52
20.00	20.08	20.07			20.00	19.90
30.00	30.04	30.09			30.02	29.89
45.00	45.08	45.09			45.03	44.92
60.00	60.02	60.13			60.03	59.91
70.00	70.11	70.13			70.06	69.96
72.50	72.63	72.61			72.55	72.50
77.50	77.59	77.65			77.59	77.52
85.00	85.07	85.13			85.02	85.00
90.00	90.14	90.11			90.07	89.97
95.00	95.14	95.10			95.05	95.08

Table 2.—(Continued)

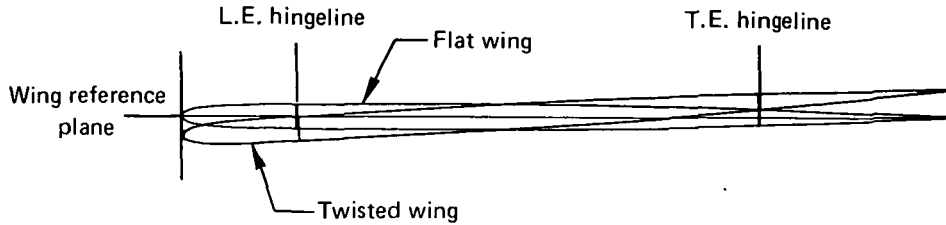
(c) Section at  $0.35 \frac{b}{2}$ , chord = 76.69 cm



Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -1.70^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		---	---	0.00	
2.50	2.45	2.59	2.59	2.58	2.39	2.33
5.00	4.93	5.07	5.11	5.04	5.12	4.78
8.50	8.60	8.54	8.65	8.63	8.49	8.32
10.50	---	---	---	10.46	---	---
11.00	---	11.03	---	---	---	---
12.50	12.37	---	12.57	---	12.50	12.33
17.50	17.64	17.63			17.54	17.53
20.00	20.00	20.09			19.94	19.84
30.00	30.01	30.10			29.88	29.87
45.00	44.99	45.09			44.96	44.79
60.00	60.03	60.08			59.97	59.89
70.00	70.07	70.08			70.03	69.90
72.50	72.55	72.58			72.56	72.44
77.50	77.60	77.61			77.54	77.51
85.00	85.11	85.14			85.08	84.96
90.00	90.06	90.09			89.89	89.89
95.00	95.07	95.09			94.95	94.86

Table 2.—(Continued)

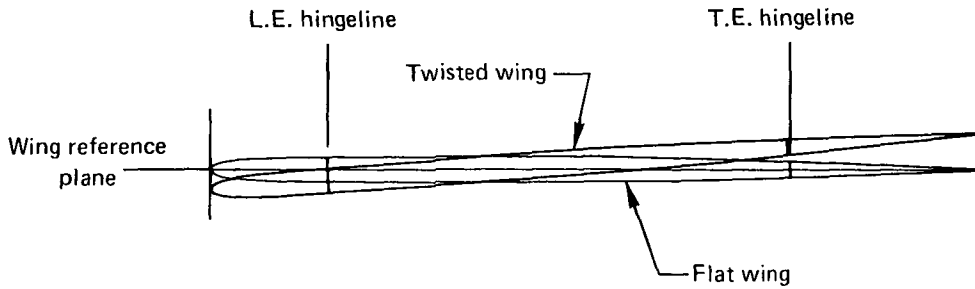
(d) Section at  $0.50 \frac{b}{2}$ , chord = 61.57 cm



Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -2.85^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		---	---	0.00	
2.50	2.47	2.53	2.69	2.60	2.44	2.38
5.00	4.99	4.95	5.13	5.06	4.92	4.80
8.50	8.48	8.38	8.66	8.61	8.46	8.38
10.10	---	---	---	10.14	---	---
11.10	---	11.08	---	---	---	---
12.50	12.39	---	12.61	---	12.50	12.31
17.50	17.64	17.52			17.54	17.24
20.00	19.98	19.97			19.92	19.83
30.00	30.07	30.06			29.91	29.85
45.00	44.98	45.06			45.00	44.85
60.00	59.97	60.00			59.95	59.92
70.00	70.07	70.10			70.03	69.88
72.50	72.65	72.61			72.56	72.44
77.50	77.66	77.65			77.61	77.43
85.00	85.19	85.18			84.85	84.90
90.00	90.22	90.12			89.93	89.93
95.00	95.05	94.94			94.88	94.93

Table 2.—(Continued)

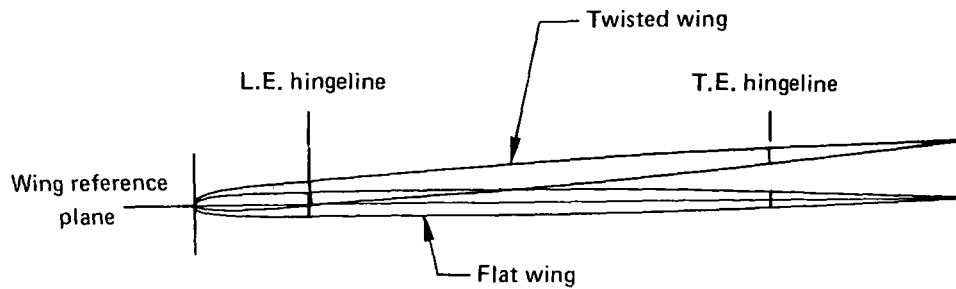
(e) Section at  $0.65 \frac{b}{2}$ , chord = 46.46 cm



Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -3.59^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		----	----	0.00	
2.50	2.56	2.66	2.49	2.38	2.18	2.49
5.00	5.06	5.12	4.94	4.95	4.76	5.01
8.50	8.55	8.55	8.46	8.40	8.32	8.45
12.20	----	----	12.12	----	12.21	----
12.60	12.57	----	----	----	----	----
17.50	17.60	17.65			17.24	17.44
20.00	20.17	20.11			19.70	19.88
30.00	30.05	30.11			30.26	29.73
45.00	45.16	45.23			44.75	44.89
60.00	60.13	60.13			59.81	59.87
70.00	69.89	70.12			69.92	69.90
72.50	72.59	72.69			72.38	72.49
77.50	77.74	77.76			77.22	77.49
85.00	85.25	85.32			84.79	84.93
90.00	90.22	90.21			89.70	89.92
95.00	95.13	95.27			95.12	94.86

Table 2.—(Continued)

(f) Section at  $0.80 \frac{b}{2}$ , chord = 31.35 cm

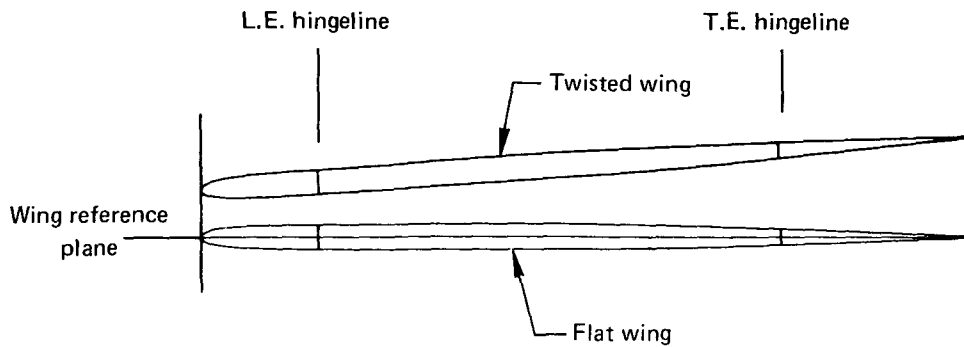


Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -3.84^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		---	---	0.00	
2.50	2.55	2.47	2.50	2.46	2.33	2.43
5.00	5.01	5.02	5.01	4.93	4.86	4.74
8.50	8.55	8.59	8.58	8.41	8.32	---
12.50	12.50	---	12.58	---	12.47	12.43
17.50	17.53	17.57			17.36	17.47
20.00	20.16	20.13			19.79	19.82
30.00	30.00	30.11			29.83	29.83
45.00	44.91	45.15			44.81	44.91
60.00	59.94	60.10			59.80	59.92
70.00	70.06	70.11			69.89	69.87
72.50	72.61	72.60			72.22	72.39
77.50	77.73	77.72			77.29	77.41
85.00	85.25	85.18			84.80	84.95
90.00	90.20	90.34			90.62	90.03
95.00	95.41	95.49			95.71	95.00



Table 2.—(Concluded)

(g) Section at  $0.93\frac{b}{2}$ , chord = 18.25 cm



Nominal	Flat wing, $\alpha_{sec} = 0.0^\circ$				Twisted wing, $\alpha_{sec} = -4.14^\circ$	
	Rounded leading edge		Sharp leading edge		Rounded leading edge	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0.00	0.00		---	---	0.00	
2.51	1.70	1.81	2.12	1.86	1.74	2.59
5.00	4.38	4.68	4.72	4.52	4.41	4.65
8.50	7.89	8.24	8.21	8.06	7.92	8.23
11.59	---	---	---	---	11.59	---
12.25	12.33	---	12.19	---	---	---
17.50	17.36	16.60			16.60	17.49
20.00	19.78	19.81			19.58	19.96
30.00	29.67	29.00			29.17	29.62
45.00	44.70	44.80			44.12	44.44
60.00	59.68	59.47			59.18	59.71
70.00	69.69	70.33			68.99	69.31
72.50	72.15	71.89			71.59	72.01
77.50	77.38	77.31			76.80	77.12
85.00	84.62	84.90			84.54	84.82
90.00	89.51	89.81			89.21	89.74
95.00	94.46	94.68			94.41	94.56

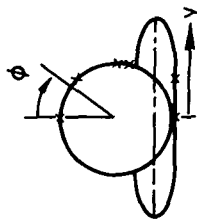


Table 3.—Body Pressure Orifice Locations

Nominal locations	x/L, percent body length														
	4.5	7.5	11.0	14.5	21.8	25.0	33.0	39.0	50.0	55.0	60.0	64.0	70.0	75.5	80.0
$\phi = 0.0^\circ$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0*	0.0*	0.0*	0.0	0.0	0.0	0.0
$\phi = 45.0^\circ$	44.3	44.3	44.5	44.7	44.4	44.8	45.0	44.8	45.0	44.8	44.8	45.0	44.8	45.0	44.8
$\phi = 90.0^\circ$	90.0	89.9	90.5	90.3	90.4	89.9	90.1	90.2	90.2	90.0	89.9	89.9	89.8	90.1	89.8
$\phi \approx 110.0^\circ$	---	---	---	---	110.2	110.0	110.1	110.1	110.2	116.8	119.9	124.2	---	---	---
Body, $\phi = 135.0^\circ$ Flat wing, $y = 3.094$ cm Twisted wing, $y = 3.094$ cm	136.1	135.3	135.0	135.2	3.025 3.132	3.028 3.106	3.028 3.048	3.056 3.048	3.071 3.005	3.056 2.926	3.043 3.094	3.045 3.094	134.6	134.5	134.8
Body, $\phi = 180.0^\circ$ Flat wing, $y = 0.0$ cm Twisted wing, $y = 0.0$ cm	180.0	180.0	180.0	180.0	-.018 .020	-.030 -.008	-.064 -.041	.081 -.043	-.048 -.056	180.0*	180.0*	180.0	180.0	180.0	180.0

\*for the first 149 runs, pressure readings at these orifices did not always stabilize

Pressure tubing used in this model was 1.016-mm (0.040-in.) o.d. Monel with a 0.1524-mm (0.006-in.) wall thickness. The major channels for wing pressure tubing were machined into the surface. The detailed grooves required to route tubing from the orifices to these channels were cut by hand. The pressure orifices were installed normal to and flush with the local surface. After installation of the pressure tubing, the surfaces were brought back to contour with solder. The tubing for body pressure orifices was run through the hollow center of the model body rather than in grooves in the outside contour. Tubing from all the orifices was routed through the hollow body to the scanivalves located in the body nose. Wiring from the scanivalves was routed through the body to the sting.

The nose portion of the body was removable to provide access to the fifteen 24-position scanivalves. Figure 1 shows the location on the aft body of the strain gages used to measure normal force and pitching moment.

### **WIND TUNNEL CAPABILITIES**

The Boeing Transonic Wind Tunnel (BTWT) is a continuous-flow, closed-circuit, single-return facility with an operating range of Mach number from 0.0 to nearly 1.2. The test section is 2.438 by 3.658 by 4.420 m (8 by 12 by 14.5 ft) with 11.0 percent of the wall area in slots. The tunnel layout is shown in figure 5. The tunnel stagnation pressure is atmospheric with a total temperature range of 300 K to 356 K (540° to 640° Rankine). The variation with Mach number of Reynolds number based on the mean aerodynamic chord (M.A.C.) of this model is shown in figure 6, which also shows the variation of dynamic pressure with Mach number. The 26 856-kW (36 000-hp) wound-rotor induction motor in tandem with a 13 428-kW (18 000-hp) synchronous motor provides the power to drive a 7.315-m (24-ft) diameter fan up to a maximum speed of 470 rpm. The fan is made up of a 5.486-m (18-ft) diameter hub with 72 fixed-pitch fiberglass blades 0.914 m (36 in.) long in two stages and directs circuit air through two stages of 67 hollow steel stators.

### **DATA SYSTEM**

The Boeing wind tunnel data system provides the capabilities of real-time test data acquisition, feedback control computation, and display. The data system consists of an Astrodata acquisition subsystem and a computing subsystem which uses a Xerox data system (XDS 9300) digital computer. The Astrodata system acquires signals from the sensors, conditions them, and passes them directly to the computer. Test data, averaged from up to 256 samples per test point, are recorded on a rapid-access data drum. As final computations are performed, selected on-line displays are provided on analog X-Y plotters and teletypewriters. Real-time computations and displays are performed every 200 milliseconds for control and test monitoring functions. Any test data may be retrieved from rapid-access drum storage and displayed on an oscilloscope. On-line programs also provide for preparation of magnetic tapes for plotting or interfacing with off-line programs. Figure 7 is a schematic of the data acquisition and reduction system.

### **MACH NUMBER**

Mach number in the BTWT is referenced to the horizontal and lateral center of the test section at tunnel station 1000 which was the pitch point of this model (40% M.A.C.).

The pressures used to determine Mach number,  $p_s$  and  $p_t$ , are measured through permanently positioned sensors. Static pressure  $p_s$  is measured by a 103.42-kN/m<sup>2</sup> (15-psi) absolute transducer. A 103.42-kN/m<sup>2</sup> (15-psi) differential transducer is used to obtain total pressure by measuring ( $p_t - p_s$ ). These transducers are temperature compensated in addition to being in a  $\pm 1.11^\circ\text{C}$  ( $\pm 2^\circ\text{F}$ ) environment. Transducer performance is checked periodically, and both the static and differential transducers have shown a maximum deviation of  $\pm 0.02\%$  of full scale.

The static pressure tap is located out of the test section above the ceiling in the pressure cap plenum. A correction is made to adjust this static pressure reading to the measured test section centerline static pressure determined during calibrations at station 1000. The tunnel total pressure is obtained from a total pressure probe mounted near the tunnel ceiling in the bellmouth throat (see fig. 5).

Signals from the pressure sensors are fed to the XDS 9300 computer. The XDS system computes and updates the Mach display five times per second. Accounting for the entire system, calculated Mach number is accurate within  $\pm 0.002$ . Data are recorded only when the tunnel is within a preselected Mach tolerance. For this test, a tolerance of  $\pm 0.003$  was used.

#### **DYNAMIC PRESSURE**

The dynamic pressure  $q$  is computed from the Mach number and the corrected static pressure. The estimated tolerance on dynamic pressure is  $\pm 95.8\text{ N/m}^2$  ( $\pm 2.0\text{ psf}$ ).

#### **ANGLE OF ATTACK**

The angle of attack of the reference point (0.25 M.A.C. for this model) for a sting-mounted model is determined from several increments. The input angle of attack is determined by an encoder mounted in the strut. This angle is accurate within  $\pm 0.02^\circ$ . This angle is then modified by the effects of sting deflection, up-flow, and wall corrections.

Sting deflections due to load were determined during the calibration of the strain gages mounted on the integral sting body of the model. These deflections are known within  $\pm 0.02^\circ$ . The corrections for sting deflection are based on the normal force and pitching moment loads obtained during wind-on data acquisition. The sting deflection was taken into account when setting test angles of attack to minimize the variation in final angle of attack for the various model configurations. The strain gages attached to the sting body of this model have an estimated accuracy of  $\pm 5\%$  of full-scale reading. This means that the sting deflections based on maximum model loads were known within  $\pm 0.11^\circ$ .

Up-flow corrections were made based on data obtained from upright and inverted runs on a calibration model of similar span. These corrections were less than  $0.2^\circ$ . It is believed the up-flow values are known within  $\pm 0.05^\circ$ .

A correction to model angle was made for the effect of lift interference for 11% slotted walls. The lift interference is a function of the ratio of model-to-test section size, test

section shape,  $C_N$ , and wall geometry. For  $C_N = 1.0$ , this correction is on the order of  $-0.48^\circ$ . Due to the limited amount of experimental substantiation, it is felt that the wall correction could be in error by  $\pm 20\%$ .

## MODEL PRESSURES

The model was instrumented with fifteen 24-position scanivalves. Each scanivalve contained a  $103.42\text{-kN/m}^2$  (15-psi) differential Statham, variable resistance, unbonded strain gage transducer. These transducers are calibrated against a high accuracy standard and, if placed in a temperature-controlled environment, will read within an accuracy of 0.1% of full scale. For this test, the transducers were located inside the model and subjected to large temperature excursions. Temperatures recorded at the scanivalves indicate that the accuracy of readout was 0.75% of full-scale capability.

For the first 149 runs, the data filter for one of the scanivalves was inadvertently set at too low a cutoff frequency. This caused a lag which affected five body pressure measurements, producing a maximum error of approximately  $0.684\text{ kN/m}^2$  (0.1 psi) at an angle of attack of  $16^\circ$  and  $M = 0.95$ . Table 3 identifies the specific data affected.

## TESTS AND DATA ACQUISITION

### TESTS

Table 4 shows the 54 configurations that were tested. Photographs of some are shown in figures 8 through 13 and a diagram of the model installation in the BTWT is shown in figure 14. Pressure and total force data were obtained at Mach numbers of 0.40, 0.70, 0.85, 0.95, and 1.05 for all configurations and at Mach numbers of 1.00 and 1.11 for selected configurations. Table 4 shows the run numbers for each Mach number and configuration for which these data were obtained. A detailed listing of all test points is shown in appendix A.

Wingtip deflection pictures were taken for representative configurations at three Mach numbers to evaluate the stiffness of the wing. These were compared to wind-off reference pictures to determine the relative deflection and twist. Configurations included the flat and twisted wings, and trailing-edge control surfaces deflected  $+30.2^\circ$ ,  $0.0^\circ$ , and  $-17.7^\circ$ . Whereas the tip did deflect (less than 2 cm), the change in incidence was negligible even at  $M = 1.05$  and no corrections to the data were required due to model flexibility.

Some oil flow pictures were taken, predominately at  $M = 0.95$  and an angle of attack of  $8.0^\circ$ .

Test angles of attack were from  $-8^\circ$  to  $+16^\circ$  in  $2^\circ$  increments. When testing at  $M = 1.11$ , the maximum angle was  $+8^\circ$ , and for some of the negative (trailing edge up) trailing-edge control surface deflections only positive angles of attack were tested. A trip strip of No. 60 carborundum grit was used throughout the test with the exception of the first series. On the body, the trip strip was 0.32 cm (0.125 in.) wide and placed 2.54 cm (1 in.) from the nose. On the wing, it was 0.32 cm (0.125 in.) wide from the side

Table 4.—Summary of Test Conditions by Run Number

Leading edge deflection, deg	Mach number	Trailing edge deflection, deg																	
		Full span							Outboard (inboard = 0.0)							Inboard (outboard = 0.0)			
		30.2	17.7	8.3	4.1	0.0	-4.1	-8.3	-17.7	-30.2	17.7	8.3	-8.3	-17.7	17.7	8.3	-8.3	-17.7	
Flat wing, rounded leading edge, trip strip off																			
Full span = 0.0	0.40																		
	0.70				10														
	0.85				15														
	0.95				7														
	1.05				16														
	1.11				14														
					9														
Flat wing, rounded leading edge, trip strip on																			
Full span = 0.0	0.40	37	32	46	48	21,269	55	78	66	75	280	275							
	0.70	34	29	43	50	23,263	57	80	63	72	277	271							
	0.85	36	31	45	52	25,267	59	82	65, 69	74	279	274							
	0.95	35	30	44	51	24,266	58	81	64, 68	73	278	273							
	1.00					268													
	1.05	33	28	42	49	22,264	56	79	62	71	276	272							
	1.11			40	47	20,262	54	77			270								
Inboard = 0.0	0.40					223					215	209	196	202	246	241	235	229	
Outboard = 5.1	0.70					218					211	205	192	198	243	237	231	228	
	0.85					221					214	208	195	201	245	240	233	227	
	0.95					220					213	207	194	200	244	239	232	226	
	1.05					219					212	206	193	199	242	238	230	224	
	1.11					217					210	204	191	197	242	238	230	224	

Table 4.—(Continued)

Leading edge deflection, deg	Mach number	Trailing edge deflection, deg																	
		Full span							Inboard (inboard = 0.0)							Inboard (outboard = 0.0)			
		30.2	17.7	8.3	4.1	0.0	-4.1	-8.3	-17.7	-30.2	17.7	8.3	-8.3	-17.7	17.7	8.3	-8.3	-17.7	
Flat wing, rounded leading edge, trip strip on																			
Inboard = 5.1 Outboard = 0.0	0.40					319									286	313		329	324
	0.70					315									283	311		326	321
	0.85					318									285	312		328	323
	0.95					317									284	310		327	322
	1.05					316									282	308		325	320
	1.11					314													
Full span = 5.1	0.40			149	138	183			189	132									
	0.70		177	145	140	179			185	134									
	0.85		175	148	142	182			188	136									
	0.95		174	147	141	181			187	135									
	1.05		172	146	139	180			186	133									
	1.11			144	137	178			184	131									
Full span = 12.8	0.40			115	109	98			85	126									
	0.70		118	112	105	100			87	128									
	0.85		123	114	108	102			89	130									
	0.95		122	113	107	101			88	129									
	1.05		120	111	106	99			86	127									
	1.11			116	104	97			84	124									

Table 4.—(Concluded)

Leading edge deflection, deg	Mach number	Trailing edge deflection, deg																	
		Full span						Outboard (inboard = 0.0)											
		30.2	17.7	8.3	4.1	0.0	-4.1	-8.3	-17.7	-30.2	17.7	8.3	-8.3	-17.7	17.7	8.3	-8.3	-17.7	
Flat wing, sharp leading edge, trip strip on																			
Full span = 0.0	0.40																		
	0.70																		
	0.85																		
	0.95																		
	1.00																		
	1.05																		
	1.11																		
Flat wing, twisted trailing edge, rounded leading edge, trip strip on																			
Full span = 0.0	0.40																		
	0.70																		
	0.85																		
	0.95																		
	1.05																		
	1.11																		
Twisted wing, rounded leading edge, trip strip on																			
Full span = 0.0	0.40	427	422	416	411	450													
	0.70	424	419	413	408	445													
	0.85	426	421	415	410	449													
	0.95	425	420	414	409	447													
	1.00					448													
	1.05	423	418	412	407	446													
	1.10					444													



of body to the midspan control surface break ( $0.57 b/2$ ), and tapered to 0.16 cm (0.0625 in.) wide at the wingtip. On the upper surface of the wing, the trip strip was placed at 15% chord; and on the lower surface, it was placed just aft of the leading-edge control surface brackets (see fig. 4). Density of the grit was 4 to 5 grains per quarter inch.

## DATA ACQUISITION AND INITIAL PROCESSING

The pressure data were recorded through the use of fifteen 24-position scanivalves located in the fore body of the model. Pressure transducers in the scanivalves measured the differential pressure between the local surface pressures and tunnel total pressure. Signals from the scanivalves, force and moment data, tunnel parameters, and model attitude angle were recorded on the Astrodata system and reduced using the XDS 9300 computer.

Final data (pressure coefficients, tunnel parameters, and model attitude) were merged on magnetic tapes, with appropriate configuration and test point identification for integration and plotting of these data.

A detailed description of the data editing and integration procedure and the data presentation are included in appendix B.

## DATA TAPE DESCRIPTION

The experimental data are available from Mr. Percy J. Bobbitt of the NASA Langley Research Center on seven-track unlabeled tapes written by the Boeing Computer Services CDC 6600 computer. The tapes are written in binary (odd parity) mode at a density of 556 BPI. The first file of each tape and any program files are BCD (formatted) information. The data files are binary.

The data are provided separately for the wing and body. Pressure coefficients and integrated data are provided in separate files.

A description of each of the tape files follows.

- First file of each tape (BCD format with 80-column records).—This file contains an identification of the test and model and describes the content of the remaining files.
- Program files (BCD).—These files contain the source code of FORTRAN IV programs which may be used to provide listings of user-selected items in the data files.
- Data files (binary).—The first record contains geometry pertinent to the data which will follow (i.e., for pressure data, the spanwise location of each section and the arrays of  $x/c$  for which  $C_p$ 's are listed; for integrated data, geometric constants used in the integrations). The remaining records each contain data for one test point. A list defining all test points is shown in appendix A.

## THEORETICAL METHODS-ATTACHED FLOW THEORIES

The arrow-wing-body model used in this study combines a highly swept thin wing and a body of high slenderness ratio (fig. 1). These characteristics tend to minimize the formation of strong shock waves and subsequent shock-induced separations. On the other hand, the highly swept thin wing also promotes early flow separation from the leading edge and subsequent vortex buildup along the wing leading edge. This spiral vortex strongly influences the wing pressure distributions at angles of attack greater than about  $4^\circ$ .

As a consequence, attached flow theories can be expected to yield good agreement with experiment only at low angles of attack for this configuration. The dominance of the leading-edge vortex flow suggests that detached flow theories may provide a more adequate representation. Although these theories are not as well developed in terms of the generalities of geometry they can handle, they offer some promise to more closely predict loading trends at the higher angles of attack. The theoretical calculations performed for both attached and detached flows were based on inviscid theories.

Two attached flow methods were used for this study. Both provided detailed surface pressure distributions and therefore the data were interpolated to the orifice locations on the model and then integrated with the methods described for the experimental data (see app. B). These data are also available on magnetic tapes from Mr. Percy J. Bobbitt of the NASA Langley Research Center. A listing of all available data points is included in appendix A.

### FLEXSTAB

Theoretical predictions of pressure distributions based on attached potential flow were primarily obtained using the unified subsonic/supersonic panel technique of FLEXSTAB, which was developed by Boeing under NASA-Ames sponsorship.\* (See refs. 7 and 8.) The FLEXSTAB system of digital computer programs uses linear theory to evaluate the static and dynamic stability, the inertial and aerodynamic loading, and the resulting elastic deformations of aircraft configurations. The aerodynamic representation used in the FLEXSTAB system is based on the constant pressure panel method developed by Woodward (refs. 9 and 10) to solve the linearized potential flow equations for supersonic and subsonic speeds. The results were also used at transonic speeds, where the nonlinear terms not accounted for may be important. The usual small perturbation assumptions are made. The severity of the preceding limitations is a function of the configuration and the flight conditions.

---

\*The Ames program was modified for this study to provide calculations of upper and lower surface pressures.

In the FLEXSTAB system, the flow about a configuration is simulated by a three-dimensional array of singularities. Each singularity is a solution to the governing potential flow equation. The singularities are placed on a mean surface instead of the actual configuration surface. The boundary condition that the flow is tangent to the surface is satisfied at a discrete set of points on the mean surface. This results in a linear set of equations that may be solved to yield the singularity strengths necessary to satisfy the specified boundary conditions. From knowledge of these singularity strengths, the velocities, pressures, and aerodynamic loads on the configuration may be calculated.

Figure 15 shows the distribution of panels used in the analysis of this configuration. Line sources and doublets are distributed along the X-axis of the body to simulate its thickness and lifting effects. Source panels are placed in the plane of the wing to simulate its thickness. To account for the wing lifting effects and interference effects between the wing and body, constant pressure vortex panels are placed in the plane of the wing and on a shell around the body. This "interference" shell serves to cancel the normal velocity components on the body induced by the wing.

At subsonic Mach numbers, 50 line singularities, 168 interference panels, and 160 wing panels are used to represent the configuration (fig. 15a). For the very low supersonic Mach numbers, the number of interference panels had to be greatly increased (to 330) in order to overcome instabilities associated with the solution (see fig. 15b). For the wing, panel edges were chosen to coincide with control surface hingelines and midspan breaks. The resulting panel arrangement has panels of nearly equal width and, in the chordwise direction, panel edges are at constant percent chord with closer spacing at the leading edge and the hingelines. The same wing paneling arrangement was used at all Mach numbers. The linearized boundary conditions employed by the method permitted control surface deflections to be treated as boundary condition changes and did not require repaneling. Table 5 summarizes the configurations and Mach numbers for which solutions were obtained.

### TEA-230

The second approach\* used to provide attached flow solutions was the general method of Rubbert and Saaris (refs. 11, 12, and 13) for the numerical solution of nonplanar, three-dimensional boundary value problems. The method employs a panel solution to the exact incompressible potential flow equation (Laplace's equation) satisfying boundary conditions on the actual configuration surface. Compressibility effects are approximated by the Göthert rule. The method is incorporated into Boeing computer program TEA-230. The program is subject to the same limitations (inviscid, attached flow) as the linearized FLEXSTAB solution and it is further limited to subsonic Mach numbers. However, it is not encumbered by the small perturbation approximation and is capable of treating problems of far more detail and generality than the linearized theories.

---

\*This work was performed by R. M. Thomas under sponsorship of the Independent Research and Development Program of the Boeing Commercial Airplane Company.





Table 5.— (Concluded)

Leading edge deflection, deg	Mach number	Trailing edge deflection, deg																
		Full span					Outboard (inboard = 0.0)					Inboard (outboard = 0.0)						
		30.2	17.7	8.3	4.1	0.0	-4.1	-8.3	-17.7	-30.2	17.7	8.3	-8.3	-17.7	17.7	8.3	-8.3	-17.7
Flat wing, sharp leading edge, trip strip on																		
Full span=0.0	0.40																	
	0.70																	
	0.85																	
	0.95																	
	1.00																	
	1.05																	
	1.11																	
Flat wing, twisted trailing edge, rounded leading edge, trip strip on																		
Full span=0.0	0.40																	
	0.70																	
	0.85																	
	0.95																	
	1.05																	
	1.11																	
Twisted wing; rounded leading edge, trip strip on																		
Full span=0.0	0.40																	
	0.70																	
	0.85																	
	0.95																	
	1.05																	
	1.10																	

○ = FLEXSTAB solution available

Note: On the data tapes and in the tables of appendix A, the above run numbers have been incremented by 1 000 to give the FLEXSTAB results unique identification.

Figure 16 shows the paneling schemes used for the TEA-230 representation of the arrow-wing-body model. The source panels are placed on the configuration surface; therefore, new paneling was required for each configuration. The internal and trailing linearly varying vortex panel networks are shown separately and arranged in the manner discussed in reference 12. These networks appear to extend only a short distance behind the wing although they actually extend 228.6 m (9000 in.) behind the model. This is due to a restriction in the plot routine so that the physical model can be drawn to a scale which will adequately show the panel definition. The vortex network on the aft body was used to represent the sting. Table 6 summarizes the configurations and Mach numbers for which solutions were obtained.

Table 6.— Summary of TEA-230 Conditions by Run Number

Leading edge deflection, deg	Mach number	Trailing edge deflection, deg																	
		Full span							Outboard (inboard = 0.0)							Inboard (outboard = 0.0)			
		30.2	17.7	8.3	4.1	0.0	-4.1	-8.3	-17.7	-30.2	17.7	8.3	8.3	-8.3	-17.7	17.7	8.3	-8.3	-17.7
Flat wing, rounded leading edge																			
Full span= 0.0	0.40	(37)	(32)	(46)	48	21(269)	(55)	(78)	66	75	280	275			252	259			
	0.85	36	(31)	45	52	25(267)	59	82	65,69	74	279	274			250	258			
Full span = 5.1	0.40		177	149	138	(183)		189	132										
	0.85		175	148	142	(182)		188	136										
Full span = 12.8	0.40		118	115	109	(98)		85	126										
	0.85		123	114	108	102		89	130										
Flat wing, sharp leading edge																			
Full span= 0.0	0.40					(368)													
	0.85					(372)													
Twisted wing, rounded leading edge																			
Full span= 0.0	0.40	427	422	416	411	(450)		435	442										
	0.85	426	421	415	410	(449)		434	441										

○ = TEA-230 solution available

Note: On the data tapes and in the tables of Appendix A, the above run numbers have been incremented by 2000 to give the TEA-230 results unique identification.



## RESULTS

Comparisons of the experimental pressure measurements with predictions using attached flow theoretical methods are presented in figures 17 through 58 (table 7). Table 8 summarizes the experimental results presented in NASA CR-132727 and NASA CR-132728. Since the results of the entire investigation are summarized and discussed in NASA CR-2610, no further discussion will be presented in this report. Instead, these data are presented here in more complete detail in order to make the maximum amount of data available. It should also be noted that both the experimental data and the theoretical data for attached flow methods are available on magnetic tape and copies may be obtained from Mr. Percy J. Bobbitt of the NASA Langley Research Center.

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Seattle, Washington 98124  
June 1975

Table 7.—Figure Summary of Data Presentation

	Mach number		
	0.40	0.85	1.05
<b>Wing</b>			
Base configuration	17	18	19
Effect of L.E. shape	20	21	
Twisted wing	22	23	24
L.E. droop = 5.1°	25	26	27
T.E. deflection, full span = 17.7°	28	29	30
T.E. deflection, full span = 8.3°	31	32	33
Effect of partial-span inboard L.E. deflection		34	
Effect of partial-span outboard L.E. deflection		35	
Effect of partial-span inboard T.E. deflection		36	
Effect of partial span outboard T.E. deflection		37	
<b>Body</b>			
Base configuraton	38	39	40
Twisted wing	41	42	43
L.E. droop = 5.1°	44	45	46
L.E. droop = 12.8°	47	48	49
T.E. deflection, full span = 17.7°	50	51	52
T.E. deflection, full span = 8.3°	53	54	55
T.E. deflection, full span = -17.7°	56	57	58

Table 8.—Summary of Additional Data Presentations

(a) Experimental Data Presented in NASA CR-132727

	Mach number						
	0.40	0.70	0.85	0.95	1.00	1.05	1.11
Wing							
Base configuration	$\alpha$	$\alpha$		$\alpha$	$\alpha$	$\alpha$	$\alpha$
L.E. shape	$\alpha, E$	$\alpha$	$\alpha, E$	$\alpha$	$\alpha$	$\alpha, E$	$\alpha$
Wing twist	$\alpha, E$	$\alpha$	$\alpha, E$	$\alpha$	$\alpha$	$\alpha, E$	$\alpha$
L.E. droop	$\alpha, E$	$\alpha$	$\alpha, E$	$\alpha$		$\alpha, E$	$\alpha$
Body							
Base configuration	$\alpha$	$\alpha$	$\alpha$	$\alpha$	$\alpha$	$\alpha$	$\alpha$
L.E. shape	$\alpha, E$		$\alpha, E$			$\alpha, E$	
Wing twist	$\alpha, E$		$\alpha, E$			$\alpha, E$	
L.E. droop	$\alpha, E$		$\alpha, E$			$\alpha, E$	

(b) Experimental Data Presented in NASA CR-132728

	Mach number						
	0.40	0.70	0.85	0.95	1.00	1.05	1.11
Wing							
T.E. deflection							
Flat wing and T.E.	$\alpha, E$	E	$\alpha, E$	E		$\alpha, E$	E
Flat wing, twisted T.E.	E		E			E	
Twisted wing and T.E.	E		E			E	
Partial span control surfaces			$\alpha, E$				
Body							
T.E. deflection	$\alpha, E$		$\alpha, E$			$\alpha, E$	

$\alpha$  = Angle of attack effect  
 E = Effect of configuration change

## APPENDIX A

### DETAILED TEST LOG

All test points for which pressure and force data were recorded are listed in tables A-1 through A-9. These tables include normal force and pitching moment coefficients obtained from strain gage measurements and by integrating the pressure data. Each test point is identified as a unique number within the test by the analysis number, where:

$$\text{ANALYSIS NUMBER} = 100 (\text{RUN NUMBER}) + \text{POSITION IN RUN}$$

Tables A-10 through A-17 list the points at which predicted pressure data are available from FLEXSTAB. For convenience, 1000 has been added to the run number of the corresponding experimental condition to obtain the theoretical test point number. Tables A-18 through A-23 are listings for TEA-230 data. An increment of 2000 has been added to obtain the run number for the TEA-230 results.

Table A-1.—Experimental Data Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 0.0°, Trip Strip Off

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
707	.85	32.2(672)	-7.78	-.297(-.297)	.065(.064)	1408	1.05	39.2(818)	-7.91	-.325(-.328)	.080(-.078)
708	.85	32.2(673)	-5.88	-.215(-.212)	.049(.046)	1409	1.05	39.2(818)	-5.84	-.238(-.239)	.063(-.060)
709	.85	32.2(673)	-3.88	-.137(-.138)	.031(-.030)	1410	1.05	39.2(818)	-3.88	-.155(-.157)	.041(-.040)
710	.85	32.2(673)	-1.92	-.065(-.065)	.013(-.011)	1411	1.05	39.2(818)	-1.92	-.075(-.075)	.018(-.015)
711	.85	32.2(673)	.06	-.000(-.005)	-.000(-.011)	1412	1.05	39.2(818)	.04	-.005(-.010)	.000(-.001)
712	.85	32.2(673)	2.06	.066(.058)	-.014(-.011)	1413	1.05	39.2(818)	2.04	.070(.060)	-.018(-.015)
713	.85	32.2(673)	4.02	.140(.130)	-.032(-.029)	1414	1.05	39.2(818)	3.98	.150(.140)	-.041(-.037)
714	.85	32.2(673)	5.98	.219(.206)	-.051(-.046)	1415	1.05	39.2(818)	5.94	.235(.226)	-.064(-.059)
715	.85	32.2(673)	7.95	.302(.294)	-.066(-.065)	1416	1.05	39.2(818)	7.91	.319(.312)	-.079(-.075)
716	.85	32.2(673)	9.89	.391(.379)	-.078(-.077)	1417	1.05	39.2(818)	9.86	.411(.405)	-.098(-.090)
717	.85	32.2(673)	11.85	.480(.468)	-.089(-.087)	1418	1.05	39.2(818)	11.82	.500(.491)	-.116(-.114)
718	.85	32.2(673)	13.82	.569(.558)	-.099(-.094)	1419	1.05	39.2(818)	13.77	.584(.576)	-.129(-.125)
719	.85	32.2(673)	15.64	.659(.653)	-.109(-.103)	1420	1.05	39.2(818)	15.72	.668(.654)	-.143(-.135)
901	1.11	40.7(850)	-7.74	-.314(-.313)	.079(.074)	1501	.70	25.2(526)	-7.76	-.277(-.283)	.060(-.060)
902	1.11	40.7(851)	-5.78	-.231(-.234)	.062(.060)	1502	.70	25.2(526)	-5.81	-.201(-.206)	.046(-.046)
903	1.11	40.7(850)	-3.83	-.149(-.152)	.041(-.040)	1503	.70	25.2(526)	-3.84	-.126(-.130)	.028(-.026)
904	1.11	40.7(850)	-1.86	-.071(-.073)	.018(-.016)	1504	.70	25.2(526)	-1.86	-.057(-.062)	.012(-.011)
906	1.11	40.7(850)	.11	-.001(-.006)	-.001(-.001)	1505	.70	25.2(527)	.11	-.005(-.004)	-.001(-.001)
907	1.11	40.7(850)	2.10	.072(.065)	-.020(-.019)	1506	.70	25.2(526)	2.07	.069(.057)	-.014(-.010)
908	1.11	40.7(850)	4.04	.152(.142)	-.043(-.041)	1507	.70	25.2(527)	4.03	.139(.124)	-.031(-.026)
909	1.11	40.7(850)	6.01	.236(.225)	-.065(-.062)	1508	.70	25.2(527)	6.00	.216(.201)	-.050(-.046)
910	1.11	40.7(851)	7.95	.322(.312)	-.084(-.080)	1509	.70	25.2(526)	7.97	.295(.281)	-.065(-.060)
1001	.40	10.3(215)	-7.73	-.260(-.266)	.056(.058)	1510	.70	25.2(526)	9.92	.383(.371)	-.079(-.076)
1002	.40	10.2(214)	-5.76	-.186(-.196)	.040(.043)	1511	.70	25.2(526)	11.87	.470(.452)	-.087(-.084)
1003	.40	10.2(213)	-3.80	-.117(-.126)	.024(.027)	1512	.70	25.2(526)	13.86	.559(.539)	-.094(-.092)
1004	.40	10.2(213)	-1.83	-.051(-.059)	.010(-.010)	1513	.70	25.2(527)	15.80	.648(.635)	-.101(-.097)
1005	.40	10.2(214)	.13	.009(-.002)	-.001(-.000)	1514	.70	25.2(527)	.10	.004(-.004)	.000(-.001)
1006	.40	10.2(214)	2.11	.070(.056)	-.012(-.010)	1601	.95	36.0(752)	-7.81	-.312(-.319)	.069(-.071)
1007	.40	10.2(214)	4.08	.136(.125)	-.028(-.028)	1602	.95	36.0(752)	-5.86	-.221(-.224)	.050(-.049)
1008	.40	10.2(214)	6.05	.209(.197)	-.045(-.044)	1603	.95	36.0(752)	-3.90	-.142(-.144)	.032(-.031)
1009	.40	10.2(214)	8.01	.284(.269)	-.061(-.058)	1604	.95	36.0(752)	-1.92	-.066(-.069)	.013(-.012)
1010	.40	10.2(214)	9.96	.374(.364)	-.076(-.076)	1605	.95	36.0(752)	.04	.000(-.007)	-.002(-.001)
1011	.40	10.2(214)	11.93	.464(.451)	-.085(-.083)	1606	.95	36.0(752)	2.01	.069(.057)	-.016(-.012)
1012	.40	10.2(214)	13.89	.551(.535)	-.092(-.091)	1607	.95	36.0(752)	3.99	.146(.132)	-.037(-.031)
1013	.40	10.3(215)	15.85	.639(.623)	-.098(-.090)	1608	.95	36.0(752)	5.95	.227(.216)	-.056(-.049)
						1609	.95	36.0(752)	7.89	.313(.306)	-.071(-.070)
						1610	.95	36.0(752)	9.84	.406(.395)	-.089(-.086)
						1611	.95	36.0(752)	11.80	.499(.489)	-.104(-.102)
						1612	.95	36.0(752)	13.77	.591(.584)	-.118(-.115)
						1613	.95	36.0(752)	15.71	.678(.675)	-.130(-.125)

Table A-1.—(Continued)

(b) T.E. Deflection, Full Span = 0.0°, Trip Strip On (The trip strip was on for the remainder of the test.)

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
2001	1.11	40.7(849)	-7.74	-.317(-.320)	.076(.077)
2002	1.11	40.7(850)	-5.78	-.230(-.235)	.059(.060)
2003	1.11	40.7(850)	-3.82	-.148(-.152)	.038(.040)
2004	1.11	40.7(849)	-1.86	-.070(-.072)	.015(.014)
2005	1.11	40.6(848)	-.11	-.000(-.006)	-.003(-.001)
2006	1.11	40.7(849)	2.09	-.075(-.063)	-.023(-.018)
2007	1.11	40.7(849)	4.03	.156(.142)	-.047(-.042)
2008	1.11	40.7(849)	6.00	.239(.227)	-.069(-.062)
2009	1.11	40.6(848)	7.96	.323(.315)	-.096(-.090)
2102	.40	10.2(214)	-5.77	-.191(-.195)	.044(.043)
2103	.40	10.3(215)	-3.80	-.119(-.122)	.027(.025)
2104	.40	10.2(214)	-1.83	-.054(-.058)	.013(.010)
2105	.40	10.2(214)	-.14	-.006(-.002)	.001(.000)
2106	.40	10.2(214)	2.11	.068(.057)	-.010(-.010)
2107	.40	10.2(214)	4.09	.136(.122)	-.027(-.025)
2108	.40	10.2(214)	6.05	.210(.199)	-.045(-.044)
2109	.40	10.2(214)	8.02	.284(.271)	-.060(-.059)
2110	.40	10.2(214)	9.97	.370(.367)	-.075(-.078)
2111	.40	10.2(214)	11.93	.463(.444)	-.087(-.087)
2112	.40	10.2(214)	13.89	.552(.534)	-.094(-.093)
2113	.40	10.2(214)	15.84	.641(.618)	-.100(-.102)
2201	1.05	39.2(818)	-7.80	-.324(-.329)	.077(.077)
2202	1.05	39.1(817)	-5.84	-.239(-.242)	.061(.061)
2203	1.05	39.2(818)	-3.88	-.155(-.157)	.040(.040)
2204	1.05	39.2(818)	-1.92	-.075(-.075)	.017(.016)
2205	1.05	39.2(818)	-.04	-.004(-.012)	-.001(.001)
2206	1.05	39.2(818)	2.02	-.069(-.058)	-.019(-.014)
2207	1.05	39.2(818)	3.98	.150(.140)	-.042(-.038)
2208	1.05	39.2(818)	5.94	.235(.225)	-.064(-.059)
2209	1.05	39.2(818)	7.89	.318(.310)	-.080(-.075)
2210	1.05	39.2(818)	9.84	.412(.406)	-.101(-.102)
2211	1.05	39.2(819)	11.81	.498(.492)	-.116(-.115)
2212	1.05	39.2(818)	13.77	.582(.576)	-.124(-.125)
2213	1.05	39.2(818)	15.73	.665(.659)	-.142(-.136)
2301	.70	25.2(526)	-7.77	-.279(-.282)	.061(.060)
2302	.70	25.2(526)	-5.80	-.202(-.206)	.047(.046)
2303	.70	25.2(526)	-3.84	-.128(-.129)	.029(.029)
2304	.70	25.2(526)	-1.87	-.060(-.062)	.013(.011)
2305	.70	25.2(526)	-.10	.002(-.004)	.001(.000)
2306	.70	25.2(527)	2.07	.066(.057)	-.012(-.011)
2307	.70	25.2(527)	4.04	.136(.125)	-.029(-.027)
2308	.70	25.2(527)	6.00	.212(.197)	-.047(-.044)
2309	.70	25.2(526)	7.97	.292(.292)	-.063(-.060)
2310	.70	25.2(527)	9.92	.380(.371)	-.077(-.076)
2311	.70	25.2(527)	11.89	.468(.453)	-.086(-.084)
2312	.70	25.2(527)	13.84	.554(.538)	-.092(-.092)
2313	.70	25.2(527)	15.80	.644(.635)	-.098(-.096)
2314	.70	25.2(527)	17.76	.732(.715)	-.103(-.101)
2401	.95	36.1(753)	-7.81	-.312(-.319)	.070(.071)
2402	.95	36.1(753)	-5.85	-.222(-.225)	.051(.049)
2403	.95	36.1(753)	-3.88	-.143(-.143)	.031(.031)
2404	.95	36.1(753)	-1.92	-.068(-.068)	.014(.012)
2405	.95	36.1(753)	-.04	-.002(-.006)	.000(.001)
2406	.95	36.0(752)	2.01	.067(.058)	-.015(-.012)
2407	.95	36.1(753)	3.97	.143(.132)	-.035(-.031)
2408	.95	36.0(752)	5.94	.224(.214)	-.054(-.049)
2409	.95	36.1(753)	7.89	.311(.307)	-.070(-.071)
2410	.95	36.0(752)	9.84	.404(.397)	-.088(-.087)
2411	.95	36.1(753)	11.80	.496(.490)	-.102(-.102)
2413	.95	36.1(753)	13.76	.587(.586)	-.116(-.115)
2414	.95	36.1(753)	15.71	.676(.675)	-.128(-.125)
2501	.85	32.1(671)	-7.79	-.296(-.300)	.065(.065)
2502	.85	32.1(671)	-5.84	-.211(-.212)	.049(.046)
2503	.85	32.1(671)	-3.86	-.135(-.134)	.031(.027)
2504	.85	32.1(671)	-1.91	-.063(-.065)	.014(.011)
2505	.85	32.1(671)	-.06	-.000(-.005)	.001(.000)
2506	.85	32.1(671)	2.03	.066(.058)	-.013(-.011)
2507	.85	32.1(671)	4.01	.140(.130)	-.031(-.029)
2508	.85	32.1(670)	5.97	.218(.206)	-.050(-.047)
2509	.85	32.1(671)	7.93	.301(.295)	-.065(-.065)
2510	.85	32.1(671)	9.88	.391(.380)	-.080(-.077)
2511	.85	32.1(670)	11.83	.478(.465)	-.089(-.087)
2512	.85	32.1(670)	13.80	.566(.557)	-.098(-.094)
2514	.85	32.2(672)	15.76	.657(.653)	-.108(-.103)

Table A-1. — (Continued)

(c) T. E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
2806	1.05	39.1(817)	-7.89	-.075(-.072)	-.067(-.071)
2807	1.05	39.1(817)	-5.97	.012(.017)	-.086(-.089)
2808	1.05	39.1(816)	-3.99	.093(.101)	-.106(-.110)
2809	1.05	39.1(817)	-2.05	.161(.169)	-.122(-.125)
2810	1.05	39.1(817)	-.08	.227(.234)	-.137(-.141)
2811	1.05	39.1(817)	1.92	.294(.303)	-.152(-.158)
2812	1.05	39.1(817)	3.88	.363(.367)	-.168(-.169)
2813	1.05	39.1(817)	5.85	.433(.439)	-.180(-.178)
2814	1.05	39.1(817)	7.80	.505(.513)	-.188(-.186)
2815	1.05	39.1(817)	9.78	.580(.591)	-.196(-.201)
2816	1.05	39.1(817)	11.75	.647(.662)	-.198(-.205)
2817	1.05	39.1(817)	13.70	.712(.726)	-.200(-.202)
2818	1.05	39.1(817)	15.69	.776(.789)	-.201(-.201)
2901	.70	25.3(528)	-7.91	-.006(-.005)	-.077(-.076)
2902	.70	25.2(527)	-5.93	.068(.071)	-.093(-.094)
2903	.70	25.2(527)	-3.97	.132(.132)	-.106(-.105)
2904	.70	25.2(527)	-2.00	.190(.186)	-.116(-.112)
2905	.70	25.2(527)	-.04	.248(.244)	-.126(-.125)
2906	.70	25.2(526)	1.94	.312(.307)	-.138(-.138)
2907	.70	25.2(526)	3.93	.383(.377)	-.154(-.152)
2908	.70	25.2(526)	5.89	.451(.444)	-.166(-.162)
2909	.70	25.2(527)	7.84	.519(.517)	-.173(-.169)
2910	.70	25.2(527)	9.82	.604(.598)	-.185(-.182)
2911	.70	25.3(528)	11.76	.692(.673)	-.189(-.186)
2912	.70	25.2(527)	13.76	.754(.746)	-.194(-.185)
2913	.70	25.2(526)	15.72	.825(.823)	-.180(-.178)
2914	.70	25.2(526)	-.02	.247(.245)	-.124(-.125)
3001	.95	36.0(751)	-7.94	-.042(-.032)	-.075(-.081)
3002	.95	36.0(751)	-5.98	.041(.053)	-.091(-.097)
3003	.95	36.0(751)	-4.02	.119(.128)	-.111(-.115)
3004	.95	36.0(751)	-2.04	.181(.185)	-.123(-.123)
3005	.95	36.0(751)	-.10	.242(.245)	-.136(-.136)
3006	.95	36.0(751)	1.89	.309(.312)	-.151(-.151)
3007	.95	36.0(751)	3.86	.381(.381)	-.170(-.166)
3008	.95	36.0(751)	5.84	.450(.449)	-.182(-.175)
3009	.95	36.0(751)	7.78	.519(.526)	-.188(-.187)
3010	.95	36.0(751)	9.84	.601(.604)	-.199(-.197)
3011	.95	36.0(751)	11.71	.668(.675)	-.201(-.201)
3012	.95	36.0(751)	13.70	.734(.743)	-.197(-.197)
3013	.95	36.0(751)	15.65	.797(.809)	-.195(-.190)
3101	.85	32.1(670)	-7.98	-.029(-.029)	-.071(-.073)
3102	.85	32.1(670)	-5.97	.056(.063)	-.090(-.093)
3103	.85	32.1(670)	-4.01	.123(.127)	-.104(-.108)
3104	.85	32.1(670)	-2.03	.181(.182)	-.114(-.115)
3105	.85	32.1(670)	-.08	.242(.243)	-.126(-.129)
3106	.85	32.1(670)	1.92	.309(.309)	-.141(-.143)
3107	.85	32.1(670)	3.89	.390(.379)	-.157(-.156)
3108	.85	32.1(670)	5.83	.450(.447)	-.170(-.167)
3109	.85	32.1(670)	7.81	.521(.524)	-.178(-.178)
3110	.85	32.1(670)	9.78	.607(.606)	-.192(-.190)
3111	.85	32.1(670)	11.76	.683(.684)	-.196(-.197)
3112	.85	32.1(670)	13.71	.750(.761)	-.197(-.196)
3113	.85	32.1(670)	15.67	.815(.830)	-.187(-.189)
3201	.40	10.2(213)	-7.86	.004(.005)	-.060(-.075)
3202	.40	10.2(213)	-5.90	.076(.075)	-.079(-.092)
3203	.40	10.2(213)	-3.93	.137(.139)	-.092(-.105)
3204	.40	10.2(213)	-1.97	.193(.189)	-.103(-.112)
3205	.40	10.2(214)	.05	.254(.249)	-.116(-.125)
3206	.40	10.2(213)	2.00	.314(.308)	-.128(-.136)
3207	.40	10.2(214)	3.98	.380(.375)	-.141(-.148)
3208	.40	10.2(213)	5.95	.443(.436)	-.151(-.156)
3209	.40	10.2(213)	7.92	.514(.506)	-.164(-.167)
3210	.40	10.2(213)	9.87	.593(.601)	-.173(-.182)
3211	.40	10.2(214)	11.82	.680(.675)	-.180(-.186)
3212	.40	10.2(213)	13.80	.753(.747)	-.178(-.187)
3213	.40	10.2(213)	15.75	.829(.825)	-.176(-.188)

Table A-1.—(Continued)

(d) T.E. Deflection, Full Span = 30.2°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
3321	1.05	39.0(815)	-7.95	.000(.022)	-.113(-.124)
3322	1.05	39.0(814)	-6.03	.084(.104)	-.128(-.138)
3323	1.05	39.0(814)	-4.04	.162(.186)	-.145(-.157)
3324	1.05	39.0(814)	-2.06	.228(.253)	-.159(-.171)
3325	1.05	39.0(815)	-1.11	.286(.314)	-.170(-.184)
3326	1.05	39.0(814)	1.88	.349(.376)	-.182(-.196)
3327	1.05	39.0(814)	3.85	.411(.434)	-.192(-.201)
3328	1.05	39.0(814)	5.82	.475(.496)	-.199(-.208)
3329	1.05	39.0(814)	7.81	.546(.576)	-.207(-.222)
3330	1.05	39.0(814)	9.79	.617(.646)	-.214(-.233)
3331	1.05	38.9(813)	11.72	.678(.711)	-.213(-.233)
3332	1.05	39.0(815)	13.69	.736(.770)	-.211(-.227)
3333	1.05	39.0(814)	15.69	.791(.822)	-.205(-.219)
3401	.70	25.1(525)	-7.94	.087(.104)	-.120(-.127)
3402	.70	25.1(525)	-5.99	.157(.179)	-.134(-.143)
3403	.70	25.1(525)	-4.01	.218(.237)	-.146(-.154)
3404	.70	25.1(524)	-2.05	.277(.294)	-.158(-.168)
3405	.70	25.1(525)	-0.08	.339(.359)	-.171(-.182)
3406	.70	25.1(525)	1.90	.404(.420)	-.185(-.193)
3407	.70	25.1(525)	3.87	.470(.485)	-.198(-.205)
3408	.70	25.1(524)	5.84	.535(.546)	-.208(-.212)
3409	.70	25.1(525)	7.82	.600(.617)	-.212(-.217)
3410	.70	25.1(525)	9.79	.681(.691)	-.222(-.225)
3411	.70	25.1(525)	11.76	.760(.770)	-.228(-.235)
3412	.70	25.1(524)	13.72	.822(.833)	-.218(-.228)
3413	.70	25.1(525)	15.69	.880(.895)	-.205(-.212)
3414	.70	25.1(525)	-1.06	.337(.360)	-.169(-.183)
3501	.95	35.9(750)	-8.11	.036(.060)	-.120(-.132)
3502	.95	35.9(750)	-6.02	.120(.148)	-.135(-.147)
3503	.95	35.9(749)	-4.07	.191(.220)	-.151(-.164)
3504	.95	35.9(749)	-2.08	.251(.282)	-.163(-.179)
3505	.95	35.9(750)	-1.11	.310(.338)	-.175(-.189)
3506	.95	35.9(750)	1.86	.372(.400)	-.189(-.204)
3507	.95	35.9(750)	3.83	.435(.457)	-.200(-.210)
3508	.95	35.9(750)	5.78	.497(.516)	-.208(-.212)
3509	.95	35.9(750)	7.77	.562(.587)	-.211(-.222)
3510	.95	35.9(750)	9.80	.639(.662)	-.221(-.231)
3511	.95	35.9(750)	11.71	.702(.730)	-.219(-.232)
3512	.95	35.9(750)	13.67	.763(.790)	-.214(-.222)
3513	.95	35.9(749)	15.66	.821(.852)	-.206(-.212)
3601	.85	31.9(667)	-7.97	.062(.080)	-.115(-.123)
3602	.85	32.0(668)	-6.01	.141(.165)	-.132(-.144)
3603	.85	32.0(668)	-4.04	.205(.229)	-.146(-.157)
3604	.85	32.0(668)	-2.09	.265(.288)	-.158(-.171)
3605	.85	32.0(668)	-1.12	.326(.348)	-.172(-.183)
3606	.85	32.0(668)	1.88	.391(.410)	-.186(-.196)
3607	.85	32.0(668)	3.85	.460(.480)	-.202(-.211)
3608	.85	32.0(668)	5.81	.527(.547)	-.213(-.221)
3609	.85	32.0(668)	7.78	.589(.613)	-.213(-.224)
3610	.85	32.0(669)	9.74	.670(.690)	-.227(-.236)
3611	.85	32.0(669)	11.70	.736(.760)	-.225(-.239)
3612	.85	32.0(669)	13.68	.793(.823)	-.215(-.229)
3613	.85	32.0(669)	15.66	.849(.876)	-.204(-.212)
3701	.40	10.2(213)	-7.87	.101(.119)	-.102(-.123)
3702	.40	10.2(213)	-5.94	.167(.183)	-.117(-.138)
3703	.40	10.2(213)	-3.97	.228(.242)	-.130(-.149)
3704	.40	10.2(213)	-2.00	.288(.302)	-.143(-.164)
3705	.40	10.2(213)	-0.02	.350(.363)	-.159(-.178)
3706	.40	10.2(213)	1.94	.414(.427)	-.175(-.191)
3707	.40	10.2(213)	3.92	.477(.489)	-.188(-.202)
3708	.40	10.2(213)	5.88	.539(.551)	-.197(-.210)
3709	.40	10.2(213)	7.86	.604(.614)	-.206(-.217)
3710	.40	10.2(213)	9.82	.681(.703)	-.213(-.230)
3711	.40	10.2(213)	11.78	.769(.779)	-.221(-.234)
3712	.40	10.2(213)	13.77	.843(.854)	-.219(-.236)
3713	.40	10.2(213)	15.75	.905(.919)	-.209(-.228)



Table A-1.-(Continued)

(e) T. E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
4004	1.11	40.5(845)	-7.80	-1.85(-.193)	-0.04(-.001)
4005	1.11	40.4(843)	-5.85	-0.94(-.101)	-0.28(-.025)
4006	1.11	40.4(843)	-3.87	-0.13(-.019)	-0.48(-.046)
4007	1.11	40.4(844)	-1.94	.061(.054)	-0.68(-.064)
4008	1.11	40.4(844)	.05	.132(.121)	-0.86(-.080)
4009	1.11	40.4(844)	2.02	.203(.190)	-1.05(-.100)
4010	1.11	40.4(844)	4.00	.276(.268)	-1.24(-.121)
4011	1.11	40.4(844)	5.95	.353(.346)	-1.41(-.136)
4012	1.11	40.4(843)	7.91	.425(.419)	-1.47(-.140)
4205	1.05	38.9(813)	-7.87	-1.84(-.192)	-0.06(-.004)
4206	1.05	38.9(813)	-5.92	-0.92(-.097)	-0.30(-.027)
4207	1.05	38.9(813)	-3.95	-0.10(-.014)	-0.51(-.048)
4208	1.05	38.9(813)	-2.00	.066(.060)	-0.71(-.066)
4209	1.05	38.9(813)	-.02	.136(.126)	-0.87(-.081)
4210	1.05	38.9(813)	1.97	.209(.202)	-1.07(-.103)
4211	1.05	39.0(814)	3.95	.285(.278)	-1.27(-.124)
4212	1.05	38.9(813)	5.86	.360(.353)	-1.43(-.136)
4213	1.05	38.9(813)	7.83	.431(.424)	-1.48(-.140)
4214	1.05	38.9(813)	9.80	.510(.509)	-1.58(-.158)
4217	1.05	39.0(814)	11.80	.586(.584)	-1.65(-.165)
4218	1.05	39.0(814)	13.73	.658(.659)	-1.72(-.169)
4222	1.05	39.0(814)	15.70	.733(.733)	-1.80(-.173)
4301	.70	25.2(526)	-7.83	-1.36(-.136)	-0.13(-.011)
4302	.70	25.1(525)	-5.88	-0.60(-.059)	-0.30(-.028)
4303	.70	25.1(525)	-3.92	-0.11(-.010)	-0.46(-.046)
4304	.70	25.2(526)	-1.93	.074(.070)	-0.58(-.057)
4305	.70	25.1(525)	-.05	.137(.128)	-0.71(-.067)
4306	.70	25.2(526)	2.02	.202(.194)	-0.85(-.083)
4307	.70	25.1(525)	3.99	.273(.264)	-1.01(-.098)
4308	.70	25.1(525)	5.95	.345(.335)	-1.16(-.112)
4309	.70	25.1(525)	7.91	.416(.409)	-1.24(-.120)
4310	.70	25.1(525)	9.90	.504(.495)	-1.37(-.134)
4311	.70	25.1(524)	11.82	.584(.571)	-1.41(-.138)
4312	.70	25.1(525)	13.80	.665(.652)	-1.42(-.141)
4313	.70	25.1(525)	15.78	.748(.738)	-1.45(-.141)
4314	.70	25.1(525)	.04	.136(.128)	-0.69(-.067)
4401	.95	35.9(749)	-7.87	-1.61(-.165)	-0.12(-.013)
4402	.95	35.9(749)	-5.95	-0.74(-.077)	-0.30(-.031)
4403	.95	35.9(749)	-3.97	-0.04(-.002)	-0.49(-.049)
4404	.95	35.9(749)	-2.02	.073(.069)	-0.64(-.063)
4405	.95	35.9(749)	-.02	.138(.132)	-0.78(-.075)
4406	.95	35.9(749)	1.95	.209(.204)	-0.96(-.094)
4407	.95	35.8(748)	3.90	.283(.276)	-1.14(-.112)
4408	.95	35.8(748)	5.86	.359(.354)	-1.31(-.127)
4409	.95	35.8(748)	7.84	.437(.436)	-1.42(-.141)
4410	.95	35.8(748)	9.87	.523(.516)	-1.55(-.151)
4411	.95	35.8(748)	11.80	.599(.594)	-1.61(-.158)
4412	.95	35.9(749)	13.70	.674(.672)	-1.66(-.161)
4413	.95	35.9(749)	15.68	.748(.750)	-1.69(-.161)
4503	.85	32.0(668)	-7.85	-1.49(-.154)	-0.10(-.010)
4504	.85	32.0(669)	-5.92	-0.67(-.068)	-0.27(-.030)
4505	.85	32.0(669)	-3.96	-0.07(.005)	-0.46(-.046)
4506	.85	32.0(669)	-1.99	.072(.069)	-0.59(-.060)
4507	.85	32.0(669)	-.02	.135(.129)	-0.72(-.071)
4508	.85	32.0(669)	1.99	.204(.198)	-0.88(-.088)
4509	.85	32.0(669)	3.94	.276(.268)	-1.06(-.103)
4510	.85	32.0(668)	5.94	.351(.343)	-1.20(-.117)
4511	.85	32.0(668)	7.86	.424(.420)	-1.28(-.128)
4512	.85	32.0(668)	9.81	.512(.504)	-1.43(-.140)
4513	.85	32.0(669)	11.77	.593(.587)	-1.50(-.149)
4514	.85	32.0(669)	13.78	.675(.673)	-1.54(-.152)
4515	.85	32.0(668)	15.71	.754(.757)	-1.59(-.153)
4601	.40	10.2(213)	-7.80	-1.26(-.127)	-0.02(-.010)
4602	.40	10.2(213)	-5.84	-0.54(-.056)	-0.20(-.027)
4603	.40	10.2(213)	-3.88	-0.14(-.011)	-0.36(-.043)
4604	.40	10.2(213)	-1.92	.073(.069)	-0.48(-.053)
4605	.40	10.2(214)	.04	.134(.127)	-0.60(-.064)
4606	.40	10.2(213)	2.04	.197(.190)	-0.74(-.079)
4607	.40	10.2(214)	4.02	.267(.257)	-0.91(-.093)
4608	.40	10.2(214)	6.01	.338(.328)	-1.06(-.107)
4609	.40	10.2(214)	7.95	.407(.397)	-1.17(-.118)
4610	.40	10.2(214)	10.01	.491(.489)	-1.30(-.131)
4611	.40	10.2(214)	11.86	.578(.566)	-1.37(-.136)
4612	.40	10.2(214)	13.81	.659(.645)	-1.39(-.140)
4613	.40	10.2(214)	15.81	.744(.727)	-1.40(-.144)

Table A-1.—(Continued)

(f) T. E. Deflection, Full Span = 4.1°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
4713	1.11	40.5(845)	-7.83	-.247(-.250)	-.033( .034)	5001	.70	25.1(524)	-7.81	-.204(-.206)	-.025( .023)
4714	1.11	40.5(846)	-5.81	-.159(-.161)	-.012( .014)	5002	.70	25.0(523)	-5.85	-.128(-.129)	-.010( .007)
4715	1.11	40.5(845)	-3.85	-.078(-.081)	-.008(-.006)	5003	.70	25.1(524)	-3.88	-.056(-.057)	-.008(-.010)
4716	1.11	40.5(845)	-1.89	-.001(-.003)	-.031(-.028)	5004	.70	25.0(523)	-1.91	.008( .007)	-.022(-.024)
4717	1.11	40.5(845)	.08	.073( .064)	-.050(-.044)	5005	.70	25.0(523)	.06	.071( .066)	-.034(-.035)
4718	1.11	40.5(845)	2.05	.147( .135)	-.070(-.064)	5006	.70	25.1(524)	2.03	.136( .129)	-.049(-.048)
4719	1.11	40.4(844)	4.00	.225( .213)	-.092(-.087)	5007	.70	25.1(524)	4.00	.208( .199)	-.066(-.065)
4720	1.11	40.5(845)	5.97	.305( .297)	-.110(-.105)	5008	.70	25.1(524)	5.97	.283( .273)	-.083(-.081)
4722	1.11	40.5(845)	7.93	.380( .371)	-.120(-.115)	5009	.70	25.1(524)	7.94	.358( .351)	-.095(-.093)
4801	.40	10.2(212)	-7.77	-.193(-.192)	-.026( .022)	5010	.70	25.1(524)	7.94	.358( .351)	-.095(-.093)
4802	.40	10.2(212)	-5.80	-.121(-.123)	-.010( .007)	5011	.70	25.1(524)	9.88	.445( .439)	-.108(-.109)
4803	.40	10.2(213)	-3.81	-.051(-.052)	-.007(-.011)	5012	.70	25.1(524)	11.84	.531( .519)	-.116(-.115)
4804	.40	10.2(213)	-1.87	-.010( .008)	-.018(-.023)	5013	.70	25.1(524)	13.82	.615( .603)	-.120(-.121)
4805	.40	10.2(213)	.11	.071( .065)	-.030(-.033)	5101	.95	35.9(750)	15.77	.701( .693)	-.124(-.122)
4806	.40	10.2(214)	2.08	.134( .128)	-.043(-.046)	5102	.95	35.9(750)	-7.85	-.233(-.236)	-.027( .026)
4807	.40	10.2(213)	4.02	.204( .196)	-.060(-.064)	5103	.95	35.9(750)	-5.90	-.145(-.145)	-.008( .007)
4808	.40	10.2(213)	6.02	.276( .264)	-.076(-.076)	5104	.95	35.9(750)	-3.92	-.067(-.066)	-.009(-.010)
4809	.40	10.2(213)	7.99	.350( .340)	-.091(-.091)	5105	.95	35.9(750)	-1.96	.006( .005)	-.027(-.028)
4810	.40	10.2(213)	9.95	.433( .432)	-.103(-.107)	5106	.95	35.9(750)	.01	.073( .068)	-.041(-.040)
4811	.40	10.2(213)	11.90	.524( .514)	-.113(-.113)	5107	.95	35.9(749)	1.97	.143( .136)	-.058(-.056)
4812	.40	10.2(213)	13.86	.612( .600)	-.118(-.119)	5109	.95	35.9(750)	3.94	.219( .209)	-.077(-.073)
4813	.40	10.2(213)	15.82	.698( .688)	-.122(-.124)	5110	.95	35.9(749)	5.90	.298( .293)	-.094(-.092)
4901	1.05	39.0(814)	-7.84	-.247(-.250)	-.032( .031)	5111	.95	35.9(749)	7.85	.381( .380)	-.109(-.110)
4902	1.05	39.0(814)	-5.88	-.161(-.164)	-.012( .013)	5112	.95	35.9(749)	9.82	.472( .465)	-.127(-.124)
4903	1.05	38.9(813)	-3.91	-.078(-.081)	-.008(-.007)	5113	.95	35.9(749)	11.77	.557( .550)	-.137(-.136)
4904	1.05	39.0(814)	-1.95	-.000(-.003)	-.030(-.028)	5114	.95	35.9(749)	13.73	.641( .638)	-.147(-.143)
4905	1.05	39.0(815)	.01	.071( .064)	-.047(-.043)	5114	.95	35.9(749)	15.69	.720( .723)	-.153(-.149)
4906	1.05	39.0(814)	1.98	.145( .134)	-.066(-.062)	5201	.85	31.9(667)	-7.82	-.218(-.221)	-.026( .026)
4907	1.05	39.0(814)	3.94	.224( .214)	-.089(-.085)	5202	.85	32.0(668)	-5.86	-.136(-.135)	-.010( .007)
4908	1.05	39.0(815)	5.91	.305( .298)	-.108(-.103)	5203	.85	32.0(668)	-3.90	-.062(-.063)	-.007(-.009)
4909	1.05	39.0(814)	7.86	.382( .375)	-.118(-.113)	5204	.85	32.0(668)	-1.93	.007( .006)	-.023(-.026)
4910	1.05	39.0(814)	9.82	.470( .465)	-.135(-.135)	5205	.85	32.0(668)	.04	.071( .066)	-.036(-.037)
4911	1.05	39.0(814)	11.79	.550( .544)	-.145(-.143)	5206	.85	32.0(668)	2.00	.138( .131)	-.051(-.051)
4912	1.05	39.0(814)	13.74	.627( .625)	-.155(-.150)	5207	.85	31.9(667)	3.97	.212( .204)	-.070(-.069)
4913	1.05	39.0(814)	15.70	.706( .706)	-.165(-.159)	5208	.85	31.9(667)	5.93	.288( .279)	-.087(-.084)
						5209	.85	32.0(668)	7.89	.367( .364)	-.098(-.100)
						5210	.85	31.9(667)	9.85	.458( .450)	-.114(-.113)
						5211	.85	31.9(667)	11.80	.542( .534)	-.122(-.122)
						5212	.85	32.0(668)	13.76	.627( .623)	-.129(-.128)
						5213	.85	32.0(668)	15.74	.713( .714)	-.135(-.133)

Table A-1.—(Continued)

(g) T. E. Deflection, Full Span =  $-4.1^\circ$

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
5404	1.11	40.5(846)	.15	-.071(-.082)	.043(.048)	5701	25.1(525)	.13	-.069(-.078)	.039(.038)
5405	1.11	40.5(846)	2.11	-.000(-.014)	-.025(-.031)	5702	25.1(525)	2.10	-.005(-.016)	-.025(-.027)
5406	1.11	40.5(845)	4.08	-.080(-.066)	-.003(.008)	5703	25.1(525)	4.07	.062(.049)	.010(.013)
5407	1.11	40.5(845)	6.04	.162(.153)	-.019(-.014)	5704	25.1(525)	6.05	.138(.126)	-.009(-.006)
5408	1.11	40.5(845)	7.99	.251(.246)	-.041(-.038)	5705	25.1(525)	8.00	.215(.205)	-.023(-.022)
5501	.40	10.3(215)	.17	-.060(-.074)	.037(.035)	5706	25.1(525)	9.96	.299(.293)	-.037(-.040)
5502	.40	10.2(213)	2.15	-.004(-.015)	-.024(-.025)	5707	25.1(524)	11.92	.387(.375)	-.047(-.048)
5503	.40	10.2(213)	4.11	.069(.048)	-.009(.012)	5708	25.1(524)	13.88	.476(.462)	-.055(-.057)
5504	.40	10.2(213)	6.09	.141(.121)	-.008(-.006)	5709	25.1(524)	15.84	.569(.562)	-.064(-.064)
5505	.40	10.2(213)	8.05	.211(.195)	-.022(-.022)	5710	25.1(524)	.13	-.072(-.078)	-.040(-.038)
5506	.40	10.2(213)	10.01	.292(.288)	-.037(-.041)	5801	35.9(750)	.07	-.080(-.088)	.043(.045)
5507	.40	10.2(213)	11.96	.342(.371)	-.047(-.048)	5802	35.9(750)	2.05	-.011(-.021)	.029(.032)
5508	.40	10.2(212)	13.92	.473(.458)	-.055(-.056)	5803	35.9(750)	4.01	.062(.050)	.011(.014)
5509	.40	10.2(213)	15.89	.563(.482)	-.043(-.056)	5804	35.9(749)	5.98	.142(.133)	-.008(-.004)
5601	1.05	39.0(815)	.09	-.081(-.090)	-.047(-.050)	5805	35.9(750)	7.93	.231(.226)	-.027(-.027)
5602	1.05	39.0(815)	2.05	-.008(-.022)	.079(.035)	5806	35.9(750)	9.88	.320(.311)	-.042(-.040)
5603	1.05	39.0(815)	4.02	.071(.058)	.007(-.013)	5807	35.9(750)	11.83	.410(.400)	-.055(-.054)
5604	1.05	39.0(815)	5.97	.153(.145)	-.014(-.009)	5808	35.9(750)	13.78	.507(.503)	-.073(-.070)
5605	1.05	39.0(815)	7.94	.243(.236)	-.034(-.031)	5809	35.9(750)	15.77	.604(.602)	-.089(-.085)
5606	1.05	39.0(815)	9.89	.334(.329)	-.055(-.055)	5901	32.0(668)	.10	-.074(-.082)	-.041(-.041)
5607	1.05	39.0(814)	11.84	.422(.419)	-.072(-.073)	5902	32.0(669)	2.08	-.007(-.019)	-.028(-.029)
5609	1.05	39.0(815)	13.80	.512(.504)	-.089(-.096)	5903	32.0(669)	4.04	.063(.051)	.011(.012)
5610	1.05	39.0(815)	15.75	.600(.597)	-.106(-.101)	5904	32.0(669)	6.01	.140(.128)	-.008(-.005)
						5905	32.0(669)	7.97	.222(.215)	-.023(-.025)
						5906	32.0(669)	9.91	.308(.298)	-.037(-.037)
						5907	32.0(669)	11.88	.396(.385)	-.047(-.048)
						5908	32.0(669)	13.83	.487(.480)	-.058(-.057)
						5909	32.0(669)	15.80	.579(.579)	-.069(-.068)

Table A-1.—(Continued)

(h) T.E. Deflection, Full Span =  $-17.7^\circ$

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
6207	1.05	39.0(814)	-04	-.263(-.289)	-.148(-.165)
6208	1.05	39.0(814)	2.15	-.190(-.216)	-.132(-.146)
6209	1.05	39.0(814)	4.10	-.121(-.144)	-.117(-.130)
6210	1.05	39.0(815)	6.07	-.037(-.054)	-.096(-.105)
6211	1.05	39.0(815)	8.02	-.057(-.043)	-.072(-.080)
6212	1.05	39.0(815)	10.00	-.155(-.139)	-.050(-.056)
6213	1.05	39.0(815)	11.94	.240(-.222)	-.039(-.048)
6214	1.05	39.0(815)	13.89	.334(-.321)	-.021(-.029)
6218	1.05	39.0(814)	15.84	.426(-.422)	-.000(-.006)
6303	.70	25.1(524)	.23	-.283(-.294)	-.145(-.148)
6304	.70	25.1(524)	2.22	-.218(-.230)	-.132(-.132)
6305	.70	25.1(524)	4.19	-.155(-.168)	-.119(-.121)
6306	.70	25.1(524)	6.15	-.089(-.101)	-.106(-.107)
6307	.70	25.1(525)	8.12	-.012(-.023)	-.098(-.088)
6308	.70	25.1(525)	10.06	.075(-.067)	-.073(-.070)
6309	.70	25.1(525)	12.02	.167(-.155)	-.061(-.058)
6310	.70	25.1(525)	13.99	.263(-.250)	-.048(-.044)
6311	.70	25.1(525)	15.95	.368(-.360)	-.033(-.029)
6312	.70	25.1(525)	.07	-.291(-.301)	-.149(-.150)
6401	.95	35.9(749)	.16	-.271(-.289)	-.146(-.154)
6402	.95	35.9(749)	2.15	-.208(-.223)	-.133(-.138)
6403	.95	35.9(749)	4.10	-.147(-.165)	-.123(-.128)
6404	.95	35.9(749)	6.10	-.071(-.088)	-.106(-.112)
6405	.95	35.9(749)	8.05	.016(-.003)	-.088(-.093)
6406	.95	35.9(750)	9.99	.106(-.087)	-.073(-.078)
6407	.95	35.9(750)	11.94	.199(-.186)	-.059(-.063)
6408	.95	35.9(749)	13.89	.303(-.294)	-.041(-.046)
6409	.95	35.9(750)	15.86	.403(-.403)	-.023(-.024)
6501	.85	32.0(668)	.20	-.282(-.299)	-.148(-.152)
6502	.85	32.0(668)	2.19	-.218(-.232)	-.135(-.136)
6503	.85	32.0(669)	4.15	-.154(-.169)	-.123(-.125)
6504	.85	32.0(669)	6.11	-.085(-.099)	-.108(-.109)
6505	.85	32.0(668)	8.07	-.001(-.013)	-.090(-.090)
6506	.85	32.1(670)	10.04	.090(-.074)	-.075(-.077)
6507	.85	32.0(669)	11.97	.180(-.166)	-.063(-.063)
6508	.85	32.0(669)	13.94	.281(-.272)	-.048(-.048)
6509	.85	32.0(669)	15.88	.378(-.378)	-.034(-.033)
6601	.40	10.2(214)	.34	-.273(-.284)	-.144(-.140)
6602	.40	10.2(213)	2.28	-.211(-.221)	-.131(-.124)
6603	.40	10.2(213)	4.22	-.150(-.162)	-.118(-.112)
6604	.40	10.2(213)	6.19	-.086(-.100)	-.105(-.100)
6605	.40	10.2(213)	8.15	-.014(-.024)	-.088(-.082)
6606	.40	10.2(213)	10.13	.068(-.062)	-.073(-.064)
6607	.40	10.2(213)	12.16	.161(-.157)	-.061(-.052)
6610	.40	10.2(213)	14.03	.249(-.241)	-.050(-.043)
6611	.40	10.2(213)	15.98	.347(-.250)	-.038(-.042)

(i) T.E. Deflection, Full Span =  $-17.7^\circ$ , Side-of-Body and Midspan L.E. Cuts Sealed. (For the remainder of the test, the side-of-body cut was sealed for inboard L.E. deflection =  $0.0^\circ$ . The midspan cut was sealed for full span L.E. deflections)

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
6807	.95	35.8(748)	.17	-.273(-.292)	-.146(-.156)
6808	.95	35.8(748)	4.11	-.147(-.166)	-.122(-.128)
6810	.95	35.9(749)	8.03	.016(-.004)	-.087(-.094)
6901	.85	32.0(668)	.21	-.284(-.299)	-.147(-.153)
6902	.85	32.0(668)	4.15	-.155(-.171)	-.122(-.125)
6903	.85	32.0(668)	8.07	-.001(-.017)	-.089(-.094)

Table A-1.—(Continued)

(j) T. E. Deflection, Full Span = -30.2°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
7104	1.05	38.9(812)	-7.68	-.564(-.593)	.204(.220)	7401	.85	31.8(665)	-8.27	-.631(-.658)	.221(.230)
7105	1.05	38.9(812)	-5.70	-.492(-.524)	.195(.213)	7402	.85	31.8(665)	-5.68	-.540(-.566)	.214(.223)
7106	1.05	38.9(812)	-3.74	-.428(-.458)	.189(.206)	7403	.85	31.9(666)	-3.71	-.469(-.495)	.201(.210)
7107	1.05	38.8(811)	-1.79	-.364(-.400)	.178(.197)	7404	.85	31.9(666)	-2.72	-.435(-.462)	.193(.203)
7108	1.05	38.9(812)	.21	-.301(-.340)	.165(.186)	7405	.85	31.8(665)	.24	-.339(-.369)	.173(.185)
7109	1.05	38.9(812)	2.18	-.240(-.278)	.154(.174)	7406	.85	31.9(666)	2.21	-.275(-.305)	.159(.170)
7110	1.05	38.9(812)	4.15	-.176(-.210)	.142(.159)	7407	.85	31.9(666)	4.19	-.213(-.241)	.146(.154)
7111	1.05	38.9(812)	6.10	-.097(-.127)	.125(.141)	7408	.85	31.9(666)	6.16	-.147(-.178)	.132(.142)
7112	1.05	38.8(811)	8.07	-.009(-.042)	.106(.124)	7409	.85	31.9(666)	8.11	-.065(-.098)	.116(.127)
7113	1.05	38.9(812)	10.00	-.089(-.056)	.085(.098)	7410	.85	31.8(665)	10.16	.029(.002)	.100(.106)
7114	1.05	38.9(812)	11.95	-.189(-.159)	.062(.077)	7411	.85	31.8(665)	12.03	-.117(-.093)	.087(.091)
7115	1.05	38.8(811)	13.91	-.285(-.266)	.044(.054)	7412	.85	31.9(666)	13.96	-.198(-.182)	.086(.089)
7116	1.05	38.9(812)	15.88	-.360(-.345)	.042(.050)	7413	.85	31.8(665)	15.93	-.283(-.277)	.084(.082)
7201	.70	25.0(523)	-7.60	-.626(-.660)	.222(.226)	7501	.40	10.2(213)	-7.55	-.622(-.630)	.227(.223)
7202	.70	25.0(523)	-5.64	-.553(-.567)	.212(.215)	7502	.40	10.2(213)	-5.58	-.548(-.560)	.214(.208)
7203	.70	25.0(523)	-3.68	-.480(-.495)	.199(.201)	7503	.40	10.2(212)	-3.63	-.482(-.490)	.202(.196)
7204	.70	24.9(521)	-1.70	-.410(-.429)	.183(.188)	7504	.40	10.2(214)	-1.65	-.416(-.435)	.188(.189)
7205	.70	25.0(522)	.25	-.347(-.369)	.169(.177)	7505	.40	10.2(213)	.33	-.352(-.367)	.173(.172)
7206	.70	24.9(521)	2.24	-.284(-.306)	.155(.162)	7506	.40	10.2(213)	2.29	-.292(-.309)	.161(.158)
7207	.70	24.9(521)	4.22	-.223(-.245)	.144(.149)	7507	.40	10.2(213)	4.24	-.234(-.249)	.150(.146)
7208	.70	25.0(522)	6.19	-.162(-.187)	.133(.140)	7508	.40	10.2(213)	6.23	-.174(-.192)	.139(.137)
7209	.70	25.0(522)	8.15	-.089(-.114)	.120(.126)	7509	.40	10.2(213)	8.21	-.109(-.130)	.128(.126)
7210	.70	25.0(523)	10.12	.001(-.020)	.104(.107)	7510	.40	10.2(213)	10.19	-.026(-.044)	.114(.109)
7211	.70	25.0(523)	12.06	.088(.070)	.093(.091)	7511	.40	10.2(213)	12.12	.059(.041)	.103(.097)
7212	.70	25.0(522)	14.03	.171(.154)	.091(.088)	7512	.40	10.2(212)	14.08	.140(.126)	.099(.091)
7213	.70	25.0(523)	15.98	-.257(-.249)	.089(.086)	7513	.40	10.2(212)	16.05	.225(.136)	.096(.100)
7214	.70	25.0(523)	.28	-.347(-.369)	.171(.177)						
7301	.95	35.8(747)	-7.70	-.579(-.601)	.211(.218)						
7302	.95	35.8(747)	-5.72	-.503(-.529)	.200(.211)						
7303	.95	35.7(746)	-3.75	-.435(-.460)	.190(.199)						
7304	.95	35.8(747)	-1.79	-.373(-.404)	.179(.193)						
7305	.95	35.7(746)	.18	-.311(-.345)	.165(.181)						
7306	.95	35.8(747)	2.18	-.250(-.281)	.152(.165)						
7307	.95	35.7(746)	4.14	-.191(-.222)	.142(.153)						
7308	.95	35.7(746)	6.12	-.119(-.151)	.126(.138)						
7309	.95	35.7(746)	8.07	-.037(-.069)	.111(.122)						
7310	.95	35.8(747)	10.07	.054(.022)	.095(.106)						
7311	.95	35.8(747)	11.98	.144(.120)	.092(.089)						
7312	.95	35.8(747)	13.92	.231(.216)	.076(.081)						
7313	.95	35.8(747)	15.90	.321(.298)	.068(.077)						

Table A-1.—(Concluded)

(k) T. E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
7705	1.11	40.3(841)	.20	-.144(-.156)	.088(.095)	8005	.70	25.0(523)	.08	-.149(-.156)	.076(.077)
7706	1.11	40.2(840)	2.21	-.072(-.088)	.071(.079)	8006	.70	25.1(524)	2.16	-.082(-.092)	.061(.065)
7707	1.11	40.2(840)	4.13	-.005(-.012)	.050(.058)	8007	.70	25.0(522)	4.11	-.018(-.030)	.051(.054)
7708	1.11	40.2(840)	6.08	.094(.080)	-.025(-.031)	8008	.70	25.0(523)	6.09	.057(.043)	-.031(-.035)
7709	1.11	40.3(841)	8.00	.184(.170)	-.001(-.007)	8009	.70	25.0(522)	8.06	.147(.129)	.013(-.016)
7801	.40	10.2(212)	-7.64	-.415(-.421)	.133(.133)	8010	.70	25.0(522)	9.98	.229(.216)	-.000(-.002)
7802	.40	10.2(213)	-5.68	-.338(-.340)	.117(.116)	8011	.70	25.0(522)	11.96	.318(.305)	-.012(-.012)
7803	.40	10.2(213)	-3.75	-.267(-.278)	.102(.105)	8012	.70	25.0(522)	13.92	.409(.396)	-.023(-.023)
7804	.40	10.2(212)	-1.77	-.200(-.209)	.087(.086)	8013	.70	25.0(522)	15.90	.501(.495)	-.032(-.030)
7805	.40	10.2(213)	.22	-.136(-.146)	.074(.072)	8101	.95	35.6(744)	.11	-.169(-.176)	.093(.094)
7806	.40	10.2(213)	2.21	-.073(-.087)	.062(.061)	8102	.95	35.6(744)	2.10	-.098(-.110)	.076(.080)
7807	.40	10.2(213)	4.16	-.011(-.027)	.050(.050)	8103	.95	35.6(744)	4.08	-.026(-.040)	.060(.065)
7808	.40	10.2(213)	6.13	.057(.042)	-.034(-.032)	8104	.95	35.7(745)	6.05	.063(.048)	-.036(-.041)
7809	.40	10.2(213)	8.07	.136(.121)	.015(-.013)	8105	.95	35.7(745)	7.97	.150(.136)	.018(.023)
7810	.40	10.2(213)	10.03	.224(.209)	.000(-.003)	8106	.95	35.7(745)	9.92	.241(.227)	.002(-.005)
7811	.40	10.2(212)	12.01	.312(.297)	-.011(-.014)	8107	.95	35.7(745)	11.87	.338(.325)	-.015(-.011)
7812	.40	10.2(212)	14.01	.402(.388)	-.020(-.025)	8108	.95	35.7(745)	13.86	.437(.428)	-.033(-.028)
7813	.40	10.2(212)	15.93	.489(.474)	-.029(-.034)	8109	.95	35.7(746)	15.81	.532(.533)	-.050(-.048)
7901	1.05	38.8(812)	-7.71	-.467(-.473)	.164(.166)	8202	.85	31.8(665)	1.85	-.097(-.103)	.072(.071)
7902	1.05	38.8(810)	-5.78	-.389(-.397)	.151(.155)	8203	.85	31.8(665)	2.12	-.088(-.099)	.069(.071)
7903	1.05	38.8(810)	-3.78	-.310(-.318)	.136(.141)	8204	.85	31.8(665)	4.10	-.021(-.034)	.055(.058)
7904	1.05	38.7(809)	-1.88	-.237(-.248)	.118(.123)	8205	.85	31.8(665)	6.04	.059(.045)	-.034(-.037)
7905	1.05	38.8(810)	.12	-.162(-.171)	.097(.099)	8206	.85	31.8(665)	8.00	.145(.130)	.017(-.020)
7906	1.05	38.7(809)	2.11	-.089(-.102)	.079(.084)	8207	.85	31.8(665)	9.98	.235(.221)	.002(-.004)
7907	1.05	38.8(810)	4.08	-.011(-.027)	.059(.065)	8208	.85	31.8(665)	11.95	.327(.315)	-.011(-.011)
7908	1.05	38.7(809)	6.03	.079(.063)	.033(-.036)	8209	.85	31.8(665)	13.88	.418(.411)	-.023(-.022)
7909	1.05	38.7(809)	7.96	.172(.157)	.009(-.015)	8210	.85	31.8(665)	15.84	.510(.509)	-.032(-.034)
7910	1.05	38.7(809)	9.94	.267(.259)	-.013(-.012)						
7911	1.05	38.8(810)	11.89	.359(.351)	-.032(-.029)						
7912	1.05	38.8(810)	13.83	.445(.441)	-.048(-.044)						
7913	1.05	38.8(811)	15.78	.535(.527)	-.066(-.065)						

Table A-2.—Experimental Data Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 12.8°

(a) T.E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
8408	1.11	40.4(843)	.19	-.155(-.168)	.083(.093)	8702	.70	25.1(524)	.17	-.159(-.166)	.075(-.076)
8409	1.11	40.3(842)	2.16	-.079(-.095)	.065(.074)	8703	.70	25.0(522)	2.14	-.090(-.099)	.061(-.063)
8410	1.11	40.3(841)	4.12	-.004(-.020)	-.046(-.054)	8704	.70	25.0(522)	4.12	-.023(-.033)	.047(-.049)
8411	1.11	40.3(842)	6.12	.074(.062)	.025(-.031)	8705	.70	25.0(522)	6.08	.046(.035)	.031(-.034)
8412	1.11	40.3(842)	8.05	.158(.152)	-.000(-.004)	8706	.70	25.0(522)	8.04	.120(.112)	.014(-.017)
8503	.40	10.2(213)	.21	-.148(-.163)	.070(.069)	8707	.70	24.9(521)	10.01	.199(.196)	-.006(-.005)
8504	.40	10.2(213)	2.18	-.081(-.094)	.059(.058)	8708	.70	25.0(522)	11.97	.287(.281)	-.027(-.023)
8505	.40	10.2(213)	4.18	-.015(-.029)	.045(.046)	8709	.70	25.0(522)	13.92	.372(.377)	-.039(-.040)
8506	.40	10.2(213)	6.13	.049(.034)	.032(-.032)	8710	.70	25.0(522)	15.88	.461(.463)	-.051(-.052)
8507	.40	10.2(212)	8.09	.118(.109)	.017(-.013)	8801	.95	35.8(747)	.13	-.182(-.191)	.091(-.093)
8508	.40	10.2(212)	10.10	.195(.194)	-.002(-.008)	8802	.95	35.8(748)	2.09	-.107(-.117)	.073(-.077)
8509	.40	10.2(212)	12.05	.278(.282)	-.024(-.031)	8803	.95	35.8(747)	4.06	-.032(-.044)	.055(-.060)
8510	.40	10.2(212)	13.98	.359(.360)	-.041(-.043)	8804	.95	35.8(747)	6.02	.045(-.034)	.035(-.040)
8511	.40	10.2(212)	15.96	.444(.466)	-.055(-.065)	8805	.95	35.8(747)	7.98	.124(.117)	.016(-.020)
8603	1.05	38.9(812)	2.10	-.094(-.111)	.073(.080)	8806	.95	35.8(747)	9.93	.213(.209)	-.007(-.003)
8604	1.05	38.9(812)	4.08	-.017(-.034)	.053(.060)	8807	.95	35.8(747)	11.89	.303(.314)	-.026(-.028)
8605	1.05	38.8(811)	6.04	.062(.050)	.032(-.036)	8808	.95	35.8(747)	13.84	.400(.402)	-.046(-.046)
8606	1.05	38.8(811)	7.97	.145(.137)	.008(-.011)	8809	.95	35.8(747)	15.81	.492(.499)	-.062(-.059)
8607	1.05	38.9(812)	9.98	.238(.232)	-.020(-.015)	8901	.85	31.9(666)	.14	-.166(-.176)	.082(-.087)
8608	1.05	38.8(811)	11.94	.328(.336)	-.042(-.042)	8902	.85	31.9(666)	2.12	-.094(-.105)	.066(-.068)
8609	1.05	38.8(811)	13.89	.416(.423)	-.061(-.064)	8903	.85	31.9(666)	4.08	-.025(-.037)	.051(-.053)
8610	1.05	38.8(811)	15.82	.501(.501)	-.078(-.075)	8904	.85	31.9(666)	6.05	.046(-.034)	.034(-.037)
						8905	.85	31.9(666)	8.00	.122(.115)	.016(-.017)
						8906	.85	31.9(666)	9.97	.206(-.203)	-.006(-.006)
						8907	.85	31.9(666)	11.93	.294(.295)	-.025(-.025)
						8908	.85	31.9(666)	13.88	.383(.389)	-.039(-.042)
						8909	.85	31.8(665)	15.84	.473(.472)	-.051(-.047)

Table A-2.—(Continued)

(b) T. E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
9701	1.11	40.5(846)	-7.79	-0.339(-.356)	-0.70(-.070)
9702	1.11	40.5(846)	-5.82	-0.253(-.264)	.051(.053)
9703	1.11	40.5(846)	-3.95	-0.167(-.171)	.031(.035)
9704	1.11	40.5(846)	-1.87	-0.083(-.089)	.010(.016)
9705	1.11	40.5(846)	.09	-0.05(-.016)	-0.01(-.004)
9706	1.11	40.6(847)	2.06	-0.73(-.057)	-0.30(-.023)
9707	1.11	40.5(846)	4.03	.151(.135)	-0.51(-.046)
9708	1.11	40.5(846)	5.99	.228(.217)	-0.71(-.069)
9709	1.11	40.5(846)	7.96	.309(.306)	-0.93(-.093)
9801	.40	10.2(212)	-7.73	-0.294(-.304)	.055(.047)
9802	.40	10.2(212)	-5.77	-0.214(-.228)	.044(.035)
9803	.40	10.2(213)	-3.79	-0.136(-.153)	.030(.022)
9804	.40	10.2(213)	-1.83	-0.063(-.080)	.017(.009)
9805	.40	10.2(213)	.15	.006(-.011)	.004(-.004)
9806	.40	10.2(213)	2.12	.071(.054)	-0.01(-.015)
9807	.40	10.2(213)	4.09	.136(.116)	-0.25(-.027)
9808	.40	10.2(213)	6.06	.204(.188)	-0.42(-.046)
9809	.40	10.2(213)	8.02	.279(.270)	-0.62(-.070)
9810	.40	10.2(213)	9.99	.360(.347)	-0.83(-.083)
9811	.40	10.2(213)	11.95	.445(.440)	-1.04(-.109)
9812	.40	10.2(213)	13.92	.529(.511)	-1.21(-.114)
9813	.40	10.2(213)	15.89	.618(.618)	-1.36(-.137)
9901	1.05	39.0(815)	-7.85	-0.349(-.365)	.073(.071)
9902	1.05	39.0(815)	-5.88	-0.261(-.273)	.054(.055)
9903	1.05	39.0(815)	-3.91	-0.173(-.175)	.037(.036)
9904	1.05	39.0(814)	-1.94	-0.088(-.093)	.012(.016)
9905	1.05	39.0(815)	.03	-0.009(-.020)	-0.07(-.004)
9906	1.05	39.0(814)	2.01	.070(.053)	-0.26(-.020)
9907	1.05	39.0(815)	3.97	.147(.133)	-0.46(-.043)
9908	1.05	39.0(815)	5.94	.227(.215)	-0.69(-.067)
9909	1.05	39.0(815)	7.91	.310(.307)	-0.91(-.092)
9910	1.05	39.0(815)	9.87	.392(.390)	-1.10(-.108)
9911	1.05	39.0(815)	11.84	.479(.482)	-1.30(-.129)
9912	1.05	39.0(815)	13.82	.560(.563)	-1.44(-.146)
9913	1.05	39.0(815)	15.82	.646(.645)	-1.60(-.154)
10001	.70	25.1(525)	-7.81	-0.308(-.320)	.051(.047)
10002	.70	25.1(525)	-5.83	-0.226(-.233)	.038(.038)
10003	.70	25.1(525)	-3.86	-0.148(-.154)	.024(.025)
10004	.70	25.1(525)	-1.88	-0.072(-.085)	.011(.011)
10005	.70	25.1(525)	.10	-0.01(-.014)	-0.004(-.003)
10006	.70	25.1(525)	2.07	.066(.053)	-0.16(-.016)
10007	.70	25.1(525)	4.05	.134(.119)	-0.31(-.028)
10008	.70	25.2(526)	6.02	.204(.193)	-0.49(-.048)
10009	.70	25.1(525)	7.99	.283(.272)	-0.69(-.066)
10010	.70	25.1(525)	9.96	.363(.361)	-0.87(-.089)
10011	.70	25.1(525)	11.93	.450(.438)	-1.06(-.099)
10012	.70	25.1(525)	13.90	.541(.540)	-1.22(-.117)
10013	.70	25.1(525)	15.89	.631(.627)	-1.32(-.128)
10101	.95	35.9(750)	-7.88	-0.337(-.352)	.062(.055)
10102	.95	35.9(750)	-5.91	-0.249(-.256)	.045(.042)
10103	.95	35.9(750)	-3.92	-0.163(-.170)	.027(.026)
10104	.95	35.9(750)	-1.95	-0.082(-.092)	.011(.011)
10105	.95	35.9(750)	.02	-0.007(-.016)	-0.005(-.004)
10106	.95	35.9(750)	2.01	.066(.054)	-0.20(-.018)
10107	.95	35.9(750)	3.99	.139(.126)	-0.37(-.034)
10108	.95	35.9(750)	5.95	.215(.204)	-0.57(-.054)
10109	.95	35.9(750)	7.92	.297(.295)	-0.77(-.078)
10110	.95	35.9(750)	9.89	.381(.375)	-0.96(-.092)
10111	.95	35.9(750)	11.86	.474(.482)	-1.19(-.119)
10112	.95	35.9(750)	13.83	.566(.571)	-1.37(-.137)
10113	.95	35.9(750)	15.82	.660(.653)	-1.54(-.147)
10201	.85	32.0(668)	-7.85	-0.322(-.335)	.057(.049)
10202	.85	32.0(668)	-5.87	-0.237(-.246)	.042(.039)
10203	.85	32.0(668)	-3.89	-0.155(-.160)	.027(.025)
10204	.85	32.0(669)	-1.91	-0.077(-.087)	.012(.012)
10205	.85	32.0(668)	.05	-0.005(-.015)	-0.003(-.003)
10206	.85	32.0(668)	2.05	.066(.053)	-0.17(-.017)
10207	.85	32.0(668)	4.02	.136(.120)	-0.34(-.030)
10208	.85	32.0(669)	5.99	.209(.197)	-0.52(-.050)
10209	.85	32.0(669)	7.96	.288(.278)	-0.72(-.067)
10210	.85	32.0(669)	9.93	.368(.359)	-0.88(-.084)
10211	.85	32.0(669)	11.91	.460(.459)	-1.09(-.108)
10212	.85	32.0(669)	13.88	.549(.551)	-1.24(-.122)
10213	.85	32.0(669)	15.87	.641(.637)	-1.36(-.129)



Table A-2.-(Continued)

(c) T.E. Deflection, Full Span = 4.1°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
10404	1.11	40.5(846)	-7.76	-2.69(-.284)	.027(-.028)	10701	.95	36.0(751)	-7.84	-2.56(-.268)	.018(-.012)
10405	1.11	40.6(848)	-5.79	-1.84(-.193)	.008(-.012)	10702	.95	36.0(751)	-5.89	-1.70(-.176)	.002(-.000)
10406	1.11	40.6(847)	-3.84	-.098(-.099)	-.013(-.007)	10703	.95	36.0(751)	-3.92	-.088(-.094)	-.013(-.014)
10407	1.11	40.6(847)	-1.88	-.015(-.018)	-.033(-.025)	10704	.95	36.0(751)	-1.96	-.009(-.015)	-.030(-.028)
10408	1.11	40.6(847)	.10	.065(-.056)	-.054(-.047)	10705	.95	36.0(752)	.01	.066(-.059)	-.045(-.044)
10409	1.11	40.6(848)	2.04	.140(-.128)	-.074(-.066)	10706	.95	36.0(751)	1.98	.138(-.129)	-.061(-.058)
10410	1.11	40.6(847)	4.00	.216(-.204)	-.095(-.089)	10707	.95	36.0(751)	3.94	.210(-.202)	-.078(-.075)
10411	1.11	40.6(847)	5.97	.291(-.282)	-.113(-.107)	10708	.95	36.0(752)	5.90	.286(-.277)	-.098(-.094)
10412	1.11	40.6(847)	7.95	.369(-.366)	-.132(-.128)	10709	.95	36.0(751)	7.87	.364(-.363)	-.116(-.114)
10501	.70	25.1(525)	-7.79	-.234(-.242)	.014(-.011)	10710	.95	36.0(752)	9.83	.443(-.444)	-.132(-.129)
10502	.70	25.1(525)	-5.83	-.155(-.157)	-.000(-.001)	10711	.95	36.0(752)	11.80	.529(-.540)	-.151(-.151)
10503	.70	25.2(526)	-3.87	-.079(-.082)	-.012(-.011)	10712	.95	36.0(752)	13.74	.618(-.625)	-.170(-.169)
10504	.70	25.2(526)	-1.91	-.004(-.011)	-.028(-.025)	10713	.95	36.0(752)	15.70	.701(-.711)	-.181(-.173)
10505	.70	25.1(525)	.07	.067(-.059)	-.042(-.039)	10801	.85	32.1(671)	-7.82	-.244(-.257)	.018(-.010)
10506	.70	25.1(525)	2.03	.133(-.124)	-.055(-.051)	10802	.85	32.1(671)	-5.85	-.162(-.169)	.004(-.000)
10507	.70	25.1(525)	4.02	.200(-.190)	-.069(-.065)	10803	.85	32.1(671)	-3.90	-.084(-.087)	-.010(-.012)
10508	.70	25.1(525)	5.98	.269(-.262)	-.085(-.083)	10804	.85	32.1(671)	-1.94	-.008(-.014)	-.025(-.026)
10509	.70	25.1(525)	7.94	.345(-.337)	-.102(-.096)	10805	.85	32.1(671)	.03	.065(-.059)	-.040(-.041)
10510	.70	25.1(525)	9.90	.424(-.417)	-.119(-.113)	10806	.85	32.1(671)	2.02	.134(-.125)	-.054(-.054)
10511	.70	25.1(525)	11.87	.503(-.500)	-.133(-.127)	10807	.85	32.1(671)	3.97	.203(-.194)	-.071(-.070)
10512	.70	25.2(526)	13.83	.597(-.605)	-.153(-.150)	10808	.85	32.1(671)	5.96	.277(-.274)	-.090(-.093)
10513	.70	25.2(526)	15.79	.685(-.685)	-.161(-.155)	10809	.85	32.1(670)	7.89	.352(-.352)	-.106(-.107)
10514	.70	25.1(525)	.07	.066(-.058)	-.039(-.039)	10810	.85	32.1(670)	9.87	.430(-.421)	-.121(-.114)
10601	1.05	39.1(817)	-7.78	-.271(-.286)	.029(-.027)	10811	.85	32.1(671)	11.83	.515(-.515)	-.139(-.134)
10602	1.05	39.1(816)	-5.86	-.187(-.197)	.011(-.012)	10812	.85	32.1(671)	13.76	.606(-.612)	-.156(-.154)
10603	1.05	39.1(816)	-3.90	-.101(-.102)	-.010(-.006)	10813	.85	32.1(671)	14.78	.652(-.653)	-.163(-.157)
10604	1.05	39.1(817)	-1.95	-.018(-.021)	-.030(-.026)	10815	.85	32.1(671)	15.73	.692(-.700)	-.165(-.160)
10605	1.05	39.1(816)	.01	.062(-.055)	-.051(-.046)	10901	.40	10.3(215)	-7.76	-.224(-.229)	.024(-.014)
10606	1.05	39.1(816)	1.99	.141(-.129)	-.071(-.064)	10902	.40	10.3(215)	-5.80	-.149(-.151)	.012(-.003)
10607	1.05	39.1(816)	3.95	.218(-.208)	-.092(-.088)	10903	.40	10.2(214)	-3.81	-.075(-.081)	-.001(-.011)
10608	1.05	39.1(816)	5.92	.296(-.286)	-.113(-.108)	10904	.40	10.2(214)	-1.88	-.004(-.015)	-.015(-.024)
10609	1.05	39.1(816)	7.87	.372(-.370)	-.130(-.129)	10905	.40	10.2(214)	.13	.066(-.059)	-.029(-.037)
10610	1.05	39.1(817)	9.84	.451(-.444)	-.146(-.138)	10906	.40	10.2(214)	2.08	.130(-.123)	-.042(-.049)
10611	1.05	39.1(817)	11.80	.529(-.531)	-.160(-.156)	10907	.40	10.2(214)	4.06	.195(-.185)	-.058(-.061)
10612	1.05	39.1(816)	13.74	.605(-.612)	-.172(-.172)	10908	.40	10.2(214)	6.03	.262(-.252)	-.075(-.077)
10613	1.05	39.0(815)	15.73	.683(-.687)	-.193(-.178)	10909	.40	10.2(213)	7.99	.334(-.340)	-.092(-.104)
						10910	.40	10.2(213)	9.95	.413(-.411)	-.111(-.112)
						10911	.40	10.2(214)	11.93	.492(-.494)	-.128(-.131)
						10912	.40	10.2(214)	13.88	.579(-.575)	-.145(-.141)
						10913	.40	10.2(213)	15.83	.669(-.672)	-.162(-.161)

Table A-2.—(Continued)

(d) T. E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
11104	1.05	39.1(817)	-7.84	-.214(-.227)	-.009(-.010)
11105	1.05	39.1(816)	-5.89	-.125(-.135)	-.030(-.026)
11106	1.05	39.1(817)	-3.93	-.040(-.037)	-.049(-.045)
11107	1.05	39.1(817)	-1.97	.042(.043)	-.069(-.064)
11108	1.05	39.1(817)	-.01	.121(.116)	-.088(-.083)
11109	1.05	39.1(817)	1.95	.200(.194)	-.109(-.103)
11110	1.05	39.2(818)	3.92	.276(.268)	-.129(-.125)
11111	1.05	39.1(817)	5.90	.348(.336)	-.143(-.138)
11112	1.05	39.2(818)	7.84	.421(.414)	-.159(-.153)
11113	1.05	39.1(817)	9.83	.497(.487)	-.174(-.162)
11114	1.05	39.1(817)	11.78	.570(.571)	-.185(-.176)
11115	1.05	39.1(817)	13.73	.641(.649)	-.193(-.193)
11116	1.05	39.1(817)	15.71	.714(.719)	-.202(-.194)
11201	.70	25.3(528)	-7.83	-.167(-.176)	-.021(-.022)
11202	.70	25.2(526)	-5.87	-.088(-.092)	-.034(-.032)
11203	.70	25.2(526)	-3.91	-.031(-.014)	-.047(-.044)
11204	.70	25.2(526)	-1.95	.060(.053)	-.060(-.059)
11205	.70	25.2(526)	.03	.129(.121)	-.073(-.071)
11206	.70	25.2(526)	2.02	.194(.189)	-.086(-.083)
11207	.70	25.2(526)	3.98	.260(.250)	-.101(-.095)
11208	.70	25.2(527)	5.95	.330(.329)	-.117(-.120)
11209	.70	25.2(527)	7.90	.404(.404)	-.132(-.130)
11210	.70	25.3(528)	9.90	.477(.466)	-.144(-.134)
11211	.70	25.3(528)	11.83	.560(.552)	-.162(-.151)
11212	.70	25.3(528)	13.80	.649(.657)	-.178(-.173)
11213	.70	25.3(528)	15.76	.731(.733)	-.186(-.177)
11214	.70	25.2(527)	.10	.131(.123)	-.073(-.072)
11301	.95	36.0(751)	-8.02	-.195(-.209)	-.017(-.023)
11302	.95	36.0(752)	-7.87	-.189(-.202)	-.019(-.024)
11303	.95	36.0(752)	-5.91	-.102(-.106)	-.035(-.037)
11304	.95	36.0(752)	-3.96	-.022(-.026)	-.049(-.051)
11305	.95	36.0(752)	-1.98	.055(.053)	-.065(-.065)
11306	.95	36.0(752)	-.03	.126(.122)	-.079(-.078)
11307	.95	36.0(752)	1.95	.199(.196)	-.096(-.094)
11308	.95	36.0(752)	3.91	.270(.271)	-.113(-.116)
11309	.95	36.1(753)	5.88	.348(.341)	-.134(-.130)
11310	.95	36.0(752)	7.86	.422(.417)	-.149(-.143)
11311	.95	36.0(752)	9.82	.497(.493)	-.164(-.156)
11312	.95	36.0(752)	11.76	.581(.591)	-.184(-.178)
11313	.95	36.0(752)	13.72	.657(.665)	-.194(-.190)
11314	.95	36.0(752)	15.69	.735(.746)	-.201(-.191)
11401	.85	32.1(671)	-7.89	-.179(-.191)	-.019(-.023)
11402	.85	32.1(671)	-5.90	-.095(-.103)	-.034(-.035)
11403	.85	32.1(671)	-3.92	-.017(-.019)	-.048(-.047)
11404	.85	32.1(671)	-1.96	.057(.053)	-.062(-.061)
11405	.85	32.1(671)	-.02	.127(.121)	-.076(-.075)
11406	.85	32.1(671)	1.96	.195(.190)	-.090(-.088)
11407	.85	32.1(671)	3.93	.264(.257)	-.106(-.103)
11408	.85	32.1(671)	5.93	.338(.333)	-.123(-.122)
11409	.85	32.1(671)	7.87	.413(.413)	-.139(-.138)
11410	.85	32.2(672)	9.83	.486(.478)	-.151(-.141)
11411	.85	32.1(671)	11.79	.570(.572)	-.168(-.162)
11412	.85	32.2(672)	13.75	.656(.663)	-.184(-.180)
11413	.85	32.1(671)	15.71	.738(.745)	-.191(-.183)
11501	.40	10.2(214)	-7.78	-.160(-.158)	-.008(-.016)
11502	.40	10.2(214)	-5.82	-.084(-.082)	-.019(-.027)
11503	.40	10.2(214)	-3.85	-.010(-.017)	-.032(-.043)
11504	.40	10.2(213)	-1.89	.060(.053)	-.045(-.056)
11505	.40	10.2(214)	.08	.125(.120)	-.057(-.068)
11506	.40	10.2(214)	2.06	.188(.183)	-.069(-.078)
11507	.40	10.2(213)	4.03	.252(.247)	-.085(-.092)
11508	.40	10.2(214)	6.01	.317(.314)	-.099(-.107)
11509	.40	10.2(214)	7.98	.388(.389)	-.115(-.125)
11510	.40	10.2(214)	9.94	.461(.474)	-.130(-.142)
11511	.40	10.2(214)	11.90	.540(.538)	-.147(-.149)
11512	.40	10.2(214)	13.86	.625(.629)	-.165(-.165)
11513	.40	10.2(214)	15.82	.715(.728)	-.182(-.185)

Table A-2.—(Continued)

(e) T.E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
11613	1.11	40.6(848)	-7.80	-.122(-.116)	-.060(-.068)
11614	1.11	40.6(848)	-3.93	.050(.059)	-.102(-.099)
11615	1.11	40.6(848)	.03	.206(.209)	-.138(-.135)
11616	1.11	40.6(848)	4.01	.347(.350)	-.170(-.171)
11801	.40	10.2(214)	-7.84	-.030(-.031)	-.080(-.078)
11802	.40	10.2(214)	-5.88	.043(.043)	-.090(-.088)
11803	.40	10.2(214)	-3.90	.113(.111)	-.101(-.099)
11804	.40	10.2(214)	-1.96	.181(.175)	-.113(-.112)
11805	.40	10.2(214)	.05	.250(.242)	-.127(-.125)
11806	.40	10.2(214)	1.99	.310(.303)	-.139(-.138)
11807	.40	10.2(214)	3.96	.370(.361)	-.150(-.147)
11808	.40	10.2(214)	5.95	.432(.434)	-.162(-.168)
11809	.40	10.2(214)	7.91	.497(.486)	-.174(-.163)
11810	.40	10.2(214)	9.88	.565(.575)	-.185(-.188)
11811	.40	10.2(214)	11.86	.638(.628)	-.198(-.187)
11812	.40	10.2(214)	13.80	.731(.747)	-.220(-.219)
11813	.40	10.2(214)	15.78	.815(.819)	-.234(-.226)
12005	1.05	39.1(817)	-7.91	-.115(-.122)	-.067(-.067)
12006	1.05	39.1(816)	-5.97	-.025(-.027)	-.087(-.084)
12007	1.05	39.1(817)	-4.00	.062(.071)	-.108(-.101)
12008	1.05	39.1(817)	-2.06	.141(.144)	-.125(-.118)
12009	1.05	39.1(816)	-.05	.219(.215)	-.143(-.137)
12010	1.05	39.1(817)	1.94	.292(.291)	-.159(-.156)
12011	1.05	39.1(816)	3.88	.357(.359)	-.172(-.172)
12012	1.05	39.1(817)	5.87	.421(.425)	-.182(-.182)
12013	1.05	39.1(817)	7.81	.487(.485)	-.194(-.185)
12014	1.05	39.1(817)	9.78	.558(.579)	-.206(-.210)
12015	1.05	39.1(817)	11.75	.623(.648)	-.212(-.216)
12016	1.05	39.1(817)	13.73	.694(.714)	-.221(-.225)
12017	1.05	39.1(817)	15.64	.750(.774)	-.220(-.221)
12102	.70	25.2(527)	-7.87	-.043(-.055)	-.081(-.079)
12103	.70	25.2(527)	-5.90	.032(.025)	-.091(-.085)
12104	.70	25.2(527)	-3.96	.107(.104)	-.105(-.101)
12105	.70	25.2(527)	-1.99	.178(.172)	-.118(-.115)
12106	.70	25.2(527)	-.03	.245(.239)	-.131(-.126)
12107	.70	25.2(527)	1.98	.308(.298)	-.143(-.137)
12108	.70	25.2(527)	3.93	.373(.369)	-.158(-.157)
12109	.70	25.2(526)	5.88	.440(.430)	-.172(-.164)
12110	.70	25.2(526)	7.88	.502(.510)	-.178(-.180)
12111	.70	25.2(526)	9.82	.572(.567)	-.190(-.181)
12112	.70	25.2(526)	11.79	.654(.667)	-.207(-.205)
12113	.70	25.2(526)	13.79	.741(.753)	-.221(-.216)
12114	.70	25.2(526)	15.72	.814(.829)	-.223(-.220)
12115	.70	25.2(527)	-.01	.743(.738)	-.130(-.126)
12201	.95	36.1(753)	-7.91	-.076(-.082)	-.078(-.083)
12202	.95	36.0(752)	-5.97	.004(.001)	-.089(-.088)
12203	.95	36.0(752)	-4.03	.087(.083)	-.108(-.104)
12204	.95	36.0(752)	-2.07	.163(.164)	-.124(-.121)
12205	.95	36.0(752)	-.06	.236(.233)	-.140(-.136)
12206	.95	36.0(751)	1.89	.305(.305)	-.156(-.155)
12207	.95	36.0(752)	3.86	.373(.372)	-.173(-.170)
12208	.95	36.0(752)	5.81	.439(.441)	-.187(-.183)
12209	.95	36.0(752)	7.79	.503(.503)	-.196(-.189)
12210	.95	36.0(752)	9.82	.573(.581)	-.206(-.201)
12211	.95	36.0(752)	11.75	.647(.666)	-.220(-.217)
12212	.95	36.0(752)	13.74	.719(.735)	-.227(-.226)
12213	.95	36.0(751)	15.69	.783(.807)	-.224(-.221)
12301	.85	32.1(671)	-7.90	-.061(-.073)	-.077(-.079)
12302	.85	32.1(671)	-5.93	.020(.011)	-.090(-.086)
12303	.85	32.1(671)	-3.98	.097(.092)	-.105(-.099)
12304	.85	32.1(671)	-2.07	.168(.163)	-.118(-.115)
12305	.85	32.1(670)	-.05	.239(.233)	-.133(-.128)
12306	.85	32.1(671)	-.04	.239(.233)	-.133(-.128)
12307	.85	32.1(670)	1.94	.304(.296)	-.146(-.141)
12308	.85	32.1(670)	3.91	.373(.371)	-.163(-.162)
12309	.85	32.1(670)	5.86	.441(.439)	-.177(-.172)
12310	.85	32.1(670)	7.82	.505(.506)	-.184(-.179)
12311	.85	32.1(670)	9.80	.576(.577)	-.196(-.188)
12312	.85	32.1(671)	11.76	.657(.675)	-.213(-.210)
12313	.85	32.1(671)	13.71	.735(.753)	-.225(-.224)
12314	.85	32.1(671)	15.69	.804(.824)	-.224(-.221)

Table A-2.—(Concluded)

(f) T. E. Deflection, Full Span = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
12405	1.11	40.7(850)	.24	-.246(-.276)	.133(.156)
12406	1.11	40.7(849)	4.20	-.105(-.132)	.102(.118)
12407	1.11	40.7(849)	8.11	-.046(-.024)	.057(.081)
12601	.40	10.3(215)	.29	-.289(-.301)	.135(.137)
12602	.40	10.3(215)	2.26	-.223(-.233)	.123(.124)
12603	.40	10.2(214)	4.22	-.155(-.166)	.108(.111)
12604	.40	10.2(214)	6.22	-.089(-.101)	.094(.097)
12605	.40	10.2(214)	8.16	-.022(-.034)	.080(.083)
12606	.40	10.2(214)	10.12	.046(.038)	.066(.068)
12607	.40	10.2(214)	12.08	.119(.115)	.051(.052)
12608	.40	10.2(214)	14.05	.204(.204)	.030(.030)
12610	.40	10.2(214)	16.05	.292(.305)	.012(.008)
12701	1.05	39.2(818)	.19	-.269(-.303)	.143(.167)
12702	1.05	39.2(818)	2.15	-.197(-.228)	.127(.149)
12703	1.05	39.2(818)	4.15	-.125(-.152)	.111(.127)
12704	1.05	39.2(818)	6.07	-.054(-.078)	.095(.109)
12705	1.05	39.2(818)	8.04	.023(.002)	.076(.089)
12706	1.05	39.2(818)	10.00	.110(.095)	.056(.068)
12707	1.05	39.2(818)	11.97	.198(.198)	.037(.040)
12708	1.05	39.2(819)	13.95	.290(.288)	.017(.020)
12709	1.05	39.2(818)	15.88	.380(.368)	-.003(.012)
12801	.70	25.3(528)	.24	-.297(-.312)	.143(.149)
12802	.70	25.3(528)	2.21	-.228(-.241)	.129(.134)
12803	.70	25.3(528)	4.17	-.160(-.175)	.114(.119)
12804	.70	25.3(528)	6.14	-.093(-.108)	.100(.105)
12805	.70	25.2(527)	8.15	-.021(-.032)	.084(.089)
12806	.70	25.2(527)	10.06	.049(.040)	.070(.075)
12807	.70	25.3(528)	12.06	.129(.126)	.053(.055)
12808	.70	25.3(528)	14.00	.218(.220)	.035(.036)
12809	.70	25.2(527)	15.97	.311(.303)	.021(.021)
12810	.70	25.3(528)	.24	-.299(-.313)	.144(.150)
12901	.95	36.1(753)	.18	-.292(-.316)	.151(.163)
12902	.95	36.1(753)	2.16	-.218(-.241)	.132(.142)
12903	.95	36.1(753)	4.12	-.150(-.173)	.117(.127)
12904	.95	36.1(753)	6.08	-.082(-.105)	.102(.114)
12905	.95	36.0(752)	8.06	-.010(-.030)	.086(.099)
12906	.95	36.0(752)	10.04	.068(.051)	.070(.082)
12907	.95	36.1(753)	11.96	.157(.149)	.052(.061)
12908	.95	36.1(753)	13.90	.251(.243)	.034(.041)
12909	.95	36.0(752)	15.87	.350(.346)	.016(.027)
13001	.85	32.2(672)	.21	-.299(-.320)	.148(.155)
13002	.85	32.2(672)	2.21	-.227(-.249)	.132(.141)
13003	.85	32.2(672)	4.13	-.160(-.180)	.117(.125)
13004	.85	32.2(672)	6.14	-.089(-.108)	.101(.109)
13005	.85	32.1(671)	8.07	-.019(-.035)	.087(.095)
13006	.85	32.1(671)	10.02	.053(.040)	.072(.079)
13007	.85	32.2(672)	12.03	.142(.133)	.052(.059)
13008	.85	32.2(672)	13.95	.232(.231)	.037(.040)
13009	.85	32.1(671)	15.92	.327(.324)	.023(.027)

Table A.3.—Experimental Data Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 5.1°

(a) T.E. Deflection, Full Span = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
13127	1.11	40.6(848)	2.2	-2.36(-.264)	.133(.155)
13128	1.11	40.6(848)	4.17	-1.04(-.131)	.107(.122)
13129	1.11	40.6(848)	8.09	-.056(-.041)	-.056(-.075)
13201	.40	10.2(214)	2.8	-.275(-.292)	.138(.143)
13202	.40	10.2(214)	2.25	-.211(-.227)	.124(.126)
13203	.40	10.2(214)	4.22	-.150(-.166)	.112(.114)
13204	.40	10.2(214)	6.19	-.096(-.102)	.099(.101)
13205	.40	10.2(214)	8.15	-.023(-.035)	-.087(-.086)
13206	.40	10.2(214)	10.12	-.052(-.041)	-.069(-.068)
13207	.40	10.2(214)	12.09	-.129(-.126)	.054(.050)
13208	.40	10.2(214)	14.05	-.215(-.204)	-.039(-.037)
13209	.40	10.2(214)	16.00	-.310(-.304)	-.026(-.019)
13301	1.05	39.1(817)	1.7	-.259(-.283)	.144(.164)
13302	1.05	39.1(817)	2.14	-.191(-.219)	.128(.147)
13303	1.05	39.1(817)	4.11	-.125(-.150)	.115(.131)
13304	1.05	39.1(817)	6.08	-.052(-.074)	-.098(-.112)
13305	1.05	39.1(817)	8.04	-.034(-.017)	-.076(-.088)
13306	1.05	39.1(817)	9.99	-.126(-.110)	-.057(-.066)
13307	1.05	39.1(817)	11.94	-.220(-.203)	-.038(-.044)
13308	1.05	39.1(817)	13.89	-.309(-.288)	-.023(-.032)
13309	1.05	39.1(817)	15.85	-.405(-.390)	-.001(-.010)
13401	.70	25.1(525)	2.3	-.286(-.302)	.146(.152)
13402	.70	25.1(525)	2.22	-.220(-.237)	.132(.136)
13403	.70	25.1(525)	4.18	-.156(-.172)	.118(.122)
13404	.70	25.2(526)	6.15	-.091(-.106)	.104(.108)
13405	.70	25.2(526)	8.12	-.024(-.037)	.090(.093)
13406	.70	25.2(526)	10.07	.056(.046)	.073(.075)
13407	.70	25.2(526)	12.03	.146(.136)	.057(.058)
13408	.70	25.2(526)	13.98	.238(.231)	.045(.043)
13409	.70	25.1(525)	15.95	.337(.331)	.031(.026)
13410	.70	25.2(526)	2.3	-.291(-.303)	.149(.152)
13501	.95	36.0(752)	1.7	-.275(-.294)	.146(.156)
13502	.95	36.0(752)	2.15	-.209(-.228)	.131(.140)
13503	.95	36.0(752)	4.11	-.146(-.169)	.120(.130)
13504	.95	36.0(752)	6.09	-.083(-.106)	.108(.119)
13505	.95	36.0(752)	8.05	-.004(-.024)	.089(.099)
13506	.95	36.0(752)	10.00	.084(.064)	.073(.081)
13507	.95	36.0(752)	11.95	.176(.157)	.058(.067)
13508	.95	36.0(752)	13.90	.274(.258)	.042(.047)
13509	.95	36.0(752)	15.86	.381(.369)	.022(.026)
13601	.85	32.1(670)	2.0	-.286(-.303)	.148(.154)
13602	.85	32.1(670)	2.18	-.220(-.239)	.134(.140)
13603	.85	32.1(670)	4.14	-.155(-.174)	.120(.126)
13604	.85	32.1(670)	6.12	-.089(-.108)	.107(.114)
13605	.85	32.1(670)	8.08	-.018(-.036)	.092(.098)
13606	.85	32.1(670)	10.04	.070(.056)	.074(.078)
13607	.85	32.1(670)	11.99	.160(.145)	.060(.063)
13608	.85	32.1(670)	13.94	.253(.241)	.047(.047)
13609	.85	32.1(670)	15.90	.356(.346)	.031(.031)

Table A-3.—(Continued)

(b) T. E. Deflection, Full Span = 4.1°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
13706	1.11	40.6(848)	-5.80	-.174(-.176)	.013(.016)
13707	1.11	40.7(849)	-3.84	-.088(-.094)	-.009(-.006)
13708	1.11	40.6(847)	-1.88	-.005(-.011)	-.031(-.026)
13709	1.11	40.6(848)	.07	.070(.065)	-.050(-.045)
13710	1.11	40.6(848)	2.04	.143(.134)	-.070(-.063)
13711	1.11	40.6(848)	4.01	.220(.211)	-.092(-.088)
13712	1.11	40.6(848)	5.97	.298(.286)	-.113(-.107)
13713	1.11	40.6(847)	7.92	.374(.362)	-.128(-.120)
13801	.40	10.2(214)	.12	.066(.065)	-.028(-.034)
13802	.40	10.3(215)	-7.76	-.219(-.215)	.028(.020)
13803	.40	10.2(214)	-5.79	-.139(-.145)	.015(.006)
13804	.40	10.2(214)	-3.83	-.063(-.063)	-.001(-.007)
13805	.40	10.2(214)	-1.86	.006(.007)	-.016(-.023)
13806	.40	10.2(214)	.12	.088(.066)	-.028(-.035)
13807	.40	10.2(214)	2.08	.129(.125)	-.041(-.045)
13808	.40	10.2(214)	4.05	.193(.184)	-.056(-.056)
13809	.40	10.2(214)	6.03	.260(.262)	-.071(-.080)
13810	.40	10.2(214)	7.98	.333(.331)	-.088(-.093)
13811	.40	10.2(214)	9.95	.418(.411)	-.109(-.109)
13812	.40	10.2(214)	11.90	.506(.502)	-.126(-.127)
13813	.40	10.2(214)	13.85	.592(.585)	-.137(-.136)
13814	.40	10.2(214)	15.84	.681(.608)	-.143(-.135)
13901	1.05	39.1(817)	-7.83	-.263(-.267)	.031(.033)
13902	1.05	39.1(816)	-5.87	-.178(-.180)	.012(.017)
13903	1.05	39.1(817)	-3.91	-.090(-.096)	-.009(-.007)
13904	1.05	39.1(816)	-1.96	-.006(-.010)	-.031(-.027)
13905	1.05	39.1(816)	.02	.070(.064)	-.050(-.045)
13906	1.05	39.1(817)	1.98	.142(.132)	-.068(-.060)
13907	1.05	39.1(817)	3.94	.220(.213)	-.090(-.086)
13908	1.05	39.1(817)	5.91	.298(.288)	-.111(-.105)
13909	1.05	39.1(817)	7.86	.376(.363)	-.126(-.117)
13910	1.05	39.1(817)	9.83	.463(.456)	-.144(-.138)
13911	1.05	39.1(817)	11.79	.542(.533)	-.154(-.148)
13912	1.05	39.1(816)	13.75	.618(.609)	-.161(-.159)
13913	1.05	39.1(817)	15.73	.695(.689)	-.170(-.164)
14001	.70	25.2(526)	-7.80	-.223(-.226)	.021(.020)
14002	.70	25.2(526)	-5.83	-.144(-.146)	.009(.007)
14003	.70	25.2(526)	-3.87	-.067(-.067)	-.006(-.007)
14004	.70	25.2(526)	-1.91	.006(.006)	-.023(-.025)
14005	.70	25.2(526)	.06	.069(.066)	-.035(-.037)
14006	.70	25.2(526)	2.04	.133(.127)	-.048(-.048)
14007	.70	25.2(526)	4.01	.199(.192)	-.064(-.062)
14008	.70	25.2(526)	5.97	.273(.268)	-.082(-.084)
14009	.70	25.2(526)	7.94	.346(.336)	-.097(-.092)
14010	.70	25.2(527)	9.89	.432(.422)	-.113(-.110)
14011	.70	25.2(527)	11.86	.516(.509)	-.122(-.120)
14012	.70	25.2(526)	13.82	.601(.592)	-.130(-.126)
14013	.70	25.2(526)	15.79	.688(.678)	-.136(-.135)
14014	.70	25.2(527)	15.79	.688(.678)	-.136(-.135)
14014	.70	25.2(527)	.06	.068(.066)	-.035(-.037)
14101	.95	36.0(751)	-7.84	-.244(-.240)	.020(.021)
14102	.95	36.0(751)	-5.88	-.160(-.162)	.007(.007)
14103	.95	36.0(752)	-3.92	-.077(-.078)	-.010(-.009)
14104	.95	36.0(751)	-1.96	.003(-.000)	-.029(-.027)
14105	.95	36.0(752)	.01	.072(.069)	-.043(-.041)
14106	.95	36.0(751)	1.97	.139(.134)	-.058(-.055)
14107	.95	36.0(752)	3.94	.212(.207)	-.076(-.075)
14108	.95	36.0(751)	5.90	.289(.282)	-.095(-.091)
14109	.95	36.0(752)	7.86	.368(.357)	-.113(-.104)
14110	.95	36.0(752)	9.81	.464(.454)	-.137(-.129)
14111	.95	36.0(752)	11.76	.548(.537)	-.148(-.138)
14112	.95	36.0(752)	13.72	.628(.622)	-.155(-.152)
14113	.95	36.0(752)	15.70	.711(.705)	-.162(-.157)
14201	.85	32.1(671)	-7.83	-.234(-.232)	.021(.022)
14202	.85	32.1(671)	-5.86	-.152(-.156)	.009(.007)
14203	.85	32.1(671)	-3.91	-.073(-.073)	-.007(-.008)
14204	.85	32.1(671)	-1.94	.004(.003)	-.025(-.026)
14205	.85	32.1(671)	.03	.070(.067)	-.038(-.039)
14206	.85	32.1(671)	1.99	.134(.129)	-.051(-.051)
14207	.85	32.1(670)	3.98	.204(.200)	-.068(-.069)
14208	.85	32.1(671)	5.94	.279(.273)	-.087(-.086)
14209	.85	32.1(671)	7.90	.355(.342)	-.102(-.095)
14210	.85	32.1(671)	9.85	.447(.445)	-.122(-.121)
14211	.85	32.1(671)	11.83	.529(.522)	-.129(-.125)
14212	.85	32.1(671)	13.77	.613(.607)	-.137(-.135)
14213	.85	32.1(671)	15.73	.702(.696)	-.145(-.143)

Table A-3.—(Continued)

(c) T. E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
14404	1.11	40.6(1948)	-7.80	-1.99(-.208)	-0.10(-.004)
14405	1.11	40.6(1848)	-5.83	-1.11(-.115)	-0.30(-.023)
14406	1.11	40.6(1847)	-3.87	-0.25(-.033)	-0.51(-.045)
14407	1.11	40.6(1848)	-1.92	-0.58(-.050)	-0.72(-.063)
14408	1.11	40.6(1848)	-1.2	-1.35(-.127)	-0.91(-.083)
14409	1.11	40.6(1848)	2.00	-2.01(-.191)	-1.07(-.099)
14410	1.11	40.6(1848)	4.00	-2.76(-.267)	-1.27(-.124)
14411	1.11	40.6(1848)	5.94	-3.51(-.339)	-1.46(-.140)
14412	1.11	40.6(1848)	7.91	-4.20(-.411)	-1.56(-.148)
14501	.70	25.2(1526)	-7.82	-1.53(-.158)	-0.17(-.013)
14502	.70	25.2(1526)	-5.86	-0.74(-.076)	-0.30(-.027)
14503	.70	25.2(1527)	-3.88	-0.04(-.002)	-0.46(-.042)
14504	.70	25.2(1527)	-1.93	-0.74(-.071)	-0.61(-.058)
14505	.70	25.2(1527)	-0.1	-1.35(-.128)	-0.73(-.068)
14506	.70	25.2(1527)	2.02	-1.99(-.189)	-0.85(-.079)
14507	.70	25.2(1527)	3.98	-2.66(-.259)	-1.00(-.098)
14508	.70	25.2(1527)	5.94	-3.36(-.329)	-1.16(-.113)
14509	.70	25.3(1528)	7.92	-4.08(-.396)	-1.29(-.121)
14510	.70	25.2(1527)	9.86	-4.93(-.481)	-1.44(-.136)
14511	.70	25.2(1527)	11.83	-5.72(-.565)	-1.51(-.146)
14512	.70	25.2(1527)	13.79	-6.52(-.644)	-1.55(-.149)
14513	.70	25.2(1527)	15.77	-7.36(-.729)	-1.59(-.157)
14601	1.05	39.1(1817)	-7.85	-1.98(-.205)	-0.06(-.005)
14602	1.05	39.1(1817)	-5.96	-1.02(-.103)	-0.48(-.045)
14603	1.05	39.1(1816)	-3.97	-0.61(-.054)	-0.69(-.065)
14604	1.05	39.2(1818)	-2.02	-1.34(-.129)	-0.87(-.083)
14605	1.05	39.1(1817)	1.94	-2.06(-.196)	-1.06(-.100)
14606	1.05	39.1(1817)	3.91	-2.80(-.272)	-1.26(-.124)
14607	1.05	39.1(1817)	5.87	-3.54(-.347)	-1.44(-.142)
14608	1.05	39.1(1817)	7.85	-4.27(-.424)	-1.56(-.151)
14609	1.05	39.1(1817)	9.89	-5.09(-.505)	-1.69(-.165)
14610	1.05	39.1(1817)	11.78	-5.81(-.577)	-1.77(-.172)
14611	1.05	39.1(1817)	13.75	-6.52(-.644)	-1.81(-.178)
14612	1.05	39.1(1817)	15.70	-7.22(-.722)	-1.86(-.182)
14701	.95	36.0(1752)	-7.89	-1.74(-.175)	-0.19(-.015)
14702	.95	36.0(1751)	-5.92	-0.89(-.094)	-0.34(-.031)
14703	.95	36.0(1751)	-3.95	-0.06(-.007)	-0.50(-.047)
14704	.95	36.0(1751)	-1.99	-0.71(-.066)	-0.67(-.063)
14705	.95	36.0(1752)	-0.4	-1.37(-.132)	-0.81(-.076)
14706	.95	36.0(1751)	1.94	-2.05(-.199)	-0.96(-.090)
14707	.95	36.0(1751)	3.92	-2.77(-.272)	-1.14(-.111)
14708	.95	36.0(1751)	5.86	-3.51(-.343)	-1.31(-.125)
14709	.95	36.0(1751)	7.83	-4.29(-.419)	-1.48(-.139)
14710	.95	36.0(1751)	9.86	-5.21(-.509)	-1.70(-.159)
14711	.95	36.0(1752)	11.75	-5.95(-.535)	-1.76(-.165)
14712	.95	36.0(1752)	13.71	-6.67(-.662)	-1.79(-.172)
14713	.95	36.0(1752)	15.69	-7.43(-.737)	-1.80(-.173)
14801	.85	32.1(1670)	-7.83	-1.63(-.164)	-0.15(-.014)
14802	.85	32.1(1670)	-5.90	-0.83(-.087)	-0.29(-.029)
14803	.85	32.1(1670)	-3.95	-0.04(-.006)	-0.44(-.043)
14804	.85	32.1(1670)	-1.96	-0.71(-.068)	-0.61(-.060)
14805	.85	32.1(1671)	-0.1	-1.34(-.130)	-0.73(-.072)
14806	.85	32.1(1670)	1.98	-1.99(-.191)	-0.87(-.083)
14807	.85	32.1(1670)	3.94	-2.69(-.264)	-1.03(-.104)
14808	.85	32.1(1670)	5.91	-3.41(-.332)	-1.19(-.116)
14809	.85	32.1(1670)	7.85	-4.16(-.405)	-1.34(-.127)
14810	.85	32.1(1670)	9.83	-5.05(-.501)	-1.52(-.144)
14811	.85	32.1(1671)	11.80	-5.84(-.576)	-1.58(-.151)
14812	.85	32.1(1671)	13.76	-6.63(-.658)	-1.63(-.160)
14813	.85	32.1(1670)	15.74	-7.47(-.745)	-1.69(-.167)
14901	.40	10.2(1214)	-7.80	-1.50(-.152)	-0.02(-.011)
14902	.40	10.2(1214)	-5.81	-0.69(-.075)	-0.17(-.026)
14903	.40	10.2(1213)	-3.86	-0.06(-.004)	-0.32(-.040)
14904	.40	10.2(1213)	-1.89	-0.73(-.071)	-0.45(-.055)
14905	.40	10.2(1213)	.08	-1.32(-.127)	-0.58(-.065)
14906	.40	10.2(1214)	2.05	-1.92(-.186)	-0.69(-.075)
14907	.40	10.2(1214)	4.02	-2.56(-.249)	-0.83(-.090)
14908	.40	10.2(1214)	5.99	-3.22(-.316)	-0.99(-.106)
14909	.40	10.2(1214)	7.96	-3.94(-.392)	-1.14(-.122)
14910	.40	10.2(1214)	9.94	-4.75(-.463)	-1.33(-.132)
14911	.40	10.2(1214)	11.87	-5.61(-.553)	-1.48(-.150)
14912	.40	10.2(1214)	13.85	-6.45(-.643)	-1.57(-.158)
14913	.40	10.2(1213)	15.80	-7.30(-.717)	-1.67(-.164)

Table A-3.—(Continued)

(d) T. E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
17204	1.05	39.0(1815)	-7.91	-.092(-.093)	-.072(-.068)
17205	1.05	39.0(1815)	-5.94	-.001(-.004)	-.093(-.088)
17206	1.05	39.1(1816)	-3.99	-.083(-.083)	-.112(-.107)
17207	1.05	39.1(1816)	-2.04	.161(-.163)	-.129(-.125)
17208	1.05	39.1(1816)	-.08	-.229(-.229)	-.144(-.138)
17209	1.05	39.0(1815)	1.90	.295(-.300)	-.158(-.159)
17210	1.05	39.1(1816)	3.89	-.362(-.367)	-.172(-.172)
17211	1.05	39.1(1816)	5.83	.431(-.432)	-.187(-.185)
17212	1.05	39.1(1816)	7.82	.494(-.502)	-.192(-.190)
17213	1.05	39.0(1815)	9.78	.569(-.572)	-.202(-.199)
17214	1.05	39.1(1816)	11.76	.635(-.646)	-.205(-.210)
17215	1.05	39.1(1816)	13.71	.702(-.713)	-.208(-.213)
17217	1.05	39.1(1816)	15.69	.763(-.779)	-.206(-.210)
17301	.70	25.2(1526)	-8.07	-.030(-.037)	-.083(-.075)
17302	.70	25.2(1526)	-7.88	-.022(-.029)	-.066(-.076)
17303	.70	25.2(1526)	-5.93	.055(-.052)	-.096(-.090)
17304	.70	25.2(1526)	-3.97	.129(-.126)	-.110(-.104)
17305	.70	25.2(1526)	-2.00	.194(-.188)	-.123(-.116)
17306	.70	25.2(1526)	-.02	.253(-.243)	-.131(-.123)
17307	.70	25.2(1526)	1.95	.315(-.309)	-.145(-.141)
17308	.70	25.2(1526)	3.92	.382(-.373)	-.160(-.153)
17309	.70	25.2(1526)	5.89	.452(-.442)	-.175(-.167)
17310	.70	25.2(1526)	7.87	.519(-.507)	-.183(-.173)
17312	.70	25.2(1527)	9.83	.587(-.578)	-.186(-.180)
17313	.70	25.2(1526)	11.76	.666(-.660)	-.195(-.190)
17314	.70	25.2(1527)	13.76	.742(-.740)	-.197(-.194)
17315	.70	25.2(1526)	15.71	.816(-.812)	-.196(-.196)
17401	.95	36.0(1752)	-7.96	-.061(-.059)	-.076(-.072)
17402	.95	36.0(1751)	-5.96	-.026(-.022)	-.093(-.088)
17403	.95	36.0(1751)	-4.01	.110(-.113)	-.112(-.110)
17404	.95	35.9(1750)	-2.06	.182(-.183)	-.128(-.125)
17405	.95	36.0(1751)	-.09	.246(-.243)	-.141(-.135)
17406	.95	36.0(1751)	1.90	.311(-.316)	-.156(-.156)
17407	.95	36.0(1751)	3.87	.379(-.381)	-.172(-.170)
17408	.95	36.0(1751)	5.84	.450(-.445)	-.190(-.180)
17409	.95	36.0(1751)	7.79	.512(-.512)	-.195(-.187)
17410	.95	36.0(1751)	9.75	.585(-.585)	-.204(-.197)
17411	.95	36.0(1751)	11.71	.662(-.662)	-.215(-.205)
17412	.95	36.0(1751)	13.70	.729(-.734)	-.212(-.211)
17413	.95	36.0(1751)	15.69	.794(-.798)	-.207(-.203)
17501	.85	32.1(1671)	-7.92	-.043(-.046)	-.076(-.070)
17502	.85	32.1(1671)	-5.95	-.042(-.036)	-.093(-.090)
17503	.85	32.1(1670)	-3.99	.119(-.119)	-.108(-.106)
17504	.85	32.1(1670)	-2.05	.186(-.183)	-.122(-.118)
17505	.85	32.1(1670)	-.05	.247(-.241)	-.132(-.126)
17506	.85	32.1(1670)	1.93	.312(-.309)	-.147(-.145)
17507	.85	32.1(1670)	3.88	.378(-.374)	-.161(-.158)
17508	.85	32.1(1670)	5.85	.450(-.442)	-.178(-.169)
17509	.85	32.1(1670)	7.81	.520(-.513)	-.189(-.179)
17510	.85	32.1(1670)	9.79	.594(-.592)	-.196(-.191)
17511	.85	32.1(1670)	11.74	.670(-.670)	-.203(-.197)
17512	.85	32.1(1670)	13.72	.746(-.751)	-.207(-.208)
17513	.85	32.1(1670)	15.68	.813(-.820)	-.202(-.204)
17701	.40	10.3(1215)	-7.84	-.016(-.024)	-.067(-.073)
17702	.40	10.3(1215)	-5.88	.060(-.048)	-.079(-.085)
17703	.40	10.2(1214)	-3.93	.134(-.127)	-.096(-.099)
17704	.40	10.2(1214)	-1.95	.196(-.187)	-.108(-.111)
17705	.40	10.2(1214)	.03	.253(-.242)	-.119(-.120)
17706	.40	10.3(1215)	2.00	.314(-.303)	-.132(-.133)
17707	.40	10.2(1214)	3.96	.375(-.363)	-.145(-.146)
17708	.40	10.2(1214)	5.93	.437(-.430)	-.157(-.158)
17709	.40	10.2(1214)	7.93	.506(-.494)	-.170(-.168)
17710	.40	10.2(1214)	9.89	.577(-.571)	-.181(-.179)
17711	.40	10.2(1214)	11.83	.659(-.645)	-.194(-.191)
17712	.40	10.2(1214)	13.82	.742(-.737)	-.202(-.199)
17713	.40	10.2(1214)	15.77	.823(-.810)	-.205(-.205)



Table A-3.—(Continued)

(e) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
17810	1.11	40.6(848)	-7.73	-.329(-.337)	.075(-.075)	18101	.95	36.0(752)	-7.80	-.326(-.323)	.069(-.066)
17811	1.11	40.6(848)	-5.75	-.243(-.247)	.057(-.060)	18102	.95	36.0(751)	-5.89	-.240(-.244)	.052(-.050)
17812	1.11	40.6(847)	-3.81	-.157(-.164)	.036(-.037)	18103	.95	36.0(751)	-3.88	-.153(-.154)	.033(-.033)
17813	1.11	40.6(847)	-1.86	-.074(-.077)	.016(-.017)	18104	.95	36.0(752)	-1.95	-.073(-.077)	.015(-.015)
17814	1.11	40.6(847)	.14	.002(-.002)	-.006(-.003)	18105	.95	36.0(751)	.04	-.002(-.005)	-.001(-.001)
17815	1.11	40.6(847)	2.07	.073(-.063)	-.024(-.019)	18106	.95	36.0(751)	2.05	.067(-.060)	-.016(-.014)
17816	1.11	40.6(847)	4.07	.151(-.138)	-.046(-.040)	18107	.95	36.0(751)	4.00	.137(-.128)	-.032(-.029)
17817	1.11	40.6(847)	6.03	.232(-.220)	-.069(-.065)	18108	.95	35.9(750)	5.93	.215(-.208)	-.053(-.052)
17818	1.11	40.6(847)	7.99	.316(-.305)	-.091(-.085)	18109	.95	36.0(751)	7.89	.299(-.291)	-.073(-.069)
17901	.70	25.2(526)	-7.76	-.298(-.302)	.057(-.058)	18110	.95	36.0(751)	9.86	.394(-.384)	-.095(-.091)
17902	.70	25.2(526)	-5.79	-.216(-.220)	.044(-.044)	18111	.95	36.0(752)	11.79	.483(-.474)	-.109(-.104)
17903	.70	25.2(526)	-3.83	-.138(-.139)	.029(-.029)	18112	.95	36.0(752)	13.75	.574(-.568)	-.124(-.122)
17904	.70	25.2(526)	-1.89	-.064(-.067)	.013(-.013)	18113	.95	36.0(752)	15.73	.666(-.657)	-.137(-.132)
17905	.70	25.2(526)	.09	-.001(-.003)	-.001(-.001)	18201	.85	32.1(670)	-7.80	-.312(-.312)	.063(-.062)
17906	.70	25.2(526)	2.11	.066(-.058)	-.013(-.013)	18202	.85	32.0(669)	-5.82	-.227(-.232)	.049(-.046)
17907	.70	25.2(526)	4.07	.131(-.122)	-.027(-.025)	18203	.85	32.1(670)	-3.89	-.147(-.147)	.033(-.031)
17908	.70	25.2(526)	6.00	.202(-.193)	-.045(-.044)	18204	.85	32.1(670)	-1.89	-.068(-.071)	.015(-.014)
17909	.70	25.2(526)	8.00	.281(-.267)	-.064(-.058)	18205	.85	32.1(670)	.07	-.001(-.004)	.000(-.001)
17910	.70	25.2(526)	10.01	.370(-.358)	-.082(-.078)	18206	.85	32.0(669)	2.04	.064(-.058)	-.013(-.013)
17911	.70	25.2(526)	11.94	.454(-.447)	-.092(-.091)	18207	.85	32.1(670)	3.99	.132(-.122)	-.028(-.026)
17912	.70	25.2(526)	13.85	.540(-.531)	-.101(-.098)	18208	.85	32.1(670)	5.99	.209(-.202)	-.049(-.049)
17913	.70	25.2(527)	14.85	.585(-.575)	-.105(-.103)	18209	.85	32.1(670)	7.94	.287(-.276)	-.066(-.063)
17914	.70	25.2(526)	15.83	.633(-.622)	-.111(-.110)	18210	.85	32.1(670)	10.03	.386(-.379)	-.087(-.087)
18001	1.05	39.1(817)	-7.82	-.339(-.347)	.079(-.077)	18211	.85	32.1(670)	11.91	.467(-.459)	-.095(-.092)
18002	1.05	39.1(816)	-5.83	-.251(-.254)	.060(-.062)	18212	.85	32.1(670)	13.90	.556(-.546)	-.105(-.104)
18003	1.05	39.1(816)	-3.88	-.163(-.169)	.039(-.039)	18213	.85	32.1(670)	15.79	.646(-.638)	-.116(-.113)
18004	1.05	39.1(816)	-1.90	-.078(-.082)	.016(-.018)	18301	.40	10.2(214)	-7.72	-.295(-.296)	.068(-.066)
18005	1.05	39.1(816)	.04	-.003(-.007)	-.002(-.002)	18302	.40	10.2(213)	-5.76	-.212(-.217)	.053(-.041)
18006	1.05	39.1(817)	2.03	.069(-.060)	-.020(-.017)	18303	.40	10.2(213)	-3.84	-.136(-.136)	.038(-.028)
18007	1.05	39.1(817)	4.00	.145(-.135)	-.041(-.038)	18304	.40	10.2(214)	-1.85	-.061(-.062)	.021(-.011)
18008	1.05	39.1(816)	5.97	.229(-.216)	-.067(-.061)	18305	.40	10.2(214)	.11	.001(-.004)	.009(-.001)
18009	1.05	39.1(816)	7.89	.314(-.305)	-.089(-.083)	18306	.40	10.2(214)	2.14	.065(-.058)	-.004(-.012)
18010	1.05	39.1(816)	9.86	.406(-.396)	-.110(-.105)	18307	.40	10.2(214)	4.09	.127(-.117)	-.018(-.024)
18011	1.05	39.1(817)	11.82	.488(-.480)	-.122(-.118)	18308	.40	10.2(214)	6.05	.193(-.187)	-.033(-.041)
18012	1.05	39.1(816)	13.78	.570(-.561)	-.134(-.133)	18309	.40	10.2(214)	8.04	.271(-.266)	-.054(-.062)
18013	1.05	39.1(817)	15.76	.654(-.647)	-.147(-.142)	18310	.40	10.2(214)	9.98	.353(-.341)	-.075(-.077)
18014	1.05	39.1(816)				18311	.40	10.2(214)	11.93	.442(-.437)	-.093(-.098)
18015	1.05	39.1(816)				18312	.40	10.2(214)	13.92	.530(-.521)	-.106(-.106)
						18313	.40	10.2(214)	15.86	.619(-.605)	-.114(-.115)

Table A-3.—(Concluded)

(f) T. E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
18405	1.11	40.6(848)	.05	-.152(-.155)	.088(.092)	18701	.95	36.0(752)	.12	-.170(-.171)	.091(.091)
18406	1.11	40.6(847)	4.12	-.003(-.011)	.050(.055)	18702	.95	36.0(752)	2.09	-.098(-.102)	.073(.074)
18407	1.11	40.6(848)	8.03	.168(-.161)	.000(.006)	18703	.95	36.0(752)	4.05	-.028(-.034)	.057(.060)
18501	.70	25.1(525)	.18	-.148(-.160)	.073(.080)	18704	.95	36.0(752)	6.03	.048(.042)	.038(.041)
18502	.70	25.2(526)	2.16	-.092(-.095)	.060(.065)	18705	.95	36.0(751)	8.00	.136(-.126)	.014(.021)
18503	.70	25.1(525)	4.14	-.017(-.031)	.047(.053)	18706	.95	36.0(752)	9.97	.228(-.218)	-.004(.001)
18504	.70	25.1(525)	6.08	.050(-.036)	.033(.038)	18707	.95	36.0(752)	11.91	.320(.311)	-.019(-.015)
18505	.70	25.1(525)	8.05	.128(-.113)	.012(.017)	18708	.95	36.0(752)	13.87	.419(.411)	-.037(-.034)
18506	.70	25.1(525)	9.99	.213(.201)	-.006(-.003)	18709	.95	36.0(752)	15.82	.512(.502)	-.051(-.045)
18507	.70	25.1(525)	11.94	.298(.287)	-.019(-.017)	18801	.85	32.1(670)	.13	-.157(-.162)	.081(.083)
18508	.70	25.1(525)	13.92	.388(.380)	-.030(-.029)	18802	.85	32.1(670)	2.13	-.098(-.095)	.066(.067)
18509	.70	25.2(526)	15.92	.482(.471)	-.040(-.041)	18803	.85	32.1(670)	4.07	-.022(-.032)	.052(.055)
18510	.70	25.1(525)	.18	-.151(-.154)	.077(.076)	18804	.85	32.1(671)	6.06	.050(.039)	.035(.019)
18601	1.05	39.1(817)	.09	-.165(-.162)	.096(.095)	18805	.85	32.1(670)	8.02	.130(.118)	.015(.019)
18602	1.05	39.1(817)	2.12	-.089(-.093)	.076(.078)	18806	.85	32.1(671)	9.96	.219(.211)	-.003(.000)
18603	1.05	39.1(816)	4.08	-.016(-.023)	.058(.061)	18807	.85	32.1(671)	11.92	.307(.298)	-.016(-.014)
18604	1.05	39.1(817)	6.01	.064(-.055)	.035(.039)	18808	.85	32.1(671)	13.89	.400(.391)	-.029(-.029)
18605	1.05	39.1(817)	8.00	.156(.150)	.009(.013)	18809	.85	32.1(670)	15.83	.491(.482)	-.040(-.039)
18606	1.05	39.1(817)	9.93	.250(-.244)	-.016(-.010)	18901	.40	10.2(214)	.21	-.136(-.172)	.074(.084)
18607	1.05	39.1(817)	11.92	.344(.340)	-.037(-.036)	18902	.40	10.2(214)	2.17	-.072(-.105)	.061(.068)
18608	1.05	39.1(817)	13.88	.434(.427)	-.055(-.054)	18903	.40	10.2(214)	4.14	-.009(-.042)	.047(.055)
18609	1.05	39.1(817)	15.81	.519(.520)	-.069(-.068)	18904	.40	10.3(215)	6.13	.055(.027)	.045(.040)
						18905	.40	10.3(215)	8.09	.125(.103)	.017(.018)
						18906	.40	10.3(215)	10.03	.203(.182)	-.003(-.000)
						18907	.40	10.3(215)	12.01	.286(.278)	-.020(-.022)
						18908	.40	10.2(214)	13.99	.373(.358)	-.032(-.033)
						18909	.40	10.3(215)	15.96	.464(.450)	-.042(-.046)

Table A-4.—Experimental Data Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Inboard = 0.0°; Outboard = 5.1°

(a) T.E. Deflection, Inboard = 0.0°, Outboard = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
19104	1.11	40.71(850)	.12	-.024(-.023)	.018(.020)
19105	1.11	40.6(848)	4.05	.127(.120)	-.022(-.019)
19106	1.11	40.6(848)	7.96	.304(.302)	-.072(-.069)
19201	.70	25.2(527)	.11	-.029(-.036)	.026(.026)
19202	.70	25.2(527)	2.08	-.035(-.025)	.014(.015)
19203	.70	25.2(526)	4.05	-.101(-.089)	-.000(-.002)
19204	.70	25.2(526)	6.01	-.176(-.162)	-.020(-.018)
19205	.70	25.2(527)	7.97	-.262(-.251)	-.051(-.037)
19206	.70	25.2(527)	9.94	-.344(-.337)	-.050(-.051)
19207	.70	25.2(526)	11.90	-.435(-.426)	-.054(-.065)
19208	.70	25.2(526)	13.84	-.536(-.527)	-.083(-.084)
19209	.70	25.2(526)	15.80	-.645(-.639)	-.102(-.102)
19210	.70	25.2(526)	.12	-.030(-.035)	.028(.026)
19301	1.05	39.2(818)	.05	-.029(-.031)	.023(.023)
19302	1.05	39.1(817)	2.03	.043(-.035)	.005(-.009)
19303	1.05	39.1(817)	4.00	.121(.110)	-.016(-.011)
19304	1.05	39.1(817)	5.95	.206(.198)	-.043(-.036)
19305	1.05	39.2(818)	7.90	.300(.293)	-.056(-.061)
19306	1.05	39.2(818)	9.87	.386(.382)	-.081(-.079)
19307	1.05	39.2(818)	11.81	.473(.465)	-.095(-.088)
19308	1.05	39.2(818)	13.77	.560(.559)	-.110(-.107)
19309	1.05	39.2(818)	15.74	.647(.648)	-.126(-.124)
19401	.95	36.1(753)	.05	-.029(-.034)	.025(.026)
19402	.95	36.1(753)	2.02	.038(.029)	.011(-.013)
19403	.95	36.0(752)	3.99	.110(-.099)	-.006(-.002)
19404	.95	36.0(752)	5.94	.194(-.179)	-.029(-.023)
19405	.95	36.0(752)	7.90	.282(-.276)	-.049(-.046)
19406	.95	36.0(752)	9.87	.370(-.362)	-.062(-.060)
19407	.95	36.1(753)	11.81	.471(-.463)	-.084(-.079)
19408	.95	36.0(752)	13.76	.570(-.567)	-.103(-.100)
19409	.95	36.1(753)	15.72	.661(-.655)	-.116(-.112)
19501	.85	32.1(671)	.09	-.030(-.036)	.028(.027)
19502	.85	32.2(672)	2.06	.035(-.027)	.015(.015)
19503	.85	32.1(671)	4.02	.104(-.093)	-.001(-.000)
19504	.85	32.2(672)	5.98	.184(-.169)	-.023(-.020)
19505	.85	32.1(671)	7.94	.269(-.259)	-.042(-.040)
19506	.85	32.1(671)	9.90	.353(-.348)	-.053(-.054)
19507	.85	32.1(671)	11.85	.446(-.434)	-.067(-.065)
19508	.85	32.1(671)	13.80	.545(-.542)	-.084(-.085)
19509	.85	32.1(671)	15.77	.641(-.641)	-.097(-.098)
19601	.40	10.2(214)	.17	-.031(-.043)	.043(.030)
19602	.40	10.2(214)	2.13	.031(-.018)	.031(.018)
19603	.40	10.2(214)	4.10	.094(.081)	.016(.005)
19604	.40	10.2(214)	6.07	.165(-.153)	-.002(-.015)
19605	.40	10.3(215)	8.03	.247(-.236)	-.025(-.037)
19606	.40	10.3(215)	9.99	.330(-.322)	-.038(-.050)
19607	.40	10.3(215)	11.95	.414(-.409)	-.048(-.061)
19608	.40	10.3(215)	13.90	.517(-.512)	-.068(-.085)
19609	.40	10.3(215)	15.85	.623(-.613)	-.088(-.101)

Table A-4. -- (Continued)

(b) T. E. Deflection, Inboard = 0.0°, Outboard = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
19705	1.11	40.7(850)	.13	-.045(-.049)	.037(.042)
19706	1.11	40.7(849)	4.07	.104(-.091)	-.001(-.007)
19707	1.11	40.6(848)	7.97	.289(-.284)	-.058(-.054)
19801	.70	25.3(528)	.13	-.058(-.067)	.048(.051)
19802	.70	25.3(528)	2.10	.004(-.007)	.037(.040)
19803	.70	25.2(527)	4.06	.070(-.058)	.023(.027)
19804	.70	25.2(527)	6.03	.146( .130)	.003(-.008)
19805	.70	25.2(527)	7.98	.238(-.227)	-.023(-.019)
19806	.70	25.2(527)	9.95	.328(-.324)	-.039(-.040)
19807	.70	25.2(527)	11.89	.422(-.416)	-.055(-.057)
19808	.70	25.2(527)	13.85	.526(-.525)	-.075(-.081)
19809	.70	25.2(526)	15.81	.638(-.642)	-.098(-.104)
19810	.70	25.2(527)	.13	-.060(-.065)	.052(.050)
19901	1.05	39.2(819)	.07	-.052(-.056)	.043(.045)
19902	1.05	39.2(819)	2.05	.019(-.009)	.026(.032)
19903	1.05	39.2(818)	4.01	.096(-.083)	.006(-.013)
19904	1.05	39.1(817)	5.95	.188(-.175)	-.024(-.014)
19905	1.05	39.2(818)	7.91	.284(-.279)	-.052(-.048)
19906	1.05	39.2(818)	9.87	.376(-.371)	-.072(-.069)
19907	1.05	39.2(818)	11.82	.466(-.455)	-.089(-.079)
19908	1.05	39.2(818)	13.77	.554(-.563)	-.105(-.107)
19909	1.05	39.2(818)	15.74	.640(-.644)	-.120(-.120)
20003	.95	36.1(753)	.07	-.055(-.063)	.046(.050)
20004	.95	36.0(752)	2.03	.011(-.001)	.033(.038)
20005	.95	36.1(753)	4.01	.082(-.070)	.016(-.022)
20006	.95	36.1(753)	5.95	.170(-.156)	-.010(-.002)
20007	.95	36.1(753)	7.91	.266(-.262)	-.036(-.033)
20008	.95	36.1(753)	9.86	.359(-.353)	-.054(-.052)
20009	.95	36.1(753)	11.81	.463(-.455)	-.077(-.072)
20010	.95	36.1(753)	13.76	.565(-.567)	-.099(-.098)
20011	.95	36.0(752)	15.72	.657(-.658)	-.113(-.112)
20101	.85	32.1(671)	.10	-.057(-.065)	.050(.050)
20102	.85	32.1(671)	2.07	.007(-.003)	.037(.040)
20103	.85	32.1(671)	4.04	.075(-.064)	.022(.025)
20104	.85	32.2(672)	5.99	.157(-.141)	-.002(-.004)
20105	.85	32.2(672)	7.95	.250(-.241)	-.027(-.025)
20106	.85	32.1(671)	9.90	.340(-.337)	-.044(-.044)
20107	.85	32.1(671)	11.85	.436(-.427)	-.060(-.058)
20108	.85	32.2(672)	13.80	.538(-.539)	-.078(-.081)
20109	.85	32.1(671)	15.76	.637(-.645)	-.094(-.101)
20201	.60	10.3(215)	.18	-.062(-.074)	.063(.054)
20202	.60	10.3(215)	2.14	-.000(-.012)	.050(.042)
20203	.60	10.3(215)	4.12	.063(-.050)	.036(.029)
20204	.60	10.3(215)	6.09	.132(-.121)	.018(-.010)
20205	.60	10.3(215)	8.04	.217(-.208)	-.007(-.015)
20206	.60	10.3(215)	10.00	.310(-.303)	-.029(-.037)
20207	.60	10.3(215)	11.95	.398(-.395)	-.042(-.051)
20208	.60	10.2(214)	13.91	.504(-.503)	-.064(-.077)
20209	.60	10.2(214)	15.85	.615(-.609)	-.087(-.098)

Table A-4.-(Continued)

(c) T.E. Deflection, Inboard = 0.0°, Outboard = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
20403	1.11	40.7(1850)	-7.74	-.308(-.316)	-.070(-.072)
20404	1.11	40.7(1850)	-3.82	-.131(-.132)	.020(-.018)
20405	1.11	40.7(1850)	.10	.024(-.020)	-.026(-.024)
20406	1.11	40.7(1850)	4.04	.171(-.160)	-.064(-.059)
20407	1.11	40.7(1849)	7.95	.332(-.329)	-.098(-.097)
20501	.70	25.3(528)	-7.78	-.265(-.271)	.044(-.048)
20502	.70	25.3(528)	-5.81	-.180(-.183)	.024(-.025)
20503	.70	25.3(528)	-3.85	-.106(-.109)	.007(-.007)
20504	.70	25.3(528)	-1.89	-.034(-.035)	-.011(-.011)
20505	.70	25.3(528)	.08	.030(-.025)	-.024(-.023)
20506	.70	25.3(528)	2.06	.094(-.086)	-.036(-.034)
20507	.70	25.3(528)	4.03	.159(-.146)	-.049(-.044)
20508	.70	25.3(528)	5.99	.231(-.221)	-.066(-.065)
20509	.70	25.3(528)	7.95	.307(-.298)	-.078(-.075)
20510	.70	25.3(528)	9.92	.379(-.372)	-.080(-.077)
20511	.70	25.3(528)	11.88	.461(-.453)	-.085(-.085)
20512	.70	25.3(528)	13.84	.553(-.545)	-.096(-.096)
20513	.70	25.2(527)	15.80	.651(-.644)	-.108(-.103)
20514	.70	25.3(528)	.09	.029(-.026)	-.072(-.023)
20601	1.05	39.2(1819)	-7.80	-.319(-.327)	.072(-.075)
20602	1.05	39.2(1819)	-5.85	-.224(-.227)	.046(-.046)
20603	1.05	39.2(1819)	-3.88	-.135(-.138)	.070(-.019)
20604	1.05	39.2(1819)	-1.93	-.054(-.059)	-.004(-.003)
20605	1.05	39.2(1819)	.03	.020(-.016)	-.023(-.022)
20606	1.05	39.2(1819)	2.00	.091(-.083)	-.040(-.036)
20607	1.05	39.2(1819)	3.97	.166(-.156)	-.059(-.055)
20608	1.05	39.2(1819)	5.93	.248(-.239)	-.080(-.075)
20609	1.05	39.2(1819)	7.88	.332(-.326)	-.096(-.092)
20610	1.05	39.2(1819)	9.85	.413(-.411)	-.106(-.106)
20611	1.05	39.2(1819)	11.81	.497(-.492)	-.118(-.112)
20612	1.05	39.2(1819)	13.77	.583(-.578)	-.132(-.125)
20613	1.05	39.2(1818)	15.72	.672(-.669)	-.149(-.144)
20702	.95	36.1(754)	-7.81	-.300(-.306)	.059(-.059)
20703	.95	36.1(754)	-5.86	-.206(-.208)	.035(-.034)
20704	.95	36.1(753)	-3.91	-.121(-.125)	.013(-.012)
20705	.95	36.1(753)	-1.94	-.044(-.047)	-.007(-.007)
20706	.95	36.1(754)	.03	.025(-.021)	-.023(-.023)
20707	.95	36.1(754)	1.99	.091(-.085)	-.036(-.035)
20708	.95	36.1(754)	3.96	.161(-.152)	-.052(-.049)
20709	.95	36.1(754)	5.92	.238(-.229)	-.070(-.066)
20710	.95	36.1(753)	7.89	.318(-.313)	-.081(-.077)
20711	.95	36.1(754)	9.85	.396(-.389)	-.087(-.083)
20712	.95	36.1(753)	11.80	.489(-.479)	-.101(-.094)
20713	.95	36.1(753)	13.75	.584(-.579)	-.117(-.109)
20715	.95	36.1(754)	15.71	.680(-.673)	-.134(-.126)
20801	.85	32.2(672)	-7.80	-.282(-.287)	.052(-.052)
20802	.85	32.2(672)	-5.84	-.192(-.193)	.030(-.028)
20803	.85	32.2(672)	-3.87	-.113(-.116)	.011(-.009)
20804	.85	32.2(672)	-1.91	-.039(-.041)	-.008(-.009)
20805	.85	32.2(672)	.05	.027(-.023)	-.022(-.023)
20806	.85	32.2(672)	2.03	.092(-.085)	-.034(-.034)
20807	.85	32.2(672)	3.99	.159(-.149)	-.049(-.046)
20808	.85	32.2(672)	5.96	.234(-.223)	-.067(-.065)
20809	.85	32.2(672)	7.92	.311(-.301)	-.078(-.075)
20810	.85	32.2(672)	9.88	.385(-.379)	-.081(-.079)
20811	.85	32.2(672)	11.84	.469(-.459)	-.088(-.085)
20812	.85	32.2(673)	13.79	.562(-.556)	-.100(-.096)
20813	.85	32.2(672)	15.75	.656(-.651)	-.112(-.107)
20901	.40	10.2(214)	-7.74	-.253(-.255)	.053(-.045)
20902	.40	10.2(214)	-5.78	-.172(-.174)	.032(-.023)
20903	.40	10.3(215)	-3.81	-.099(-.103)	.015(-.006)
20904	.40	10.3(215)	-1.84	-.030(-.031)	-.002(-.012)
20905	.40	10.3(215)	.13	.031(-.026)	-.014(-.023)
20906	.40	10.3(215)	2.10	.091(-.085)	-.026(-.033)
20907	.40	10.3(215)	4.08	.153(-.145)	-.039(-.043)
20908	.40	10.3(215)	6.04	.221(-.215)	-.055(-.062)
20909	.40	10.3(215)	8.00	.298(-.290)	-.073(-.077)
20910	.40	10.3(215)	9.97	.371(-.363)	-.076(-.080)
20911	.40	10.3(215)	11.93	.447(-.442)	-.080(-.084)
20912	.40	10.3(215)	13.89	.539(-.533)	-.091(-.098)
20913	.40	10.3(215)	15.85	.634(-.624)	-.101(-.107)

Table A-4. — (Continued)

(d) T. E. Deflection, Inboard = 0.0°, Outboard = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
21009	1.11	40.7(850)	4.02	.188( .187)	-.080(-.082)	40.7(850)	4.02	.188( .187)	-.080(-.082)
21010	1.11	40.7(850)	7.94	.350( .348)	-.114(-.114)	40.7(850)	7.94	.350( .348)	-.114(-.114)
21101	.70	25.3(529)	-7.80	-.234(-.239)	.020( .024)	25.3(529)	-7.80	-.234(-.239)	.020( .024)
21102	.70	25.3(529)	-5.83	-.149(-.152)	-.001( .001)	25.3(529)	-5.83	-.149(-.152)	-.001( .001)
21103	.70	25.3(528)	-3.86	-.075(-.078)	-.017(-.016)	25.3(528)	-3.86	-.075(-.078)	-.017(-.016)
21104	.70	25.3(528)	.06	.060( .053)	-.047(-.045)	25.3(528)	.06	.060( .053)	-.047(-.045)
21105	.70	25.3(528)	2.06	.123( .114)	-.059(-.055)	25.3(528)	2.06	.123( .114)	-.059(-.055)
21106	.70	25.3(528)	4.02	.188( .175)	-.072(-.066)	25.3(528)	4.02	.188( .175)	-.072(-.066)
21107	.70	25.3(528)	5.97	.256( .246)	-.086(-.085)	25.3(528)	5.97	.256( .246)	-.086(-.085)
21108	.70	25.3(528)	7.94	.330( .321)	-.096(-.093)	25.3(528)	7.94	.330( .321)	-.096(-.093)
21109	.70	25.3(528)	9.91	.398( .390)	-.094(-.090)	25.3(528)	9.91	.398( .390)	-.094(-.090)
21110	.70	25.3(529)	11.86	.476( .465)	-.097(-.094)	25.3(529)	11.86	.476( .465)	-.097(-.094)
21111	.70	25.3(529)	13.83	.546( .554)	-.106(-.102)	25.3(529)	13.83	.546( .554)	-.106(-.102)
21112	.70	25.3(529)	15.79	.663( .651)	-.117(-.108)	25.3(529)	15.79	.663( .651)	-.117(-.108)
21209	1.05	39.3(820)	-7.80	-.302(-.311)	.058( .062)	39.3(820)	-7.80	-.302(-.311)	.058( .062)
21210	1.05	39.3(820)	-5.87	-.204(-.209)	.029( .030)	39.3(820)	-5.87	-.204(-.209)	.029( .030)
21211	1.05	39.2(819)	-3.90	-.112(-.113)	.000(-.003)	39.2(819)	-3.90	-.112(-.113)	.000(-.003)
21212	1.05	39.2(819)	-1.95	-.030(-.034)	-.024(-.025)	39.2(819)	-1.95	-.030(-.034)	-.024(-.025)
21213	1.05	39.3(820)	.01	.044( .040)	-.044(-.044)	39.3(820)	.01	.044( .040)	-.044(-.044)
21214	1.05	39.3(820)	2.01	.115( .106)	-.061(-.057)	39.3(820)	2.01	.115( .106)	-.061(-.057)
21215	1.05	39.3(820)	3.96	.188( .181)	-.079(-.076)	39.3(820)	3.96	.188( .181)	-.079(-.076)
21216	1.05	39.3(820)	5.93	.269( .256)	-.094(-.091)	39.3(820)	5.93	.269( .256)	-.094(-.091)
21217	1.05	39.3(820)	7.87	.350( .348)	-.112(-.110)	39.3(820)	7.87	.350( .348)	-.112(-.110)
21218	1.05	39.2(819)	9.83	.427( .424)	-.118(-.117)	39.2(819)	9.83	.427( .424)	-.118(-.117)
21219	1.05	39.3(820)	11.81	.508( .508)	-.128(-.127)	39.3(820)	11.81	.508( .508)	-.128(-.127)
21220	1.05	39.3(820)	13.76	.593( .593)	-.141(-.138)	39.3(820)	13.76	.593( .593)	-.141(-.138)
21221	1.05	39.3(820)	15.73	.681( .684)	-.157(-.156)	39.3(820)	15.73	.681( .684)	-.157(-.156)
21301	.95	36.1(755)	-7.82	-.279(-.282)	.038( .039)	36.1(755)	-7.82	-.279(-.282)	.038( .039)
21302	.95	36.1(754)	-5.87	-.180(-.183)	.012( .014)	36.1(754)	-5.87	-.180(-.183)	.012( .014)
21303	.95	36.1(754)	-3.92	-.095(-.099)	-.011(-.010)	36.1(754)	-3.92	-.095(-.099)	-.011(-.010)
21304	.95	36.1(754)	-1.96	-.017(-.020)	-.032(-.030)	36.1(754)	-1.96	-.017(-.020)	-.032(-.030)
21305	.95	36.1(755)	.00	.051( .046)	-.047(-.045)	36.1(755)	.00	.051( .046)	-.047(-.045)
21306	.95	36.1(754)	1.99	.119( .110)	-.062(-.056)	36.1(754)	1.99	.119( .110)	-.062(-.056)
21307	.95	36.1(755)	3.96	.188( .180)	-.076(-.073)	36.1(755)	3.96	.188( .180)	-.076(-.073)
21308	.95	36.1(754)	5.90	.262( .249)	-.091(-.084)	36.1(754)	5.90	.262( .249)	-.091(-.084)
21309	.95	36.1(755)	7.88	.330( .334)	-.100(-.095)	36.1(755)	7.88	.330( .334)	-.100(-.095)
21310	.95	36.1(754)	9.86	.414( .405)	-.101(-.097)	36.1(754)	9.86	.414( .405)	-.101(-.097)
21311	.95	36.1(755)	11.79	.502( .492)	-.111(-.105)	36.1(755)	11.79	.502( .492)	-.111(-.105)
21312	.95	36.1(755)	13.75	.596( .591)	-.127(-.119)	36.1(755)	13.75	.596( .591)	-.127(-.119)
21313	.95	36.1(755)	15.70	.690( .684)	-.142(-.135)	36.1(755)	15.70	.690( .684)	-.142(-.135)
21401	.85	32.3(674)	-7.81	-.256(-.261)	.030( .032)	32.3(674)	-7.81	-.256(-.261)	.030( .032)
21402	.85	32.2(673)	-5.85	-.163(-.165)	.006( .006)	32.2(673)	-5.85	-.163(-.165)	.006( .006)
21403	.85	32.2(673)	-3.88	-.084(-.087)	-.013(-.014)	32.2(673)	-3.88	-.084(-.087)	-.013(-.014)
21404	.85	32.2(673)	-2.90	-.047(-.051)	-.022(-.022)	32.2(673)	-2.90	-.047(-.051)	-.022(-.022)
21405	.85	32.2(672)	.06	.056( .051)	-.046(-.045)	32.2(672)	.06	.056( .051)	-.046(-.045)
21406	.85	32.3(674)	2.01	.120( .111)	-.059(-.055)	32.3(674)	2.01	.120( .111)	-.059(-.055)
21407	.85	32.3(674)	3.99	.187( .179)	-.073(-.070)	32.3(674)	3.99	.187( .179)	-.073(-.070)
21408	.85	32.3(674)	5.94	.260( .248)	-.088(-.086)	32.3(674)	5.94	.260( .248)	-.088(-.086)
21409	.85	32.3(674)	7.92	.334( .325)	-.097(-.094)	32.3(674)	7.92	.334( .325)	-.097(-.094)
21410	.85	32.3(674)	9.88	.404( .398)	-.096(-.094)	32.3(674)	9.88	.404( .398)	-.096(-.094)
21411	.85	32.2(673)	11.85	.485( .473)	-.100(-.095)	32.2(673)	11.85	.485( .473)	-.100(-.095)
21412	.85	32.3(674)	13.79	.575( .569)	-.110(-.105)	32.3(674)	13.79	.575( .569)	-.110(-.105)
21413	.85	32.2(673)	15.76	.669( .664)	-.122(-.115)	32.2(673)	15.76	.669( .664)	-.122(-.115)
21501	.40	10.3(215)	-7.75	-.214(-.222)	.023( .021)	10.3(215)	-7.75	-.214(-.222)	.023( .021)
21502	.40	10.3(215)	-5.80	-.137(-.141)	.004( .001)	10.3(215)	-5.80	-.137(-.141)	.004( .001)
21503	.40	10.3(215)	-3.84	-.065(-.071)	-.013(-.018)	10.3(215)	-3.84	-.065(-.071)	-.013(-.018)
21504	.40	10.3(215)	-1.86	.004( .000)	-.030(-.036)	10.3(215)	-1.86	.004( .000)	-.030(-.036)
21505	.40	10.3(215)	.13	.063( .057)	-.040(-.045)	10.3(215)	.13	.063( .057)	-.040(-.045)
21506	.40	10.3(215)	2.08	.123( .115)	-.051(-.054)	10.3(215)	2.08	.123( .115)	-.051(-.054)
21507	.40	10.3(215)	4.06	.185( .172)	-.064(-.063)	10.3(215)	4.06	.185( .172)	-.064(-.063)
21508	.40	10.3(215)	6.03	.252( .247)	-.078(-.086)	10.3(215)	6.03	.252( .247)	-.078(-.086)
21509	.40	10.3(215)	8.00	.323( .312)	-.091(-.093)	10.3(215)	8.00	.323( .312)	-.091(-.093)
21510	.40	10.3(215)	9.97	.394( .384)	-.093(-.095)	10.3(215)	9.97	.394( .384)	-.093(-.095)
21511	.40	10.3(215)	11.92	.467( .457)	-.095(-.095)	10.3(215)	11.92	.467( .457)	-.095(-.095)
21512	.40	10.3(215)	13.88	.556( .544)	-.104(-.104)	10.3(215)	13.88	.556( .544)	-.104(-.104)
21513	.40	10.3(215)	15.85	.650( .633)	-.113(-.112)	10.3(215)	15.85	.650( .633)	-.113(-.112)

Table A-4.-(Continued)

(e) T. E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
21709	1.11	40.8(852)	-7.74	-.325(-.328)	.082(-.093)
21711	1.11	40.8(852)	-3.80	-.150(-.152)	.039(-.040)
21712	1.11	40.8(852)	.12	.001(-.004)	-.004(-.001)
21713	1.11	40.8(852)	4.06	.151(-.138)	-.043(-.037)
21714	1.11	40.8(852)	7.97	.319(-.312)	-.084(-.079)
21801	.70	25.3(528)	-7.77	-.287(-.294)	.063(-.068)
21804	.70	25.4(530)	-5.80	-.204(-.208)	.045(-.046)
21805	.70	25.3(529)	-3.82	-.132(-.138)	.030(-.031)
21806	.70	25.3(528)	-1.87	-.061(-.064)	.013(-.013)
21807	.70	25.3(529)	.10	.003(-.003)	-.000(-.001)
21808	.70	25.3(528)	2.06	.066(-.057)	-.012(-.010)
21809	.70	25.3(529)	4.06	.133(-.121)	-.026(-.023)
21810	.70	25.3(529)	6.02	.206(-.195)	-.045(-.044)
21812	.70	25.3(529)	7.96	.285(-.276)	-.059(-.056)
21813	.70	25.3(529)	9.97	.362(-.358)	-.064(-.064)
21814	.70	25.3(529)	11.89	.447(-.442)	-.074(-.076)
21815	.70	25.3(529)	13.85	.542(-.537)	-.087(-.090)
21816	.70	25.3(529)	15.82	.641(-.636)	-.099(-.097)
21901	1.05	39.3(821)	-7.78	-.330(-.338)	.087(-.086)
21902	1.05	39.3(820)	-5.82	-.239(-.242)	.064(-.062)
21903	1.05	39.3(820)	-3.89	-.156(-.160)	.042(-.041)
21904	1.05	39.3(820)	-1.92	-.077(-.076)	.019(-.018)
21905	1.05	39.3(821)	.06	-.002(-.005)	-.002(-.000)
21906	1.05	39.3(821)	2.01	.069(-.060)	-.019(-.015)
21907	1.05	39.3(821)	4.01	.146(-.134)	-.039(-.034)
21908	1.05	39.3(821)	5.92	.229(-.218)	-.062(-.056)
21909	1.05	39.3(821)	7.89	.315(-.307)	-.080(-.074)
21910	1.05	39.3(821)	9.87	.398(-.393)	-.091(-.087)
21911	1.05	39.3(821)	11.81	.482(-.480)	-.104(-.101)
21912	1.05	39.3(820)	13.78	.571(-.565)	-.120(-.112)
21913	1.05	39.3(820)	15.73	.660(-.656)	-.138(-.130)
22001	.95	36.1(755)	-7.79	-.317(-.322)	.075(-.073)
22002	.95	36.1(754)	-5.86	-.227(-.228)	.054(-.052)
22003	.95	36.1(755)	-3.90	-.146(-.152)	.035(-.036)
22004	.95	36.1(754)	-1.93	-.070(-.074)	.016(-.017)
22005	.95	36.1(755)	.04	-.001(-.006)	.000(-.001)
22006	.95	36.1(755)	2.01	.066(-.058)	-.014(-.011)
22007	.95	36.1(755)	4.00	.137(-.126)	-.030(-.025)
22008	.95	36.1(755)	5.95	.217(-.206)	-.049(-.045)
22009	.95	36.1(755)	7.90	.299(-.294)	-.064(-.060)
22010	.95	36.1(755)	9.85	.380(-.374)	-.072(-.070)
22011	.95	36.1(755)	11.82	.478(-.469)	-.090(-.085)
22012	.95	36.1(755)	13.77	.574(-.569)	-.108(-.101)
22013	.95	36.2(756)	15.73	.669(-.663)	-.123(-.117)
22101	.85	32.3(674)	-7.80	-.302(-.308)	.070(-.069)
22102	.85	32.2(673)	-5.83	-.215(-.217)	.051(-.049)
22103	.85	32.2(673)	-3.86	-.139(-.146)	.035(-.034)
22104	.85	32.3(674)	-1.90	-.067(-.071)	.017(-.015)
22105	.85	32.2(673)	.07	.000(-.006)	.002(-.001)
22106	.85	32.2(673)	2.02	.065(-.056)	-.011(-.010)
22107	.85	32.3(674)	4.02	.133(-.122)	-.026(-.023)
22108	.85	32.2(673)	5.98	.211(-.197)	-.046(-.043)
22109	.85	32.3(674)	7.94	.290(-.280)	-.059(-.057)
22110	.85	32.2(673)	9.90	.368(-.362)	-.065(-.065)
22111	.85	32.3(674)	11.85	.455(-.445)	-.075(-.074)
22112	.85	32.2(673)	13.81	.549(-.547)	-.089(-.088)
22114	.85	32.3(674)	15.77	.643(-.643)	-.099(-.100)
22201	.95	36.1(755)	.04	-.001(-.005)	.001(-.000)
22301	.40	10.3(215)	-7.73	-.268(-.282)	.067(-.066)
22302	.40	10.3(215)	-5.75	-.194(-.204)	.050(-.047)
22303	.40	10.3(215)	-3.79	-.125(-.135)	.034(-.031)
22304	.40	10.3(215)	-1.84	-.057(-.063)	.019(-.013)
22305	.40	10.3(215)	.14	.005(-.004)	.006(-.001)
22306	.40	10.3(215)	2.12	.067(-.055)	-.005(-.009)
22307	.40	10.3(215)	4.10	.129(-.117)	-.018(-.021)
22308	.40	10.3(215)	6.06	.199(-.186)	-.035(-.039)
22309	.40	10.3(215)	8.03	.279(-.266)	-.055(-.058)
22310	.40	10.3(215)	9.99	.354(-.343)	-.062(-.065)
22311	.40	10.3(215)	11.95	.435(-.427)	-.068(-.074)
22312	.40	10.3(215)	13.90	.529(-.523)	-.082(-.091)
22313	.40	10.3(215)	15.84	.627(-.615)	-.095(-.101)

Table A-4.-(Continued)

(f) T. E. Deflection, Inboard = -17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
22411	1.05	39.3(820)	.16	-.234(-.260)	.124(.142)	22801	.70	25.3(528)	.20	-.232(-.245)	.103(.106)
22412	1.05	39.3(820)	2.12	-.166(-.192)	.108(.124)	22802	.70	25.3(528)	2.18	-.163(-.178)	.087(.089)
22413	1.05	39.3(820)	4.10	-.097(-.122)	.094(.109)	22803	.70	25.3(528)	4.17	-.098(-.114)	.074(.076)
22414	1.05	39.3(820)	6.05	-.023(-.045)	.079(.094)	22804	.70	25.3(528)	6.13	-.033(-.050)	.062(.064)
22415	1.05	39.3(820)	8.04	.062(.044)	.063(.077)	22805	.70	25.3(528)	8.08	.033(.019)	.051(.054)
22416	1.05	39.3(820)	9.97	.158(.147)	.040(.047)	22806	.70	25.3(529)	10.06	.117(.102)	.038(.042)
22417	1.05	39.3(820)	11.93	.262(.259)	.014(.018)	22807	.70	25.3(529)	11.99	.203(.190)	.028(.028)
22418	1.05	39.3(821)	13.88	.364(.365)	-.010(-.012)	22808	.70	25.3(528)	13.98	.305(.293)	.011(.011)
22419	1.05	39.3(820)	15.84	.459(.460)	-.033(-.035)	22809	.70	25.3(528)	15.93	.411(.404)	-.005(-.003)
						22810	.70	25.3(529)	.23	-.233(-.244)	.105(.106)
22601	.95	36.1(755)	.16	-.239(-.259)	.119(.127)	22901	.40	10.3(215)	.26	-.214(-.228)	.096(.094)
22602	.95	36.1(754)	2.12	-.173(-.195)	.103(.112)	22902	.40	10.3(215)	2.23	-.148(-.162)	.081(.078)
22603	.95	36.1(754)	4.10	-.109(-.131)	.091(.100)	22903	.40	10.3(215)	4.21	-.087(-.102)	.068(.067)
22604	.95	36.1(754)	6.07	-.044(-.067)	.081(.090)	22904	.40	10.3(215)	6.15	-.026(-.043)	.057(.056)
22605	.95	36.1(755)	8.05	.034(.016)	.068(.076)	22905	.40	10.3(215)	8.13	.038(.023)	.046(.043)
22606	.95	36.1(755)	9.97	.127(.108)	.048(.055)	22906	.40	10.2(214)	10.11	.111(.100)	.036(.031)
22607	.95	36.2(756)	11.92	.234(.221)	.026(.033)	22907	.40	10.3(215)	12.08	.192(.179)	.028(.024)
22608	.95	36.1(755)	13.87	.341(.331)	.004(.012)	22908	.40	10.2(214)	14.03	.280(.270)	.017(.011)
22610	.95	36.1(755)	15.84	.443(.441)	-.017(-.014)	22909	.40	10.2(214)	15.98	.379(.369)	.005(-.004)
22701	.85	32.2(673)	.21	-.743(-.260)	.115(.119)						
22702	.85	32.2(673)	2.17	-.174(-.193)	.098(.102)						
22703	.85	32.2(673)	4.12	-.109(-.128)	.085(.089)						
22704	.85	32.2(673)	6.10	-.041(-.060)	.071(.075)						
22705	.85	32.3(674)	8.06	.031(.013)	.060(.064)						
22706	.85	32.3(674)	10.03	.120(.103)	.045(.050)						
22707	.85	32.3(674)	11.98	.215(.200)	.030(.033)						
22708	.85	32.3(674)	13.93	.322(.313)	.011(.013)						
22709	.85	32.2(673)	15.87	.418(.414)	-.003(-.002)						



Table A-4.-(Continued)

(g) T. E. Deflection, Inboard = -8.3', Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
23011	1.05	39.2(819)	-12	-.142(-.151)	.075(.091)	23301	.85	32.2(673)	-12	-.126(-.134)	-.058(-.060)
23012	1.05	39.2(819)	2.11	-.068(-.079)	-.056(-.062)	23302	.85	32.2(673)	2.10	-.058(-.069)	-.044(-.046)
23013	1.05	39.2(819)	4.05	.005(-.007)	.039(.044)	23303	.85	32.2(673)	4.07	.008(-.004)	.030(.034)
23014	1.05	39.2(819)	6.01	.086(.074)	.070(.079)	23304	.85	32.2(673)	6.04	.079(.065)	.015(.019)
23015	1.05	39.3(820)	7.97	-.174(-.167)	-.000(-.007)	23305	.85	32.2(672)	8.00	.157(.144)	.001(-.005)
23016	1.05	39.3(820)	9.90	.267(.257)	-.020(-.015)	23306	.85	32.2(672)	10.06	.242(.232)	-.008(-.005)
23017	1.05	39.3(820)	11.87	.362(.356)	-.040(-.035)	23307	.85	32.2(673)	11.90	.327(.316)	-.019(-.016)
23018	1.05	39.3(820)	13.84	.453(.450)	-.058(-.053)	23308	.85	32.2(672)	13.89	.425(.420)	-.033(-.031)
23020	1.05	39.3(820)	15.78	.544(.542)	-.078(-.074)	23309	.85	32.2(672)	15.84	.519(.519)	-.045(-.045)
23101	.70	25.2(526)	-7.69	-.421(-.431)	.122(-.127)	23501	.40	10.2(214)	.20	-.106(-.117)	.050(.049)
23102	.70	25.2(527)	-5.73	-.336(-.344)	.103(-.106)	23502	.40	10.3(215)	2.20	-.041(-.054)	.037(.036)
23103	.70	25.2(526)	-3.78	-.262(-.268)	.087(-.088)	23503	.40	10.2(214)	4.15	.020(-.004)	.075(.026)
23104	.70	25.2(526)	-1.83	-.189(-.194)	.069(-.070)	23504	.40	10.3(215)	6.14	.084(.069)	.013(-.012)
23105	.70	25.2(527)	.20	-.116(-.122)	.051(-.053)	23505	.40	10.3(215)	8.08	.156(.140)	-.004(-.005)
23106	.70	25.2(527)	2.14	-.052(-.061)	.039(-.040)	23506	.40	10.3(215)	10.04	.230(.216)	-.012(-.014)
23107	.70	25.3(528)	4.11	.013(.001)	.026(-.029)	23507	.40	10.3(215)	11.99	.308(.297)	-.018(-.020)
23108	.70	25.3(528)	6.08	.081(.067)	.012(-.015)	23508	.40	10.3(215)	13.98	.399(.390)	-.028(-.034)
23109	.70	25.3(528)	8.07	.155(.144)	-.003(-.000)	23509	.40	10.2(214)	15.93	.490(.480)	-.038(-.045)
23110	.70	25.3(528)	10.08	.236(.227)	-.010(-.008)						
23111	.70	25.3(528)	11.96	.319(.309)	-.019(-.019)						
23112	.70	25.2(527)	13.98	.415(.408)	-.032(-.033)						
23113	.70	25.2(527)	15.89	.510(.506)	-.044(-.041)						
23114	.70	25.3(528)	.16	-.118(-.124)	-.053(-.053)						
23201	.95	36.1(755)	.06	-.145(-.153)	.070(-.073)						
23202	.95	36.1(754)	2.08	-.070(-.079)	.051(-.055)						
23203	.95	36.1(754)	4.05	.000(-.011)	.036(-.040)						
23204	.95	36.1(754)	6.02	.075(.062)	.020(-.026)						
23205	.95	36.1(754)	8.04	.161(.151)	.004(-.011)						
23206	.95	36.1(754)	9.93	.246(.236)	-.009(-.003)						
23207	.95	36.1(755)	11.88	.347(.335)	-.028(-.020)						
23208	.95	36.1(754)	13.83	.445(.444)	-.046(-.041)						
23209	.95	36.1(754)	15.83	.544(.542)	-.062(-.058)						

Table A-4. -- (Continued)

(h) T. E. Deflection, Inboard = 8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
23605	1.11	40.7(851)	-7.79	-.204(-.214)	.010(.017)
23606	1.11	40.7(850)	-3.84	-.037(-.049)	-.029(-.019)
23607	1.11	40.7(850)	.07	.110(.100)	-.066(-.059)
23608	1.11	40.7(851)	4.03	.259(.248)	-.108(-.102)
23610	1.11	40.7(849)	6.95	.376(.369)	-.134(-.129)
23701	.70	25.3(529)	-7.80	-.167(-.170)	.012(.012)
23702	.70	25.2(527)	-5.88	-.094(-.097)	-.002(-.003)
23703	.70	25.2(527)	-3.90	-.026(-.029)	-.016(-.016)
23704	.70	25.2(527)	-1.91	.041(.038)	-.031(-.032)
23705	.70	25.2(527)	.06	.103(.098)	-.043(-.042)
23706	.70	25.3(528)	2.05	.167(.160)	-.056(-.054)
23707	.70	25.2(527)	3.99	.234(.227)	-.072(-.071)
23708	.70	25.2(527)	5.98	.310(.303)	-.091(-.090)
23709	.70	25.3(528)	7.92	.389(.385)	-.105(-.104)
23710	.70	25.3(528)	9.87	.462(.462)	-.109(-.109)
23711	.70	25.3(529)	11.87	.548(.546)	-.119(-.121)
23712	.70	25.3(528)	13.82	.649(.647)	-.138(-.140)
23713	.70	25.3(528)	15.76	.746(.745)	-.152(-.149)
23714	.70	25.2(527)	.05	.102(.097)	-.041(-.042)
23801	1.05	39.2(819)	-7.87	-.205(-.217)	.013(.016)
23802	1.05	39.2(819)	-5.88	-.116(-.126)	-.008(-.004)
23803	1.05	39.2(819)	-3.96	-.037(-.047)	-.026(-.021)
23804	1.05	39.2(819)	-1.99	.039(.030)	-.046(-.041)
23805	1.05	39.2(819)	.01	.111(.101)	-.065(-.058)
23806	1.05	39.2(819)	1.96	.184(.171)	-.084(-.075)
23807	1.05	39.2(819)	3.93	.258(.252)	-.105(-.102)
23808	1.05	39.3(820)	5.89	.340(.333)	-.127(-.122)
23809	1.05	39.2(819)	7.82	.419(.416)	-.142(-.134)
23810	1.05	39.2(819)	9.82	.491(.488)	-.145(-.141)
23811	1.05	39.2(819)	11.77	.565(.563)	-.151(-.144)
23812	1.05	39.2(819)	13.77	.646(.646)	-.162(-.155)
23813	1.05	39.2(819)	15.70	.723(.716)	-.173(-.160)
23901	.95	36.1(753)	-7.87	-.185(-.188)	.006(.007)
23902	.95	36.1(753)	-5.92	-.102(-.106)	-.009(-.007)
23903	.95	36.1(753)	-3.94	-.027(-.032)	-.024(-.021)
23904	.95	36.1(754)	-1.98	.044(.040)	-.040(-.038)
23905	.95	36.1(754)	.01	.110(.105)	-.054(-.051)
23906	.95	36.1(753)	1.96	.178(.172)	-.070(-.065)
23907	.95	36.1(754)	3.91	.252(.246)	-.090(-.087)
23908	.95	36.1(753)	5.88	.330(.321)	-.109(-.101)
23909	.95	36.1(753)	7.88	.414(.416)	-.126(-.122)
23910	.95	36.1(753)	9.88	.490(.486)	-.132(-.127)
23911	.95	36.1(754)	11.77	.573(.567)	-.141(-.136)
23912	.95	36.1(754)	13.74	.661(.659)	-.156(-.149)
23913	.95	36.1(754)	15.69	.738(.729)	-.162(-.148)
24001	.85	32.2(672)	-7.84	-.176(-.180)	.009(.011)
24002	.85	32.2(673)	-5.89	-.096(-.100)	-.005(-.004)
24003	.85	32.2(673)	-3.94	-.027(-.033)	-.019(-.017)
24004	.85	32.2(673)	-1.99	.041(.038)	-.034(-.034)
24005	.85	32.2(673)	.01	.106(.100)	-.047(-.046)
24006	.85	32.2(672)	2.02	.172(.165)	-.061(-.058)
24007	.85	32.2(673)	3.97	.243(.237)	-.080(-.079)
24008	.85	32.2(673)	5.94	.321(.310)	-.099(-.093)
24009	.85	32.2(673)	7.88	.398(.397)	-.111(-.111)
24010	.85	32.2(672)	9.87	.473(.472)	-.116(-.115)
24011	.85	32.2(673)	11.81	.558(.550)	-.125(-.120)
24012	.85	32.2(673)	13.77	.650(.649)	-.139(-.134)
24013	.85	32.2(673)	15.73	.736(.736)	-.148(-.141)
24101	.60	10.3(215)	-7.76	-.160(-.163)	.028(.015)
24102	.60	10.3(215)	-5.83	-.092(-.095)	.014(.000)
24103	.60	10.3(215)	-3.87	-.025(-.029)	-.002(-.013)
24104	.60	10.3(215)	-1.90	.037(.035)	-.015(-.028)
24105	.60	10.3(215)	.10	.096(.093)	-.026(-.038)
24106	.60	10.3(215)	2.09	.158(.154)	-.040(-.050)
24107	.60	10.3(215)	4.06	.222(.216)	-.055(-.062)
24108	.60	10.3(215)	6.06	.281(.281)	-.066(-.062)
24109	.60	10.3(215)	8.02	.329(.328)	-.074(-.083)
24110	.60	10.3(215)	9.99	.375(.370)	-.095(-.102)
24111	.60	10.3(215)	11.91	.448(.449)	-.100(-.108)
24112	.60	10.3(215)	13.86	.530(.534)	-.108(-.119)
24113	.60	10.3(215)	15.83	.630(.632)	-.127(-.139)
24114	.60	10.3(215)	17.77	.734(.727)	-.144(-.151)

Table A-4. — (Concluded)

(i) T.E. Deflection, Inboard = 17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
24205	1.05	39.2(819)	-7.92	-.093(-.080)	-.056(-.057)	24501	.85	32.2(672)	-7.90	-.063(-.066)	-.043(-.042)
24206	1.05	39.2(819)	-5.95	-.010(-.004)	-.071(-.069)	24502	.85	32.2(672)	-5.96	.014(.010)	-.057(-.056)
24207	1.05	39.2(818)	-3.98	.069(.072)	-.089(-.086)	24503	.85	32.2(672)	-3.96	.083(.081)	-.071(-.071)
24208	1.05	39.2(818)	-2.03	.137(.139)	-.104(-.101)	24504	.85	32.2(672)	-2.01	.144(.142)	-.083(-.083)
24209	1.05	39.2(819)	-.03	.204(.205)	-.119(-.115)	24505	.85	32.2(672)	-.03	.206(.201)	-.095(-.094)
24210	1.05	39.2(819)	1.90	.271(.272)	-.135(-.132)	24506	.85	32.2(672)	1.96	.274(.271)	-.112(-.112)
24211	1.05	39.2(819)	3.89	.343(.346)	-.154(-.152)	24507	.85	32.2(672)	3.91	.345(.341)	-.131(-.129)
24212	1.05	39.2(818)	5.83	.419(.423)	-.171(-.170)	24508	.85	32.2(672)	5.85	.421(.410)	-.149(-.142)
24214	1.05	39.2(819)	7.82	.492(.507)	-.181(-.184)	24509	.85	32.1(671)	7.82	.496(.502)	-.162(-.163)
24215	1.05	39.2(819)	9.81	.566(.569)	-.189(-.185)	24510	.85	32.2(672)	9.79	.569(.574)	-.166(-.167)
24216	1.05	39.2(819)	11.73	.629(.636)	-.187(-.185)	24511	.85	32.2(672)	11.75	.647(.642)	-.171(-.167)
24217	1.05	39.2(818)	13.74	.703(.719)	-.193(-.195)	24512	.85	32.2(672)	13.72	.731(.735)	-.182(-.178)
24218	1.05	39.2(819)	15.69	.770(.774)	-.198(-.199)	24513	.85	32.2(672)	15.69	.814(.813)	-.189(-.181)
24301	.70	25.3(528)	-7.86	-.057(-.060)	-.037(-.036)	24601	.40	10.3(216)	-7.83	-.058(-.071)	-.016(-.025)
24302	.70	25.3(528)	-5.92	.015(.010)	-.057(-.050)	24602	.40	10.3(215)	-5.86	.012(-.001)	-.034(-.039)
24303	.70	25.3(528)	-3.92	.083(.080)	-.066(-.066)	24603	.40	10.2(214)	-3.90	.077(.066)	-.050(-.054)
24304	.70	25.3(528)	-1.99	.143(.137)	-.078(-.076)	24604	.40	10.2(214)	-1.93	.138(.126)	-.067(-.066)
24305	.70	25.2(527)	.00	.204(.197)	-.090(-.088)	24605	.40	10.3(215)	.06	.199(.187)	-.075(-.078)
24306	.70	25.2(527)	1.99	.270(.262)	-.105(-.102)	24606	.40	10.2(214)	2.02	.261(.246)	-.089(-.090)
24307	.70	25.2(527)	3.96	.340(.333)	-.123(-.122)	24607	.40	10.2(214)	3.98	.328(.320)	-.107(-.113)
24308	.70	25.2(527)	5.92	.415(.402)	-.141(-.135)	24608	.40	10.2(214)	5.95	.399(.388)	-.124(-.128)
24309	.70	25.2(527)	7.85	.490(.490)	-.154(-.154)	24609	.40	10.2(214)	7.92	.477(.464)	-.142(-.143)
24310	.70	25.2(527)	9.82	.562(.561)	-.158(-.155)	24610	.40	10.2(214)	9.89	.551(.547)	-.148(-.152)
24311	.70	25.2(527)	11.82	.644(.640)	-.165(-.165)	24611	.40	10.2(213)	11.87	.634(.633)	-.157(-.163)
24312	.70	25.2(527)	13.78	.743(.738)	-.185(-.183)	24612	.40	10.2(214)	13.82	.734(.727)	-.176(-.180)
24313	.70	25.2(527)	15.73	.834(.833)	-.195(-.191)	24613	.40	10.2(214)	15.76	.834(.817)	-.192(-.190)
24314	.70	25.2(527)	.01	.202(.199)	-.088(-.088)						
24401	.95	36.1(754)	-7.91	-.069(-.064)	-.053(-.053)						
24402	.95	36.1(754)	-6.02	.007(.009)	-.065(-.063)						
24403	.95	36.1(753)	-3.99	.082(.083)	-.081(-.079)						
24404	.95	36.1(753)	-2.02	.147(.149)	-.094(-.093)						
24405	.95	36.1(753)	-.05	.210(.203)	-.108(-.104)						
24406	.95	36.1(753)	1.92	.278(.278)	-.126(-.123)						
24407	.95	36.1(753)	3.87	.350(.349)	-.145(-.142)						
24408	.95	36.1(754)	5.83	.431(.424)	-.169(-.159)						
24409	.95	36.1(753)	7.80	.517(.522)	-.191(-.186)						
24410	.95	36.1(753)	9.88	.588(.588)	-.192(-.186)						
24411	.95	36.1(753)	11.72	.650(.648)	-.188(-.181)						
24412	.95	36.1(753)	13.71	.724(.725)	-.192(-.183)						
24413	.95	36.1(754)	15.69	.799(.795)	-.197(-.186)						

Table A-5.—Experimental Data Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Inboard = 17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (pst)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
24715	1.05	39.2(819)	-7.92	-0.090(-.081)	-0.057(-.058)
24716	1.05	39.2(819)	-5.94	-0.071(-.003)	-0.072(-.069)
24717	1.05	39.2(819)	-4.00	.071(.075)	-0.089(-.087)
24718	1.05	39.2(819)	-2.01	.140(.141)	-0.104(-.101)
24719	1.05	39.2(818)	-0.06	.206(.205)	-0.119(-.116)
24720	1.05	39.2(819)	1.92	.275(.274)	-0.137(-.136)
24721	1.05	39.2(819)	3.86	.346(.347)	-0.154(-.152)
24722	1.05	39.2(819)	5.87	.423(.424)	-0.169(-.166)
24723	1.05	39.2(819)	7.84	.498(.492)	-0.178(-.170)
24724	1.05	39.2(819)	9.84	.575(.572)	-0.189(-.183)
24725	1.05	39.2(819)	11.77	.642(.643)	-0.193(-.187)
24726	1.05	39.2(819)	13.71	.707(.723)	-0.194(-.197)
24727	1.05	39.2(819)	15.67	.774(.779)	-0.199(-.192)
24801	.70	25.3(528)	-7.88	-0.054(-.056)	-0.036(-.037)
24802	.70	25.2(527)	-5.91	.022(.020)	-0.053(-.054)
24803	.70	25.2(527)	-3.92	.085(.082)	-0.065(-.066)
24804	.70	25.2(527)	-1.98	.145(.139)	-0.076(-.076)
24805	.70	25.2(527)	-0.01	.206(.197)	-0.089(-.087)
24806	.70	25.2(527)	1.99	.275(.269)	-0.106(-.107)
24807	.70	25.2(527)	3.96	.347(.335)	-0.124(-.120)
24808	.70	25.2(527)	5.90	.422(.412)	-0.142(-.138)
24809	.70	25.3(528)	7.85	.505(.492)	-0.157(-.153)
24810	.70	25.3(528)	9.84	.595(.582)	-0.173(-.168)
24811	.70	25.3(528)	11.79	.692(.665)	-0.186(-.191)
24812	.70	25.3(529)	13.73	.762(.745)	-0.192(-.184)
24813	.70	25.3(528)	15.70	.842(.825)	-0.195(-.182)
24901	.95	36.1(754)	-7.93	-0.067(-.060)	-0.054(-.055)
24902	.95	36.1(754)	-5.98	.011(.016)	-0.067(-.066)
24903	.95	36.1(754)	-4.01	.085(.086)	-0.081(-.080)
24904	.95	36.1(754)	-2.04	.148(.149)	-0.093(-.092)
24905	.95	36.1(754)	-0.05	.213(.212)	-0.109(-.106)
24906	.95	36.1(754)	1.92	.282(.281)	-0.127(-.124)
24907	.95	36.1(753)	3.87	.356(.348)	-0.147(-.139)
24908	.95	36.1(754)	5.83	.435(.429)	-0.167(-.160)
24909	.95	36.1(754)	7.79	.517(.511)	-0.184(-.176)
24910	.95	36.1(754)	9.78	.595(.587)	-0.193(-.185)
24911	.95	36.1(754)	11.72	.663(.665)	-0.195(-.191)
24912	.95	36.1(754)	13.69	.738(.740)	-0.200(-.193)
24913	.95	36.1(754)	15.64	.811(.809)	-0.205(-.196)
25001	.85	32.3(674)	-7.91	-0.059(-.059)	-0.045(-.045)
25002	.85	32.2(673)	-5.94	.019(.018)	-0.059(-.059)
25003	.85	32.2(673)	-4.00	.085(.083)	-0.071(-.072)
25004	.85	32.2(673)	-2.01	.146(.143)	-0.093(-.083)
25005	.85	32.2(672)	-0.07	.208(.203)	-0.097(-.095)
25006	.85	32.2(672)	1.94	.279(.276)	-0.114(-.115)
25007	.85	32.2(672)	3.89	.351(.342)	-0.132(-.128)
25008	.85	32.2(672)	5.87	.431(.421)	-0.152(-.147)
25009	.85	32.2(672)	7.83	.516(.506)	-0.169(-.165)
25010	.85	32.2(673)	9.76	.605(.596)	-0.188(-.181)
25011	.85	32.2(673)	11.74	.686(.674)	-0.197(-.188)
25012	.85	32.2(672)	13.71	.762(.760)	-0.201(-.195)
25013	.85	32.2(672)	15.68	.837(.833)	-0.203(-.194)
25201	.40	10.3(215)	-7.84	-0.052(-.056)	-0.017(-.028)
25202	.40	10.3(215)	-5.89	.019(.013)	-0.035(-.045)
25203	.40	10.3(215)	-3.88	.081(.072)	-0.048(-.056)
25204	.40	10.3(215)	-1.92	.140(.130)	-0.060(-.067)
25205	.40	10.2(214)	.01	.198(.188)	-0.073(-.078)
25206	.40	10.2(214)	2.03	.265(.256)	-0.090(-.097)
25207	.40	10.2(214)	3.99	.334(.324)	-0.108(-.114)
25208	.40	10.2(214)	5.93	.405(.389)	-0.124(-.125)
25209	.40	10.2(214)	7.94	.485(.470)	-0.139(-.142)
25210	.40	10.2(214)	9.88	.573(.558)	-0.154(-.157)
25211	.40	10.2(214)	11.83	.661(.647)	-0.167(-.171)
25212	.40	10.2(214)	13.82	.749(.733)	-0.177(-.181)
25213	.40	10.3(215)	15.75	.835(.817)	-0.184(-.186)

Table A-5. — (Continued)

(b) T. E. Deflection, Inboard = 8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
25404	1.11	40.7(849)	-7.81	-2.02(-.210)	-0.13(-.016)
25406	1.11	40.6(847)	-3.87	-0.33(-.040)	-0.30(-.023)
25407	1.11	40.6(847)	.06	1.10(.099)	-0.66(-.057)
25408	1.11	40.6(847)	4.01	2.60(.249)	-1.08(-.101)
25409	1.11	40.6(848)	7.90	4.24(.409)	-1.45(-.136)
25501	.70	25.2(527)	-7.82	-1.65(-.166)	-0.11(-.011)
25502	.70	25.2(527)	-5.88	-0.89(-.090)	-0.03(-.003)
25503	.70	25.2(526)	-3.90	-0.20(-.022)	-0.20(-.021)
25504	.70	25.2(527)	-1.93	0.47(.038)	-0.31(-.031)
25505	.70	25.2(526)	.01	1.03(.097)	-0.43(-.042)
25506	.70	25.2(527)	2.05	1.70(.162)	-0.58(-.055)
25507	.70	25.2(526)	4.01	2.41(.233)	-0.76(-.074)
25508	.70	25.2(527)	5.94	3.18(.309)	-0.94(-.090)
25509	.70	25.2(526)	7.91	4.06(.394)	-1.11(-.107)
25510	.70	25.2(526)	9.89	4.93(.480)	-1.25(-.120)
25511	.70	25.2(526)	11.85	5.81(.565)	-1.37(-.133)
25512	.70	25.2(526)	13.79	6.67(.651)	-1.46(-.140)
25513	.70	25.2(526)	15.78	7.55(.742)	-1.52(-.142)
25514	.70	25.2(527)	.04	1.03(.098)	-0.42(-.042)
25601	1.05	39.1(817)	-7.84	-2.02(-.210)	-0.11(-.015)
25602	1.05	39.1(817)	-5.90	-1.16(-.124)	-0.08(-.004)
25603	1.05	39.2(818)	-3.95	-0.32(-.040)	-0.30(-.024)
25604	1.05	39.1(817)	-1.98	0.42(.034)	-0.47(-.042)
25605	1.05	39.1(817)	.02	1.12(.103)	-0.64(-.057)
25606	1.05	39.1(816)	1.97	1.86(.176)	-0.84(-.079)
25607	1.05	39.1(816)	3.93	2.65(.255)	-1.07(-.102)
25608	1.05	39.1(816)	5.89	3.47(.334)	-1.27(-.118)
25609	1.05	39.1(817)	7.85	4.29(.422)	-1.47(-.137)
25610	1.05	39.1(817)	9.82	5.08(.496)	-1.54(-.145)
25611	1.05	39.2(818)	11.77	5.82(.581)	-1.62(-.158)
25612	1.05	39.1(817)	13.75	6.60(.662)	-1.72(-.168)
25613	1.05	39.1(817)	15.70	7.33(.729)	-1.79(-.168)
25701	.95	36.0(752)	-7.87	-1.81(-.184)	-0.05(-.004)
25702	.95	36.0(752)	-5.91	-1.00(-.104)	-0.08(-.006)
25703	.95	36.0(752)	-3.98	-0.21(-.023)	-0.26(-.026)
25704	.95	36.0(752)	-1.99	0.45(.041)	-0.39(-.038)
25705	.95	36.0(752)	-.04	1.09(.104)	-0.53(-.050)
25706	.95	36.0(751)	1.94	1.80(.177)	-0.70(-.070)
25707	.95	36.0(751)	3.93	2.58(.250)	-0.92(-.087)
25708	.95	36.0(751)	5.87	3.41(.335)	-1.13(-.110)
25709	.95	36.0(751)	7.85	4.34(.426)	-1.36(-.131)
25710	.95	36.0(751)	9.77	5.16(.504)	-1.51(-.143)
25711	.95	36.0(751)	11.76	6.00(.594)	-1.61(-.155)
25712	.95	36.0(751)	13.72	6.78(.677)	-1.68(-.161)
25713	.95	36.0(751)	15.66	7.52(.747)	-1.72(-.161)
25801	.85	32.1(671)	-7.85	-1.72(-.172)	-0.09(-.008)
25802	.85	32.1(670)	-5.91	-0.95(-.093)	-0.04(-.004)
25803	.85	32.1(670)	-3.95	-0.21(-.022)	-0.22(-.023)
25804	.85	32.1(670)	-1.96	0.44(.039)	-0.35(-.034)
25805	.85	32.1(670)	.01	1.07(.101)	-0.47(-.046)
25806	.85	32.1(670)	1.99	1.75(.167)	-0.63(-.060)
25807	.85	32.1(670)	3.95	2.50(.239)	-0.83(-.079)
25808	.85	32.1(670)	5.90	3.30(.319)	-1.02(-.097)
25809	.85	32.1(670)	7.86	4.17(.405)	-1.20(-.115)
25810	.85	32.1(670)	9.82	5.07(.493)	-1.36(-.129)
25811	.85	32.1(671)	11.78	5.95(.581)	-1.50(-.141)
25812	.85	32.1(671)	13.74	6.83(.670)	-1.62(-.150)
25813	.85	32.1(670)	15.72	7.66(.755)	-1.67(-.155)
25901	.40	10.2(214)	-7.78	-1.57(-.156)	0.25(.013)
25902	.40	10.2(214)	-5.83	-0.84(-.086)	0.07(-.003)
25903	.40	10.2(214)	-3.87	-0.20(-.022)	-0.08(-.018)
25904	.40	10.2(214)	-1.86	0.39(.036)	-0.18(-.028)
25905	.40	10.3(215)	.10	0.98(.094)	-0.29(-.038)
25906	.40	10.3(215)	2.07	1.60(.152)	-0.43(-.048)
25907	.40	10.3(215)	4.06	2.28(.223)	-0.61(-.068)
25908	.40	10.3(215)	6.00	2.99(.293)	-0.78(-.083)
25909	.40	10.3(215)	7.98	3.82(.373)	-0.95(-.099)
25910	.40	10.3(215)	9.98	4.76(.467)	-1.11(-.116)
25911	.40	10.3(215)	11.89	5.62(.552)	-1.24(-.127)
25912	.40	10.2(214)	13.84	6.51(.639)	-1.34(-.138)
25913	.40	10.2(214)	15.80	7.43(.729)	-1.43(-.146)

Table A-5.—(Continued)

(c) T.E. Deflection, Full Span = 0.0° (Repeat series)

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
26204	1.11	40.6(848)	-7.72	-0.318(-.325)	0.090(.083)	26701	.85	32.2(672)	-7.78	-2.97(-.298)	0.671(.065)
26205	1.11	40.6(848)	-3.81	-0.146(-.151)	0.037(.040)	26702	.85	32.1(671)	-5.81	-2.12(-.213)	0.511(.047)
26206	1.11	40.6(847)	.11	0.001(-.006)	-0.003(-.000)	26703	.85	32.1(671)	-3.87	-1.33(-.138)	0.311(.032)
26207	1.11	40.6(848)	4.07	0.157(.142)	-0.046(-.040)	26704	.85	32.2(672)	-1.90	-0.62(-.066)	0.141(.013)
26208	1.11	40.6(848)	7.98	0.331(.313)	-0.090(-.094)	26705	.85	32.2(672)	.07	0.01(-.005)	0.011(.001)
26301	.70	25.2(526)	-7.74	-0.281(-.285)	0.631(.061)	26706	.85	32.1(671)	2.06	0.67(.058)	-0.12(-.011)
26302	.70	25.2(526)	-5.84	-0.203(-.203)	0.048(.044)	26707	.85	32.1(671)	3.99	1.38(.127)	-0.30(-.029)
26303	.70	25.1(525)	-3.84	-0.126(-.129)	0.029(.027)	26708	.85	32.1(671)	5.96	2.22(.209)	-0.52(-.048)
26304	.70	25.2(526)	-1.87	-0.060(-.064)	0.14(.012)	26709	.85	32.1(671)	7.92	3.07(.292)	-0.67(-.064)
26305	.70	25.2(526)	.08	0.002(-.005)	0.02(.001)	26710	.85	32.1(671)	9.88	3.93(.377)	-0.79(-.075)
26306	.70	25.2(526)	2.05	0.065(.057)	-0.10(-.010)	26711	.85	32.1(670)	11.87	4.80(.466)	-0.89(-.085)
26307	.70	25.2(526)	4.03	0.135(.124)	-0.27(-.026)	26712	.85	32.1(671)	13.90	5.73(.564)	-0.99(-.095)
26308	.70	25.2(526)	6.03	0.214(.200)	-0.47(-.044)	26713	.85	32.1(671)	15.79	6.60(.653)	-1.08(-.104)
26309	.70	25.2(526)	7.98	0.300(.286)	-0.64(-.061)	26802	1.00	37.6(786)	-7.82	-3.25(-.333)	0.811(.079)
26310	.70	25.1(525)	9.91	0.385(.369)	-0.75(-.072)	26803	1.00	37.6(786)	-5.87	-2.33(-.237)	0.591(.056)
26311	.70	25.1(525)	11.91	0.471(.454)	-0.84(-.082)	26805	1.00	37.6(786)	-3.90	-1.45(-.149)	0.361(.035)
26312	.70	25.1(525)	13.86	0.557(.543)	-0.91(-.090)	26806	1.00	37.7(787)	-1.95	-0.69(-.072)	0.15(.014)
26313	.70	25.1(525)	15.83	0.647(.640)	-0.98(-.096)	26807	1.00	37.6(786)	.02	-0.02(-.007)	0.001(.001)
26314	.70	25.2(526)	.11	0.002(-.002)	0.003(.001)	26808	1.00	37.6(786)	1.99	0.68(.059)	-0.16(-.012)
26401	1.05	39.1(817)	-7.76	-0.325(-.329)	0.083(.082)	26809	1.00	37.6(786)	3.96	1.47(.136)	-0.37(-.033)
26402	1.05	39.1(816)	-5.84	-0.237(-.241)	0.062(.061)	26810	1.00	37.7(787)	5.90	2.37(.226)	-0.62(-.057)
26403	1.05	39.1(817)	-3.86	-0.150(-.155)	0.039(.040)	26811	1.00	37.6(785)	7.87	3.27(.317)	-0.82(-.077)
26404	1.05	39.1(816)	-1.91	-0.072(-.076)	0.16(.017)	26812	1.00	37.6(786)	9.83	4.14(.401)	-0.97(-.091)
26405	1.05	39.1(817)	.09	-0.001(-.008)	-0.001(.001)	26813	1.00	37.6(786)	11.78	5.00(.492)	-1.10(-.105)
26406	1.05	39.1(817)	2.03	0.070(.059)	-0.18(-.014)	26814	1.00	37.6(786)	13.75	5.86(.580)	-1.22(-.114)
26407	1.05	39.1(817)	3.99	0.151(.138)	-0.42(-.036)	26815	1.00	37.6(786)	15.70	6.72(.664)	-1.34(-.127)
26408	1.05	39.1(817)	5.96	0.241(.229)	-0.67(-.060)	26901	.40	10.2(214)	-7.75	-2.66(-.269)	0.681(.059)
26409	1.05	39.1(817)	7.87	0.329(.313)	-0.88(-.082)	26902	.40	10.3(215)	-5.77	-1.68(-.194)	0.471(.044)
26410	1.05	39.1(817)	9.89	0.416(.405)	-1.03(-.096)	26903	.40	10.3(215)	-3.80	-1.18(-.123)	0.30(.024)
26411	1.05	39.1(817)	11.82	0.499(.494)	-1.15(-.112)	26904	.40	10.3(215)	-1.83	-0.55(-.061)	0.16(.011)
26412	1.05	39.1(817)	13.76	0.580(.580)	-1.27(-.124)	26905	.40	10.3(215)	.14	0.06(-.003)	0.051(.001)
26413	1.05	39.1(817)	15.76	0.668(.666)	-1.43(-.138)	26906	.40	10.3(215)	2.11	0.67(.056)	-0.07(-.010)
26601	.95	36.0(752)	-7.81	-0.312(-.316)	0.72(.071)	26907	.40	10.3(215)	4.10	1.32(.120)	-0.23(-.023)
26602	.95	36.0(752)	-5.85	-0.222(-.225)	0.53(.051)	26908	.40	10.3(215)	6.07	2.06(.193)	-0.42(-.043)
26603	.95	36.0(752)	-3.89	-0.139(-.145)	0.33(.033)	26910	.40	10.3(215)	8.00	2.89(.272)	-0.61(-.060)
26604	.95	36.0(752)	-1.92	-0.065(-.069)	0.14(.013)	26911	.40	10.2(214)	9.97	3.79(.361)	-0.74(-.073)
26605	.95	36.0(752)	.05	-0.001(-.006)	0.01(.001)	26913	.40	10.2(214)	11.91	4.63(.445)	-0.82(-.082)
26606	.95	36.0(752)	2.00	0.066(.058)	-0.13(-.011)	26914	.40	10.2(214)	13.88	5.51(.529)	-0.91(-.091)
26607	.95	36.0(751)	3.99	0.143(.132)	-0.33(-.031)	26915	.40	10.2(214)	15.87	6.42(.621)	-0.99(-.099)
26608	.95	36.0(751)	5.93	0.229(.217)	-0.55(-.051)						
26609	.95	36.0(751)	7.88	0.317(.303)	-0.73(-.067)						
26610	.95	36.0(751)	9.85	0.406(.393)	-0.98(-.083)						
26611	.95	36.0(751)	11.82	0.498(.491)	-1.03(-.100)						
26612	.95	36.0(752)	13.77	0.589(.585)	-1.17(-.112)						
26613	.95	36.0(752)	15.71	0.678(.672)	-1.30(-.124)						

Table A-5.--(Continued)

(d) T.E. Deflection, Inboard = 0.0°, Outboard = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
27006	1.11	40.6(848)	-7.75	-.307(-.315)	-.068(-.072)
27007	1.11	40.6(848)	-3.83	-.125(-.129)	.016(.017)
27008	1.11	40.6(848)	.11	-.026(-.021)	-.026(-.024)
27009	1.11	40.6(848)	4.02	.177(.165)	-.067(-.062)
27010	1.11	40.6(848)	7.97	.344(.330)	-.102(-.095)
27101	.70	25.2(527)	-7.76	-.256(-.258)	.042(.041)
27102	.70	25.2(527)	-5.82	-.173(-.172)	.024(.021)
27103	.70	25.2(527)	-3.84	-.095(-.097)	.003(.001)
27104	.70	25.2(527)	-1.88	-.029(-.034)	-.011(-.013)
27105	.70	25.2(527)	.07	.032(.026)	-.023(-.023)
27106	.70	25.2(527)	2.05	.097(.086)	-.036(-.034)
27107	.70	25.2(527)	4.02	.165(.154)	-.052(-.051)
27108	.70	25.2(527)	5.98	.242(.228)	-.070(-.067)
27109	.70	25.2(527)	7.97	.325(.309)	-.083(-.079)
27110	.70	25.2(527)	9.91	.404(.385)	-.090(-.084)
27111	.70	25.2(527)	11.88	.484(.464)	-.094(-.089)
27112	.70	25.2(526)	13.86	.570(.550)	-.101(-.095)
27113	.70	25.2(526)	15.80	.659(.646)	-.108(-.101)
27114	.70	25.2(527)	.07	-.031(-.026)	-.022(-.023)
27201	1.05	39.1(817)	-7.83	-.313(-.323)	-.071(-.074)
27202	1.05	39.1(817)	-5.86	-.218(-.224)	.044(.044)
27203	1.05	39.1(817)	-3.89	-.127(-.132)	.016(.017)
27204	1.05	39.1(817)	-1.93	-.046(-.048)	-.008(-.008)
27205	1.05	39.1(817)	.03	.023(.017)	-.024(-.022)
27206	1.05	39.1(816)	2.02	.096(.085)	-.042(-.036)
27207	1.05	39.1(817)	3.99	.175(.163)	-.063(-.060)
27208	1.05	39.1(816)	5.92	.259(.248)	-.084(-.078)
27209	1.05	39.1(817)	7.87	.343(.330)	-.100(-.093)
27210	1.05	39.1(816)	9.83	.424(.410)	-.110(-.102)
27211	1.05	39.1(816)	11.83	.510(.503)	-.125(-.120)
27212	1.05	39.1(817)	13.78	.595(.589)	-.139(-.132)
27213	1.05	39.1(816)	15.75	.682(.678)	-.155(-.151)
27301	.95	36.0(751)	-7.82	-.293(-.299)	.056(.055)
27302	.95	36.0(751)	-5.86	-.198(-.203)	.032(.032)
27303	.95	36.0(751)	-3.90	-.112(-.117)	.010(.009)
27304	.95	36.0(751)	-1.95	-.038(-.042)	-.010(-.011)
27305	.95	36.0(751)	.04	.028(.022)	-.023(-.023)
27306	.95	36.0(751)	1.99	.095(.085)	-.037(-.034)
27307	.95	36.0(752)	3.96	.169(.160)	-.056(-.054)
27308	.95	36.0(752)	5.92	.252(.241)	-.075(-.071)
27309	.95	36.0(752)	7.87	.335(.321)	-.088(-.083)
27310	.95	36.0(751)	9.85	.418(.402)	-.098(-.090)
27311	.95	36.0(751)	11.80	.506(.495)	-.110(-.103)
27312	.95	36.0(752)	13.74	.597(.590)	-.124(-.116)
27313	.95	36.0(751)	15.70	.689(.682)	-.138(-.132)
27401	.85	32.1(671)	-7.79	-.274(-.276)	.049(.047)
27402	.85	32.1(671)	-5.84	-.186(-.188)	.029(.026)
27403	.85	32.1(671)	-3.88	-.104(-.109)	.007(.007)
27404	.85	32.1(671)	-1.93	-.034(-.038)	-.010(-.012)
27405	.85	32.1(671)	.04	.029(.023)	-.022(-.023)
27406	.85	32.1(671)	2.02	.095(.085)	-.036(-.034)
27407	.85	32.1(671)	4.00	.167(.158)	-.054(-.054)
27408	.85	32.1(671)	5.96	.248(.236)	-.073(-.070)
27409	.85	32.1(670)	7.92	.328(.313)	-.085(-.080)
27410	.85	32.1(671)	9.87	.407(.388)	-.090(-.083)
27411	.85	32.1(670)	11.83	.490(.472)	-.097(-.090)
27412	.85	32.1(670)	13.81	.579(.566)	-.107(-.099)
27413	.85	32.1(670)	15.75	.670(.662)	-.117(-.111)
27502	.40	10.2(214)	-7.75	-.236(-.239)	.044(.038)
27503	.40	10.2(213)	-5.78	-.157(-.162)	.023(.020)
27504	.40	10.2(214)	-3.83	-.086(-.090)	.005(-.000)
27505	.40	10.2(214)	-1.84	-.023(-.029)	-.008(-.013)
27506	.40	10.2(214)	.14	.036(.029)	-.018(-.023)
27507	.40	10.2(214)	2.12	.097(.088)	-.029(-.033)
27508	.40	10.2(214)	4.07	.162(.153)	-.044(-.049)
27509	.40	10.2(214)	6.05	.236(.225)	-.063(-.067)
27510	.40	10.2(214)	8.01	.317(.301)	-.079(-.080)
27511	.40	10.2(214)	9.97	.402(.383)	-.089(-.089)
27512	.40	10.2(214)	11.94	.482(.461)	-.094(-.092)
27513	.40	10.2(214)	13.89	.566(.541)	-.100(-.097)
27514	.40	10.2(214)	15.82	.653(.628)	-.107(-.104)

Table A-5.—(Concluded)

(e) T.E. Deflection, Inboard = 0.0°, Outboard = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
27610	1.05	39.1(817)	-7.81	-.300(-.309)	.055(.060)	27901	.85	32.1(671)	-7.82	-.251(-.254)	.028(.028)
27611	1.05	39.1(816)	-5.86	-.199(-.203)	.025(.025)	27902	.85	32.1(671)	-5.86	-.158(-.160)	.006(.003)
27612	1.05	39.1(817)	-3.91	-.104(-.108)	-.006(-.005)	27903	.85	32.1(671)	-3.91	-.075(-.079)	-.017(-.018)
27613	1.05	39.1(817)	-1.95	-.023(-.025)	-.029(-.030)	27904	.85	32.1(671)	-1.95	-.006(-.009)	-.033(-.035)
27614	1.05	39.1(816)	.03	.046(.043)	-.046(-.044)	27905	.85	32.1(671)	.04	.056(.052)	-.045(-.046)
27615	1.05	39.1(817)	2.01	.118(.108)	-.062(-.057)	27906	.85	32.1(671)	2.02	.122(.113)	-.058(-.056)
27616	1.05	39.1(817)	3.97	.194(.185)	-.082(-.078)	27907	.85	32.1(671)	3.87	.192(.185)	-.075(-.076)
27617	1.05	39.1(817)	5.92	.276(.270)	-.100(-.097)	27908	.85	32.1(671)	5.94	.271(.261)	-.092(-.091)
27618	1.05	39.1(817)	7.89	.358(.345)	-.112(-.105)	27909	.85	32.1(671)	7.90	.345(.332)	-.098(-.096)
27619	1.05	39.1(817)	9.84	.436(.424)	-.121(-.112)	27910	.85	32.1(671)	9.86	.419(.401)	-.100(-.093)
27620	1.05	39.1(817)	11.78	.517(.511)	-.132(-.127)	27911	.85	32.1(671)	11.82	.500(.480)	-.106(-.106)
27621	1.05	39.1(817)	13.77	.602(.601)	-.146(-.143)	27912	.85	32.1(671)	13.80	.589(.575)	-.116(-.106)
27622	1.05	39.1(817)	15.74	.685(.692)	-.162(-.163)	27913	.85	32.1(671)	15.73	.680(.672)	-.126(-.119)
27701	.70	25.2(526)	-7.78	-.227(-.230)	.020(-.018)	28001	.40	10.2(214)	-7.76	-.209(-.210)	.024(.014)
27702	.70	25.2(526)	-5.84	-.141(-.142)	-.001(-.004)	28002	.40	10.2(214)	-5.79	-.126(-.128)	.007(-.006)
27703	.70	25.2(526)	-3.86	-.063(-.065)	-.022(-.024)	28003	.40	10.2(214)	-3.83	-.056(-.058)	-.016(-.026)
27704	.70	25.2(526)	-1.90	.000(-.003)	-.035(-.036)	28004	.40	10.2(214)	-1.85	.006(.003)	-.029(-.037)
27705	.70	25.2(526)	.06	.061(.055)	-.047(-.046)	28005	.40	10.2(214)	.12	.064(.059)	-.039(-.046)
27706	.70	25.2(526)	2.05	.125(.114)	-.059(-.056)	28006	.40	10.2(214)	2.10	.125(.116)	-.051(-.054)
27707	.70	25.2(526)	4.00	.193(.184)	-.074(-.074)	28007	.40	10.2(214)	4.07	.190(.185)	-.066(-.074)
27708	.70	25.2(526)	5.99	.269(.258)	-.092(-.090)	28008	.40	10.2(214)	6.04	.262(.254)	-.098(-.089)
27709	.70	25.2(526)	7.94	.344(.331)	-.099(-.096)	28009	.40	10.2(214)	8.00	.342(.329)	-.098(-.100)
27710	.70	25.2(526)	9.92	.418(.401)	-.100(-.095)	28010	.40	10.2(214)	9.94	.419(.403)	-.102(-.104)
27711	.70	25.2(526)	11.88	.496(.474)	-.103(-.096)	28011	.40	10.2(214)	11.90	.494(.475)	-.104(-.102)
27712	.70	25.2(526)	13.82	.579(.553)	-.109(-.101)	28012	.40	10.2(214)	13.88	.576(.552)	-.107(-.105)
27713	.70	25.2(527)	15.81	.670(.655)	-.116(-.107)	28013	.40	10.2(214)	15.84	.663(.639)	-.112(-.109)
27714	.70	25.2(526)	.06	.061(.056)	-.045(-.046)						
27801	.95	36.0(752)	-7.81	-.272(-.277)	.037(-.038)						
27802	.95	36.0(752)	-5.88	-.174(-.179)	.011(-.011)						
27803	.95	36.0(752)	-3.93	-.086(-.089)	-.015(-.015)						
27804	.95	36.0(751)	-1.95	-.011(-.014)	-.034(-.034)						
27805	.95	36.0(751)	.03	.053(.048)	-.046(-.045)						
27806	.95	36.0(752)	2.00	.121(.112)	-.061(-.057)						
27807	.95	36.0(752)	3.94	.193(.183)	-.078(-.075)						
27808	.95	36.0(752)	5.91	.273(.263)	-.094(-.090)						
27809	.95	36.0(752)	7.88	.351(.338)	-.102(-.096)						
27810	.95	36.0(752)	9.85	.430(.412)	-.108(-.099)						
27811	.95	36.0(752)	11.79	.516(.504)	-.119(-.110)						
27812	.95	36.0(752)	13.76	.608(.603)	-.133(-.126)						
27813	.95	36.0(752)	15.72	.700(.696)	-.148(-.142)						



Table A-6.—Experimental Data Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Inboard = 5.1°,  
Outboard = 0.0°

(a) T.E. Deflection, Inboard = 0.0°, Outboard = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
28204	1.05	39.1(817)	-7.82	-.303(-.304)	.043(-.051)
28205	1.05	39.1(817)	-5.84	-.208(-.215)	.073(-.026)
28206	1.05	39.1(816)	-3.91	-.114(-.123)	-.005(-.004)
28207	1.05	39.1(816)	-1.96	-.026(-.029)	-.031(-.030)
28208	1.05	39.1(817)	.02	.046(.042)	-.048(-.046)
28209	1.05	39.1(816)	1.99	.118(.109)	-.066(-.060)
28210	1.05	39.1(816)	3.95	.195(.186)	-.086(-.083)
28211	1.05	39.1(816)	5.92	.277(.272)	-.107(-.106)
28212	1.05	39.1(817)	7.88	.354(.347)	-.122(-.117)
28213	1.05	39.1(817)	9.84	.435(.425)	-.133(-.128)
28214	1.05	39.1(817)	11.82	.512(.500)	-.141(-.134)
28215	1.05	39.1(817)	13.76	.593(.582)	-.154(-.149)
28216	1.05	39.1(816)	15.73	.678(.667)	-.167(-.162)
28301	.70	25.2(527)	-7.82	-.244(-.253)	.018(-.023)
28302	.70	25.2(527)	-5.81	-.154(-.159)	-.002(-.000)
28303	.70	25.2(527)	-3.88	-.069(-.072)	-.024(-.022)
28304	.70	25.2(526)	-1.91	-.009(-.003)	-.040(-.037)
28305	.70	25.2(527)	.09	.063(.057)	-.052(-.048)
28306	.70	25.2(526)	2.05	.127(.115)	-.065(-.058)
28307	.70	25.2(526)	4.01	.195(.185)	-.079(-.077)
28308	.70	25.2(526)	5.98	.270(.258)	-.097(-.092)
28309	.70	25.2(527)	7.95	.339(.330)	-.107(-.102)
28310	.70	25.2(527)	9.91	.416(.409)	-.117(-.114)
28311	.70	25.2(527)	11.85	.493(.482)	-.121(-.117)
28312	.70	25.2(527)	13.82	.572(.552)	-.124(-.114)
28313	.70	25.2(527)	15.79	.663(.636)	-.132(-.121)
28314	.70	25.2(527)	.07	.062(.057)	-.049(-.048)
28401	.95	35.9(750)	-7.82	-.279(-.284)	.034(-.033)
28402	.95	36.0(752)	-5.88	-.186(-.194)	.012(-.013)
28403	.95	36.0(752)	-3.93	-.095(-.100)	-.012(-.011)
28404	.95	36.0(752)	-1.97	-.014(-.018)	-.034(-.034)
28405	.95	36.0(752)	.01	.053(.048)	-.047(-.047)
28406	.95	36.0(752)	2.01	.121(.111)	-.062(-.058)
28407	.95	36.0(752)	3.96	.193(.185)	-.080(-.078)
28408	.95	36.0(751)	5.93	.271(.265)	-.098(-.098)
28409	.95	36.0(751)	7.86	.344(.334)	-.109(-.104)
28410	.95	36.0(751)	9.82	.429(.416)	-.122(-.115)
28411	.95	36.0(752)	11.81	.510(.495)	-.129(-.119)
28412	.95	36.0(752)	13.74	.595(.579)	-.140(-.130)
28413	.95	36.0(752)	15.71	.686(.674)	-.153(-.146)
28501	.85	32.1(670)	-7.90	-.263(-.266)	.029(-.028)
28502	.85	32.1(671)	-5.86	-.172(-.182)	.009(-.007)
28503	.85	32.1(670)	-3.90	-.084(-.088)	-.015(-.015)
28504	.85	32.1(671)	-1.93	-.008(-.010)	-.014(-.036)
28506	.85	32.2(672)	.03	.056(.054)	-.046(-.048)
28507	.85	32.1(671)	2.02	.122(.113)	-.060(-.058)
28508	.85	32.1(671)	3.99	.193(.186)	-.077(-.079)
28509	.85	32.1(670)	5.93	.265(.261)	-.095(-.095)
28510	.85	32.1(670)	7.90	.340(.331)	-.105(-.103)
28511	.85	32.1(670)	9.86	.419(.415)	-.115(-.115)
28513	.85	32.1(671)	11.82	.495(.486)	-.118(-.114)
28514	.85	32.1(671)	13.80	.579(.560)	-.125(-.117)
28515	.85	32.2(672)	15.76	.672(.652)	-.136(-.126)
28601	.40	10.2(213)	-7.76	-.233(-.238)	.025(-.017)
28602	.40	10.2(213)	-5.79	-.145(-.156)	.006(-.002)
28603	.40	10.2(213)	-3.84	-.065(-.068)	-.014(-.023)
28604	.40	10.2(214)	-1.84	.005(.004)	-.029(-.038)
28605	.40	10.2(214)	.13	.065(.063)	-.040(-.048)
28606	.40	10.2(214)	2.08	.126(.118)	-.051(-.058)
28607	.40	10.2(214)	4.04	.192(.185)	-.068(-.076)
28608	.40	10.2(214)	6.03	.266(.257)	-.085(-.092)
28609	.40	10.2(214)	8.00	.337(.326)	-.099(-.102)
28610	.40	10.2(214)	9.95	.407(.397)	-.108(-.110)
28611	.40	10.2(214)	11.93	.492(.477)	-.124(-.125)
28612	.40	10.2(214)	13.87	.571(.560)	-.131(-.131)
28613	.40	10.2(214)	15.77	.651(.626)	-.135(-.131)

Table A-6.—(Continued)

(b) T.E. Deflection, Inboard = 0.0°, Outboard = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
30817	1.05	39.1(816)	-2.00	-.050(-.055)	-.012(-.009)
30818	1.05	39.0(815)	.07	.026(.019)	-.030(-.025)
30819	1.05	39.0(815)	2.11	.102(.090)	-.049(-.040)
30820	1.05	39.1(816)	3.94	.176(.164)	-.069(-.064)
30821	1.05	39.0(815)	6.02	.262(.257)	-.092(-.087)
30822	1.05	39.0(815)	7.97	.342(.332)	-.108(-.101)
30823	1.05	39.0(815)	9.84	.423(.414)	-.124(-.117)
30825	1.05	39.0(815)	12.11	.513(.503)	-.134(-.130)
30826	1.05	39.1(816)	13.78	.586(.576)	-.146(-.142)
30901	.70	25.1(525)	-7.78	-.261(-.270)	.035(.035)
30902	.70	25.1(525)	-3.79	-.097(-.100)	.002(.005)
30903	.70	25.2(526)	.09	.032(.026)	-.024(-.025)
30904	.70	25.2(526)	4.03	.165(.155)	-.034(-.034)
30905	.70	25.1(525)	8.02	.315(.307)	-.086(-.083)
31001	.95	35.9(750)	-7.83	-.291(-.295)	.042(.043)
31002	.95	35.9(750)	-5.83	-.202(-.210)	.026(.027)
31003	.95	35.9(750)	-3.93	-.119(-.125)	.008(.009)
31004	.95	35.9(750)	-2.02	-.042(-.045)	-.012(-.012)
31005	.95	35.9(750)	.10	.029(.024)	-.026(-.026)
31009	.95	36.0(751)	2.00	.095(.086)	-.040(-.038)
31010	.95	36.0(751)	4.01	.171(.161)	-.060(-.058)
31011	.95	35.9(750)	5.89	.247(.238)	-.079(-.076)
31012	.95	35.9(750)	7.87	.326(.314)	-.094(-.087)
31013	.95	36.0(751)	9.89	.418(.404)	-.117(-.104)
31014	.95	35.9(750)	11.87	.502(.487)	-.121(-.111)
31015	.95	36.0(751)	13.76	.587(.575)	-.133(-.127)
31017	.95	36.0(751)	15.71	.677(.664)	-.146(-.138)
31101	.70	25.2(526)	-7.78	-.262(-.269)	.036(.035)
31102	.70	25.1(525)	-5.77	-.178(-.185)	.022(.020)
31103	.70	25.1(525)	-3.92	-.103(-.105)	.004(.002)
31104	.70	25.1(525)	-1.87	-.030(-.033)	-.013(-.014)
31105	.70	25.1(525)	.09	.032(.026)	-.024(-.025)
31106	.70	25.2(526)	2.09	.097(.087)	-.038(-.036)
31107	.70	25.2(526)	3.98	.164(.154)	-.053(-.053)
31108	.70	25.1(525)	6.01	.241(.229)	-.072(-.070)
31109	.70	25.1(525)	7.94	.312(.303)	-.085(-.082)
31110	.70	25.1(525)	10.09	.402(.396)	-.101(-.100)
31111	.70	25.1(525)	11.96	.475(.470)	-.108(-.106)
31112	.70	25.2(526)	13.93	.562(.545)	-.113(-.106)
31113	.70	25.2(526)	15.86	.652(.631)	-.122(-.116)
31114	.70	25.2(526)	.07	.030(.025)	-.023(-.025)
31201	.85	32.1(670)	-7.76	-.275(-.277)	.038(.038)
31202	.85	32.0(669)	-5.91	-.196(-.204)	.024(.024)
31203	.85	32.0(669)	-3.84	-.107(-.112)	.005(.006)
31204	.85	32.0(669)	-1.98	-.037(-.040)	-.012(-.013)
31205	.85	32.0(669)	.05	.029(.024)	-.025(-.025)
31206	.85	32.0(669)	2.07	.096(.087)	-.039(-.036)
31207	.85	32.0(669)	4.04	.169(.160)	-.057(-.056)
31208	.85	32.0(669)	5.94	.244(.234)	-.075(-.072)
31209	.85	32.0(669)	7.97	.321(.311)	-.089(-.085)
31210	.85	32.0(669)	9.92	.404(.400)	-.103(-.102)
31211	.85	32.0(669)	11.92	.488(.475)	-.110(-.103)
31212	.85	32.1(670)	13.87	.572(.555)	-.118(-.111)
31213	.85	32.0(669)	15.84	.665(.646)	-.129(-.119)
31301	.40	10.2(214)	-2.73	-.254(-.256)	.043(.032)
31302	.40	10.2(213)	-5.83	-.173(-.184)	.029(.018)
31303	.40	10.2(213)	-3.82	-.094(-.098)	.011(-.001)
31304	.40	10.2(213)	-1.90	-.028(-.030)	-.003(-.014)
31305	.40	10.2(213)	.14	.033(.029)	-.015(-.025)
31306	.40	10.2(214)	2.13	.096(.089)	-.027(-.036)
31307	.40	10.2(213)	4.06	.162(.155)	-.045(-.053)
31308	.40	10.2(214)	6.11	.240(.229)	-.064(-.070)
31309	.40	10.2(213)	8.05	.311(.300)	-.080(-.082)
31310	.40	10.2(214)	9.97	.383(.374)	-.092(-.093)
31311	.40	10.2(213)	11.98	.473(.460)	-.112(-.112)
31312	.40	10.2(213)	13.94	.558(.547)	-.122(-.121)
31313	.40	10.2(213)	15.80	.639(.616)	-.127(-.124)

Table A-6.—(Continued)

(c) T. E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
31411	1.11	40.6(847)	-7.74	-.317(-.323)	.066(.068)
31413	1.11	40.6(847)	-3.80	-.148(-.158)	-.031(-.035)
31414	1.11	40.5(846)	.26	.007(.002)	-.007(-.004)
31415	1.11	40.5(846)	4.11	.158(.145)	-.050(-.044)
31416	1.11	40.5(846)	8.01	.321(.311)	-.094(-.087)
31501	.70	25.2(526)	-7.79	-.781(-.288)	.047(.049)
31502	.70	25.1(525)	-5.74	-.203(-.209)	.040(.039)
31503	.70	25.1(525)	-3.90	-.132(-.134)	.025(.025)
31504	.70	25.1(525)	-1.94	-.063(-.065)	.011(.010)
31505	.70	25.2(526)	.12	.001(-.003)	-.001(-.001)
31506	.70	25.2(526)	2.01	.063(.056)	-.013(-.012)
31507	.70	25.2(526)	4.04	.134(.124)	-.030(-.029)
31508	.70	25.1(525)	6.04	.212(.200)	-.050(-.045)
31509	.70	25.1(525)	7.99	.287(.279)	-.066(-.063)
31510	.70	25.1(525)	10.06	.378(.371)	-.085(-.083)
31511	.70	25.1(525)	11.92	.459(.452)	-.096(-.094)
31512	.70	25.1(525)	13.84	.544(.531)	-.105(-.100)
31513	.70	25.1(525)	15.86	.641(.625)	-.116(-.113)
31514	.70	25.1(525)	.07	-.001(-.005)	.001(-.000)
31601	1.05	39.0(815)	-7.79	-.322(-.327)	.068(.070)
31602	1.05	39.0(815)	-5.81	-.239(-.246)	.054(.054)
31603	1.05	39.0(815)	-3.83	-.151(-.162)	.034(.035)
31604	1.05	39.0(815)	-1.88	-.071(-.076)	.013(.013)
31605	1.05	39.0(815)	.05	-.002(-.008)	-.003(-.002)
31606	1.05	39.0(815)	2.16	.076(.067)	-.023(-.019)
31607	1.05	39.0(815)	4.14	.157(.145)	-.047(-.042)
31608	1.05	39.0(815)	5.98	.237(.227)	-.070(-.064)
31609	1.05	39.0(815)	7.93	.321(.312)	-.090(-.085)
31610	1.05	39.1(816)	9.90	.410(.403)	-.111(-.106)
31611	1.05	39.0(815)	11.85	.492(.483)	-.124(-.120)
31613	1.05	39.1(816)	13.79	.574(.565)	-.136(-.135)
31614	1.05	39.0(815)	15.77	.659(.649)	-.150(-.144)
31701	.95	36.0(751)	-7.86	-.306(-.309)	.054(.054)
31702	.95	36.0(751)	-5.79	-.221(-.227)	.042(.043)
31703	.95	35.9(750)	-3.87	-.141(-.147)	.027(.030)
31704	.95	36.0(751)	-1.95	-.068(-.070)	.010(.010)
31705	.95	36.0(751)	.10	.001(-.003)	-.003(-.002)
31706	.95	36.0(751)	2.03	.067(.059)	-.017(-.014)
31707	.95	35.9(750)	4.02	.144(.134)	-.038(-.034)
31708	.95	35.9(750)	6.04	.227(.218)	-.059(-.054)
31709	.95	36.0(751)	8.01	.310(.301)	-.077(-.071)
31710	.95	36.0(751)	9.77	.395(.384)	-.097(-.090)
31711	.95	36.0(751)	11.79	.487(.478)	-.112(-.108)
31712	.95	36.0(751)	13.79	.590(.572)	-.127(-.124)
31713	.95	36.0(752)	15.75	.670(.659)	-.140(-.134)
31801	.85	32.1(670)	-7.83	-.292(-.296)	.050(.051)
31802	.85	32.1(670)	-5.86	-.215(-.223)	.042(.041)
31803	.85	32.1(670)	-3.89	-.136(-.141)	.027(.029)
31805	.95	32.1(670)	-1.90	-.063(-.065)	.011(.010)
31806	.85	32.1(670)	.07	.001(-.004)	-.001(-.001)
31807	.85	32.1(670)	2.09	.068(.060)	-.015(-.014)
31808	.85	32.1(670)	3.98	.137(.128)	-.033(-.031)
31809	.85	32.1(670)	5.95	.217(.206)	-.054(-.049)
31812	.85	32.1(670)	7.95	.295(.287)	-.069(-.066)
31813	.85	32.0(669)	9.87	.381(.378)	-.086(-.086)
31814	.85	32.0(669)	11.89	.472(.461)	-.099(-.094)
31815	.85	32.0(669)	13.82	.559(.547)	-.110(-.107)
31816	.95	32.0(669)	15.76	.652(.638)	-.122(-.117)
31901	.40	10.2(213)	-7.73	-.275(-.276)	.055(.047)
31902	.40	10.2(213)	-5.81	-.199(-.209)	.045(.038)
31904	.40	10.2(214)	-3.80	-.123(-.126)	.028(.022)
31905	.40	10.2(213)	-1.83	-.058(-.059)	.015(.009)
31906	.40	10.2(213)	.15	.002(-.002)	.004(-.001)
31907	.40	10.2(213)	2.12	.064(.058)	-.009(-.012)
31908	.40	10.2(213)	4.12	.132(.124)	-.026(-.028)
31911	.40	10.2(214)	6.05	.204(.196)	-.045(-.046)
31912	.40	10.2(213)	8.01	.278(.267)	-.061(-.059)
31913	.40	10.2(213)	10.00	.358(.350)	-.077(-.076)
31914	.40	10.2(213)	11.93	.447(.437)	-.098(-.096)
31915	.40	10.2(213)	13.91	.536(.526)	-.112(-.109)
31916	.40	10.2(213)	15.80	.623(.604)	-.120(-.117)

Table A-6.--(Continued)

(d) T.E. Deflection, Inboard = 8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
32012	1.05	39.1(816)	-7.87	-2.94(-.208)	-.001(-.003)	32301	.85	32.1(670)	-7.84	-.172(-.174)	-.004(-.004)
32013	1.05	39.1(816)	-5.92	-.115(-.128)	-.019(-.012)	32302	.95	32.1(670)	-5.89	-.096(-.104)	-.012(-.013)
32014	1.05	39.1(816)	-3.94	-.033(-.041)	-.035(-.031)	32303	.85	32.1(670)	-3.90	-.020(-.023)	-.027(-.027)
32015	1.05	39.1(816)	-1.97	.043(.036)	-.051(-.047)	32304	.85	32.1(670)	-1.95	.044(.040)	-.037(-.037)
32016	1.05	39.1(817)	-.01	-1.13(-.103)	-.067(-.061)	32305	.85	32.1(670)	.01	.106(.101)	-.048(-.047)
32017	1.05	39.1(816)	1.99	.189(.180)	-.089(-.083)	32306	.85	32.1(670)	1.97	.174(.166)	-.064(-.063)
32018	1.05	39.1(816)	3.92	.266(.255)	-.112(-.106)	32307	.85	32.1(670)	3.99	.251(.241)	-.085(-.081)
32020	1.05	39.1(816)	5.92	.346(.334)	-.132(-.125)	32308	.85	32.1(670)	5.99	.329(.320)	-.104(-.099)
32022	1.05	39.1(816)	7.86	.420(.410)	-.147(-.139)	32309	.85	32.1(670)	7.90	.403(.395)	-.119(-.114)
32023	1.05	39.1(816)	9.82	.502(.494)	-.162(-.155)	32310	.85	32.1(670)	9.82	.493(.490)	-.139(-.138)
32024	1.05	39.1(816)	11.78	.579(.570)	-.173(-.167)	32311	.85	32.1(670)	11.78	.581(.570)	-.154(-.146)
32025	1.05	39.1(816)	13.72	.651(.642)	-.179(-.175)	32312	.85	32.1(670)	13.74	.669(.657)	-.168(-.162)
32026	1.05	39.1(816)	15.69	.723(.724)	-.185(-.187)	32313	.85	32.1(670)	15.70	.760(.748)	-.180(-.173)
32101	.70	25.2(526)	-7.81	-.164(-.169)	-.001(-.001)	32401	.40	10.2(214)	-7.78	-.162(-.165)	.014(.001)
32102	.70	25.2(526)	-5.82	-.090(-.095)	-.009(-.009)	32402	.40	10.2(214)	-5.82	-.086(-.096)	-.003(-.008)
32103	.70	25.2(526)	-3.89	-.019(-.021)	-.024(-.024)	32403	.40	10.2(214)	-3.85	-.019(-.023)	-.009(-.021)
32104	.70	25.2(526)	-1.94	.042(.039)	-.033(-.033)	32404	.40	10.2(214)	-1.88	.041(.038)	-.018(-.030)
32105	.70	25.2(526)	.06	.104(.098)	-.045(-.044)	32405	.40	10.2(214)	.10	.099(.094)	-.029(-.040)
32106	.70	25.2(526)	2.07	.171(.162)	-.060(-.058)	32406	.40	10.2(214)	2.07	.163(.153)	-.044(-.050)
32108	.70	25.2(527)	4.00	.243(.234)	-.079(-.077)	32407	.40	10.2(214)	4.04	.230(.224)	-.062(-.071)
32109	.70	25.2(526)	5.97	.317(.305)	-.095(-.090)	32408	.40	10.2(214)	6.00	.303(.293)	-.079(-.084)
32110	.70	25.2(526)	7.94	.391(.386)	-.111(-.108)	32409	.40	10.2(213)	7.97	.376(.371)	-.095(-.101)
32111	.70	25.2(526)	9.93	.478(.473)	-.129(-.126)	32410	.40	10.2(213)	9.94	.453(.449)	-.111(-.116)
32113	.70	25.2(526)	11.86	.565(.558)	-.142(-.141)	32411	.40	10.2(213)	11.89	.542(.533)	-.131(-.135)
32115	.70	25.2(526)	13.81	.654(.640)	-.153(-.147)	32412	.40	10.2(213)	13.85	.632(.628)	-.147(-.151)
32116	.70	25.1(525)	15.78	.746(.730)	-.165(-.162)	32414	.40	10.2(213)	15.82	.724(.706)	-.157(-.159)
32117	.70	25.2(526)	.04	.102(.098)	-.043(-.043)						
32201	.95	36.0(752)	-7.87	-.182(-.185)	-.006(-.006)						
32202	.95	36.0(752)	-5.90	-.100(-.106)	-.018(-.016)						
32203	.95	36.0(751)	-3.93	-.021(-.023)	-.032(-.031)						
32204	.95	36.0(751)	-2.02	.044(.040)	-.043(-.041)						
32205	.95	36.0(752)	-.01	.111(.107)	-.056(-.053)						
32206	.95	36.0(752)	1.97	.183(.179)	-.074(-.073)						
32207	.95	36.0(751)	3.92	.260(.249)	-.096(-.089)						
32208	.95	36.0(751)	5.89	.338(.331)	-.117(-.110)						
32209	.95	36.0(752)	7.82	.420(.413)	-.138(-.131)						
32210	.95	36.0(751)	9.83	.512(.501)	-.161(-.152)						
32211	.95	36.0(751)	11.76	.593(.579)	-.173(-.161)						
32212	.95	36.0(751)	13.72	.675(.666)	-.183(-.178)						
32213	.95	36.0(752)	15.69	.750(.742)	-.186(-.180)						

Table A-6.-(Concluded)

(e) T. E. Deflection, Inboard = 17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
32505	1.05	39.1(817)	-7.91	-1.00(-.098)	-0.62(-.051)
32506	1.05	39.1(816)	-5.95	-0.98(-.092)	-0.82(-.072)
32507	1.05	39.1(817)	-3.98	-0.70(-.072)	-0.96(-.088)
32508	1.05	39.1(817)	-2.02	-1.39(-.142)	-1.07(-.100)
32509	1.05	39.1(817)	-0.06	-2.05(-.204)	-1.21(-.114)
32510	1.05	39.1(817)	1.92	-2.75(-.272)	-1.39(-.135)
32511	1.05	39.1(817)	3.98	-3.47(-.343)	-1.57(-.154)
32512	1.05	39.1(817)	5.95	-4.17(-.412)	-1.71(-.167)
32513	1.05	39.1(817)	7.80	-4.88(-.483)	-1.85(-.182)
32514	1.05	39.1(817)	9.78	-5.56(-.547)	-1.91(-.188)
32515	1.05	39.1(817)	11.74	-6.32(-.613)	-1.99(-.196)
32516	1.05	39.1(817)	13.71	-6.94(-.685)	-1.99(-.205)
32518	1.05	39.2(818)	15.68	-7.67(-.762)	-2.07(-.220)
32601	.70	25.2(527)	-7.88	-0.59(-.050)	-0.48(-.046)
32602	.70	25.2(526)	-5.90	-0.18(-.025)	-0.59(-.060)
32603	.70	25.2(527)	-3.94	0.82(-.091)	-0.69(-.069)
32604	.70	25.2(527)	-1.98	1.44(-.149)	-0.79(-.090)
32605	.70	25.2(527)	0.01	2.05(-.205)	-0.92(-.091)
32606	.70	25.2(527)	1.96	2.73(-.273)	-1.09(-.113)
32607	.70	25.2(527)	3.94	3.45(-.338)	-1.27(-.128)
32608	.70	25.2(527)	5.89	4.18(-.413)	-1.44(-.146)
32609	.70	25.2(526)	7.86	4.91(-.486)	-1.59(-.163)
32610	.70	25.2(526)	9.82	5.71(-.563)	-1.74(-.178)
32611	.70	25.2(527)	11.79	6.57(-.646)	-1.88(-.194)
32612	.70	25.2(526)	13.75	7.42(-.724)	-1.98(-.203)
32613	.70	25.2(526)	15.71	8.32(-.813)	-2.09(-.220)
32701	.95	36.0(752)	-7.93	-0.75(-.053)	-0.61(-.060)
32702	.95	36.0(752)	-5.97	-0.10(-.027)	-0.76(-.076)
32703	.95	36.0(752)	-3.99	0.82(-.099)	-0.86(-.086)
32704	.95	36.0(752)	-2.03	1.47(-.164)	-0.97(-.100)
32705	.95	36.0(752)	-0.06	2.12(-.227)	-1.11(-.115)
32706	.95	36.0(752)	1.90	2.81(-.293)	-1.29(-.134)
32707	.95	36.0(752)	3.88	3.54(-.359)	-1.49(-.150)
32708	.95	36.0(752)	5.83	4.30(-.431)	-1.70(-.170)
32709	.95	36.0(752)	7.79	5.07(-.513)	-1.90(-.194)
32710	.95	36.0(752)	9.75	5.83(-.583)	-2.01(-.205)
32711	.95	36.0(752)	11.72	6.60(-.652)	-2.11(-.210)
32712	.95	36.0(752)	13.69	7.14(-.710)	-2.19(-.209)
32713	.95	36.0(752)	15.66	7.96(-.791)	-2.29(-.220)
32801	.85	32.1(670)	-7.90	-0.65(-.049)	-0.54(-.053)
32802	.85	32.1(670)	-5.94	-0.15(-.023)	-0.66(-.067)
32803	.85	32.1(670)	-3.97	0.83(-.093)	-0.76(-.077)
32804	.85	32.1(670)	-2.01	1.45(-.154)	-0.86(-.087)
32805	.85	32.1(670)	-0.03	2.08(-.213)	-0.99(-.100)
32806	.85	32.1(671)	1.94	2.77(-.282)	-1.17(-.127)
32807	.85	32.1(671)	3.90	3.51(-.349)	-1.36(-.137)
32808	.85	32.1(670)	5.86	4.24(-.424)	-1.53(-.156)
32809	.85	32.1(670)	7.82	4.99(-.494)	-1.69(-.172)
32810	.85	32.1(670)	9.78	5.86(-.585)	-1.90(-.195)
32811	.85	32.1(670)	11.75	6.73(-.666)	-2.04(-.207)
32812	.85	32.1(670)	13.69	7.54(-.745)	-2.14(-.222)
32813	.85	32.1(670)	15.67	8.28(-.819)	-2.15(-.226)
32901	.60	10.2(214)	-7.82	-0.67(-.053)	-0.25(-.037)
32902	.60	10.2(214)	-5.87	-0.10(-.018)	-0.38(-.051)
32903	.60	10.2(214)	-3.89	0.75(-.081)	-0.47(-.060)
32904	.60	10.2(214)	-1.92	1.35(-.140)	-0.59(-.071)
32905	.60	10.2(214)	0.05	1.96(-.196)	-0.73(-.083)
32906	.60	10.2(214)	2.02	2.61(-.261)	-0.90(-.103)
32907	.60	10.3(215)	3.99	3.32(-.329)	-1.09(-.121)
32908	.60	10.2(214)	5.96	4.02(-.393)	-1.25(-.134)
32909	.60	10.2(214)	7.92	4.72(-.469)	-1.41(-.152)
32910	.60	10.2(214)	9.89	5.46(-.545)	-1.55(-.170)
32911	.60	10.2(214)	11.85	6.25(-.621)	-1.68(-.185)
32912	.60	10.2(214)	13.80	7.20(-.716)	-1.88(-.202)
32914	.60	10.2(214)	15.77	8.12(-.789)	-1.99(-.213)

Table A-7.—Experimental Data Test Point Log. Flat Wing, Twisted Trailing Edge, Rounded Leading Edge;  
L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
33214	1.11	40.7(849)	-7.75	-.278(-.283)	.060(.061)
33215	1.11	40.5(848)	-3.83	-.116(-.120)	.018(.022)
33216	1.11	40.7(849)	.09	.036(.027)	-.020(-.016)
33217	1.11	40.7(849)	4.02	.189(.177)	-.064(-.058)
33218	1.11	40.7(849)	7.95	.359(.348)	-.102(-.099)
33301	.70	25.2(527)	-7.78	-.244(-.245)	.048(.047)
33302	.70	25.2(527)	-5.83	-.167(-.169)	.033(.033)
33303	.70	25.2(527)	-3.92	-.093(-.095)	.014(.014)
33304	.70	25.2(527)	-1.88	-.026(-.033)	.001(.001)
33305	.70	25.2(527)	.09	.033(.027)	-.011(-.010)
33306	.70	25.2(527)	2.05	.097(.089)	-.024(-.022)
33307	.70	25.3(528)	4.03	.167(.153)	-.040(-.040)
33309	.70	25.2(527)	7.95	.329(.317)	-.074(-.072)
33310	.70	25.2(527)	9.90	.414(.402)	-.085(-.084)
33311	.70	25.2(527)	11.87	.500(.486)	-.094(-.095)
33312	.70	25.2(527)	13.83	.586(.574)	-.102(-.103)
33313	.70	25.2(527)	15.78	.677(.667)	-.110(-.108)
33314	.70	25.3(528)	.08	.032(.027)	-.009(-.010)
33401	1.05	39.2(818)	-7.82	-.284(-.286)	.061(.061)
33402	1.05	39.2(818)	-5.87	-.199(-.201)	.042(.041)
33403	1.05	39.2(818)	-3.89	-.113(-.119)	.019(.022)
33404	1.05	39.2(818)	-1.92	-.036(-.041)	-.002(-.001)
33405	1.05	39.2(818)	.05	.034(.027)	-.019(-.016)
33406	1.05	39.2(818)	1.99	.107(.096)	-.037(-.034)
33407	1.05	39.2(818)	3.98	.187(.175)	-.060(-.056)
33408	1.05	39.2(818)	5.93	.274(.267)	-.083(-.077)
33409	1.05	39.2(818)	7.87	.360(.343)	-.101(-.097)
33410	1.05	39.2(818)	9.94	.442(.429)	-.113(-.108)
33411	1.05	39.2(818)	11.79	.526(.517)	-.126(-.123)
33412	1.05	39.2(818)	13.76	.610(.603)	-.140(-.134)
33413	1.05	39.2(818)	15.72	.693(.689)	-.154(-.146)
33501	.95	36.0(752)	-7.83	-.267(-.269)	.051(.050)
33502	.95	36.1(753)	-5.89	-.186(-.190)	.037(.036)
33503	.95	36.0(752)	-3.91	-.103(-.107)	.016(.017)
33504	.95	36.0(752)	-1.96	-.033(-.036)	.000(-.001)
33505	.95	36.1(753)	-.01	.032(.027)	-.013(-.013)
33506	.95	36.1(753)	2.00	.103(.095)	-.029(-.026)
33507	.95	36.1(753)	3.97	.179(.170)	-.048(-.046)
33508	.95	36.1(753)	5.90	.263(.254)	-.069(-.066)
33509	.95	36.1(753)	7.89	.353(.344)	-.088(-.086)
33510	.95	36.1(754)	9.82	.439(.429)	-.102(-.100)
33511	.95	36.1(753)	11.79	.530(.523)	-.116(-.116)
33513	.95	36.1(753)	13.74	.620(.614)	-.131(-.127)
33516	.95	36.1(753)	15.69	.707(.700)	-.143(-.138)
33601	.85	32.2(672)	-7.82	-.257(-.258)	.051(.049)
33602	.85	32.1(671)	-5.85	-.177(-.178)	.036(.034)
33603	.85	32.1(671)	-3.88	-.099(-.102)	.017(.016)
33604	.85	32.2(672)	-1.92	-.032(-.035)	.002(-.000)
33605	.85	32.2(672)	.07	.033(.028)	-.011(-.012)
33606	.85	32.1(671)	2.02	.098(.090)	-.024(-.023)
33607	.85	32.2(672)	4.01	.172(.163)	-.043(-.043)
33608	.85	32.2(672)	5.95	.253(.242)	-.062(-.061)
33609	.85	32.2(672)	7.91	.338(.326)	-.077(-.077)
33610	.85	32.2(672)	9.89	.424(.414)	-.089(-.089)
33611	.85	32.2(672)	11.82	.508(.501)	-.098(-.101)
33612	.85	32.2(672)	13.78	.590(.593)	-.109(-.110)
33613	.85	32.2(673)	15.72	.691(.682)	-.121(-.117)
33701	.40	10.3(215)	-7.75	-.231(-.233)	.062(.047)
33702	.40	10.3(215)	-5.80	-.158(-.164)	.043(.034)
33703	.40	10.2(214)	-3.81	-.089(-.093)	.025(.014)
33704	.40	10.2(214)	-1.84	-.029(-.032)	.013(.001)
33705	.40	10.2(214)	.12	.031(.025)	.002(-.009)
33707	.40	10.2(214)	2.10	.091(.084)	-.012(-.020)
33708	.40	10.2(214)	4.08	.159(.151)	-.028(-.036)
33709	.40	10.2(214)	6.03	.230(.222)	-.045(-.054)
33710	.40	10.2(214)	8.00	.313(.302)	-.062(-.070)
33711	.40	10.2(214)	9.97	.403(.389)	-.076(-.083)
33712	.40	10.3(215)	11.91	.487(.475)	-.093(-.093)
33713	.40	10.2(214)	13.90	.576(.560)	-.092(-.102)
33714	.40	10.2(214)	15.82	.665(.650)	-.100(-.110)

Table A-7.—(Continued)

(b) T. E. Deflection, Full Span = 4.1°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
33814	1.05	39.1(817)	-7.86	-0.218(-.220)	0.16(-.018)	34101	.85	32.1(671)	-7.83	-0.184(-.183)	0.13(-.011)
33815	1.05	39.1(817)	-5.89	-0.128(-.130)	-0.006(-.002)	34102	.85	32.1(671)	-5.90	-0.104(-.105)	-0.003(-.004)
33816	1.05	39.2(818)	-3.93	-0.042(-.045)	-0.028(-.023)	34103	.85	32.1(670)	-3.94	-0.028(-.027)	-0.021(-.024)
33817	1.05	39.2(818)	-1.97	0.034(-.030)	-0.048(-.043)	34104	.85	32.1(671)	-1.95	0.037(-.036)	-0.035(-.037)
33818	1.05	39.1(817)	-0.01	0.104(-.095)	-0.065(-.056)	34105	.85	32.1(671)	0.03	0.101(-.097)	-0.048(-.048)
33821	1.05	39.1(817)	1.98	0.175(-.171)	-0.080(-.079)	34106	.85	32.1(671)	1.99	0.167(-.162)	-0.063(-.062)
33822	1.05	39.1(817)	3.95	0.254(-.248)	-0.102(-.100)	34107	.85	32.1(671)	3.97	0.240(-.233)	-0.081(-.080)
33823	1.05	39.1(817)	5.89	0.334(-.322)	-0.120(-.113)	34108	.85	32.1(671)	5.94	0.320(-.311)	-0.099(-.095)
33824	1.05	39.2(818)	7.86	0.415(-.404)	-0.135(-.128)	34109	.85	32.2(672)	7.88	0.402(-.393)	-0.112(-.110)
33825	1.05	39.2(818)	9.82	0.491(-.479)	-0.143(-.135)	34110	.85	32.2(672)	9.86	0.485(-.477)	-0.121(-.120)
33826	1.05	39.2(818)	11.78	0.568(-.563)	-0.151(-.146)	34111	.85	32.1(671)	11.81	0.566(-.560)	-0.128(-.130)
33827	1.05	39.1(817)	13.74	0.645(-.641)	-0.161(-.153)	34112	.85	32.2(672)	13.75	0.649(-.647)	-0.136(-.135)
33828	1.05	39.1(817)	15.74	0.725(-.718)	-0.172(-.163)	34113	.85	22.1(671)	15.71	0.734(-.730)	-0.143(-.138)
33901	.70	25.2(527)	-7.83	-0.174(-.177)	0.12(-.012)	34201	.40	10.2(214)	-7.78	-0.160(-.163)	0.023(-.013)
33902	.70	25.2(526)	-5.92	-0.093(-.096)	-0.005(-.003)	34202	.40	10.2(214)	-5.83	-0.087(-.090)	0.005(-.004)
33905	.70	25.2(527)	-3.87	-0.024(-.021)	-0.022(-.024)	34203	.40	10.2(214)	-3.86	-0.022(-.024)	-0.011(-.020)
33906	.70	25.2(526)	-1.93	0.037(-.036)	-0.034(-.034)	34204	.40	10.2(214)	-1.88	0.038(-.034)	-0.021(-.031)
33907	.70	25.2(526)	0.07	0.101(-.096)	-0.046(-.045)	34205	.40	10.2(214)	0.09	0.097(-.092)	-0.031(-.042)
33908	.70	25.2(526)	2.01	0.164(-.156)	-0.059(-.057)	34206	.40	10.2(214)	2.09	0.160(-.152)	-0.045(-.053)
33909	.70	25.2(526)	3.99	0.235(-.228)	-0.076(-.077)	34207	.40	10.2(214)	4.03	0.226(-.220)	-0.061(-.071)
33910	.70	25.2(526)	5.96	0.310(-.303)	-0.093(-.090)	34208	.40	10.2(214)	6.00	0.296(-.286)	-0.076(-.084)
33911	.70	25.2(527)	7.93	0.395(-.382)	-0.107(-.104)	34209	.40	10.2(214)	7.97	0.378(-.367)	-0.092(-.100)
33912	.70	25.2(526)	9.90	0.477(-.465)	-0.116(-.114)	34210	.40	10.2(214)	9.92	0.464(-.452)	-0.103(-.111)
33913	.70	25.2(527)	11.82	0.556(-.544)	-0.121(-.121)	34211	.40	10.2(214)	11.90	0.546(-.535)	-0.111(-.119)
33914	.70	25.2(527)	13.80	0.638(-.629)	-0.125(-.126)	34212	.40	10.2(214)	13.87	0.630(-.619)	-0.116(-.126)
33915	.70	25.2(526)	15.76	0.723(-.716)	-0.131(-.128)	34213	.40	10.2(214)	15.82	0.716(-.706)	-0.121(-.131)
33916	.70	25.2(526)	0.05	0.101(-.096)	-0.045(-.045)						
34001	.95	36.1(753)	-7.87	-0.196(-.198)	0.10(-.009)						
34002	.95	36.0(752)	-5.89	-0.112(-.113)	-0.006(-.005)						
34003	.95	36.0(752)	-3.95	-0.029(-.029)	-0.027(-.026)						
34004	.95	36.0(751)	-1.99	0.037(-.036)	-0.041(-.040)						
34005	.95	36.0(752)	0.03	0.103(-.099)	-0.055(-.052)						
34006	.95	36.0(752)	1.97	0.173(-.169)	-0.071(-.068)						
34007	.95	36.0(752)	3.94	0.248(-.243)	-0.089(-.087)						
34008	.95	36.0(752)	5.87	0.329(-.322)	-0.109(-.105)						
34009	.95	36.0(752)	7.84	0.416(-.407)	-0.127(-.122)						
34010	.95	36.0(752)	9.80	0.495(-.486)	-0.136(-.131)						
34011	.95	36.1(753)	11.75	0.575(-.571)	-0.144(-.140)						
34012	.95	36.1(753)	13.74	0.657(-.655)	-0.152(-.146)						
34013	.95	36.0(752)	15.69	0.736(-.731)	-0.159(-.152)						

Table A-7. — (Continued)

(c) T. E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
34315	1.05	39.1(817)	-7.89	-.152(-.151)	-.026(-.024)	34601	.85	32.1(670)	-7.87	-.117(-.116)	-.025(-.025)
34317	1.05	39.1(816)	-5.92	-.061(-.063)	-.047(-.042)	34602	.85	32.1(670)	-5.92	-.035(-.035)	-.041(-.041)
34318	1.05	39.1(816)	-3.95	.023(.025)	-.069(-.066)	34603	.85	32.1(670)	-3.97	.037(.039)	-.058(-.059)
34320	1.05	39.1(816)	-2.00	.093(.094)	-.084(-.081)	34604	.85	32.1(670)	-1.99	.101(.099)	-.071(-.070)
34321	1.05	39.1(816)	-.02	.162(.157)	-.100(-.093)	34605	.85	32.1(670)	-.03	.163(.158)	-.083(-.080)
34323	1.05	39.0(815)	1.93	.230(.228)	-.116(-.114)	34606	.85	32.1(670)	1.96	.231(.227)	-.099(-.098)
34324	1.05	39.1(816)	3.91	.305(.302)	-.135(-.133)	34607	.85	32.1(670)	3.93	.302(.297)	-.115(-.113)
34325	1.05	39.0(815)	5.88	.377(.373)	-.145(-.140)	34608	.85	32.0(669)	5.90	.379(.371)	-.131(-.127)
34326	1.05	39.1(816)	7.82	.457(.450)	-.160(-.154)	34609	.85	32.0(669)	7.84	.459(.451)	-.144(-.141)
34327	1.05	39.1(816)	9.81	.533(.525)	-.168(-.161)	34610	.85	32.1(670)	9.82	.539(.533)	-.152(-.150)
34328	1.05	39.1(816)	11.75	.601(.604)	-.170(-.169)	34611	.85	32.1(670)	11.76	.616(.611)	-.157(-.156)
34329	1.05	39.0(815)	13.76	.676(.679)	-.177(-.173)	34612	.85	32.0(669)	13.73	.695(.694)	-.161(-.159)
34330	1.05	39.0(815)	15.68	.745(.743)	-.193(-.176)	34613	.85	32.1(670)	15.70	.772(.771)	-.164(-.160)
34401	.70	25.1(525)	-7.86	-.106(-.109)	-.025(-.022)	34701	.60	10.2(214)	-7.81	-.097(-.105)	-.027(-.015)
34402	.70	25.1(525)	-5.90	-.028(-.029)	-.042(-.039)	34702	.60	10.2(213)	-5.85	-.022(-.031)	-.028(-.033)
34403	.70	25.1(524)	-3.92	.040(.039)	-.057(-.056)	34703	.60	10.2(212)	-3.90	.039(.033)	-.042(-.049)
34404	.70	25.1(525)	-1.95	.102(.098)	-.069(-.067)	34704	.60	10.2(213)	-3.90	.039(.033)	-.042(-.049)
34405	.70	25.1(525)	-.03	.163(.157)	-.091(-.077)	34704	.60	10.2(213)	-1.90	.098(.092)	-.052(-.060)
34406	.70	25.1(525)	1.98	.228(.222)	-.094(-.093)	34705	.60	10.2(213)	.09	.158(.151)	-.065(-.070)
34407	.70	25.1(525)	3.98	.297(.293)	-.110(-.108)	34706	.60	10.2(213)	2.04	.220(.214)	-.078(-.095)
34408	.70	25.1(525)	5.95	.371(.363)	-.124(-.121)	34707	.60	10.2(213)	4.01	.285(.281)	-.093(-.102)
34409	.70	25.1(525)	7.89	.451(.441)	-.136(-.133)	34708	.60	10.2(213)	6.01	.355(.344)	-.107(-.117)
34410	.70	25.1(525)	9.85	.531(.521)	-.144(-.141)	34709	.60	10.2(213)	7.94	.433(.425)	-.121(-.127)
34411	.70	25.2(526)	11.83	.608(.600)	-.147(-.148)	34710	.60	10.2(213)	9.89	.517(.507)	-.131(-.137)
34412	.70	25.1(525)	13.78	.686(.680)	-.148(-.149)	34711	.60	10.2(213)	11.88	.598(.590)	-.136(-.144)
34413	.70	25.2(526)	15.77	.767(.763)	-.151(-.148)	34712	.60	10.2(213)	13.82	.677(.670)	-.140(-.149)
34414	.70	25.2(526)	.02	.162(.158)	-.078(-.077)	34713	.60	10.2(213)	15.86	.764(.756)	-.143(-.152)
34501	.95	36.0(751)	-7.90	-.127(-.124)	-.029(-.031)						
34502	.95	35.9(750)	-5.93	-.043(-.041)	-.045(-.045)						
34503	.95	35.9(750)	-3.98	.036(.040)	-.064(-.065)						
34504	.95	35.9(750)	-2.02	.101(.103)	-.077(-.077)						
34505	.95	35.9(750)	-.04	.166(.163)	-.091(-.087)						
34506	.95	35.9(750)	1.94	.234(.231)	-.107(-.103)						
34507	.95	35.9(750)	3.89	.306(.305)	-.124(-.122)						
34508	.95	35.9(750)	5.86	.386(.382)	-.143(-.139)						
34509	.95	35.9(750)	7.81	.467(.461)	-.157(-.152)						
34510	.95	35.9(750)	9.78	.543(.535)	-.164(-.157)						
34511	.95	36.0(751)	11.74	.616(.614)	-.168(-.163)						
34512	.95	36.0(751)	13.71	.690(.691)	-.171(-.164)						
34513	.95	36.0(751)	15.68	.764(.762)	-.174(-.167)						



Table A-7.—(Continued)

(d) T. E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
34805	1.05	39.01(814)	-7.92	-.049(-.040)	-.087(-.085)	35101	.85	31.91(667)	-7.92	-.002(-.003)	-.086(-.058)
34806	1.05	39.01(814)	-5.96	.034(.045)	-.101(-.101)	35102	.85	32.01(668)	-5.97	.077(.083)	-.101(-.099)
34807	1.05	38.91(813)	-4.01	.113(.124)	-.119(-.119)	35103	.85	32.01(668)	-4.01	.142(.146)	-.114(-.112)
34808	1.05	38.91(813)	-2.06	.180(.189)	-.134(-.133)	35104	.85	32.01(668)	-2.05	.207(.204)	-.175(-.121)
34809	1.05	38.91(813)	-.07	.244(.254)	-.147(-.149)	35105	.85	32.01(668)	-.06	.266(.267)	-.140(-.136)
34811	1.05	39.01(814)	3.87	.375(.396)	-.173(-.175)	35106	.85	32.01(668)	1.95	.333(.335)	-.154(-.152)
34812	1.05	38.91(813)	5.83	.439(.461)	-.177(-.189)	35108	.85	32.01(668)	3.86	.401(.400)	-.170(-.165)
34813	1.05	39.01(814)	7.83	.514(.530)	-.188(-.194)	35109	.85	32.01(668)	5.83	.471(.471)	-.181(-.177)
34814	1.05	39.01(814)	9.84	.588(.606)	-.195(-.204)	35110	.85	32.01(668)	7.80	.545(.550)	-.190(-.190)
34816	1.05	38.91(813)	11.72	.651(.682)	-.196(-.214)	35111	.85	32.01(668)	9.77	.621(.626)	-.196(-.196)
34817	1.05	39.01(814)	13.74	.717(.746)	-.198(-.209)	35112	.85	32.01(668)	11.76	.699(.709)	-.203(-.207)
34819	1.05	39.01(814)	15.71	.779(.827)	-.199(-.224)	35113	.85	32.01(668)	13.71	.764(.782)	-.198(-.204)
34906	.70	25.11(524)	-7.90	.013(.024)	-.085(-.086)	35114	.85	32.01(668)	15.66	.828(.846)	-.193(-.197)
34907	.70	25.11(524)	-5.94	.087(.098)	-.101(-.102)	35201	.40	10.21(212)	-7.89	.028(.012)	-.073(-.069)
34908	.70	25.11(524)	-3.98	.149(.155)	-.113(-.111)	35202	.40	10.21(212)	-5.90	.097(.081)	-.090(-.085)
34909	.70	25.11(524)	-2.00	.208(.211)	-.123(-.119)	35203	.40	10.21(212)	-3.93	.156(.140)	-.101(-.096)
34911	.70	25.11(524)	1.96	.337(.338)	-.152(-.149)	35204	.40	10.21(212)	-1.96	.213(.196)	-.112(-.105)
34912	.70	25.11(524)	3.91	.336(.337)	-.151(-.149)	35205	.40	10.21(213)	.01	.273(.254)	-.124(-.116)
34913	.70	25.11(524)	5.88	.406(.402)	-.167(-.161)	35206	.40	10.21(213)	2.01	.338(.323)	-.140(-.136)
34914	.70	25.11(524)	7.85	.474(.470)	-.177(-.172)	35207	.40	10.21(212)	3.95	.402(.389)	-.154(-.150)
34915	.70	25.11(524)	9.82	.549(.548)	-.185(-.184)	35208	.40	10.21(212)	5.92	.471(.456)	-.168(-.162)
34916	.70	25.01(523)	11.80	.629(.629)	-.193(-.193)	35209	.40	10.21(212)	7.89	.542(.530)	-.175(-.174)
34917	.70	25.11(524)	13.73	.703(.706)	-.195(-.200)	35210	.40	10.21(213)	9.86	.628(.618)	-.186(-.188)
34918	.70	25.11(524)	15.71	.772(.777)	-.193(-.197)	35211	.40	10.21(212)	11.86	.706(.702)	-.190(-.198)
34919	.70	25.11(524)	17.68	.842(.851)	-.198(-.190)	35212	.40	10.21(212)	13.78	.779(.777)	-.190(-.198)
34920	.70	25.11(524)	19.65	.910(.922)	-.201(-.201)	35213	.40	10.21(212)	15.74	.852(.851)	-.186(-.195)
35001	.95	35.91(750)	-7.96	-.018(-.001)	-.090(-.094)						
35002	.95	35.81(748)	-6.00	.063(.081)	-.104(-.109)						
35003	.95	35.91(749)	-4.03	.137(.155)	-.121(-.125)						
35004	.95	35.91(749)	-2.05	.200(.212)	-.134(-.133)						
35005	.95	35.91(749)	-.10	.262(.276)	-.148(-.150)						
35006	.95	35.81(748)	1.88	.328(.342)	-.162(-.166)						
35007	.95	35.91(749)	3.85	.396(.406)	-.178(-.178)						
35008	.95	35.81(748)	5.80	.462(.473)	-.186(-.188)						
35009	.95	35.81(748)	7.77	.532(.541)	-.193(-.192)						
35010	.95	35.81(748)	9.77	.608(.616)	-.202(-.201)						
35011	.95	35.91(749)	11.70	.676(.694)	-.204(-.208)						
35013	.95	35.81(748)	13.71	.742(.760)	-.201(-.202)						
35014	.95	35.91(750)	15.65	.807(.822)	-.199(-.198)						

Table A-7.—(Continued)

(e) T.E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
35317	1.05	39.0(815)	-1.0	-1.24(-.133)	.077(-.082)	35603	.85	32.0(669)	-1.2	-.119(-.127)	.069(-.070)
35318	1.05	39.0(814)	2.07	-.051(-.063)	.059(-.066)	35604	.85	32.0(669)	2.12	-.053(-.062)	.056(-.057)
35319	1.05	39.0(814)	4.05	.028(.017)	.038(-.044)	35605	.85	32.0(669)	4.04	.013(-.002)	.042(-.045)
35320	1.05	39.0(814)	6.00	.119(.106)	.012(-.018)	35606	.85	32.0(669)	6.03	.096(.084)	.020(-.022)
35321	1.05	39.0(814)	7.93	.211(.199)	-.011(-.006)	35607	.85	32.0(669)	8.00	.182(.170)	.004(-.005)
35322	1.05	39.0(814)	9.90	.302(.294)	-.031(-.029)	35608	.85	32.0(669)	9.95	.271(.263)	-.010(-.013)
35323	1.05	39.0(814)	11.86	.392(.387)	-.048(-.046)	35609	.85	32.0(669)	11.91	.359(.352)	-.022(-.025)
35324	1.05	39.0(815)	13.83	.485(.482)	-.067(-.064)	35610	.85	32.0(669)	13.86	.452(.448)	-.035(-.035)
35325	1.05	39.0(814)	15.78	.580(.573)	-.088(-.085)	35611	.85	32.0(669)	15.81	.550(.546)	-.048(-.049)
35402	.70	25.1(525)	.13	-.115(-.122)	.066(-.066)	35701	.95	35.9(750)	.05	-.129(-.135)	.076(-.075)
35403	.70	25.1(525)	2.10	-.051(-.061)	.053(-.055)	35702	.95	35.9(749)	2.06	-.059(-.067)	.060(-.062)
35404	.70	25.1(525)	4.14	.016(-.004)	.040(-.042)	35703	.95	35.9(749)	4.03	.012(-.002)	.044(-.047)
35405	.70	25.1(525)	6.07	.090(.076)	.021(-.023)	35704	.95	35.9(749)	6.01	.100(.091)	.021(-.023)
35406	.70	25.1(525)	8.04	.177(.166)	.004(-.003)	35705	.95	35.9(749)	7.99	.190(.181)	.003(-.005)
35407	.70	25.1(525)	9.98	.263(.253)	-.009(-.012)	35706	.95	35.9(749)	9.96	.283(.274)	-.013(-.015)
35408	.70	25.1(524)	11.98	.351(.342)	-.020(-.025)	35707	.95	35.9(750)	11.87	.376(.367)	-.030(-.027)
35409	.70	25.1(524)	13.92	.440(.434)	-.031(-.035)	35708	.95	35.9(750)	13.81	.475(.469)	-.049(-.044)
35410	.70	25.1(524)	15.90	.538(.534)	-.043(-.045)	35709	.95	35.9(750)	15.76	.579(.575)	-.077(-.069)
35501	.95	35.9(750)	.11	-.128(-.133)	.076(-.075)	35801	.40	10.2(214)	.20	-.108(-.118)	.071(-.062)
35502	.95	35.9(749)	2.13	-.057(-.064)	.059(-.061)	35802	.40	10.2(214)	2.18	-.045(-.058)	.058(-.051)
35503	.95	35.9(749)	4.10	.015(-.005)	.043(-.046)	35803	.40	10.2(213)	4.13	.017(-.002)	.045(-.040)
35504	.95	35.9(750)	6.02	.101(.092)	.020(-.021)	35804	.40	10.2(213)	6.09	.086(.072)	.030(-.021)
35505	.95	35.9(749)	7.96	.189(.180)	.002(-.005)	35805	.40	10.2(213)	8.13	.169(.157)	.012(-.001)
35506	.95	35.9(750)	10.01	.286(.276)	-.015(-.015)	35806	.40	10.2(214)	10.02	.253(.241)	-.001(-.013)
35507	.95	35.9(750)	11.88	.377(.367)	-.031(-.028)	35807	.40	10.2(213)	12.02	.338(.331)	-.010(-.026)
35508	.95	35.9(750)	13.83	.477(.470)	-.051(-.045)	35808	.40	10.2(213)	13.96	.425(.418)	-.020(-.036)
35509	.95	35.9(750)	15.78	.581(.577)	-.073(-.070)	35809	.40	10.2(214)	15.90	.518(.511)	-.031(-.047)

Table A-7.—(Concluded)

(f) T. E. Deflection, Full Span = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
35912	1.05	39.0(815)	.17	-.245(-.266)	-.141(-.158)
35913	1.05	39.0(814)	2.14	-.178(-.198)	-.126(-.141)
35914	1.05	39.0(814)	4.10	-.104(-.126)	-.110(-.125)
35915	1.05	39.0(814)	6.06	-.018(-.039)	-.088(-.100)
35916	1.05	39.0(814)	8.02	.075(.053)	.067(.079)
35917	1.05	39.0(814)	9.96	.171(.155)	.046(.052)
35918	1.05	39.0(815)	11.91	.264(.242)	.030(.043)
35919	1.05	39.0(814)	13.87	.360(.345)	.009(.020)
35920	1.05	39.0(814)	15.84	.453(.443)	-.011(-.004)
36001	.70	25.1(525)	.22	-.261(-.275)	-.137(-.142)
36002	.70	25.1(525)	2.19	-.197(-.210)	-.124(-.127)
36003	.70	25.1(525)	4.17	-.133(-.148)	-.112(-.116)
36004	.70	25.1(525)	6.14	-.066(-.081)	-.098(-.101)
36005	.70	25.1(525)	8.09	.020(.005)	.090(.082)
36006	.70	25.1(525)	10.05	.108(.094)	.065(.066)
36007	.70	25.1(525)	12.00	.198(.184)	.053(.050)
36008	.70	25.1(525)	13.96	.293(.283)	.039(.036)
36009	.70	25.1(525)	15.91	.393(.386)	.025(.023)
36010	.70	25.1(525)	.23	-.262(-.276)	-.139(-.143)
36101	.95	35.9(749)	.17	-.263(-.280)	-.144(-.155)
36102	.95	35.9(750)	2.14	-.198(-.212)	-.130(-.137)
36103	.95	35.9(750)	4.11	-.134(-.153)	-.119(-.128)
36104	.95	35.9(750)	6.07	-.054(-.072)	-.100(-.108)
36105	.95	35.9(750)	8.02	.031(.015)	.084(.091)
36106	.95	35.9(750)	9.97	.125(.110)	.068(.072)
36107	.95	35.9(750)	11.93	.224(.210)	.051(.057)
36108	.95	35.9(750)	13.88	.328(.318)	.031(.038)
36109	.95	35.9(750)	15.83	.433(.426)	.010(.014)
36202	.85	32.0(668)	.20	-.267(-.283)	-.143(-.150)
36203	.85	32.0(669)	2.17	-.200(-.212)	-.128(-.131)
36204	.85	32.0(669)	4.13	-.135(-.151)	-.116(-.121)
36205	.85	32.0(669)	6.10	-.062(-.078)	-.099(-.105)
36206	.85	32.0(669)	8.07	.024(.007)	.083(.087)
36207	.85	32.0(669)	10.01	.115(.100)	.067(.070)
36208	.85	32.0(669)	11.96	.208(.194)	.054(.055)
36209	.85	32.0(669)	13.91	.308(.298)	.038(.040)
36210	.85	32.0(668)	15.88	.405(.398)	.025(.026)
36301	.40	10.2(213)	.76	-.247(-.266)	-.134(-.134)
36302	.40	10.2(213)	2.25	-.185(-.202)	-.120(-.119)
36303	.40	10.2(214)	4.21	-.125(-.143)	-.108(-.109)
36304	.40	10.2(214)	6.17	-.062(-.079)	-.096(-.095)
36305	.40	10.2(214)	8.14	.013(-.003)	.080(.076)
36306	.40	10.2(214)	10.10	.100(.084)	.066(.061)
36307	.40	10.2(214)	12.06	.187(.173)	.054(.047)
36308	.40	10.2(214)	14.02	.278(.265)	.042(.033)
36309	.40	10.2(214)	15.97	.373(.363)	.030(.019)

Table A-8.—Experimental Data Test Point Log. Flat Wing, Sharp Leading Edge; L.E. Deflection, Full Span = 0.0°; T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
36504	1.11	40.5(845)	-7.71	-0.325(-.333)	-.082(-.081)
36505	1.11	40.4(844)	-5.79	-.237(-.249)	-.063(-.062)
36506	1.11	40.5(845)	-3.82	-.149(-.161)	-.040(-.041)
36507	1.11	40.4(844)	-1.87	-.069(-.077)	-.016(-.017)
36508	1.11	40.4(844)	.12	.003(-.006)	-.001(-.000)
36509	1.11	40.4(844)	2.10	.074(.066)	-.020(-.017)
36510	1.11	40.4(844)	4.05	.156(.149)	-.044(-.040)
36511	1.11	40.4(844)	6.01	.245(.242)	-.065(-.063)
36512	1.11	40.4(844)	7.95	.332(.327)	-.084(-.081)
36605	.70	25.1(525)	-7.75	-.300(-.308)	.060(.057)
36606	.70	25.0(523)	-5.80	-.218(-.225)	-.047(-.044)
36607	.70	25.1(524)	-3.84	-.134(-.142)	-.030(-.029)
36608	.70	25.1(524)	-1.88	-.060(-.068)	-.017(-.012)
36609	.70	25.1(524)	.11	-.021(-.002)	-.000(-.001)
36610	.70	25.1(524)	2.07	.066(.062)	-.013(-.012)
36611	.70	25.1(524)	4.05	.142(.137)	-.031(-.028)
36612	.70	25.1(524)	6.01	.228(.222)	-.048(-.044)
36613	.70	25.1(524)	7.96	.310(.306)	-.059(-.056)
36614	.70	25.0(523)	9.92	.395(.391)	-.068(-.066)
36615	.70	25.0(523)	11.87	.481(.478)	-.075(-.073)
36616	.70	25.0(523)	14.49	.603(.605)	-.085(-.082)
36617	.70	25.0(523)	15.79	.668(.669)	-.092(-.089)
36618	.70	25.1(524)	.10	.002(-.003)	.001(-.001)
36702	1.05	38.9(813)	-7.79	-.334(-.343)	.083(.082)
36703	1.05	38.9(813)	-5.81	-.245(-.253)	-.063(-.063)
36704	1.05	38.9(813)	-3.90	-.154(-.166)	-.040(-.040)
36705	1.05	38.9(813)	-1.93	-.072(-.079)	-.016(-.016)
36706	1.05	38.9(813)	.02	.003(-.011)	-.002(-.001)
36707	1.05	38.9(812)	2.04	.071(.062)	-.020(-.016)
36708	1.05	38.9(813)	4.01	.154(.149)	-.044(-.039)
36709	1.05	38.9(813)	5.92	.244(.238)	-.067(-.060)
36710	1.05	38.9(813)	7.87	.333(.329)	-.085(-.080)
36711	1.05	38.9(813)	9.85	.421(.419)	-.099(-.095)
36712	1.05	38.9(813)	11.80	.507(.507)	-.113(-.107)
36713	1.05	38.9(813)	13.76	.593(.596)	-.127(-.121)
36714	1.05	38.9(813)	15.71	.683(.684)	-.144(-.138)
36801	.40	10.2(213)	-7.74	-.288(-.297)	.058(.054)
36802	.40	10.2(213)	-5.76	-.208(-.217)	-.047(-.042)
36803	.40	10.2(213)	-3.79	-.128(-.135)	-.031(-.027)
36804	.40	10.2(213)	-1.84	-.055(-.062)	-.016(-.012)
36805	.40	10.2(213)	.13	.004(-.001)	-.005(-.001)
36806	.40	10.2(213)	2.10	.065(.062)	-.007(-.011)
36807	.40	10.2(213)	4.08	.139(.135)	-.024(-.026)
36808	.40	10.2(213)	6.08	.226(.220)	-.040(-.041)
36809	.40	10.2(213)	8.00	.305(.300)	-.051(-.052)
36810	.40	10.2(213)	9.99	.392(.385)	-.059(-.062)
36811	.40	10.2(213)	11.91	.476(.469)	-.065(-.069)
36812	.40	10.2(213)	13.88	.567(.559)	-.072(-.075)
36813	.40	10.2(213)	15.85	.660(.654)	-.077(-.079)
37230	.85	31.9(667)	-7.78	-.311(-.314)	.061(.061)
37231	.85	31.9(667)	-5.82	-.226(-.230)	.044(.047)
37232	.85	31.9(666)	-3.87	-.140(-.147)	-.029(-.031)
37233	.85	31.9(666)	-1.88	-.063(-.067)	-.010(-.013)
37234	.85	31.9(666)	.08	-.001(-.003)	-.003(-.001)
37235	.85	31.9(667)	2.03	.067(.063)	-.016(-.013)
37236	.85	31.9(666)	3.99	.144(.140)	-.035(-.030)
37237	.85	31.9(666)	5.95	.237(.227)	-.053(-.046)
37238	.85	31.9(667)	7.92	.317(.312)	-.066(-.059)
37239	.85	31.9(666)	9.88	.403(.400)	-.076(-.071)
37240	.85	31.9(667)	11.84	.491(.488)	-.084(-.079)
37241	.85	31.9(667)	13.79	.582(.583)	-.094(-.088)
37242	.85	31.9(667)	15.75	.681(.681)	-.108(-.102)
37301	1.00	37.4(781)	-7.82	-.334(-.339)	.080(.075)
37302	1.00	37.4(782)	-5.86	-.244(-.254)	-.061(-.059)
37303	1.00	37.4(782)	-3.91	-.152(-.162)	-.038(-.036)
37304	1.00	37.4(782)	-1.95	-.070(-.078)	-.015(-.016)
37305	1.00	37.4(782)	.01	-.002(-.007)	-.001(-.001)
37306	1.00	37.4(782)	1.99	.067(.062)	-.016(-.014)
37307	1.00	37.4(782)	3.96	.150(.147)	-.039(-.035)
37308	1.00	37.5(783)	5.91	.244(.240)	-.062(-.057)
37309	1.00	37.4(782)	7.85	.332(.328)	-.082(-.074)
37310	1.00	37.4(782)	9.81	.420(.417)	-.095(-.088)
37311	1.00	37.4(782)	11.78	.509(.507)	-.108(-.100)
37312	1.00	37.4(782)	13.74	.598(.596)	-.121(-.112)
37314	1.00	37.4(782)	15.68	.690(.688)	-.138(-.126)
37405	.95	35.8(749)	-7.80	-.322(-.329)	.069(.067)
37406	.95	35.8(747)	-5.84	-.233(-.241)	.052(-.052)
37407	.95	35.8(747)	-3.88	-.144(-.152)	.032(-.032)
37408	.95	35.8(747)	-1.92	-.066(-.071)	-.012(-.014)
37409	.95	35.8(747)	.03	-.001(-.005)	-.002(-.001)
37410	.95	35.8(747)	2.00	.067(.062)	-.016(-.013)
37411	.95	35.8(747)	3.98	.146(.143)	-.036(-.032)
37412	.95	35.8(747)	5.94	.237(.233)	-.056(-.050)
37413	.95	35.8(747)	7.89	.324(.321)	-.072(-.065)
37414	.95	35.8(748)	9.84	.414(.414)	-.086(-.081)
37415	.95	35.8(748)	11.79	.506(.508)	-.100(-.096)
37416	.95	35.8(748)	13.76	.600(.602)	-.114(-.107)
37417	.95	35.8(748)	15.70	.698(.696)	-.133(-.123)

Table A-9.—Experimental Data Test Point Log. Twisted Wing, Rounded Leading Edge, L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 4.1°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
40705	1.05	38.9(812)	-7.78	-322(-320)	.066(.065)
40706	1.05	38.9(812)	-5.83	-242(-233)	.050(.046)
40707	1.05	38.8(811)	-3.86	-160(-153)	.031(.027)
40708	1.05	38.9(812)	-1.94	-079(-076)	.010(.007)
40710	1.05	38.9(812)	.05	.021(.001)	-.013(-015)
40711	1.05	38.9(812)	2.03	.073(.070)	-.031(-032)
40712	1.05	38.9(812)	3.99	144(.138)	-.047(-045)
40713	1.05	38.9(812)	5.94	220(.215)	-.067(-068)
40714	1.05	38.9(812)	7.89	304(.294)	-.086(-084)
40715	1.05	38.9(812)	9.87	391(.383)	-.100(-101)
40717	1.05	38.9(812)	11.83	477(.467)	-.113(-111)
40718	1.05	38.9(812)	13.78	560(.552)	-.125(-122)
40719	1.05	38.9(812)	15.75	640(.630)	-.136(-130)
40805	.70	25.0(522)	-7.78	-290(-291)	.049(.050)
40806	.70	25.0(522)	-5.81	-211(-214)	.038(.037)
40807	.70	25.0(523)	-3.83	-132(-137)	.022(.022)
40808	.70	25.0(523)	-1.87	-.058(-064)	.004(.005)
40809	.70	25.0(523)	.10	.008(-003)	-.011(-011)
40810	.70	25.0(523)	2.08	.073(.065)	-.023(-022)
40811	.70	25.0(522)	4.03	135(.126)	-.035(-033)
40812	.70	25.0(522)	6.01	201(.192)	-.048(-049)
40813	.70	25.0(523)	7.98	274(.263)	-.064(-064)
40814	.70	25.0(522)	9.94	365(.354)	-.083(-082)
40815	.70	25.0(523)	11.87	453(.442)	-.094(-094)
40816	.70	25.0(523)	13.85	540(.525)	-.101(-101)
40817	.70	25.1(524)	15.82	626(.611)	-.106(-103)
40818	.70	25.0(523)	.10	.009(-004)	-.010(-011)
40901	.95	35.7(746)	-7.82	-313(-314)	.054(.053)
40902	.95	35.7(746)	-5.86	-231(-226)	.041(.038)
40903	.95	35.7(746)	-3.90	-149(-148)	.025(.024)
40904	.95	35.7(746)	-1.93	-.068(-069)	.006(.006)
40905	.95	35.8(747)	.01	.005(-006)	-.014(-015)
40906	.95	35.8(747)	2.00	.074(.073)	-.028(-028)
40907	.95	35.8(747)	3.97	141(.139)	-.042(-041)
40908	.95	35.8(747)	5.92	213(.210)	-.058(-058)
40909	.95	35.8(747)	7.90	299(.296)	-.079(-079)
40910	.95	35.8(747)	9.86	389(.386)	-.095(-096)
40911	.95	35.8(747)	11.83	476(.470)	-.105(-103)
40912	.95	35.8(747)	13.77	564(.564)	-.117(-117)
40913	.95	35.8(747)	15.74	650(.647)	-.127(-123)
41005	.85	31.9(666)	-7.80	-300(-300)	.052(.050)
41006	.85	31.9(666)	-5.92	-220(-216)	.040(.035)
41007	.85	31.9(666)	-3.87	-141(-145)	.025(.025)
41008	.85	31.9(666)	-1.91	-.063(-065)	.006(.006)
41009	.85	31.9(666)	.07	.007(.006)	-.012(-013)
41010	.85	31.9(666)	2.03	.072(.070)	-.025(-025)
41011	.85	31.9(666)	4.00	137(.133)	-.037(-037)
41012	.85	31.9(666)	5.97	206(.203)	-.052(-054)
41013	.85	31.9(666)	7.95	287(.282)	-.071(-072)
41014	.85	31.9(666)	9.91	377(.371)	-.087(-088)
41015	.85	31.9(667)	11.86	463(.455)	-.096(-097)
41016	.85	31.9(666)	13.81	552(.540)	-.106(-101)
41017	.85	31.9(666)	15.78	637(.630)	-.112(-108)
41101	.40	10.2(212)	-7.69	-275(-274)	.055(.048)
41102	.40	10.2(212)	-5.75	-199(-206)	.042(.041)
41103	.40	10.2(212)	-3.80	-124(-129)	.026(.024)
41104	.40	10.2(212)	-1.82	-.055(-056)	.009(.003)
41105	.40	10.2(212)	.15	.007(.006)	-.004(-010)
41106	.40	10.2(212)	2.10	.068(.066)	-.015(-021)
41107	.40	10.2(212)	4.08	129(.125)	-.027(-032)
41108	.40	10.2(212)	6.06	192(.188)	-.039(-045)
41109	.40	10.2(212)	8.04	259(.256)	-.053(-062)
41110	.40	10.2(212)	10.00	345(.340)	-.074(-081)
41111	.40	10.2(212)	11.93	436(.427)	-.091(-097)
41112	.40	10.2(212)	13.89	524(.512)	-.101(-106)
41113	.40	10.2(212)	15.87	614(.603)	-.109(-112)

Table A.9. — (Continued)

(b) T. E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
41211	1.05	38.8(811)	-7.84	-2.65(-.273)	-0.26(-.030)	41505	.85	31.9(666)	-7.80	-2.32(-.234)	-0.14(-.016)
41212	1.05	38.7(809)	-5.87	-1.70(-.177)	-0.07(.007)	41506	.85	31.8(665)	-5.86	-1.50(-.148)	-0.00(-.001)
41213	1.05	38.8(810)	-3.90	-0.92(-.094)	-0.14(-.012)	41507	.85	31.8(665)	-3.89	-0.69(-.073)	-0.15(-.013)
41214	1.05	38.8(811)	-1.94	-0.58(-.054)	-0.36(-.035)	41508	.85	31.8(665)	-1.93	-0.09(.008)	-0.36(-.035)
41215	1.05	38.8(810)	.02	-0.69(-.064)	-0.57(-.054)	41509	.85	31.8(665)	.02	0.75(.072)	-0.50(-.049)
41216	1.05	38.8(810)	1.97	-1.37(-.131)	-0.72(-.069)	41510	.85	31.8(665)	2.00	1.39(.135)	-0.62(-.060)
41217	1.05	38.8(810)	3.94	-2.09(-.203)	-0.90(-.088)	41511	.85	31.8(665)	3.97	2.03(.198)	-0.74(-.072)
41218	1.05	38.8(810)	5.91	-2.95(-.278)	-1.17(-.109)	41512	.85	31.8(665)	5.95	2.73(.269)	-0.90(-.089)
41219	1.05	38.8(810)	7.88	-3.63(-.350)	-1.23(-.115)	41513	.85	31.8(665)	7.91	3.51(.346)	-1.07(-.106)
41220	1.05	38.8(810)	9.84	-4.46(-.433)	-1.34(-.128)	41514	.85	31.8(665)	9.87	4.39(.432)	-1.21(-.119)
41221	1.05	38.8(810)	11.81	-5.25(-.516)	-1.41(-.139)	41515	.85	31.8(665)	11.84	5.21(.515)	-1.27(-.126)
41222	1.05	38.8(810)	13.64	-5.96(-.592)	-1.49(-.146)	41516	.85	31.8(665)	13.78	6.04(.596)	-1.34(-.130)
41224	1.05	38.8(810)	15.75	-6.76(-.670)	-1.56(-.150)	41517	.85	31.8(664)	15.74	6.84(.680)	-1.36(-.134)
41302	.70	24.9(521)	-7.78	-2.21(-.219)	-0.16(-.015)	41601	.40	10.2(212)	-7.76	-2.09(-.225)	-0.26(-.025)
41303	.70	24.9(521)	-5.84	-1.41(-.141)	-0.03(.002)	41602	.40	10.2(212)	-5.80	-1.30(-.148)	-0.11(-.013)
41304	.70	24.9(521)	-3.98	-0.63(-.063)	-0.13(-.015)	41603	.40	10.2(212)	-3.84	-0.57(-.068)	-0.06(-.006)
41305	.70	24.9(520)	-1.92	-0.11(-.010)	-0.33(-.034)	41604	.40	10.2(213)	-1.85	-0.10(-.005)	-0.23(-.028)
41306	.70	24.9(521)	.07	-0.76(-.073)	-0.46(-.046)	41605	.40	10.2(213)	.12	0.71(.066)	-0.35(-.040)
41307	.70	24.9(520)	2.01	-1.37(-.132)	-0.57(-.057)	41606	.40	10.1(211)	2.08	1.31(.126)	-0.46(-.051)
41308	.70	24.9(520)	4.01	-2.00(-.193)	-0.64(-.067)	41607	.40	10.1(211)	4.06	1.92(.186)	-0.58(-.061)
41309	.70	24.9(520)	5.98	-2.67(-.261)	-0.82(-.084)	41608	.40	10.1(211)	6.03	2.55(.251)	-0.70(-.077)
41310	.70	24.9(520)	7.94	-3.40(-.332)	-0.98(-.099)	41609	.40	10.1(211)	8.01	3.27(.320)	-0.84(-.094)
41311	.70	24.9(520)	9.89	-4.28(-.420)	-1.14(-.114)	41610	.40	10.1(211)	9.97	4.04(.400)	-1.03(-.110)
41312	.70	24.9(520)	11.87	-5.14(-.507)	-1.23(-.124)	41611	.40	10.1(211)	11.92	4.95(.487)	-1.18(-.124)
41313	.70	24.9(520)	13.82	-5.95(-.584)	-1.27(-.129)	41612	.40	10.1(211)	13.89	5.81(.570)	-1.25(-.132)
41314	.70	24.9(520)	15.78	-6.76(-.666)	-1.29(-.128)	41613	.40	10.1(211)	15.83	6.64(.658)	-1.30(-.136)
41315	.70	24.9(520)	.07	-0.77(-.072)	-0.44(-.046)						
41401	.95	35.7(745)	-7.94	-2.51(-.252)	-0.18(-.017)						
41402	.95	35.7(745)	-5.89	-1.60(-.157)	-0.01(-.001)						
41403	.95	35.7(745)	-3.92	-0.76(-.076)	-0.15(-.015)						
41404	.95	35.7(745)	-1.98	-0.05(-.004)	-0.35(-.035)						
41405	.95	35.7(745)	.01	-0.76(-.074)	-0.52(-.052)						
41406	.95	35.6(744)	1.96	-1.40(-.139)	-0.65(-.064)						
41407	.95	35.6(744)	3.95	-2.08(-.205)	-0.79(-.078)						
41408	.95	35.6(744)	5.92	-2.80(-.275)	-0.96(-.095)						
41409	.95	35.6(744)	7.87	-3.61(-.360)	-1.14(-.116)						
41410	.95	35.6(744)	9.84	-4.45(-.442)	-1.26(-.127)						
41411	.95	35.6(744)	11.79	-5.25(-.519)	-1.32(-.130)						
41412	.95	35.6(744)	13.73	-6.06(-.605)	-1.40(-.140)						
41413	.95	35.7(745)	15.71	-6.86(-.681)	-1.46(-.142)						

Table A-9. — (Continued)

(c) T. E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
41804	1.05	38.7(809)	-7.97	-1.53(-.150)	-.043(-.039)	42101	.85	31.7(663)	-7.88	-.104(-.107)	-.052(-.046)
41805	1.05	38.6(807)	-5.93	-.065(-.057)	-.067(-.060)	42102	.85	31.7(663)	-5.93	-.024(-.023)	-.064(-.061)
41806	1.05	38.7(808)	-3.98	.019(.019)	-.091(-.075)	42103	.85	31.8(664)	-3.97	.056(.053)	-.080(-.075)
41807	1.05	38.7(808)	-2.00	.100(.102)	-.100(-.097)	42104	.85	31.8(664)	-2.00	.126(.124)	-.095(-.091)
41808	1.05	38.7(808)	-.04	.168(.168)	-.115(-.110)	42105	.85	31.7(663)	-.02	.186(.182)	-.106(-.101)
41809	1.05	38.6(807)	1.96	.231(.230)	-.126(-.120)	42106	.85	31.7(663)	1.96	.247(.242)	-.117(-.111)
41810	1.05	38.7(808)	3.92	.294(.294)	-.138(-.138)	42107	.85	31.7(663)	3.94	.312(.309)	-.130(-.127)
41811	1.05	38.7(808)	5.97	.358(.363)	-.148(-.153)	42108	.85	31.8(664)	5.88	.380(.375)	-.146(-.142)
41812	1.05	38.7(808)	7.85	.431(.429)	-.157(-.156)	42109	.85	31.8(664)	7.84	.451(.445)	-.158(-.153)
41814	1.05	38.6(807)	9.80	.509(.508)	-.155(-.168)	42110	.85	31.8(664)	9.83	.534(.531)	-.168(-.166)
41815	1.05	38.7(808)	11.75	.586(.593)	-.174(-.181)	42111	.85	31.8(664)	11.76	.612(.612)	-.174(-.174)
41817	1.05	38.7(808)	13.73	.655(.662)	-.177(-.182)	42112	.85	31.8(664)	13.77	.689(.694)	-.178(-.181)
41818	1.05	38.7(808)	15.69	.718(.725)	-.175(-.181)	42114	.85	31.8(665)	15.70	.756(.763)	-.172(-.175)
41902	.70	24.9(521)	-7.86	-.088(-.088)	-.052(-.049)	42201	.40	10.1(211)	-7.81	-.077(-.075)	-.039(-.049)
41903	.70	24.9(521)	-5.91	-.009(-.013)	-.064(-.060)	42202	.40	10.1(211)	-5.89	-.001(-.005)	-.053(-.058)
41904	.70	24.9(521)	-3.93	.067(.062)	-.079(-.075)	42203	.40	10.2(212)	-3.88	.069(.068)	-.068(-.073)
41905	.70	24.9(521)	-1.97	.132(.126)	-.093(-.089)	42204	.40	10.1(211)	-1.91	.131(.129)	-.081(-.086)
41906	.70	24.9(521)	.01	.191(.184)	-.103(-.098)	42205	.40	10.2(212)	.06	.189(.184)	-.091(-.094)
41907	.70	25.0(522)	1.97	.250(.241)	-.113(-.106)	42206	.40	10.1(211)	2.04	.248(.239)	-.102(-.102)
41908	.70	24.9(521)	3.94	.314(.306)	-.126(-.123)	42207	.40	10.2(212)	4.02	.307(.300)	-.113(-.115)
41909	.70	24.9(521)	5.93	.382(.374)	-.141(-.139)	42208	.40	10.2(212)	5.97	.369(.365)	-.126(-.131)
41910	.70	24.9(521)	7.88	.450(.440)	-.152(-.148)	42209	.40	10.2(212)	7.94	.437(.431)	-.140(-.146)
41911	.70	24.9(521)	9.84	.533(.526)	-.164(-.164)	42210	.40	10.2(212)	9.90	.511(.504)	-.152(-.156)
41912	.70	24.9(521)	11.82	.617(.612)	-.172(-.172)	42211	.40	10.2(212)	11.87	.599(.593)	-.165(-.172)
41913	.70	24.9(521)	13.75	.691(.683)	-.173(-.176)	42212	.40	10.2(212)	13.80	.682(.672)	-.171(-.179)
41914	.70	24.9(520)	15.75	.762(.758)	-.168(-.171)	42213	.40	10.2(212)	15.79	.761(.759)	-.177(-.180)
41915	.70	24.9(521)	.00	.189(.184)	-.110(-.098)						
42005	.95	35.6(744)	-7.90	-.124(-.125)	-.051(-.046)						
42006	.95	35.6(744)	-5.93	-.038(-.032)	-.065(-.062)						
42007	.95	35.6(744)	-3.98	.044(.045)	-.082(-.077)						
42008	.95	35.6(744)	-2.02	.121(.122)	-.101(-.097)						
42009	.95	35.6(744)	-.05	.183(.184)	-.113(-.109)						
42010	.95	35.6(744)	1.91	.245(.244)	-.125(-.120)						
42011	.95	35.6(744)	3.90	.311(.312)	-.139(-.137)						
42012	.95	35.6(744)	5.84	.379(.377)	-.155(-.151)						
42013	.95	35.6(744)	7.82	.445(.444)	-.162(-.159)						
42014	.95	35.7(745)	9.78	.527(.526)	-.173(-.170)						
42015	.95	35.7(745)	11.76	.603(.605)	-.178(-.179)						
42016	.95	35.7(745)	13.71	.673(.676)	-.179(-.179)						
42017	.95	35.7(745)	15.68	.740(.740)	-.176(-.172)						

Table A-9.-(Continued)

(d) T. E. Deflection, Full Span = 30.2°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
42310	1.05	38.7(809)	-7.95	-.084(-.061)	-.080(-.099)	42601	.85	31.9(666)	-7.93	-.021(.003)	-.088(-.099)
42311	1.05	38.7(809)	-5.96	-.006(-.033)	-.099(-.110)	42602	.85	31.9(666)	-5.97	.061(.089)	-.102(-.117)
42312	1.05	38.8(810)	-4.00	.087(.113)	-.115(-.127)	42603	.85	31.9(666)	-4.00	.141(.168)	-.120(-.134)
42313	1.05	38.8(810)	-2.04	.162(.188)	-.131(-.144)	42604	.85	31.9(666)	-2.03	.202(.228)	-.130(-.145)
42314	1.05	38.7(809)	-.07	.224(.252)	-.143(-.156)	42605	.85	31.9(666)	-.07	.259(.283)	-.140(-.153)
42316	1.05	38.8(810)	1.90	.281(.311)	-.150(-.167)	42606	.85	31.9(666)	1.92	.319(.342)	-.152(-.166)
42317	1.05	38.7(809)	3.88	.342(.370)	-.161(-.176)	42607	.85	31.9(666)	3.86	.382(.403)	-.166(-.178)
42318	1.05	38.8(810)	5.86	.406(.435)	-.172(-.189)	42608	.85	31.9(666)	5.85	.450(.469)	-.181(-.193)
42319	1.05	38.8(810)	7.81	.467(.494)	-.173(-.190)	42609	.85	31.9(666)	7.82	.519(.537)	-.192(-.201)
42320	1.05	38.8(810)	9.78	.546(.573)	-.184(-.202)	42610	.85	31.9(666)	9.77	.582(.601)	-.198(-.208)
42321	1.05	38.8(810)	11.76	.616(.648)	-.186(-.209)	42611	.85	31.9(666)	11.74	.665(.687)	-.200(-.214)
42323	1.05	38.8(810)	13.71	.680(.719)	-.187(-.212)	42612	.85	31.9(666)	13.72	.734(.767)	-.198(-.219)
42324	1.05	38.8(810)	15.71	.741(.771)	-.187(-.212)	42613	.85	31.9(667)	15.69	.792(.819)	-.197(-.202)
42401	.70	25.0(523)	-7.91	.095(.026)	-.092(-.100)	42701	.40	10.2(213)	-7.88	.019(.046)	-.069(-.099)
42402	.70	25.1(524)	-5.95	.077(.107)	-.107(-.117)	42702	.40	10.2(214)	-5.89	.097(.122)	-.087(-.115)
42403	.70	25.0(523)	-3.97	.157(.179)	-.121(-.133)	42703	.40	10.2(212)	-3.94	.160(.189)	-.099(-.130)
42404	.70	25.0(522)	-2.05	.213(.236)	-.130(-.142)	42704	.40	10.2(212)	-1.97	.219(.244)	-.111(-.139)
42405	.70	25.0(523)	-.03	.272(.292)	-.140(-.150)	42705	.40	10.2(212)	.01	.276(.298)	-.122(-.147)
42406	.70	25.0(523)	1.94	.330(.352)	-.151(-.164)	42706	.40	10.2(213)	1.99	.335(.357)	-.135(-.159)
42407	.70	25.0(522)	3.93	.395(.415)	-.155(-.178)	42707	.40	10.2(213)	3.96	.395(.416)	-.147(-.173)
42408	.70	25.0(522)	5.87	.461(.475)	-.179(-.189)	42708	.40	10.2(213)	5.92	.457(.478)	-.159(-.187)
42409	.70	25.0(522)	7.85	.529(.544)	-.191(-.200)	42709	.40	10.2(213)	7.90	.520(.539)	-.170(-.196)
42410	.70	25.0(522)	9.84	.600(.616)	-.192(-.204)	42710	.40	10.2(212)	9.86	.595(.602)	-.175(-.201)
42411	.70	25.0(522)	11.76	.681(.696)	-.200(-.210)	42711	.40	10.2(212)	11.83	.668(.689)	-.184(-.211)
42412	.70	25.0(522)	13.75	.760(.775)	-.205(-.222)	42712	.40	10.2(213)	13.78	.753(.767)	-.192(-.220)
42413	.70	25.0(523)	15.72	.821(.842)	-.194(-.211)	42713	.40	10.2(212)	15.76	.834(.856)	-.197(-.227)
42414	.70	25.0(523)	-.03	.871(.892)	-.138(-.150)						
42502	.95	35.7(746)	-7.93	-.038(-.016)	-.093(-.103)						
42503	.95	35.7(746)	-5.98	.043(.073)	-.105(-.120)						
42504	.95	35.7(746)	-4.03	.120(.152)	-.120(-.137)						
42505	.95	35.7(746)	-2.05	.190(.223)	-.135(-.154)						
42506	.95	35.7(746)	-.08	.246(.277)	-.145(-.161)						
42507	.95	35.7(746)	1.90	.304(.334)	-.155(-.172)						
42508	.95	35.7(746)	3.86	.364(.391)	-.167(-.182)						
42509	.95	35.8(747)	5.81	.428(.453)	-.180(-.195)						
42510	.95	35.8(747)	7.80	.487(.512)	-.183(-.195)						
42511	.95	35.8(747)	9.75	.563(.584)	-.190(-.201)						
42512	.95	35.8(747)	11.78	.643(.671)	-.198(-.215)						
42513	.95	35.7(746)	13.69	.707(.734)	-.196(-.210)						
42514	.95	35.8(747)	15.67	.769(.794)	-.189(-.200)						



Table A.9. — (Continued)

(e) T. E. Deflection, Full Span =  $-8.3^\circ$

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
43101	1.05	38.9(813)	1.16	-.240(-.256)	-.131(-.146)	43401	.85	31.9(667)	.17	-.228(-.241)	-.116(-.121)
43103	1.05	38.9(812)	2.14	-.165(-.182)	-.112(-.124)	43402	.85	31.9(667)	2.15	-.157(-.166)	-.098(-.100)
43104	1.05	38.9(812)	4.10	-.090(-.106)	-.093(-.103)	43403	.85	32.0(668)	4.11	-.090(-.098)	-.084(-.084)
43105	1.05	38.9(812)	6.05	-.017(-.034)	-.076(-.085)	43404	.85	32.0(668)	6.08	-.023(-.033)	-.070(-.072)
43106	1.05	38.9(812)	8.02	-.077(-.062)	-.050(-.059)	43405	.85	32.0(668)	8.05	-.050(-.039)	-.054(-.054)
43107	1.05	38.9(812)	9.97	-.176(-.161)	-.026(-.034)	43406	.85	32.0(668)	10.00	-.142(-.132)	-.036(-.035)
43108	1.05	38.9(813)	11.90	-.274(-.262)	-.005(-.010)	43407	.85	32.0(668)	11.95	-.232(-.223)	-.024(-.020)
43109	1.05	38.9(813)	13.86	-.372(-.355)	-.015(-.006)	43408	.85	32.0(668)	13.89	-.329(-.318)	-.009(-.009)
43111	1.05	38.8(811)	15.82	-.468(-.451)	-.036(-.025)	43409	.85	32.0(668)	15.87	-.428(-.422)	-.005(-.006)
43202	.70	25.1(524)	.21	-.217(-.227)	-.107(-.111)	43501	.40	10.2(213)	.25	-.203(-.219)	-.108(-.103)
43203	.70	25.1(524)	2.17	-.149(-.158)	-.091(-.092)	43502	.40	10.2(213)	2.22	-.138(-.152)	-.092(-.086)
43204	.70	25.1(524)	4.15	-.084(-.093)	-.078(-.079)	43503	.40	10.2(213)	4.19	-.076(-.090)	-.079(-.074)
43205	.70	25.1(524)	6.11	-.020(-.030)	-.066(-.067)	43504	.40	10.2(213)	6.15	-.014(-.029)	-.068(-.063)
43206	.70	25.1(525)	8.08	-.046(-.036)	-.054(-.053)	43505	.40	10.2(213)	8.13	-.048(-.033)	-.057(-.050)
43207	.70	25.1(524)	10.03	-.137(-.126)	-.033(-.031)	43506	.40	10.2(214)	10.08	-.125(-.112)	-.038(-.029)
43208	.70	25.1(524)	12.00	-.226(-.218)	-.020(-.016)	43507	.40	10.2(214)	12.05	-.213(-.201)	-.022(-.011)
43209	.70	25.1(525)	13.94	-.317(-.306)	-.008(-.004)	43508	.40	10.2(214)	14.00	-.301(-.288)	-.010(-.002)
43210	.70	25.1(524)	15.91	-.415(-.403)	-.004(-.007)	43509	.40	10.2(214)	15.96	-.394(-.383)	-.001(-.014)
43301	.95	35.8(747)	.16	-.247(-.259)	-.128(-.136)						
43302	.95	35.8(747)	2.13	-.172(-.179)	-.108(-.112)						
43303	.95	35.8(748)	4.09	-.100(-.109)	-.091(-.094)						
43304	.95	35.8(748)	6.06	-.030(-.041)	-.075(-.080)						
43305	.95	35.8(748)	8.02	-.054(-.042)	-.055(-.059)						
43306	.95	35.8(748)	9.97	-.148(-.141)	-.037(-.038)						
43307	.95	35.8(748)	11.92	-.242(-.232)	-.023(-.025)						
43308	.95	35.8(748)	13.86	-.345(-.331)	-.004(-.010)						
43309	.95	35.8(747)	15.83	-.450(-.445)	-.017(-.016)						

Table A-9.—(Continued)

(f) T. E. Deflection, Full Span = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
43805	1.05	39.0(814)	-7.65	-0.610(-.638)	-.722( .244)	44105	.85	32.0(669)	-.04	-.369(-.388)	.181( .191)
43806	1.05	39.0(814)	-5.68	-.537(-.565)	-.211( .234)	44106	.85	32.1(670)	-.22	-.358(-.379)	-.178( .189)
43807	1.05	39.0(814)	-3.73	-.463(-.494)	.199( .221)	44107	.85	32.0(669)	2.23	-.290(-.313)	.164( .177)
43808	1.05	39.0(815)	-1.78	-.397(-.425)	.191( .210)	44108	.85	32.0(669)	4.20	-.221(-.242)	.148( .157)
43809	1.05	39.0(815)	.22	-.327(-.358)	.176( .199)	44109	.85	32.0(669)	6.16	-.154(-.173)	.133( .140)
43810	1.05	39.0(815)	2.20	-.259(-.291)	.161( .194)	44110	.85	32.0(668)	8.12	-.085(-.105)	.119( .126)
43811	1.05	39.0(814)	4.15	-.193(-.222)	.147( .166)	44111	.85	32.0(669)	10.08	.004(-.018)	.103( .110)
43812	1.05	39.0(815)	6.11	-.123(-.150)	.132( .149)	44112	.85	32.1(670)	17.03	.097( .077)	.089( .092)
43814	1.05	39.0(815)	8.10	-.032(-.064)	.111( .127)	44113	.85	32.1(670)	13.98	.192( .176)	.076( .081)
43815	1.05	39.0(815)	10.01	.067( .035)	.088( .103)	44114	.85	32.0(669)	15.93	.296( .283)	.060( .064)
43817	1.05	39.0(815)	11.97	.169( .142)	.065( .077)						
43818	1.05	39.0(815)	13.92	.265( .236)	.048( .066)	44201	.40	10.2(214)	.30	-.344(-.360)	.165( .171)
43819	1.05	39.0(815)	15.90	.361( .343)	.029( .040)	44202	.40	10.2(213)	2.29	-.278(-.293)	.150( .155)
43905	.70	25.1(525)	-7.58	-.648(-.659)	.715( .222)	44203	.40	10.2(213)	4.24	-.215(-.225)	.137( .137)
43906	.70	25.1(525)	-5.64	-.573(-.583)	.208( .212)	44204	.40	10.2(213)	6.21	-.153(-.161)	.125( .123)
43907	.70	25.1(524)	-3.66	-.499(-.515)	.199( .209)	44205	.40	10.2(213)	9.18	-.089(-.099)	.113( .111)
43908	.70	25.1(524)	-1.70	-.428(-.442)	.188( .196)	44206	.40	10.2(214)	10.18	-.015(-.029)	.097( .095)
43909	.70	25.1(524)	.26	-.357(-.378)	.174( .185)	44207	.40	10.2(213)	12.11	.070( .056)	.082( .079)
43910	.70	25.1(524)	2.23	-.288(-.308)	.158( .169)	44208	.40	10.2(213)	14.09	.158( .144)	.069( .065)
43911	.70	25.1(524)	4.24	-.219(-.237)	.142( .149)	44210	.40	10.2(213)	16.05	.250( .237)	.057( .053)
43912	.70	25.1(525)	6.19	-.154(-.170)	.129( .134)						
43913	.70	25.1(524)	8.16	-.088(-.104)	.117( .120)						
43914	.70	25.1(525)	10.13	-.004(-.020)	.100( .102)						
43915	.70	25.2(526)	12.06	.085( .070)	.086( .087)						
43916	.70	25.1(525)	14.03	.176( .163)	.074( .072)						
43917	.70	25.2(526)	15.97	.274( .261)	.061( .061)						
43918	.70	25.2(526)	.28	-.357(-.378)	.175( .185)						
44001	.95	35.9(749)	.20	-.347(-.369)	.180( .192)						
44002	.95	35.9(750)	2.18	-.278(-.302)	.163( .176)						
44003	.95	35.9(749)	4.16	-.211(-.232)	.147( .158)						
44004	.95	35.9(750)	6.12	-.147(-.169)	.135( .144)						
44005	.95	35.9(749)	8.07	-.072(-.095)	.119( .129)						
44006	.95	35.9(750)	10.05	.020(-.002)	.103( .109)						
44007	.95	35.9(750)	11.97	.112( .093)	.089( .095)						
44008	.95	35.9(750)	13.93	.212( .196)	.074( .081)						
44009	.95	35.9(750)	15.87	.317( .308)	.054( .057)						

Table A-9.—(Concluded)

(g) T. E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
44402	1.10	40.3(841)	-7.69	-.391(-.398)	.108(.112)
44403	1.10	40.3(841)	-5.75	-.311(-.314)	.093(.096)
44404	1.10	40.3(841)	-3.78	-.226(-.232)	.074(.076)
44406	1.10	40.3(841)	-1.83	-.143(-.151)	.052(.056)
44407	1.10	40.3(842)	.17	-.063(-.072)	.027(-.032)
44408	1.10	40.3(841)	2.08	.007(-.002)	.010(.012)
44409	1.10	40.3(841)	4.09	.077(-.066)	-.005(-.002)
44411	1.10	40.3(841)	6.01	.153(-.139)	-.026(-.022)
44412	1.10	40.3(841)	7.97	.239(-.228)	-.046(-.044)
44501	.70	25.1(525)	-7.74	-.366(-.365)	.087(.086)
44502	.70	25.1(524)	-5.76	-.284(-.284)	.075(.072)
44503	.70	25.1(525)	-3.81	-.204(-.208)	.061(.059)
44504	.70	25.1(524)	-1.86	-.129(-.136)	.043(.044)
44505	.70	25.1(525)	.15	-.057(-.064)	.025(.024)
44506	.70	25.1(524)	2.10	.006(-.002)	.012(.012)
44507	.70	25.1(525)	4.08	.068(-.058)	.001(-.002)
44508	.70	25.1(525)	6.03	.131(-.119)	-.010(-.009)
44509	.70	25.1(524)	7.99	.202(-.193)	-.026(-.029)
44510	.70	25.1(525)	9.96	.294(-.281)	-.046(-.047)
44511	.70	25.1(524)	11.92	.384(-.373)	-.059(-.059)
44512	.70	25.1(524)	13.90	.475(-.460)	-.069(-.070)
44513	.70	25.1(524)	15.85	.565(-.551)	-.076(-.076)
44514	.70	25.1(524)	.13	-.057(-.065)	.026(-.025)
44604	1.05	39.0(815)	-7.75	-.405(-.412)	.111(.115)
44605	1.05	39.0(815)	-5.80	-.322(-.325)	.096(.099)
44606	1.05	39.0(814)	-3.86	-.235(-.239)	.077(.078)
44607	1.05	39.0(815)	-1.89	-.150(-.156)	.053(.056)
44608	1.05	39.0(814)	.07	-.071(-.077)	.029(.033)
44609	1.05	39.0(815)	2.04	.001(-.006)	.010(.015)
44610	1.05	39.0(814)	4.01	.071(-.062)	-.004(-.000)
44611	1.05	39.0(814)	5.98	.145(-.135)	-.021(-.020)
44612	1.05	39.0(814)	7.95	.237(-.224)	-.047(-.042)
44613	1.05	39.0(815)	9.91	.329(-.317)	-.066(-.062)
44614	1.05	39.0(815)	11.85	.419(-.408)	-.082(-.075)
44615	1.05	39.0(814)	13.81	.506(-.504)	-.096(-.095)
44616	1.05	39.0(815)	15.79	.591(-.587)	-.110(-.106)
44701	.95	35.9(750)	-7.78	-.397(-.404)	.099(.100)
44702	.95	35.9(749)	-5.83	-.312(-.312)	.085(.085)
44703	.95	35.9(749)	-3.90	-.228(-.227)	.069(.067)
44704	.95	35.9(749)	-1.91	-.143(-.145)	.047(.049)
44705	.95	35.9(749)	.09	-.065(-.070)	.027(.028)
44706	.95	35.9(749)	2.05	.002(-.004)	.012(.014)
44707	.95	35.9(749)	4.03	.068(-.061)	-.001(-.002)
44708	.95	35.9(749)	5.98	.136(-.127)	-.015(-.012)
44709	.95	35.9(749)	7.94	.222(-.213)	-.035(-.034)
44710	.95	35.9(749)	9.88	.313(-.307)	-.053(-.053)
44711	.95	35.9(749)	11.83	.406(-.395)	-.067(-.064)
44712	.95	35.9(749)	13.78	.501(-.490)	-.083(-.077)
44713	.95	35.9(750)	15.74	.595(-.587)	-.099(-.094)
44805	1.00	37.5(783)	-7.79	-.404(-.407)	.109(.106)
44806	1.00	37.5(784)	-5.84	-.321(-.322)	.093(.092)
44807	1.00	37.5(784)	-3.85	-.234(-.235)	.073(.073)
44808	1.00	37.5(783)	-1.91	-.149(-.149)	.050(.050)
44809	1.00	37.5(784)	.04	-.070(-.071)	.028(.029)
44810	1.00	37.5(784)	2.02	.001(-.004)	.011(.014)
44811	1.00	37.5(784)	4.01	.068(-.061)	-.002(-.002)
44812	1.00	37.5(784)	5.94	.139(-.130)	-.017(-.014)
44813	1.00	37.5(784)	7.92	.230(-.222)	-.041(-.039)
44814	1.00	37.5(783)	9.89	.324(-.317)	-.059(-.060)
44815	1.00	37.5(785)	11.82	.416(-.405)	-.076(-.070)
44817	1.00	37.5(784)	15.75	.516(-.509)	-.091(-.089)
44901	.85	32.0(668)	-7.73	-.379(-.382)	.090(.091)
44902	.85	32.0(669)	-5.80	-.298(-.296)	.079(.076)
44903	.85	32.0(668)	-3.83	-.215(-.220)	.064(.065)
44904	.85	32.0(668)	-1.89	-.136(-.141)	.045(.047)
44906	.85	32.0(668)	.09	-.063(-.068)	.027(.026)
44907	.85	32.0(669)	2.08	.003(-.002)	.013(.013)
44908	.85	32.0(668)	4.03	.066(-.059)	.001(-.002)
44909	.85	32.0(668)	5.99	.131(-.122)	-.012(-.011)
44910	.85	32.0(668)	7.98	.211(-.202)	-.031(-.031)
44911	.85	32.0(668)	9.92	.301(-.293)	-.048(-.048)
44912	.85	32.0(668)	11.88	.390(-.380)	-.059(-.060)
44913	.85	32.0(669)	13.84	.483(-.472)	-.070(-.068)
44914	.85	32.0(668)	15.79	.574(-.565)	-.080(-.077)
45001	.40	10.2(214)	-7.69	-.355(-.353)	.095(.083)
45002	.40	10.2(212)	-5.74	-.274(-.282)	.081(.076)
45003	.40	10.2(213)	-3.76	-.196(-.200)	.065(.058)
45004	.40	10.2(213)	-1.80	-.122(-.128)	.046(.040)
45006	.40	10.2(213)	.17	-.057(-.062)	.029(.024)
45007	.40	10.2(213)	2.15	.005(-.002)	.017(.013)
45008	.40	10.2(213)	4.12	.064(-.057)	.006(.003)
45009	.40	10.2(213)	6.09	.124(-.116)	-.004(-.008)
45010	.40	10.2(213)	8.05	.189(-.183)	-.018(-.025)
45011	.40	10.2(213)	10.03	.275(-.265)	-.040(-.045)
45012	.40	10.2(214)	11.96	.368(-.355)	-.058(-.063)
45013	.40	10.2(214)	13.94	.458(-.444)	-.069(-.074)
45014	.40	10.2(213)	15.91	.549(-.537)	-.078(-.082)

Table A-10.—FLEXSTAB Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
1C2806	1.05	-7.89	(-.174)	(-.174)	(-.200)
1C2807	1.05	-5.97	(-.247)	(-.247)	(-.217)
1C2808	1.05	-3.99	(-.323)	(-.323)	(-.235)
1C2809	1.05	-2.05	(-.398)	(-.398)	(-.252)
1C2810	1.05	-.08	(-.473)	(-.473)	(-.270)
1C2811	1.05	1.92	(-.550)	(-.550)	(-.288)
1C2812	1.05	3.89	(-.625)	(-.625)	(-.305)
1C2813	1.05	5.85	(-.701)	(-.701)	(-.323)
1C2814	1.05	7.80	(-.775)	(-.775)	(-.340)
1C2815	1.05	9.78	(-.851)	(-.851)	(-.357)
1C2816	1.05	11.75	(-.927)	(-.927)	(-.375)
1C2817	1.05	13.70	(1.002)	(1.002)	(-.392)
1C2818	1.05	15.69	(1.078)	(1.078)	(-.410)
1C2901	.70	-7.91	(-.134)	(-.134)	(-.152)
1C2902	.70	-5.93	(-.202)	(-.202)	(-.164)
1C2903	.70	-3.97	(-.270)	(-.270)	(-.177)
1C2904	.70	-2.00	(-.338)	(-.338)	(-.190)
1C2905	.70	-.04	(-.405)	(-.405)	(-.203)
1C2906	.70	1.95	(-.474)	(-.474)	(-.215)
1C2907	.70	3.93	(-.543)	(-.543)	(-.228)
1C2908	.70	5.89	(-.610)	(-.610)	(-.241)
1C2909	.70	7.84	(-.678)	(-.678)	(-.254)
1C2910	.70	9.82	(-.746)	(-.746)	(-.266)
1C2911	.70	11.76	(-.813)	(-.813)	(-.279)
1C2912	.70	13.76	(-.882)	(-.882)	(-.292)
1C2913	.70	15.72	(-.950)	(-.950)	(-.305)
1C2914	.70	-.02	(-.606)	(-.606)	(-.203)
1C3001	.95	-7.94	(-.156)	(-.156)	(-.176)
1C3002	.95	-5.98	(-.228)	(-.228)	(-.191)
1C3003	.95	-4.02	(-.301)	(-.301)	(-.206)
1C3004	.95	-2.04	(-.374)	(-.374)	(-.222)
1C3005	.95	-.10	(-.445)	(-.445)	(-.237)
1C3006	.95	1.89	(-.519)	(-.519)	(-.253)
1C3007	.95	3.86	(-.592)	(-.592)	(-.268)
1C3008	.95	5.84	(-.665)	(-.665)	(-.284)
1C3009	.95	7.78	(-.737)	(-.737)	(-.299)
1C3010	.95	9.84	(-.813)	(-.813)	(-.315)
1C3011	.95	11.71	(-.882)	(-.882)	(-.330)
1C3012	.95	13.69	(-.955)	(-.955)	(-.345)
1C3013	.95	15.65	(1.028)	(1.028)	(-.361)
1C31C1	.85	-7.98	(-.142)	(-.142)	(-.164)
1C3102	.85	-5.57	(-.214)	(-.214)	(-.178)
1C3103	.85	-4.01	(-.284)	(-.284)	(-.192)
1C3104	.85	-2.03	(-.355)	(-.355)	(-.206)
1C31C5	.85	-.08	(-.424)	(-.424)	(-.220)
1C3106	.85	1.92	(-.495)	(-.495)	(-.234)
1C3107	.85	3.89	(-.566)	(-.566)	(-.248)
1C3108	.85	5.83	(-.635)	(-.635)	(-.261)
1C31C9	.85	7.81	(-.705)	(-.705)	(-.275)
1C3110	.85	9.78	(-.776)	(-.776)	(-.289)
1C3111	.85	11.76	(-.846)	(-.846)	(-.303)
1C3112	.85	13.71	(-.916)	(-.916)	(-.317)
1C3113	.85	15.67	(-.985)	(-.985)	(-.331)
1C32C1	.40	-7.86	(-.124)	(-.124)	(-.140)
1C3202	.40	-5.90	(-.189)	(-.189)	(-.152)
1C3203	.40	-3.93	(-.255)	(-.255)	(-.163)
1C3204	.40	-1.97	(-.321)	(-.321)	(-.175)
1C32C5	.40	-.05	(-.388)	(-.388)	(-.187)
1C32C6	.40	2.00	(-.453)	(-.453)	(-.198)
1C32C7	.40	3.97	(-.519)	(-.519)	(-.210)
1C32C8	.40	5.95	(-.585)	(-.585)	(-.221)
1C32C9	.40	7.92	(-.651)	(-.651)	(-.233)
1C3210	.40	9.87	(-.716)	(-.716)	(-.245)
1C3211	.40	11.82	(-.781)	(-.781)	(-.256)
1C3212	.40	13.80	(-.847)	(-.847)	(-.268)
1C3213	.40	15.75	(-.912)	(-.912)	(-.279)

Table A-10. — (Continued)

(b) T.E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
1C4C04	1.11		-7.80	(-.080)	(-.058)
1C4C05	1.11		-5.85	(-.005)	(-.077)
1C4C06	1.11		-3.87	(-.072)	(-.095)
1C4C07	1.11		-1.94	(-.146)	(-.114)
1C4C08	1.11		.05	(-.223)	(-.132)
1C4C09	1.11		2.02	(.299)	(-.151)
1C4C10	1.11		4.00	(.376)	(-.169)
1C4C11	1.11		5.95	(.451)	(-.188)
1C4C12	1.11		7.91	(.527)	(-.206)
1C4C13	1.11				
1C4C14	1.11				
1C4C15	1.11				
1C4C16	1.11				
1C4C17	1.11				
1C4C18	1.11				
1C4C19	1.11				
1C4C20	1.11				
1C4C21	1.11				
1C4C22	1.11				
1C4C23	1.11				
1C4C24	1.11				
1C4C25	1.11				
1C4C26	1.11				
1C4C27	1.11				
1C4C28	1.11				
1C4C29	1.11				
1C4C30	1.11				
1C4C31	1.11				
1C4C32	1.11				
1C4C33	1.11				
1C4C34	1.11				
1C4C35	1.11				
1C4C36	1.11				
1C4C37	1.11				
1C4C38	1.11				
1C4C39	1.11				
1C4C40	1.11				
1C4C41	1.11				
1C4C42	1.11				
1C4C43	1.11				
1C4C44	1.11				
1C4C45	1.11				
1C4C46	1.11				
1C4C47	1.11				
1C4C48	1.11				
1C4C49	1.11				
1C4C50	1.11				
1C4C51	1.11				
1C4C52	1.11				
1C4C53	1.11				
1C4C54	1.11				
1C4C55	1.11				
1C4C56	1.11				
1C4C57	1.11				
1C4C58	1.11				
1C4C59	1.11				
1C4C60	1.11				
1C4C61	1.11				
1C4C62	1.11				
1C4C63	1.11				
1C4C64	1.11				
1C4C65	1.11				
1C4C66	1.11				
1C4C67	1.11				
1C4C68	1.11				
1C4C69	1.11				
1C4C70	1.11				
1C4C71	1.11				
1C4C72	1.11				
1C4C73	1.11				
1C4C74	1.11				
1C4C75	1.11				
1C4C76	1.11				
1C4C77	1.11				
1C4C78	1.11				
1C4C79	1.11				
1C4C80	1.11				
1C4C81	1.11				
1C4C82	1.11				
1C4C83	1.11				
1C4C84	1.11				
1C4C85	1.11				
1C4C86	1.11				
1C4C87	1.11				
1C4C88	1.11				
1C4C89	1.11				
1C4C90	1.11				
1C4C91	1.11				
1C4C92	1.11				
1C4C93	1.11				
1C4C94	1.11				
1C4C95	1.11				
1C4C96	1.11				
1C4C97	1.11				
1C4C98	1.11				
1C4C99	1.11				
1C4C00	1.11				
1C4C01	1.11				
1C4C02	1.11				
1C4C03	1.11				
1C4C04	1.11				
1C4C05	1.11				
1C4C06	1.11				
1C4C07	1.11				
1C4C08	1.11				
1C4C09	1.11				
1C4C10	1.11				
1C4C11	1.11				
1C4C12	1.11				
1C4C13	1.11				
1C4C14	1.11				
1C4C15	1.11				
1C4C16	1.11				
1C4C17	1.11				
1C4C18	1.11				
1C4C19	1.11				
1C4C20	1.11				
1C4C21	1.11				
1C4C22	1.11				
1C4C23	1.11				
1C4C24	1.11				
1C4C25	1.11				
1C4C26	1.11				
1C4C27	1.11				
1C4C28	1.11				
1C4C29	1.11				
1C4C30	1.11				
1C4C31	1.11				
1C4C32	1.11				
1C4C33	1.11				
1C4C34	1.11				
1C4C35	1.11				
1C4C36	1.11				
1C4C37	1.11				
1C4C38	1.11				
1C4C39	1.11				
1C4C40	1.11				
1C4C41	1.11				
1C4C42	1.11				
1C4C43	1.11				
1C4C44	1.11				
1C4C45	1.11				
1C4C46	1.11				
1C4C47	1.11				
1C4C48	1.11				
1C4C49	1.11				
1C4C50	1.11				
1C4C51	1.11				
1C4C52	1.11				
1C4C53	1.11				
1C4C54	1.11				
1C4C55	1.11				
1C4C56	1.11				
1C4C57	1.11				
1C4C58	1.11				
1C4C59	1.11				
1C4C60	1.11				
1C4C61	1.11				
1C4C62	1.11				
1C4C63	1.11				
1C4C64	1.11				
1C4C65	1.11				
1C4C66	1.11				
1C4C67	1.11				
1C4C68	1.11				
1C4C69	1.11				
1C4C70	1.11				
1C4C71	1.11				
1C4C72	1.11				
1C4C73	1.11				
1C4C74	1.11				
1C4C75	1.11				
1C4C76	1.11				
1C4C77	1.11				
1C4C78	1.11				
1C4C79	1.11				
1C4C80	1.11				
1C4C81	1.11				
1C4C82	1.11				
1C4C83	1.11				
1C4C84	1.11				
1C4C85	1.11				
1C4C86	1.11				
1C4C87	1.11				
1C4C88	1.11				
1C4C89	1.11				
1C4C90	1.11				
1C4C91	1.11				
1C4C92	1.11				
1C4C93	1.11				
1C4C94	1.11				
1C4C95	1.11				
1C4C96	1.11				
1C4C97	1.11				
1C4C98	1.11				
1C4C99	1.11				
1C4C00	1.11				
1C4C01	1.11				
1C4C02	1.11				
1C4C03	1.11				
1C4C04	1.11				
1C4C05	1.11				
1C4C06	1.11				
1C4C07	1.11				
1C4C08	1.11				
1C4C09	1.11				
1C4C10	1.11				
1C4C11	1.11				
1C4C12	1.11				
1C4C13	1.11				
1C4C14	1.11				
1C4C15	1.11				
1C4C16	1.11				
1C4C17	1.11				
1C4C18	1.11				
1C4C19	1.11				
1C4C20	1.11				
1C4C21	1.11				
1C4C22	1.11				
1C4C23	1.11				
1C4C24	1.11				
1C4C25	1.11				
1C4C26	1.11				
1C4C27	1.11				
1C4C28	1.11				
1C4C29	1.11				
1C4C30	1.11				
1C4C31	1.11				
1C4C32	1.11				
1C4C33	1.11				
1C4C34	1.11				
1C4C35	1.11				
1C4C36	1.11				
1C4C37	1.11				
1C4C38	1.11				
1C4C39	1.11				
1C4C40	1.11				
1C4C41	1.11				
1C4C42	1.11				
1C4C43	1.11				
1C4C44	1.11				
1C4C45	1.11				
1C4C46	1.11				
1C4C47	1.11				
1C4C48	1.11				
1C4C49	1.11				
1C4C50	1.11				
1C4C51	1.11				
1C4C52	1.11				
1C4C53	1.11				
1C4C54	1.11				
1C4C55	1.11				
1C4C56	1.11				
1C4C57	1.11				
1C4C58	1.11				
1C4C59	1.11				
1C4C60	1.11				
1C4C61	1.11				
1C4C62	1.11				
1C4C63	1.11				
1C4C64	1.11				
1C4C65	1.11				
1C4C66	1.11				
1C4C67	1.11				
1C4C68	1.11				
1C4C69	1.11				
1C4C70	1.11				
1C4C71	1.11				
1C4C72	1.11				
1C4C73	1.11				
1C4C74	1.11				
1C4C75	1.11				
1C4C76	1.11				
1C4C77	1.11				
1C4C78	1.11				
1C4C79	1.11				
1C4C80	1.11				
1C4C81	1.11				
1C4C82	1.11				
1C4C83	1.11				
1C4C84	1.11				
1C4C85	1.11				
1C4C86	1.11				
1C4C87	1.11				
1C4C88	1.11				
1C4C89	1.11				
1C4C90	1.11				
1C4C91	1.11				
1C4C92	1.11				
1C4C93	1.11				
1C4C94	1.11				
1C4C95	1.11				
1C4C96	1.11				
1C					

Table A-10. — (Continued)

(c) T.E. Deflection, Full Span = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
1C6207	1.05		-0.4	(-.478)	(-.271)	1C6501	.85		.20	(-.421)	(-.218)
1C6208	1.05		2.15	(-.394)	(-.251)	1C6502	.85		2.19	(-.350)	(-.204)
1C6209	1.05		4.10	(-.319)	(-.234)	1C6503	.85		4.15	(-.280)	(-.190)
1C6210	1.05		6.07	(-.243)	(-.217)	1C6504	.85		6.11	(-.210)	(-.176)
1C6211	1.05		8.02	(-.169)	(-.199)	1C6505	.85		8.07	(-.140)	(-.162)
1C6212	1.05		10.00	(-.093)	(-.182)	1C6506	.85		10.04	(-.070)	(-.148)
1C6213	1.05		11.94	(-.018)	(-.164)	1C6507	.85		11.97	(-.001)	(-.135)
1C6214	1.05		13.89	(.056)	(-.147)	1C6508	.85		13.94	(.069)	(-.121)
1C6218	1.05		15.84	(-.131)	(-.130)	1C6509	.85		15.88	(-.138)	(-.107)
1C6303	.70		.24	(-.399)	(-.200)	1C6601	.40		.34	(-.376)	(-.183)
1C6304	.70		2.22	(-.331)	(-.187)	1C6602	.40		2.28	(-.311)	(-.172)
1C6305	.70		4.19	(-.263)	(-.175)	1C6603	.40		4.22	(-.246)	(-.161)
1C6306	.70		6.15	(-.195)	(-.162)	1C6604	.40		6.19	(-.180)	(-.149)
1C6307	.70		8.12	(-.127)	(-.149)	1C6605	.40		8.15	(-.115)	(-.137)
1C6308	.70		10.06	(-.060)	(-.137)	1C6606	.40		10.13	(-.049)	(-.126)
1C6309	.70		12.02	(.008)	(-.124)	1C6607	.40		12.16	(.019)	(-.114)
1C6310	.70		13.99	(.076)	(-.111)	1C6610	.40		14.03	(.082)	(-.103)
1C6311	.70		15.95	(.143)	(-.098)	1C6611	.40		15.98	(.147)	(-.091)
1C6312	.70		.07	(-.405)	(-.201)						
1C6401	.95		.16	(-.442)	(.233)						
1C6402	.95		2.15	(-.369)	(-.217)						
1C6403	.95		4.10	(-.297)	(-.202)						
1C6404	.95		6.10	(-.223)	(-.186)						
1C6405	.95		8.05	(-.151)	(-.171)						
1C6406	.95		9.99	(-.079)	(-.156)						
1C6407	.95		11.94	(-.007)	(-.140)						
1C6408	.95		13.89	(.065)	(-.125)						
1C6409	.95		15.86	(.138)	(-.110)						

Table A-10.—(Concluded)

(d) T.E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
1C77C5	1.11		-2.20	(-.214)	(.130)
1C77C6	1.11		2.22	(-.136)	(.111)
1C77C7	1.11		4.13	(-.062)	(.093)
1C77C8	1.11		6.09	(.014)	(.074)
1C77C9	1.11		8.00	(.088)	(.057)
1C78C1	.40		-7.64	(-.440)	(.133)
1C78C2	.40		-5.68	(-.374)	(.122)
1C78C3	.40		-3.75	(-.309)	(.110)
1C78C4	.40		-1.77	(-.243)	(.098)
1C78C5	.40		.22	(-.176)	(.087)
1C78C6	.40		2.21	(-.110)	(.075)
1C78C7	.40		4.16	(-.044)	(.063)
1C78C8	.40		6.13	(.022)	(.051)
1C78C9	.40		8.07	(.086)	(.040)
1C78D0	.40		10.04	(.152)	(.028)
1C78D1	.40		12.01	(.218)	(.017)
1C78D2	.40		14.01	(.285)	(.005)
1C78D3	.40		15.93	(.350)	(-.007)
1C79C1	1.05		-7.71	(-.524)	(.198)
1C79C2	1.05		-5.78	(-.449)	(.181)
1C79C3	1.05		-3.78	(-.372)	(.163)
1C79C4	1.05		-1.88	(-.299)	(.146)
1C79C5	1.05		.12	(-.222)	(.128)
1C79C6	1.05		2.11	(-.146)	(.110)
1C79C7	1.05		4.08	(-.070)	(.092)
1C79C8	1.05		6.03	(.005)	(.075)
1C79C9	1.05		7.96	(.080)	(.057)
1C79D0	1.05		9.94	(.156)	(.040)
1C79D1	1.05		11.89	(.231)	(.022)
1C79D2	1.05		13.83	(.306)	(.005)
1C79D3	1.05		15.78	(.381)	(-.013)
1C80C5	.70		.08	(-.191)	(.095)
1C80C6	.70		2.16	(-.119)	(.081)
1C80C7	.70		4.11	(-.051)	(.069)
1C80C8	.70		6.09	(.017)	(.056)
1C80C9	.70		8.06	(.085)	(.043)
1C80D0	.70		9.98	(.152)	(.030)
1C80D1	.70		11.96	(.221)	(.018)
1C80D2	.70		13.92	(.289)	(.005)
1C80D3	.70		15.90	(.357)	(-.008)
1C81D1	.95		.11	(-.209)	(.109)
1C81D2	.95		2.10	(-.135)	(.094)
1C81D3	.95		4.08	(-.061)	(.078)
1C81D4	.95		6.05	(.012)	(.062)
1C81D5	.95		7.97	(.083)	(.047)
1C81D6	.95		9.92	(.155)	(.032)
1C81D7	.95		11.87	(.228)	(.016)
1C81D8	.95		13.86	(.301)	(.001)
1C81D9	.95		15.81	(.374)	(-.015)
1C82D1	.85		.00	(-.203)	(.104)
1C82D3	.85		2.12	(-.128)	(.089)
1C82D4	.85		4.10	(-.057)	(.075)
1C82D5	.85		6.04	(.013)	(.061)
1C82D6	.85		8.00	(.083)	(.047)
1C82D7	.85		9.98	(.153)	(.033)
1C82D8	.85		11.95	(.224)	(.019)
1C82D9	.85		13.88	(.293)	(.005)
1C82D0	.85		15.84	(.363)	(-.009)

Table A-11.—FLEXSTAB Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 12.8°

(a) T.E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
1C8503	.40		.21	(-.177)	(.077)
1C8504	.40		2.19	(-.111)	(.065)
1C8505	.40		4.18	(-.045)	(.054)
1C8506	.40		6.13	(.020)	(.042)
1C8507	.40		8.09	(.085)	(.031)
1C8508	.40		10.10	(.151)	(.019)
1C8509	.40		12.05	(.216)	(.007)
1C8510	.40		13.98	(.280)	(-.004)
1C8511	.40		15.96	(.345)	(-.016)
1C8603	1.05		2.10	(-.148)	(.098)
1C8604	1.05		4.08	(-.073)	(.081)
1C8605	1.05		6.04	(.002)	(.063)
1C8606	1.05		7.97	(.076)	(.046)
1C8607	1.05		9.98	(.152)	(.028)
1C8608	1.05		11.94	(.227)	(.011)
1C8609	1.05		13.89	(.301)	(-.007)
1C8610	1.05		15.82	(.375)	(-.024)
1C8901	.85		.14	(-.197)	(.092)
1C8902	.85		2.12	(-.127)	(.078)
1C8903	.85		4.08	(-.058)	(.065)
1C8904	.85		6.05	(.012)	(.051)
1C8905	.85		8.00	(.081)	(.037)
1C8906	.85		9.97	(.151)	(.023)
1C8907	.85		11.93	(.220)	(.009)
1C8908	.85		13.88	(.289)	(-.005)
1C8909	.85		15.84	(.358)	(-.018)

(b) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
1C9801	.40		-7.73	(-.257)	(.035)
1C9802	.40		-5.76	(-.192)	(.024)
1C9803	.40		-3.80	(-.127)	(.012)
1C9804	.40		-1.83	(-.061)	(.001)
1C9805	.40		.16	(.005)	(-.011)
1C9806	.40		2.12	(.070)	(-.023)
1C9807	.40		4.09	(.135)	(-.034)
1C9808	.40		6.06	(.200)	(-.046)
1C9809	.40		8.02	(.265)	(-.057)
1C9810	.40		9.99	(.331)	(-.069)
1C9811	.40		11.95	(.396)	(-.080)
1C9812	.40		13.92	(.461)	(-.092)
1C9813	.40		15.89	(.526)	(-.104)
1C9901	1.05		-7.85	(-.302)	(.058)
1C9902	1.05		-5.88	(-.227)	(.041)
1C9903	1.05		-3.91	(-.152)	(.023)
1C9904	1.05		-1.94	(-.076)	(.006)
1C9905	1.05		.03	(.001)	(-.012)
1C9906	1.05		2.01	(.075)	(-.030)
1C9907	1.05		3.97	(.149)	(-.047)
1C9908	1.05		5.94	(.225)	(-.065)
1C9909	1.05		7.91	(.300)	(-.082)
1C9910	1.05		9.88	(.375)	(-.100)
1C9911	1.05		11.84	(.450)	(-.117)
1C9912	1.05		13.82	(.526)	(-.135)
1C9913	1.05		15.82	(.602)	(-.153)
110201	.85		-7.85	(-.278)	(.045)
110202	.85		-5.87	(-.208)	(.031)
110203	.85		-3.89	(-.138)	(.017)
110204	.85		-1.91	(-.067)	(.003)
110205	.85		.05	(.002)	(-.011)
110206	.85		2.05	(.073)	(-.025)
110207	.85		4.02	(.143)	(-.039)
110208	.85		5.99	(.212)	(-.053)
110209	.85		7.96	(.282)	(-.067)
110210	.85		9.93	(.352)	(-.081)
110211	.85		11.91	(.422)	(-.095)
110212	.85		13.88	(.492)	(-.109)
110213	.85		15.87	(.562)	(-.123)



Table A-11.—(Continued)

(c) T.E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
111104	1.05		-7.84	(-.075)	(-.070)
111105	1.05		-5.89	(-.001)	(-.088)
111106	1.05		-3.93	(-.074)	(-.105)
111107	1.05		-1.97	(-.149)	(-.122)
111108	1.05		-.01	(.224)	(-.140)
111109	1.05		1.95	(.299)	(-.157)
111110	1.05		3.92	(.374)	(-.175)
111111	1.05		5.90	(.449)	(-.192)
111112	1.05		7.84	(.523)	(-.210)
111113	1.05		9.83	(.599)	(-.227)
111114	1.05		11.78	(.674)	(-.245)
111115	1.05		13.73	(.748)	(-.262)
111116	1.05		15.71	(.824)	(-.280)
111401	.85		-7.89	(-.077)	(-.059)
111402	.85		-5.90	(-.006)	(-.073)
111403	.85		-3.92	(.064)	(-.087)
111404	.85		-1.96	(.133)	(-.101)
111405	.85		-.02	(.202)	(-.115)
111406	.85		1.96	(.272)	(-.129)
111407	.85		3.93	(.342)	(-.143)
111408	.85		5.93	(.413)	(-.157)
111409	.85		7.87	(.481)	(-.170)
111410	.85		9.83	(.551)	(-.184)
111411	.85		11.79	(.620)	(-.198)
111412	.85		13.75	(.689)	(-.212)
111413	.85		15.71	(.759)	(-.226)
111501	.40		-7.78	(-.075)	(-.053)
111502	.40		-5.82	(-.011)	(-.064)
111503	.40		-3.85	(.055)	(-.076)
111504	.40		-1.89	(.120)	(-.087)
111505	.40		-.08	(.185)	(-.099)
111506	.40		2.06	(.251)	(-.110)
111507	.40		4.03	(.316)	(-.122)
111508	.40		6.01	(.382)	(-.134)
111509	.40		7.98	(.447)	(-.145)
111510	.40		9.94	(.512)	(-.157)
111511	.40		11.90	(.577)	(-.168)
111512	.40		13.86	(.642)	(-.180)
111513	.40		15.82	(.707)	(-.191)

(d) T.E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
111801	.40		-7.84	(.126)	(-.150)
111802	.40		-5.88	(.191)	(-.161)
111803	.40		-3.90	(.256)	(-.173)
111804	.40		-1.96	(.320)	(-.184)
111805	.40		-.05	(.386)	(-.196)
111806	.40		1.99	(.451)	(-.207)
111807	.40		3.96	(.516)	(-.219)
111808	.40		5.95	(.581)	(-.230)
111809	.40		7.91	(.646)	(-.242)
111810	.40		9.88	(.711)	(-.253)
111811	.40		11.86	(.777)	(-.265)
111812	.40		13.80	(.841)	(-.276)
111813	.40		15.78	(.906)	(-.287)
112005	1.05		-7.91	(.172)	(-.212)
112006	1.05		-5.97	(.246)	(-.229)
112007	1.05		-4.00	(.321)	(-.246)
112008	1.05		-2.06	(.395)	(-.263)
112009	1.05		-.05	(.471)	(-.281)
112010	1.05		1.94	(.547)	(-.299)
112011	1.05		3.88	(.620)	(-.316)
112012	1.05		5.87	(.696)	(-.333)
112013	1.05		7.81	(.770)	(-.350)
112014	1.05		9.78	(.845)	(-.368)
112015	1.05		11.75	(.919)	(-.385)
112016	1.05		13.73	(.995)	(-.402)
112017	1.05		15.64	(1.067)	(-.419)
112301	.85		-7.90	(.148)	(-.175)
112302	.85		-5.93	(.217)	(-.188)
112303	.85		-3.98	(.286)	(-.202)
112304	.85		-2.07	(.353)	(-.215)
112305	.85		-.05	(.425)	(-.230)
112306	.85		1.94	(.495)	(-.243)
112307	.85		3.91	(.564)	(-.257)
112308	.85		5.86	(.633)	(-.271)
112309	.85		7.82	(.702)	(-.285)
112310	.85		9.80	(.772)	(-.298)
112311	.85		11.76	(.841)	(-.312)
112312	.85		13.71	(.910)	(-.326)
112314	.85		15.69	(.980)	(-.340)

Table A-11.-(Concluded)

(e) T.E. Deflection, Full Span =  $-17.7^\circ$

Analysis number	Mach number	Dynamic pressure, $kN/m^2$ (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
112601	.40		.29	(-.376)	(-.174)
112602	.40		2.26	(-.311)	(-.162)
112603	.40		4.22	(-.247)	(-.151)
112604	.40		6.22	(-.181)	(-.139)
112605	.40		8.16	(-.116)	(-.128)
112606	.40		10.12	(-.052)	(-.116)
112607	.40		12.08	(.013)	(-.105)
112608	.40		14.05	(.078)	(-.094)
112610	.40		16.04	(.144)	(-.082)
112701	1.05		.19	(-.470)	(.257)
112702	1.05		2.15	(-.396)	(.239)
112703	1.05		4.15	(-.320)	(.222)
112704	1.05		6.07	(-.247)	(.205)
112705	1.05		8.04	(-.172)	(.187)
112706	1.05		10.00	(-.098)	(.170)
112707	1.05		11.97	(-.023)	(.153)
112708	1.05		13.95	(.053)	(.135)
112709	1.05		15.88	(.126)	(.118)
113001	.85		.21	(-.419)	(.207)
113002	.85		2.21	(-.348)	(.193)
113003	.85		4.13	(-.280)	(.179)
113004	.85		6.14	(-.209)	(.165)
113005	.85		8.07	(-.141)	(.152)
113006	.85		10.02	(-.073)	(.138)
113007	.85		12.03	(-.002)	(.124)
113008	.85		13.95	(.066)	(.111)
113009	.85		15.92	(.136)	(.097)

Table A-12.—FLEXSTAB Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 5.1°

(a) T.E. Deflection, Full Span = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
113127	1.11		.22	(-.457)	(.270)
113128	1.11		4.16	(-.305)	(.233)
113129	1.11		8.09	(-.154)	(.197)
113201	.40		.28	(-.378)	(.180)
113202	.40		2.25	(-.312)	(.168)
113203	.40		4.22	(-.246)	(.157)
113204	.40		6.19	(-.181)	(.145)
113205	.40		8.15	(-.116)	(.134)
113206	.40		10.12	(-.050)	(.122)
113207	.40		12.09	(-.016)	(.111)
113208	.40		14.05	(.081)	(.099)
113209	.40		16.00	(.146)	(.088)
113301	1.05		.17	(-.471)	(.264)
113302	1.05		2.14	(-.395)	(.247)
113303	1.05		4.11	(-.320)	(.229)
113304	1.05		6.08	(-.244)	(.212)
113305	1.05		8.04	(-.169)	(.195)
113306	1.05		9.99	(-.095)	(.177)
113307	1.05		11.94	(-.020)	(.160)
113308	1.05		13.89	(.054)	(.143)
113309	1.05		15.85	(.129)	(.125)
113401	.70		.23	(-.400)	(.196)
113402	.70		2.22	(-.331)	(.183)
113403	.70		4.18	(-.264)	(.170)
113404	.70		6.15	(-.196)	(.158)
113405	.70		8.12	(-.128)	(.145)
113406	.70		10.07	(-.061)	(.132)
113407	.70		12.03	(.007)	(.120)
113408	.70		13.98	(.074)	(.107)
113409	.70		15.95	(.142)	(.094)
113410	.70		.23	(-.400)	(.196)
113501	.95		.17	(-.442)	(.228)
113502	.95		2.15	(-.368)	(.213)
113503	.95		4.11	(-.296)	(.197)
113504	.95		6.09	(-.223)	(.182)
113505	.95		8.05	(-.151)	(.167)
113506	.95		10.00	(-.079)	(.151)
113507	.95		11.95	(-.007)	(.136)
113508	.95		13.90	(.065)	(.121)
113509	.95		15.86	(.137)	(.105)
113601	.85		.20	(-.420)	(.214)
113602	.85		2.18	(-.350)	(.200)
113603	.85		4.14	(-.280)	(.186)
113604	.85		6.12	(-.210)	(.172)
113605	.85		8.08	(-.140)	(.158)
113606	.85		10.04	(-.071)	(.144)
113607	.85		11.99	(-.001)	(.131)
113608	.85		13.94	(.068)	(.117)
113609	.85		15.90	(.138)	(.103)

Table A-12.—(Continued)

(b) T.E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
114504	1.11		-7.80	(-.0811)	(-.0631)	114701	.95		-7.89	(-.078)	(-.056)
114505	1.11		-5.83	(-.005)	(-.082)	114702	.95		-5.92	(-.005)	(-.072)
114506	1.11		-3.87	(-.071)	(-.100)	114703	.95		-3.95	(.068)	(-.087)
114507	1.11		-1.92	(-.146)	(-.118)	114704	.95		-1.99	(.140)	(-.103)
114508	1.11		.12	(-.225)	(-.138)	114705	.95		-.04	(-.212)	(-.118)
114509	1.11		2.00	(-.297)	(-.155)	114706	.95		1.94	(.286)	(-.134)
114510	1.11		4.00	(-.374)	(-.174)	114707	.95		3.92	(.359)	(-.149)
114511	1.11		5.94	(-.449)	(-.192)	114708	.95		5.86	(.431)	(-.165)
114512	1.11		7.91	(-.525)	(-.211)	114709	.95		7.83	(.503)	(-.180)
114513	1.11					114710	.95		9.86	(.579)	(-.196)
114514	.70		-7.82	(-.078)	(-.050)	114711	.95		11.75	(.649)	(-.211)
114515	.70		-5.86	(-.010)	(-.063)	114712	.95		13.71	(.721)	(-.227)
114516	.70		-3.88	(.058)	(-.076)	114713	.95		15.69	(.794)	(-.242)
114517	.70		-1.93	(.126)	(-.088)						
114518	.70		.01	(.193)	(-.101)	114801	.85		-7.83	(-.077)	(-.053)
114519	.70		2.02	(.262)	(-.114)	114802	.85		-5.90	(-.008)	(-.067)
114520	.70		3.98	(.330)	(-.127)	114803	.85		-3.95	(.062)	(-.081)
114521	.70		5.94	(.398)	(-.140)	114804	.85		-1.96	(.132)	(-.095)
114522	.70		7.92	(.466)	(-.152)	114805	.85		-.01	(.202)	(-.109)
114523	.70		9.86	(.533)	(-.165)	114806	.85		1.98	(.273)	(-.123)
114524	.70		11.83	(.601)	(-.178)	114807	.85		3.94	(.343)	(-.137)
114525	.70		13.79	(.669)	(-.191)	114808	.85		5.91	(.413)	(-.151)
114526	.70		15.77	(.738)	(-.204)	114809	.85		7.85	(.482)	(-.165)
114527	.70					114810	.85		9.83	(.553)	(-.179)
114528	1.05		-7.85	(-.076)	(-.063)	114811	.85		11.80	(.623)	(-.193)
114529	1.05		-3.96	(-.073)	(-.098)	114812	.85		13.76	(.693)	(-.207)
114530	1.05		-1.97	(.150)	(-.116)	114813	.85		15.74	(.764)	(-.221)
114531	1.05		-.02	(.225)	(-.133)						
114532	1.05		1.94	(.300)	(-.151)	114901	.40		-7.80	(-.078)	(-.047)
114533	1.05		3.91	(.376)	(-.168)	114902	.40		-5.81	(-.011)	(-.058)
114534	1.05		5.87	(.451)	(-.186)	114903	.40		-3.86	(.054)	(-.070)
114535	1.05		7.85	(.527)	(-.203)	114904	.40		-1.89	(.120)	(-.081)
114536	1.05		9.89	(.606)	(-.222)	114905	.40		-.08	(.185)	(-.093)
114537	1.05		11.77	(.678)	(-.239)	114906	.40		2.05	(.251)	(-.105)
114538	1.05		13.75	(.754)	(-.256)	114907	.40		4.02	(.317)	(-.116)
114539	1.05		15.70	(.829)	(-.274)	114908	.40		5.99	(.383)	(-.128)
114540	1.05					114909	.40		7.96	(.449)	(-.140)
114541	1.05					114910	.40		9.94	(.515)	(-.151)
114542	1.05					114911	.40		11.87	(.579)	(-.163)
114543	1.05					114912	.40		13.85	(.645)	(-.175)
114544	1.05					114913	.40		15.80	(.711)	(-.186)

Table A-12.-(Continued)

(c) T.E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
117204	1.05	7.91	(-.172)	(-.155)	(-.205)
117205	1.05	-5.94	(-.247)	(-.156)	(-.222)
117206	1.05	-3.99	(-.322)	(-.169)	(-.240)
117207	1.05	-2.04	(-.397)	(-.181)	(-.257)
117208	1.05	-.08	(-.472)	(-.194)	(-.274)
117209	1.05	1.90	(-.547)	(-.207)	(-.292)
117210	1.05	3.89	(-.624)	(-.219)	(-.309)
117211	1.05	5.83	(-.698)	(-.245)	(-.327)
117212	1.05	7.82	(-.774)	(-.258)	(-.344)
117213	1.05	9.78	(-.849)	(-.270)	(-.362)
117214	1.05	11.75	(-.924)	(-.283)	(-.379)
117215	1.05	13.71	(-1.000)	(-.296)	(-.396)
117217	1.05	15.69	(-1.075)	(-.308)	(-.414)
117301	.70	-8.07	(-.128)	(-.155)	(-.155)
117302	.70	-7.88	(-.135)	(-.156)	(-.156)
117303	.70	-5.93	(-.202)	(-.169)	(-.169)
117304	.70	-3.97	(-.269)	(-.181)	(-.181)
117305	.70	-2.00	(-.337)	(-.194)	(-.194)
117306	.70	-.02	(-.406)	(-.207)	(-.207)
117307	.70	1.95	(-.473)	(-.219)	(-.219)
117308	.70	3.92	(-.541)	(-.232)	(-.232)
117309	.70	5.89	(-.609)	(-.245)	(-.245)
117310	.70	7.88	(-.678)	(-.258)	(-.258)
117312	.70	9.83	(-.745)	(-.270)	(-.270)
117313	.70	11.76	(-.812)	(-.283)	(-.283)
117314	.70	13.76	(-.880)	(-.296)	(-.296)
117315	.70	15.71	(-.948)	(-.308)	(-.308)
117401	.95	-7.96	(-.155)	(-.180)	(-.180)
117402	.95	-5.96	(-.229)	(-.195)	(-.195)
117403	.95	-4.01	(-.301)	(-.211)	(-.211)
117404	.95	-2.06	(-.373)	(-.226)	(-.226)
117405	.95	-.10	(-.445)	(-.241)	(-.241)
117406	.95	1.90	(-.519)	(-.257)	(-.257)
117407	.95	3.87	(-.592)	(-.272)	(-.272)
117408	.95	5.84	(-.664)	(-.288)	(-.288)
117409	.95	7.79	(-.736)	(-.303)	(-.303)
117410	.95	9.75	(-.809)	(-.319)	(-.319)
117411	.95	11.71	(-.881)	(-.334)	(-.334)
117412	.95	13.70	(-.954)	(-.349)	(-.349)
117413	.95	15.69	(-1.028)	(-.365)	(-.365)
117501	.85	-7.92	(.145)	(.125)	(-.168)
117502	.85	-5.95	(.215)	(.190)	(-.182)
117503	.85	-3.99	(.285)	(.255)	(-.196)
117504	.85	-2.05	(.354)	(.321)	(-.210)
117505	.85	-.04	(.425)	(.387)	(-.224)
117506	.85	1.93	(.495)	(.452)	(-.238)
117507	.85	3.88	(.565)	(.518)	(-.251)
117508	.85	5.85	(.635)	(.583)	(-.265)
117509	.85	7.81	(.704)	(.648)	(-.279)
117510	.85	9.79	(.775)	(.715)	(-.293)
117511	.85	11.74	(.844)	(.780)	(-.307)
117512	.85	13.73	(.915)	(.846)	(-.321)
117513	.85	15.68	(.984)	(.911)	(-.335)
117701	.40	-7.84	(.125)	(.125)	(-.144)
117702	.40	-5.88	(.190)	(.190)	(-.156)
117703	.40	-3.93	(.255)	(.255)	(-.167)
117704	.40	-1.95	(.321)	(.321)	(-.179)
117705	.40	-.03	(.387)	(.387)	(-.190)
117706	.40	2.00	(.452)	(.452)	(-.202)
117707	.40	3.96	(.518)	(.518)	(-.213)
117708	.40	5.93	(.583)	(.583)	(-.225)
117709	.40	7.93	(.650)	(.650)	(-.237)
117710	.40	9.89	(.715)	(.715)	(-.248)
117711	.40	11.83	(.780)	(.780)	(-.259)
117712	.40	13.82	(.846)	(.846)	(-.271)
117713	.40	15.77	(.911)	(.911)	(-.283)

Table A-12. — (Continued)

(d) T. E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
117810	1.11		-7.73	(-.300)	(.068)
117811	1.11		-5.75	(-.223)	(.049)
117812	1.11		-3.81	(-.148)	(.031)
117813	1.11		-1.86	(-.073)	(.013)
117814	1.11		.14	(.004)	(-.006)
117815	1.11		2.07	(.079)	(-.024)
117816	1.11		4.07	(.156)	(-.043)
117817	1.11		6.03	(.232)	(-.062)
117818	1.11		7.99	(.308)	(-.080)
117901	.70		-7.76	(-.269)	(.046)
117902	.70		-5.79	(-.201)	(.033)
117903	.70		-3.83	(-.133)	(.020)
117904	.70		-1.89	(-.066)	(.008)
117905	.70		.09	(.002)	(-.005)
117906	.70		2.11	(.072)	(-.019)
117907	.70		4.07	(.140)	(-.031)
117908	.70		6.00	(.207)	(-.044)
117909	.70		8.00	(.276)	(-.057)
117910	.70		10.01	(.346)	(-.070)
117911	.70		11.94	(.412)	(-.083)
117912	.70		13.85	(.478)	(-.095)
117913	.70		14.85	(.513)	(-.102)
117914	.70		15.83	(.547)	(-.108)
118001	1.05		-7.82	(-.302)	(.066)
118002	1.05		-5.83	(-.225)	(.048)
118003	1.05		-3.88	(-.150)	(.030)
118004	1.05		-1.91	(-.075)	(.013)
118005	1.05		.04	(.000)	(-.005)
118006	1.05		2.03	(.077)	(-.023)
118007	1.05		4.00	(.153)	(-.040)
118008	1.05		5.97	(.229)	(-.058)
118009	1.05		7.89	(.302)	(-.075)
118010	1.05		9.86	(.378)	(-.093)
118011	1.05		11.82	(.454)	(-.111)
118012	1.05		13.78	(.529)	(-.128)
118013	1.05		15.76	(.605)	(-.146)
118101	.95		-7.80	(-.279)	(.051)
118102	.95		-5.82	(-.208)	(.037)
118103	.95		-3.89	(-.139)	(.023)
118104	.95		-1.89	(-.068)	(.009)
118105	.95		.07	(.002)	(-.005)
118106	.95		2.04	(.072)	(-.019)
118107	.95		3.99	(.142)	(-.033)
118108	.95		5.99	(.213)	(-.047)
118109	.95		7.94	(.283)	(-.061)
118110	.95		10.02	(.357)	(-.076)
118111	.95		11.91	(.425)	(-.089)
118112	.95		13.90	(.496)	(-.104)
118113	.95		15.79	(.563)	(-.117)
118201	.85		-7.72	(-.259)	(.041)
118202	.85		-5.76	(-.193)	(.030)
118203	.85		-3.84	(-.129)	(.018)
118204	.85		-1.85	(-.062)	(.007)
118205	.85		.11	(.003)	(-.005)
118206	.85		2.14	(.071)	(-.017)
118207	.85		4.09	(.136)	(-.029)
118208	.85		6.05	(.202)	(-.040)
118209	.85		8.04	(.268)	(-.052)
118210	.85		9.98	(.333)	(-.063)
118211	.85		11.94	(.399)	(-.075)
118212	.85		13.92	(.465)	(-.087)
118213	.85		15.86	(.530)	(-.098)

Table A-12. —(Concluded)

(e) T.E. Deflection, Full Span =  $-8.3^\circ$

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
118405	1.11	.05	4.12	(-.2211)	(.1271)	118701	.95	.12	.13	(-.208)	(.105)
118406	1.11	8.03	8.03	(-.0631)	(.088)	118702	.95	2.09	2.13	(-.135)	(.089)
118407	1.11	.18	.18	(.087)	(.052)	118703	.95	4.05	4.07	(-.063)	(.074)
118501	.70	2.16	2.16	(-.188)	(.090)	118704	.95	6.03	6.06	(.011)	(.058)
118502	.70	4.14	4.14	(-.119)	(.077)	118705	.95	8.00	8.02	(.084)	(.043)
118503	.70	6.08	6.08	(-.051)	(.064)	118706	.95	9.97	9.96	(.156)	(.027)
118504	.70	8.05	8.05	(.016)	(.052)	118707	.95	11.91	11.92	(.228)	(.012)
118505	.70	9.99	9.99	(.084)	(.039)	118708	.95	13.87	13.89	(.301)	(-.004)
118506	.70	11.94	11.94	(.151)	(.026)	118709	.95	15.82	15.83	(.373)	(-.019)
118507	.70	13.92	13.92	(.219)	(.014)	118801	.85	.13	.13	(-.199)	(.099)
118508	.70	15.92	15.92	(.287)	(.001)	118802	.85	2.13	2.17	(-.127)	(.085)
118509	.70	.18	.18	(.356)	(-.012)	118803	.85	4.07	4.14	(-.058)	(.071)
118510	.70	.09	.09	(-.188)	(.090)	118804	.85	6.06	6.13	(.013)	(.057)
118601	1.05	2.12	2.12	(-.224)	(.123)	118805	.85	8.02	8.09	(.083)	(.043)
118602	1.05	4.08	4.08	(-.146)	(.105)	118806	.85	9.96	10.03	(.152)	(.029)
118603	1.05	6.01	6.01	(-.071)	(.088)	118807	.85	11.92	12.01	(.222)	(.015)
118604	1.05	8.00	8.00	(.003)	(.070)	118808	.85	13.89	13.99	(.292)	(.001)
118605	1.05	9.93	9.93	(.080)	(.052)	118809	.85	15.83	15.96	(.361)	(-.013)
118606	1.05	11.92	11.92	(.154)	(.035)	118901	.40	.21	.21	(-.177)	(.083)
118607	1.05	13.88	13.88	(.230)	(.017)	118902	.40	2.17	2.17	(-.112)	(.071)
118608	1.05	15.81	15.81	(.306)	(-.000)	118903	.40	4.14	4.14	(-.046)	(.060)
119605	1.05			(.380)	(-.017)	118904	.40	6.13	6.13	(.021)	(.048)
						118905	.40	8.09	8.09	(.086)	(.036)
						118906	.40	10.03	10.03	(.151)	(.025)
						118907	.40	12.01	12.01	(.217)	(.013)
						118908	.40	13.99	13.99	(.283)	(.001)
						118909	.40	15.96	15.96	(.349)	(-.010)

Table A-13.—FLEXSTAB Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Inboard = 0.0°; Outboard = 5.1°

(a) T.E. Deflection, Inboard = 0.0°, Outboard = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
119501	.85		.09	(-.0431)	(-.0341)
119502	.85		2.06	(-.0271)	(-.0201)
119503	.85		4.02	(-.0971)	(-.0061)
119504	.85		5.98	(-.1671)	(-.0081)
119505	.85		7.94	(-.2371)	(-.0221)
119506	.85		9.90	(-.3071)	(-.0361)
119507	.85		11.85	(-.3771)	(-.0501)
119508	.85		13.80	(-.4471)	(-.0631)
119509	.85		15.77	(-.5171)	(-.0771)

(b) T.E. Deflection, Inboard = 0.0°, Outboard = -17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
120101	.85		.10	(-.0931)	(-.0731)
120102	.85		2.07	(-.0231)	(-.0591)
120103	.85		4.04	(-.0481)	(-.0451)
120104	.85		5.99	(-.1171)	(-.0321)
120105	.85		7.95	(-.1871)	(-.0181)
120106	.85		9.90	(-.2571)	(-.0041)
120107	.85		11.85	(-.3261)	(-.0101)
120108	.85		13.80	(-.3961)	(-.0241)
120109	.85		15.76	(-.4661)	(-.0371)

(c) T.E. Deflection, Inboard = 0.0°, Outboard = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
120801	.85		-7.80	(-.234)	(.019)
120802	.85		-5.84	(-.164)	(.005)
120803	.85		-3.88	(-.094)	(-.009)
120804	.85		-1.91	(-.024)	(-.023)
120805	.85		.05	(.046)	(-.037)
120806	.85		2.03	(.117)	(-.051)
120807	.85		3.99	(.187)	(-.065)
120808	.85		5.96	(.257)	(-.079)
120809	.85		7.92	(.327)	(-.093)
120810	.85		9.88	(.397)	(-.107)
120811	.85		11.84	(.467)	(-.121)
120812	.85		13.79	(.537)	(-.135)
120813	.85		15.75	(.607)	(-.149)

(d) T.E. Deflection, Inboard = 0.0°, Outboard = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
121401	.85		-7.81	(-.184)	(-.021)
121402	.85		-5.85	(-.114)	(-.035)
121403	.85		-3.88	(-.044)	(-.049)
121404	.85		-2.90	(-.009)	(-.056)
121405	.85		.06	(.097)	(-.077)
121406	.85		2.01	(.166)	(-.090)
121407	.85		3.98	(.237)	(-.104)
121408	.85		5.94	(.307)	(-.118)
121409	.85		7.92	(.377)	(-.132)
121410	.85		9.88	(.447)	(-.146)
121411	.85		11.85	(.517)	(-.160)
121412	.85		13.79	(.587)	(-.174)
121413	.85		15.76	(.657)	(-.188)



Table A-13. --(Continued)

(e) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
122101	.85		-7.80	(-.287)	(.054)
122102	.85		-5.83	(-.210)	(.049)
122103	.85		-3.86	(-.139)	(.026)
122104	.85		-1.90	(-.069)	(.012)
122105	.85		.07	(.001)	(-.002)
122106	.85		2.03	(.071)	(-.016)
122107	.85		4.02	(.143)	(-.030)
122108	.85		5.98	(.213)	(-.044)
122109	.85		7.94	(.283)	(-.058)
122110	.85		9.90	(.353)	(-.071)
122111	.85		11.85	(.423)	(-.085)
122112	.85		13.81	(.493)	(-.099)
122114	.85		15.77	(.563)	(-.113)

(g) T.E. Deflection, Inboard = -8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
123301	.85		.12	(-.154)	(.067)
123302	.85		2.10	(-.084)	(.053)
123303	.85		4.07	(-.013)	(.039)
123304	.85		6.04	(.057)	(.025)
123305	.85		8.00	(.127)	(.011)
123306	.85		10.06	(.201)	(-.004)
123307	.85		11.90	(.266)	(-.017)
123308	.85		13.88	(.337)	(-.031)
123309	.85		15.84	(.407)	(-.045)

(h) T.E. Deflection, Inboard = 8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
124001	.85		-7.84	(-.124)	(-.014)
124002	.85		-5.89	(-.054)	(-.028)
124003	.85		-3.94	(-.016)	(-.042)
124004	.85		-1.99	(.085)	(-.056)
124005	.85		.01	(.157)	(-.070)
124006	.85		2.02	(.229)	(-.084)
124007	.85		3.97	(.298)	(-.098)
124008	.85		5.94	(.369)	(-.112)
124009	.85		7.88	(.438)	(-.126)
124010	.85		9.87	(.509)	(-.140)
124011	.85		11.81	(.578)	(-.154)
124012	.85		13.77	(.648)	(-.168)
124013	.85		15.73	(.718)	(-.182)

(f) T.E. Deflection, Inboard = -17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
122701	.85		.21	(-.326)	(.142)
122702	.85		2.17	(-.256)	(.129)
122703	.85		4.12	(-.187)	(.115)
122704	.85		6.10	(-.116)	(.101)
122705	.85		8.06	(-.046)	(.087)
122706	.85		10.03	(.024)	(.073)
122707	.85		11.98	(.093)	(.059)
122708	.85		13.93	(.163)	(.046)
122709	.85		15.87	(.232)	(.032)

Table A-13.—(Concluded)

(i) T.E. Deflection, Inboard = 17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
124501	.85		-7.90	(-.050)	(-.090)
124502	.85		-5.97	(-.118)	(-.104)
124503	.85		-3.96	(-.190)	(-.118)
124504	.85		-2.01	(-.260)	(-.132)
124505	.85		-.03	(-.330)	(-.146)
124506	.85		1.96	(-.401)	(-.160)
124507	.85		3.91	(-.471)	(-.174)
124508	.85		5.85	(-.540)	(-.187)
124509	.85		7.82	(-.610)	(-.201)
124510	.85		9.79	(-.680)	(-.215)
124511	.85		11.75	(-.750)	(-.229)
124512	.85		13.72	(-.820)	(-.243)
124513	.85		15.69	(-.890)	(-.257)

Table A-14.—FLEXSTAB Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Inboard = 17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
125001	.85		-7.91	(-.050)	(-.090)
125002	.85		-5.94	(-.120)	(-.104)
125003	.85		-4.00	(-.189)	(-.117)
125004	.85		-2.01	(-.260)	(-.131)
125005	.85		-.07	(-.330)	(-.145)
125006	.85		1.94	(-.401)	(-.159)
125007	.85		3.89	(-.471)	(-.173)
125008	.85		5.88	(-.542)	(-.187)
125009	.85		7.83	(-.612)	(-.201)
125010	.85		9.76	(-.680)	(-.215)
125011	.85		11.74	(-.751)	(-.229)
125012	.85		13.71	(-.821)	(-.243)
125013	.85		15.68	(-.892)	(-.257)

(b) T.E. Deflection, Inboard = 8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
125801	.85		-7.85	(-.123)	(-.013)
125802	.85		-5.91	(-.054)	(-.027)
125803	.85		-3.95	(.016)	(-.041)
125804	.85		-1.96	(.087)	(-.055)
125805	.85		.01	(.158)	(-.069)
125806	.85		1.99	(.228)	(-.084)
125807	.85		3.95	(.299)	(-.098)
125808	.85		5.90	(.368)	(-.111)
125809	.85		7.86	(.438)	(-.125)
125810	.85		9.82	(.509)	(-.139)
125811	.85		11.78	(.579)	(-.153)
125812	.85		13.74	(.649)	(-.167)
125813	.85		15.72	(.720)	(-.181)

Table A-14.—(Continued)

(c) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
126204	1.11		-7.72	(-.299)	(.073)	1267C1	.85		-7.78	(-.279)	(.055)
126205	1.11		-3.81	(-.148)	(.036)	126702	.85		-5.81	(-.208)	(.041)
126206	1.11		.10	(.004)	(-.001)	126703	.85		-3.87	(-.139)	(.027)
126207	1.11		4.07	(.158)	(-.038)	126704	.85		-1.90	(-.068)	(.013)
126208	1.11		7.98	(.309)	(-.075)	126705	.85		-.07	(.002)	(-.001)
1263C1	.70		-7.74	(-.269)	(.050)	126706	.85		2.06	(.073)	(-.015)
126302	.70		-5.84	(-.203)	(.038)	126707	.85		3.99	(.142)	(-.029)
126303	.70		-3.84	(-.134)	(.025)	126708	.85		5.96	(.213)	(-.043)
126304	.70		-1.88	(-.066)	(.012)	1267C5	.85		7.92	(.283)	(-.057)
126305	.70		.08	(.002)	(-.001)	12671C	.85		9.88	(.353)	(-.071)
126306	.70		2.05	(.071)	(-.011)	126711	.85		11.87	(.424)	(-.085)
126307	.70		4.03	(.139)	(-.027)	126712	.85		13.89	(.497)	(-.100)
1263C8	.70		6.03	(.209)	(-.040)	126713	.85		15.79	(.565)	(-.113)
126309	.70		7.98	(.276)	(-.053)	126802	1.00		-7.82	(-.298)	(.063)
12631C	.70		9.91	(.343)	(-.065)	126803	1.00		-5.87	(-.224)	(.047)
126311	.70		11.90	(.412)	(-.078)	126805	1.00		-3.90	(-.149)	(.031)
126312	.70		13.86	(.480)	(-.091)	126806	1.00		-1.95	(-.076)	(.015)
126313	.70		15.83	(.549)	(-.104)	126807	1.00		.02	(.001)	(-.011)
126314	.70		.11	(.003)	(-.001)	126808	1.00		1.99	(.073)	(-.018)
126401	1.05		-7.76	(-.299)	(.070)	126809	1.00		3.96	(.148)	(-.034)
126402	1.05		-5.84	(-.225)	(.052)	12681C	1.00		5.90	(.221)	(-.050)
126403	1.05		-3.86	(-.149)	(.035)	126811	1.00		7.87	(.295)	(-.066)
126404	1.05		-1.91	(-.074)	(.017)	126812	1.00		9.83	(.369)	(-.082)
126405	1.05		.08	(.003)	(-.001)	126813	1.00		11.78	(.443)	(-.098)
126406	1.05		2.03	(.078)	(-.018)	126814	1.00		13.75	(.518)	(-.114)
126407	1.05		3.99	(.154)	(-.036)	126815	1.00		15.70	(.591)	(-.130)
126408	1.05		5.96	(.230)	(-.054)	126901	.40		-7.75	(-.260)	(.046)
126409	1.05		7.87	(.303)	(-.071)	126902	.40		-5.77	(-.194)	(.034)
126410	1.05		9.89	(.381)	(-.089)	126903	.40		-3.80	(-.128)	(.022)
126411	1.05		11.82	(.456)	(-.106)	126904	.40		-1.83	(-.062)	(.010)
126412	1.05		13.76	(.530)	(-.124)	126905	.40		.14	(.004)	(-.001)
126413	1.05		15.76	(.608)	(-.142)	126906	.40		2.11	(.070)	(-.013)
126601	.95		-7.81	(-.289)	(.060)	126907	.40		4.10	(.137)	(-.025)
126602	.95		-5.85	(-.217)	(.044)	126908	.40		6.07	(.203)	(-.037)
126603	.95		-3.89	(-.144)	(.029)	126910	.40		8.00	(.268)	(-.048)
126604	.95		-1.92	(-.071)	(.013)	126911	.40		9.97	(.334)	(-.060)
126605	.95		.05	(.002)	(-.002)	126913	.40		11.91	(.399)	(-.071)
126606	.95		2.00	(.075)	(-.018)	126914	.40		13.88	(.465)	(-.083)
126607	.95		3.99	(.149)	(-.034)	126915	.40		15.87	(.532)	(-.095)
126608	.95		5.93	(.221)	(-.049)						
126609	.95		7.88	(.293)	(-.064)						
126610	.95		9.85	(.366)	(-.080)						
126611	.95		11.82	(.439)	(-.096)						
126612	.95		13.77	(.512)	(-.111)						
126613	.95		15.71	(.584)	(-.127)						

Table A-14. — (Concluded)

(d) T.E. Deflection, Inboard = 0.0°, Outboard = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
127401	.85		-7.79	(-.234)	(-.019)
127402	.85		-5.84	(-.164)	(-.005)
127403	.85		-3.89	(-.094)	(-.009)
127404	.85		-1.93	(-.024)	(-.023)
127405	.85		.04	(-.046)	(-.037)
127406	.85		2.02	(-.117)	(-.051)
127407	.85		4.00	(-.188)	(-.065)
127408	.85		5.96	(-.258)	(-.079)
127409	.85		7.92	(-.328)	(-.093)
127410	.85		9.87	(-.398)	(-.107)
127411	.85		11.83	(-.468)	(-.121)
127412	.85		13.81	(-.539)	(-.135)
127413	.85		15.75	(-.609)	(-.149)

(e) T.E. Deflection, Inboard = 0.0°, Outboard = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
127901	.85		-7.82	(-.184)	(-.020)
127902	.85		-5.86	(-.114)	(-.034)
127903	.85		-3.91	(-.045)	(-.048)
127904	.85		-1.95	(-.026)	(-.062)
127905	.85		.04	(-.097)	(-.076)
127906	.85		2.02	(-.167)	(-.090)
127907	.85		3.97	(-.237)	(-.104)
127908	.85		5.94	(-.308)	(-.118)
127909	.85		7.90	(-.378)	(-.132)
127910	.85		9.86	(-.448)	(-.146)
127911	.85		11.82	(-.518)	(-.160)
127912	.85		13.80	(-.589)	(-.174)
127913	.85		15.73	(-.658)	(-.188)

Table A-15.—FLEXSTAB Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Inboard = 5.1°  
Outboard = 0.0°

(a) T.E. Deflection, Inboard = 0.0°, Outboard = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
128501	.85		-7.80	(-.1831)	(-.0241)
128502	.85		-5.86	(-.1131)	(-.0381)
128503	.85		-3.90	(-.0431)	(-.0521)
128504	.85		-1.93	(.0271)	(-.0661)
128506	.85		.03	(.0971)	(-.0801)
128507	.85		2.02	(.1681)	(-.0941)
128508	.85		3.99	(.2381)	(-.1081)
128509	.85		5.93	(.3081)	(-.1211)
128510	.85		7.90	(.3781)	(-.1351)
128511	.85		9.86	(.4481)	(-.1491)
128513	.85		11.82	(.5181)	(-.1631)
128514	.85		13.80	(.5891)	(-.1771)
128515	.85		15.76	(.6591)	(-.1911)

(c) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
131801	.85		-7.83	(-.2801)	(-.0521)
131802	.85		-5.86	(-.2091)	(-.0381)
131803	.85		-3.89	(-.1391)	(-.0241)
131805	.85		-1.90	(-.0681)	(-.0091)
131806	.85		.07	(.0031)	(-.0051)
131807	.85		2.09	(.0751)	(-.0191)
131808	.85		3.98	(.1431)	(-.0331)
131809	.85		5.96	(.2131)	(-.0471)
131812	.85		7.95	(.2841)	(-.0611)
131813	.85		9.87	(.3531)	(-.0751)
131814	.85		11.89	(.4251)	(-.0891)
131815	.85		13.82	(.4941)	(-.1031)
131816	.85		15.76	(.5641)	(-.1171)

(b) T.E. Deflection, Inboard = 0.0°, Outboard = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
131201	.85		-7.76	(-.2321)	(.0161)
131202	.85		-5.91	(-.1651)	(.0021)
131203	.85		-3.84	(-.0911)	(-.0121)
131204	.85		-1.98	(-.0251)	(-.0261)
131205	.85		.05	(.0481)	(-.0401)
131206	.85		2.07	(.1201)	(-.0551)
131207	.85		4.04	(.1901)	(-.0691)
131208	.85		5.94	(.2581)	(-.0821)
131209	.85		7.97	(.3301)	(-.0971)
131210	.85		9.92	(.4021)	(-.1111)
131211	.85		11.92	(.4721)	(-.1251)
131212	.85		13.87	(.5411)	(-.1391)
131213	.85		15.83	(.6111)	(-.1531)

(d) T.E. Deflection, Inboard = 8.3°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
132301	.85		-7.94	(-.1221)	(-.0171)
132302	.85		-5.89	(-.0521)	(-.0311)
132303	.85		-3.90	(.0191)	(-.0451)
132304	.85		-1.95	(.0881)	(-.0591)
132305	.85		.01	(.1581)	(-.0731)
132306	.85		1.97	(.2281)	(-.0871)
132307	.85		3.99	(.3001)	(-.1011)
132308	.85		5.99	(.3721)	(-.1161)
132309	.85		7.90	(.4401)	(-.1291)
132310	.85		9.82	(.5091)	(-.1431)
132311	.85		11.78	(.5791)	(-.1571)
132312	.85		13.74	(.6491)	(-.1711)
132313	.85		15.70	(.7191)	(-.1851)

Table A-15. — (Concluded)

(e) T.E. Deflection, Inboard = 17.7°, Outboard = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
132801	.85		-7.90	(-.051)	(-.093)
132802	.85		-5.94	(.121)	(-.107)
132803	.85		-3.97	(.191)	(-.121)
132804	.85		-2.01	(.261)	(-.135)
132805	.85		-.03	(.332)	(-.149)
132806	.85		1.94	(.402)	(-.163)
132807	.85		3.90	(.472)	(-.177)
132808	.85		5.86	(.542)	(-.191)
132809	.85		7.82	(.611)	(-.205)
132810	.85		9.78	(.681)	(-.219)
132811	.85		11.75	(.751)	(-.233)
132812	.85		13.69	(.821)	(-.246)
132813	.85		15.67	(.891)	(-.260)

Table A-16.—FLEXSTAB Test Point Log. Flat Wing, Twisted Trailing Edge, Rounded Leading Edge,  
L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
133401	1.05		-7.82	(-.243)	(.043)
133402	1.05		-5.87	(-.168)	(.026)
133403	1.05		-3.89	(-.091)	(.008)
133404	1.05		-1.92	(-.015)	(-.010)
133405	1.05		.05	(.061)	(-.028)
133406	1.05		1.99	(.135)	(.045)
133407	1.05		3.98	(.212)	(.063)
133408	1.05		5.93	(.287)	(.081)
133409	1.05		7.87	(.362)	(.098)
133410	1.05		9.84	(.438)	(.116)
133411	1.05		11.79	(.513)	(.133)
133412	1.05		13.76	(.589)	(.151)
133413	1.05		15.72	(.665)	(.168)
133601	.85		-7.82	(-.233)	(.036)
133602	.85		-5.85	(-.162)	(.022)
133603	.85		-3.89	(-.092)	(.008)
133604	.85		-1.92	(-.021)	(-.006)
133605	.85		.07	(.050)	(-.020)
133606	.85		2.02	(.120)	(-.034)
133607	.85		4.01	(.191)	(-.048)
133608	.85		5.95	(.260)	(-.062)
133609	.85		7.91	(.330)	(-.076)
133610	.85		9.89	(.401)	(-.090)
133611	.85		11.81	(.470)	(-.104)
133612	.85		13.78	(.540)	(-.118)
133613	.85		15.72	(.610)	(-.132)
133701	.40		-7.75	(-.218)	(.030)
133702	.40		-5.80	(-.153)	(.019)
133703	.40		-3.81	(-.086)	(.007)
133704	.40		-1.84	(-.020)	(-.005)
133705	.40		.12	(.046)	(-.016)
133707	.40		2.10	(.112)	(-.028)
133708	.40		4.08	(.179)	(-.040)
133709	.40		6.03	(.244)	(-.052)
133710	.40		8.00	(.310)	(-.063)
133711	.40		9.97	(.376)	(-.075)
133712	.40		11.91	(.441)	(-.087)
133713	.40		13.90	(.508)	(-.098)
133714	.40		15.82	(.572)	(-.110)

(b) T.E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
134315	1.05		-7.89	(-.019)	(-.085)
134317	1.05		-5.92	(.057)	(-.103)
134318	1.05		-3.95	(.133)	(-.120)
134320	1.05		-2.00	(.208)	(-.138)
134321	1.05		-.02	(.284)	(-.156)
134322	1.05		1.93	(.359)	(-.173)
134324	1.05		3.91	(.435)	(-.191)
134325	1.05		5.88	(.511)	(-.208)
134326	1.05		7.82	(.586)	(-.226)
134327	1.05		9.81	(.663)	(-.244)
134328	1.05		11.75	(.737)	(-.261)
134329	1.05		13.76	(.815)	(-.279)
134330	1.05		15.68	(.888)	(-.296)
134601	.85		-7.87	(-.031)	(-.068)
134602	.85		-5.92	(.039)	(-.082)
134603	.85		-3.97	(.109)	(-.096)
134604	.85		-1.99	(.179)	(-.110)
134605	.85		-.03	(.250)	(-.124)
134606	.85		1.96	(.321)	(-.138)
134607	.85		3.93	(.391)	(-.152)
134608	.85		5.90	(.461)	(-.166)
134609	.85		7.84	(.531)	(-.180)
134610	.85		9.82	(.602)	(-.194)
134611	.85		11.76	(.671)	(-.208)
134612	.85		13.73	(.741)	(-.222)
134613	.85		15.70	(.812)	(-.236)
134701	.40		-7.81	(-.036)	(-.058)
134702	.40		-5.85	(.030)	(-.070)
134703	.40		-3.90	(.095)	(-.081)
134704	.40		-1.90	(.162)	(-.093)
134705	.40		.09	(.229)	(-.105)
134706	.40		2.04	(.294)	(-.116)
134707	.40		4.01	(.360)	(-.128)
134708	.40		6.01	(.427)	(-.140)
134709	.40		7.94	(.492)	(-.151)
134710	.40		9.89	(.557)	(-.163)
134711	.40		11.88	(.623)	(-.175)
134712	.40		13.82	(.688)	(-.186)
134713	.40		15.86	(.757)	(-.198)

Table A-16. — (Continued)

(c) T.E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
134805	1.05		-7.92	(-.228)	(-2.26)
134806	1.05		-5.96	(-.303)	(-2.44)
134807	1.05		-4.01	(-.378)	(-2.61)
134808	1.05		-2.06	(-.453)	(-2.78)
134809	1.05		-.07	(-.529)	(-2.96)
134811	1.05		3.87	(-.680)	(-3.31)
134812	1.05		5.82	(-.755)	(-3.48)
134813	1.05		7.83	(-.832)	(-3.66)
134814	1.05		9.84	(-.909)	(-3.84)
134816	1.05		11.72	(-.981)	(-4.00)
134817	1.05		13.74	(-1.058)	(-4.18)
134819	1.05		15.71	(-1.133)	(-4.36)
135101	.85		-7.92	(-.191)	(-1.83)
135102	.85		-5.97	(-.260)	(-1.97)
135103	.85		-4.01	(-.330)	(-2.11)
135104	.85		-2.05	(-.400)	(-2.24)
135105	.85		-.06	(-.471)	(-2.38)
135106	.85		1.95	(-.543)	(-2.53)
135108	.85		3.86	(-.611)	(-2.66)
135109	.85		5.83	(-.681)	(-2.80)
135110	.85		7.80	(-.751)	(-2.94)
135111	.85		9.77	(-.821)	(-3.08)
135112	.85		11.76	(-.892)	(-3.22)
135113	.85		13.71	(-.961)	(-3.35)
135114	.85		15.66	(-1.031)	(-3.49)
135201	.40		-7.89	(-.164)	(-1.55)
135202	.40		-5.90	(-.230)	(-1.67)
135203	.40		-3.93	(-.296)	(-1.78)
135204	.40		-1.96	(-.362)	(-1.90)
135205	.40		-.01	(-.428)	(-2.01)
135206	.40		2.01	(-.494)	(-2.13)
135207	.40		3.95	(-.559)	(-2.24)
135208	.40		5.92	(-.625)	(-2.36)
135209	.40		7.89	(-.691)	(-2.48)
135210	.40		9.86	(-.756)	(-2.59)
135211	.40		11.86	(-.823)	(-2.71)
135212	.40		13.78	(-.887)	(-2.82)
135213	.40		15.74	(-.953)	(-2.94)

(d) T.E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
135317	1.05		.10	(-.164)	(-.101)
135318	1.05		2.07	(-.289)	(-.083)
135319	1.05		4.05	(-.412)	(-.065)
135320	1.05		6.00	(-.538)	(-.048)
135321	1.05		7.93	(-.663)	(-.030)
135322	1.05		9.90	(-.788)	(-.013)
135323	1.05		11.86	(-.913)	(-.005)
135324	1.05		13.83	(-1.038)	(-.023)
135325	1.05		15.78	(-1.163)	(-.040)
135603	.85		.12	(-.151)	(-.084)
135604	.85		2.12	(-.279)	(-.069)
135605	.85		4.04	(-.406)	(-.056)
135606	.85		6.03	(-.533)	(-.042)
135607	.85		8.00	(-.660)	(-.028)
135608	.85		9.95	(-.787)	(-.014)
135609	.85		11.91	(-.914)	(-.000)
135610	.85		13.86	(-1.041)	(-.014)
135611	.85		15.81	(-1.168)	(-.028)
135801	.40		.20	(-.134)	(-.071)
135802	.40		2.18	(-.268)	(-.059)
135803	.40		4.13	(-.402)	(-.048)
135804	.40		6.09	(-.536)	(-.036)
135805	.40		8.13	(-.670)	(-.024)
135806	.40		10.02	(-.804)	(-.013)
135807	.40		12.02	(-.938)	(-.001)
135808	.40		13.96	(-1.072)	(-.010)
135809	.40		15.90	(-1.206)	(-.022)



Table A-16. — (Concluded)

(e) T.E. Deflection, Full Span =  $-17.7^\circ$

Analysis number	Mach number	Dynamic pressure, $kN/m^2$ ( $\mu sf$ )	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
135912	1.05		.17	(-.413)	(.243)
135913	1.05		2.14	(-.338)	(.225)
135914	1.05		4.10	(-.262)	(.208)
135915	1.05		6.06	(-.187)	(.190)
135916	1.05		8.02	(-.112)	(.173)
135917	1.05		9.96	(-.037)	(.156)
135918	1.05		11.91	(.037)	(.138)
135919	1.05		13.87	(.113)	(.121)
135920	1.05		15.84	(.188)	(.103)
136201	.85		.20	(-.374)	(.199)
136202	.85		.20	(-.374)	(.199)
136203	.85		2.17	(-.304)	(.185)
136204	.85		4.13	(-.234)	(.171)
136205	.85		6.10	(-.163)	(.157)
136206	.85		8.07	(-.093)	(.143)
136207	.85		10.01	(-.024)	(.130)
136208	.85		11.96	(.046)	(.116)
136209	.85		13.91	(.115)	(.102)
136210	.85		15.88	(.186)	(.088)
136301	.40		.26	(-.337)	(.169)
136302	.40		2.25	(-.270)	(.157)
136303	.40		4.21	(-.205)	(.146)
136304	.40		6.17	(-.139)	(.134)
136305	.40		8.14	(-.073)	(.123)
136306	.40		10.10	(-.008)	(.111)
136307	.40		12.06	(.058)	(.099)
136308	.40		14.02	(.123)	(.088)
136309	.40		15.97	(.188)	(.076)

Table A-17.—FLEXSTAB Test Point Log. Twisted Wing, Rounded Leading Edge;  
L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ. press.)	Pitching moment coefficient, bal (integ. press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ. press.)	Pitching moment coefficient, bal (integ. press.)
141211	1.05		-7.84	(-.1451)	(-.0281)	141505	.85		-7.80	(-.1421)	(-.0231)
141212	1.05		-5.87	(-.0691)	(-.0461)	141506	.85		-5.86	(-.0721)	(-.0371)
141213	1.05		-3.90	(.0071)	(-.0631)	141507	.85		-3.89	(-.0021)	(-.0511)
141214	1.05		-1.94	(.0831)	(-.0811)	141508	.85		-1.93	(.0681)	(-.0651)
141215	1.05		.02	(.1581)	(-.0991)	141509	.85		.02	(.1381)	(-.0791)
141216	1.05		1.97	(.2331)	(-.1161)	141510	.85		2.00	(.2091)	(-.0931)
141217	1.05		3.94	(.3091)	(-.1341)	141511	.85		3.97	(.2791)	(-.1071)
141218	1.05		5.91	(.3851)	(-.1511)	141512	.85		5.94	(.3591)	(-.1211)
141219	1.05		7.88	(.4611)	(-.1691)	141513	.85		7.91	(.4201)	(-.1351)
141220	1.05		9.84	(.5361)	(-.1871)	141514	.85		9.87	(.4901)	(-.1491)
141221	1.05		11.81	(.6121)	(-.2041)	141515	.85		11.84	(.5611)	(-.1631)
141223	1.05		13.64	(.6831)	(-.2211)	141516	.85		13.78	(.6301)	(-.1771)
141224	1.05		15.75	(.7641)	(-.2401)	141517	.85		15.74	(.7001)	(-.1911)
141322	.70		-7.78	(-.1401)	(-.0211)	141601	.40		-7.76	(-.1371)	(-.0201)
141303	.70		-5.84	(-.0731)	(-.0341)	141602	.40		-5.80	(-.0721)	(-.0311)
141304	.70		-3.88	(.0051)	(-.0471)	141603	.40		-3.83	(-.0061)	(-.0431)
141305	.70		-1.91	(.0641)	(-.0601)	141604	.40		-1.85	(.0601)	(-.0551)
141306	.70		.07	(.1321)	(-.0721)	141605	.40		.12	(.1261)	(-.0671)
141307	.70		2.01	(.1991)	(-.0851)	141606	.40		2.08	(.1921)	(-.0781)
141308	.70		4.01	(.2691)	(-.0981)	141607	.40		4.06	(.2581)	(-.0901)
141309	.70		5.98	(.3371)	(-.1111)	141608	.40		6.03	(.3241)	(-.1021)
141310	.70		7.94	(.4051)	(-.1241)	141609	.40		8.01	(.3911)	(-.1131)
141311	.70		9.89	(.4721)	(-.1371)	141610	.40		9.96	(.4561)	(-.1251)
141312	.70		11.87	(.5411)	(-.1491)	141611	.40		11.92	(.5221)	(-.1361)
141313	.70		13.82	(.6091)	(-.1621)	141612	.40		13.88	(.5871)	(-.1481)
141314	.70		15.78	(.6761)	(-.1751)	141613	.40		15.83	(.6531)	(-.1601)
141315	.70		.07	(.1321)	(-.0721)						
141401	.95		-7.94	(-.1481)	(-.0241)						
141402	.95		-5.89	(-.0721)	(-.0401)						
141403	.95		-3.92	(.0011)	(-.0551)						
141404	.95		-1.98	(.0731)	(-.0711)						
141405	.95		.01	(.1401)	(-.0871)						
141406	.95		1.96	(.2191)	(-.1021)						
141407	.95		3.95	(.2931)	(-.1181)						
141408	.95		5.92	(.3661)	(-.1331)						
141409	.95		7.87	(.4381)	(-.1491)						
141410	.95		9.84	(.5111)	(-.1641)						
141411	.95		11.79	(.5831)	(-.1801)						
141412	.95		13.73	(.6551)	(-.1951)						
141413	.95		15.71	(.7291)	(-.2111)						

Table A-17.-(Continued)

(b) T. E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
141804	1.05		-7.87	(.105)	(-.170)
141805	1.05		-5.93	(.180)	(-.188)
141806	1.05		-3.98	(.254)	(-.205)
141807	1.05		-2.00	(.330)	(-.223)
141808	1.05		-.04	(.405)	(-.240)
141809	1.05		1.96	(.482)	(-.258)
141810	1.05		3.92	(.557)	(-.275)
141811	1.05		5.87	(.632)	(-.293)
141812	1.05		7.85	(.708)	(-.310)
141813	1.05		9.80	(.783)	(-.327)
141814	1.05		11.75	(.858)	(-.345)
141815	1.05		13.73	(.934)	(-.362)
141816	1.05		15.69	(1.009)	(-.380)
141817	1.05				
141818	1.05				
141902	.70		-7.86	(.072)	(-.127)
141903	.70		-5.91	(.140)	(-.140)
141904	.70		-3.93	(.208)	(-.153)
141905	.70		-1.97	(.276)	(-.165)
141906	.70		.01	(.344)	(-.178)
141907	.70		1.97	(.412)	(-.191)
141908	.70		3.94	(.480)	(-.204)
141909	.70		5.94	(.549)	(-.217)
141910	.70		7.88	(.616)	(-.229)
141911	.70		9.84	(.684)	(-.242)
141912	.70		11.82	(.752)	(-.255)
141913	.70		13.75	(.819)	(-.267)
141914	.70		15.75	(.888)	(-.280)
141915	.70		.00	(.944)	(-.293)
142005	.95		-7.90	(.090)	(-.148)
142006	.95		-5.93	(.163)	(-.164)
142007	.95		-3.98	(.235)	(-.179)
142008	.95		-2.02	(.307)	(-.195)
142009	.95		-.05	(.380)	(-.210)
142010	.95		1.91	(.452)	(-.225)
142011	.95		3.90	(.526)	(-.241)
142012	.95		5.84	(.598)	(-.256)
142013	.95		7.81	(.671)	(-.272)
142014	.95		9.78	(.743)	(-.287)
142015	.95		11.76	(.817)	(-.303)
142016	.95		13.71	(.889)	(-.318)
142017	.95		15.68	(.961)	(-.334)
142101	.85		-7.88	(.081)	(-.139)
142102	.85		-5.93	(.150)	(-.153)
142103	.85		-3.97	(.220)	(-.166)
142104	.85		-2.00	(.291)	(-.180)
142105	.85		-.02	(.361)	(-.194)
142106	.85		1.96	(.432)	(-.208)
142107	.85		3.94	(.502)	(-.222)
142108	.85		5.88	(.571)	(-.236)
142109	.85		7.84	(.641)	(-.250)
142110	.85		9.83	(.712)	(-.264)
142111	.85		11.76	(.781)	(-.277)
142112	.85		13.72	(.851)	(-.291)
142113	.85		15.70	(.921)	(-.305)
142114	.85				
142201	.40		-7.81	(.065)	(-.118)
142202	.40		-5.89	(.129)	(-.129)
142203	.40		-3.88	(.196)	(-.141)
142204	.40		-1.91	(.262)	(-.152)
142205	.40		.06	(.328)	(-.164)
142206	.40		2.04	(.394)	(-.175)
142207	.40		4.02	(.460)	(-.187)
142208	.40		5.97	(.525)	(-.199)
142209	.40		7.94	(.591)	(-.210)
142210	.40		9.90	(.656)	(-.222)
142211	.40		11.87	(.722)	(-.233)
142212	.40		13.80	(.787)	(-.245)
142213	.40		15.79	(.853)	(-.256)

Table A-17. — (Continued)

(c) T. E. Deflection, Full Span =  $-8.3^\circ$

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
143101	1.05		.16	(-.290)	(-.158)	143401	.85		.17	(-.263)	(.129)
143103	1.05		2.14	(-.214)	(-.140)	143402	.85		2.15	(-.192)	(.115)
143104	1.05		4.10	(-.139)	(-.122)	143403	.85		4.11	(-.122)	(.101)
143105	1.05		6.05	(-.063)	(.105)	143404	.85		6.08	(-.051)	(.087)
143106	1.05		8.02	(.012)	(.087)	143405	.85		8.05	(.019)	(.073)
143107	1.05		9.97	(.087)	(.070)	143406	.85		10.00	(.089)	(.059)
143108	1.05		11.90	(.162)	(.052)	143407	.85		11.95	(.159)	(.045)
143109	1.05		13.87	(.238)	(.035)	143408	.85		13.89	(.228)	(.031)
143111	1.05		15.82	(.313)	(.017)	143409	.85		15.87	(.299)	(.017)
143202	.70		.21	(-.250)	(.119)	143501	.40		.25	(-.236)	(.109)
143203	.70		2.17	(-.182)	(.106)	143502	.40		2.22	(-.170)	(.098)
143204	.70		4.15	(-.113)	(.093)	143503	.40		4.19	(-.104)	(.086)
143205	.70		6.12	(-.045)	(.080)	143504	.40		6.15	(-.039)	(.074)
143206	.70		8.08	(.023)	(.068)	143505	.40		8.13	(.028)	(.063)
143207	.70		10.03	(.091)	(.055)	143506	.40		10.08	(.093)	(.051)
143208	.70		12.00	(.159)	(.042)	143507	.40		12.05	(.159)	(.040)
143209	.70		13.94	(.226)	(.029)	143508	.40		14.00	(.224)	(.028)
143210	.70		15.91	(.294)	(.016)	143509	.40		15.96	(.290)	(.016)
143301	.95		.16	(-.274)	(.137)						
143302	.95		2.13	(-.201)	(.121)						
143303	.95		4.09	(-.129)	(.106)						
143304	.95		6.06	(-.056)	(.090)						
143305	.95		8.01	(.017)	(.075)						
143306	.95		9.97	(.089)	(.059)						
143307	.95		11.92	(.162)	(.044)						
143308	.95		13.86	(.234)	(.028)						
143309	.95		15.83	(.307)	(.013)						

Table A-17.—(Continued)

(d) T.E. Deflection, Full Span =  $-17.7^\circ$

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
143805	1.05		-7.65	(-.839)	(.369)	144105	.85		-.04	(-.494)	(.245)
143806	1.05		-5.68	(-.763)	(.351)	144106	.85		.22	(-.485)	(.244)
143807	1.05		-3.73	(-.689)	(.334)	144107	.85		2.23	(-.229)	(.215)
143808	1.05		-1.78	(-.614)	(.316)	144108	.85		4.20	(-.343)	(.202)
143809	1.05		.22	(-.537)	(.299)	144109	.85		6.16	(-.273)	(.188)
143810	1.05		2.20	(-.461)	(.281)	144110	.85		8.12	(-.203)	(.174)
143811	1.05		4.15	(-.386)	(.264)	144111	.85		10.08	(-.134)	(.160)
143812	1.05		6.11	(-.311)	(.246)	144112	.85		12.03	(-.064)	(.146)
143813	1.05		8.10	(-.235)	(.229)	144113	.85		13.98	(.005)	(.133)
143814	1.05		10.01	(-.162)	(.212)	144114	.85		15.93		
143815	1.05		11.98	(-.086)	(.194)						
143817	1.05		13.92	(-.012)	(.177)						
143818	1.05		15.90	(.064)	(.159)						
143819	1.05										
143905	.70		-7.58	(-.732)	(.275)	144201	.40		.30	(-.438)	(.207)
143906	.70		-5.64	(-.665)	(.263)	144202	.40		2.29	(-.371)	(.195)
143907	.70		-3.66	(-.597)	(.250)	144203	.40		4.24	(-.306)	(.183)
143908	.70		-1.70	(-.529)	(.237)	144204	.40		6.21	(-.240)	(.172)
143909	.70		.26	(-.462)	(.225)	144205	.40		8.18	(-.174)	(.160)
143910	.70		2.23	(-.394)	(.212)	144206	.40		10.18	(-.108)	(.149)
143911	.70		4.24	(-.324)	(.199)	144207	.40		12.11	(-.043)	(.137)
143912	.70		6.19	(-.257)	(.186)	144208	.40		14.09	(.023)	(.126)
143913	.70		8.16	(-.189)	(.173)	144210	.40		16.05	(.088)	(.114)
143914	.70		10.13	(-.121)	(.161)						
143915	.70		12.06	(-.054)	(.148)						
143916	.70		14.03	(.014)	(.135)						
143917	.70		15.97	(.081)	(.123)						
143918	.70		.28	(-.461)	(.224)						
144001	.95		.20	(-.508)	(.260)						
144002	.95		2.18	(-.435)	(.244)						
144003	.95		4.16	(-.362)	(.229)						
144004	.95		6.12	(-.289)	(.214)						
144005	.95		8.07	(-.217)	(.198)						
144006	.95		10.05	(-.144)	(.183)						
144007	.95		11.97	(-.073)	(.168)						
144008	.95		13.93	(.001)	(.152)						
144009	.95		15.87	(.071)	(.137)						

Table A-17. — (Concluded)

(e) T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)	Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
144462	1.11		-7.65	(-.367)	(.104)	144705	.95		7.94	(.228)	(-.037)
144463	1.11		-5.75	(-.292)	(.085)	144710	.95		9.88	(.302)	(-.053)
144464	1.11		-3.78	(-.210)	(.067)	144711	.95		11.83	(.372)	(-.068)
144465	1.11		-1.83	(-.140)	(.048)	144712	.95		13.78	(.444)	(-.084)
144466	1.11		-1.83	(-.140)	(.048)	144713	.95		15.74	(.517)	(-.099)
144467	1.11		.17	(-.063)	(.029)	144805	1.00		-7.79	(-.366)	(.092)
144468	1.11		2.08	(.011)	(.011)	144806	1.00		-5.84	(-.292)	(.076)
144469	1.11		4.09	(.089)	(.007)	144807	1.00		-3.85	(-.217)	(.059)
144471	1.11		6.01	(.163)	(-.026)	144808	1.00		-1.91	(-.144)	(.043)
144472	1.11		7.97	(.239)	(-.044)	144809	1.00		.04	(-.070)	(.027)
144501	.70		-7.74	(-.332)	(.075)	144810	1.00		2.02	(.005)	(.011)
144502	.70		-5.76	(-.263)	(.062)	144811	1.00		4.00	(.083)	(-.005)
144503	.70		-3.81	(-.196)	(.049)	144812	1.00		5.94	(.153)	(-.021)
144504	.70		-1.86	(-.128)	(.036)	144813	1.00		7.92	(.228)	(-.037)
144505	.70		.15	(-.058)	(.023)	144814	1.00		9.88	(.302)	(-.054)
144506	.70		2.10	(.009)	(.010)	144815	1.00		11.82	(.375)	(-.070)
144507	.70		4.08	(.078)	(-.002)	144817	1.00		15.75	(.524)	(-.102)
144508	.70		6.03	(.145)	(-.015)	144901	.85		-7.73	(-.342)	(.081)
144509	.70		7.99	(.213)	(-.028)	144902	.85		-5.80	(-.273)	(.067)
144510	.70		9.96	(.282)	(-.041)	144903	.85		-3.83	(-.203)	(.053)
144511	.70		11.92	(.350)	(-.054)	144904	.85		-1.88	(-.133)	(.039)
144512	.70		13.90	(.418)	(-.067)	144906	.85		.09	(-.063)	(.025)
144513	.70		15.85	(.486)	(-.080)	144907	.85		2.08	(.009)	(.011)
144514	.70		.13	(-.059)	(.023)	144908	.85		4.03	(.078)	(-.003)
144604	1.05		-7.75	(-.369)	(.100)	144909	.85		5.99	(.149)	(-.017)
144605	1.05		-5.80	(-.293)	(.083)	144910	.85		7.98	(.220)	(-.031)
144606	1.05		-3.86	(-.219)	(.065)	144911	.85		9.92	(.289)	(-.045)
144607	1.05		-1.89	(-.143)	(.047)	144912	.85		11.88	(.359)	(-.059)
144608	1.05		.07	(-.067)	(.030)	144913	.85		13.84	(.429)	(-.073)
144609	1.05		2.04	(.009)	(.012)	144914	.85		15.79	(.499)	(-.087)
144610	1.05		4.01	(.085)	(-.006)	145001	.40		-7.69	(-.319)	(.068)
144611	1.05		5.98	(.161)	(-.023)	145002	.40		-5.74	(-.254)	(.057)
144612	1.05		7.95	(.237)	(-.041)	145003	.40		-3.76	(-.187)	(.045)
144613	1.05		9.90	(.312)	(-.059)	145004	.40		-1.80	(-.122)	(.033)
144614	1.05		11.85	(.387)	(-.076)	145006	.40		.17	(-.055)	(.022)
144615	1.05		13.81	(.463)	(-.094)	145007	.40		2.15	(.010)	(.010)
144616	1.05		15.79	(.539)	(-.112)	145008	.40		4.12	(.077)	(-.002)
144701	.95		-7.78	(-.356)	(.088)	145009	.40		6.09	(.143)	(-.014)
144702	.95		-5.83	(-.284)	(.072)	145010	.40		8.05	(.209)	(-.025)
144703	.95		-3.90	(-.212)	(.057)	145011	.40		10.03	(.275)	(-.037)
144704	.95		-1.91	(-.138)	(.041)	145012	.40		11.96	(.340)	(-.048)
144705	.95		.09	(-.064)	(.025)	145013	.40		13.94	(.406)	(-.060)
144706	.95		2.05	(.009)	(.010)	145014	.40		15.91	(.472)	(-.072)
144707	.95		4.03	(.082)	(-.006)						
144708	.95		5.98	(.155)	(-.022)						

Table A-18.—TEA-230 Test Point Log. Flat Wing, Rounded Leading Edge, L.E. Deflection, Full Span = 0.0°

(a) T.E. Deflection, Full Span = 17.7°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
203101	.85		-8.00	(.0061)	(-.0921)
203103	.85		-4.00	(.114)	(-.111)
203104	.85		-2.00	(.169)	(-.120)
203105	.85		-1.0	(.220)	(-.128)
203106	.85		1.90	(.271)	(-.134)
203107	.85		3.90	(.320)	(-.139)
203108	.85		5.80	(.362)	(-.143)
203109	.85		7.80	(.403)	(-.146)
203111	.85		11.80	(.475)	(-.149)
203113	.85		15.70	(.531)	(-.151)
203201	.40		-7.70	(.026)	(-.097)
203203	.40		-3.80	(.135)	(-.115)
203204	.40		-1.80	(.190)	(-.123)
203205	.40		.10	(.242)	(-.131)
203206	.40		2.10	(.296)	(-.139)
203207	.40		4.10	(.349)	(-.147)
203208	.40		6.10	(.400)	(-.153)
203209	.40		8.00	(.447)	(-.159)
203211	.40		11.90	(.535)	(-.168)
203213	.40		15.90	(.614)	(-.174)

(c) T.E. Deflection, Full Span = 8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
204601	.40		-7.80	(-.104)	(-.027)
204603	.40		-3.90	(.067)	(-.046)
204604	.40		-1.90	(.056)	(-.056)
204605	.40		.10	(.121)	(-.065)
204606	.40		2.00	(.175)	(-.074)
204607	.40		4.00	(.230)	(-.083)
204608	.40		6.00	(.285)	(-.091)
204609	.40		7.90	(.335)	(-.098)
204611	.40		11.90	(.433)	(-.111)
204613	.40		15.90	(.520)	(-.121)

(d) T.E. Deflection, Full Span = -4.1°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
205501	.40		.20	(-.069)	(.036)
205502	.40		2.10	(-.011)	(.025)
205503	.40		4.10	(.050)	(.014)
205505	.40		6.10	(.109)	(.002)
205507	.40		8.10	(.168)	(.008)
205509	.40		12.00	(.277)	(.028)

(b) T.E. Deflection, Full Span = 30.2°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
203701	.40		-7.90	(.165)	(-.173)
203703	.40		-4.00	(.269)	(-.188)
203704	.40		-2.00	(.322)	(-.195)
203705	.40		.00	(.373)	(-.201)
203706	.40		1.90	(.421)	(-.206)
203707	.40		3.90	(.469)	(-.211)
203708	.40		5.90	(.516)	(-.215)
203709	.40		7.90	(.560)	(-.218)
203711	.40		11.80	(.638)	(-.222)
203713	.40		15.70	(.706)	(-.222)

(e) T.E. Deflection, Full Span = -8.3°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
207801	.40		-7.60	(-.327)	(.067)
207803	.40		-3.80	(-.230)	(.061)
207804	.40		-1.80	(-.177)	(.057)
207805	.40		.20	(-.122)	(.051)
207806	.40		2.20	(-.066)	(.045)
207807	.40		4.20	(-.009)	(.038)
207808	.40		6.10	(.045)	(.031)
207809	.40		8.10	(.101)	(.023)
207811	.40		12.00	(.208)	(.007)
207813	.40		15.90	(.309)	(.010)

Table A-19.—TEA-230 Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 12.8°; T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
209801	.40		-7.70	(2.509)	(-.011)
209803	.40		-3.80	(1.722)	(-.087)
209804	.40		-1.80	(1.190)	(-.042)
209805	.40		.10	(.723)	(.009)
209806	.40		2.10	(.364)	(.029)
209807	.40		4.10	(.208)	(.010)
209808	.40		6.10	(.273)	(.106)
209809	.40		8.00	(.519)	(.226)
209811	.40		11.90	(1.270)	(.409)
209813	.40		15.90	(1.992)	(.351)

Table A-20.—TEA-230 Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 5.1°; T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
218201	.85		-7.80	(-.216)	(.044)
218202	.85		-3.90	(-.110)	(.019)
218203	.85		-1.90	(-.054)	(.006)
218204	.85		.10	(.005)	(-.008)
218205	.85		2.00	(.065)	(.023)
218206	.85		4.00	(.131)	(.039)
218207	.85		6.00	(.197)	(.054)
218208	.85		7.90	(.255)	(.065)
218209	.85		11.90	(.364)	(.086)
218211	.85		15.80	(.452)	(.103)
218301	.40		-7.70	(-.195)	(.031)
218303	.40		-3.80	(-.101)	(.013)
218304	.40		-1.80	(-.049)	(.003)
218305	.40		.10	(.004)	(-.007)
218306	.40		2.10	(.064)	(.020)
218307	.40		4.10	(.127)	(.033)
218308	.40		6.10	(.194)	(.048)
218309	.40		8.00	(.258)	(.062)
218311	.40		11.90	(.389)	(.088)
218313	.40		15.90	(.512)	(.108)



Table A-21.—TEA-230 Test Point Log. Flat Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 0.0°, T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
226701	.85		-7.80	(-.247)	(-.050)
226703	.85		-3.90	(-.130)	(-.027)
226704	.85		-1.90	(-.064)	(-.013)
226705	.85		.10	(.002)	(-.002)
226706	.85		2.10	(.068)	(-.017)
226707	.85		4.00	(.130)	(-.030)
226708	.85		6.00	(.192)	(-.043)
226709	.85		7.90	(.246)	(-.053)
226711	.85		11.90	(.347)	(-.071)
226713	.85		15.80	(.428)	(-.085)
226901	.40		-7.70	(-.239)	(.044)
226903	.40		-3.80	(-.120)	(.022)
226904	.40		-1.80	(-.058)	(.010)
226905	.40		.10	(.002)	(-.002)
226906	.40		2.10	(.065)	(-.014)
226907	.40		4.10	(.128)	(-.026)
226908	.40		6.10	(.189)	(-.037)
226910	.40		8.00	(.246)	(-.048)
226913	.40		11.90	(.357)	(-.068)
226915	.40		15.90	(.461)	(-.086)

Table A-22.—TEA-230 Test Point Log. Flat Wing, Sharp Leading Edge; L.E. Deflection, Full Span = 0.0°;  
T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
2368C1	.4C		-7.7C	(-.250)	(.050)
236803	.4C		-3.80	(-.145)	(.038)
236804	.4C		-1.80	(-.064)	(.015)
236805	.4C		.10	(.005)	(-.001)
236806	.4C		2.10	(.055)	(-.005)
236807	.4C		4.10	(.093)	(-.006)
236808	.4C		6.10	(.141)	(-.021)
236809	.4C		8.0C	(.197)	(-.043)
236811	.4C		11.9C	(.315)	(-.083)
236813	.4C		15.80	(.43C)	(-.105)
2371C1	.85		-7.80	(-.241)	(.055)
2371C3	.85		-3.90	(-.122)	(.030)
237104	.85		-1.90	(-.064)	(.017)
237105	.85		.00	(.000)	(-.091)
237106	.85		2.10	(.063)	(-.012)
237107	.85		4.0C	(.12C)	(-.029)
237108	.85		6.0C	(.182)	(-.047)
237109	.85		7.9C	(.238)	(-.059)
237111	.85		11.80	(.363)	(-.076)
237113	.85		15.70	(.428)	(-.089)

Table A-23.—TEA-230 Test Point Log. Twisted Wing, Rounded Leading Edge; L.E. Deflection, Full Span = 0.0° ; T.E. Deflection, Full Span = 0.0°

Analysis number	Mach number	Dynamic pressure, kN/m <sup>2</sup> (psf)	Angle of attack, deg	Normal force coefficient, bal (integ press.)	Pitching moment coefficient, bal (integ press.)
244901	.85		-7.70	(-.279)	(.052)
244903	.85		-3.80	(-.177)	(.045)
244904	.85		-1.90	(-.121)	(.034)
244906	.85		.10	(-.058)	(.022)
244907	.85		2.10	(.007)	(.008)
244908	.85		4.00	(.071)	(-.007)
244909	.85		6.00	(.140)	(-.022)
244910	.85		8.00	(.204)	(-.036)
244912	.85		11.90	(.316)	(-.059)
244914	.85		15.80	(.409)	(-.078)
245001	.40		-7.70	(-.281)	(.061)
245003	.40		-3.80	(-.172)	(.042)
245004	.40		-1.80	(-.113)	(.031)
245006	.40		-.20	(-.064)	(.022)
245007	.40		2.20	(.010)	(.008)
245008	.40		4.10	(.071)	(-.004)
245009	.40		6.10	(.136)	(-.016)
245011	.40		8.10	(.201)	(-.028)
245012	.40		12.00	(.323)	(-.051)

## APPENDIX B

### DATA REDUCTION AND PRESENTATION

#### DATA EDITING AND INTEGRATION PROCEDURE

##### DATA EDITING

Some cases were encountered with these data where the methods of data editing available within the integration programs were not adequate. During approximately the first half of the test, the scanivalve which recorded lower surface wing box (between the hingelines) pressures for the sections at  $2y/b = 0.09, 0.20, 0.35,$  and  $0.50$  was intermittent at an angle of attack of  $16^\circ$ . This problem was eventually traced to an electrical problem in the strut. Rather than sacrifice all of these data, these incorrect measurements were replaced by extrapolating the data from angles of attack of  $12^\circ$  and  $14^\circ$ .

Because the plotting program assumes that geometry for all configurations is the same and the chordwise location of orifices on the various model parts was not absolutely identical, points were added as required. Therefore, some interpolations or extrapolations using selected orifices were done before the integration program was used. The row of orifices on the body at the wing-body intersection was extended in front of the wing and aft of the wing by interpolating between the orifices located at  $90^\circ$  and  $135^\circ$ .

To obtain comparisons of the results of some of the theoretical methods, the experimental data were required as a loading parameter along the body length or as pressure distributions at constant body stations. To obtain this information, a set of body stations was selected and at each of these, orifices were defined so that the interpolation would be along constant  $x/c$  lines on the streamwise wing sections. A linear interpolation was performed between buttock lines. This representation was verified by comparing the integrations of these data to those obtained using the data at the actual orifices. All three integrated coefficients matched within 1%.

Several methods were introduced into the integration program to replace or add data points to account for:

- Plugged or leaking orifices or bad data points
- Extrapolating the data to leading and trailing edges
- Hingeline discontinuities in the pressure data

These procedures were selected by code for each point. The codes are described in the following list and are illustrated in figure B-1. An additional use of these codes is to ensure that only measured pressure data ( $CODE_i = 0$ ) are identified with symbols on the plots.

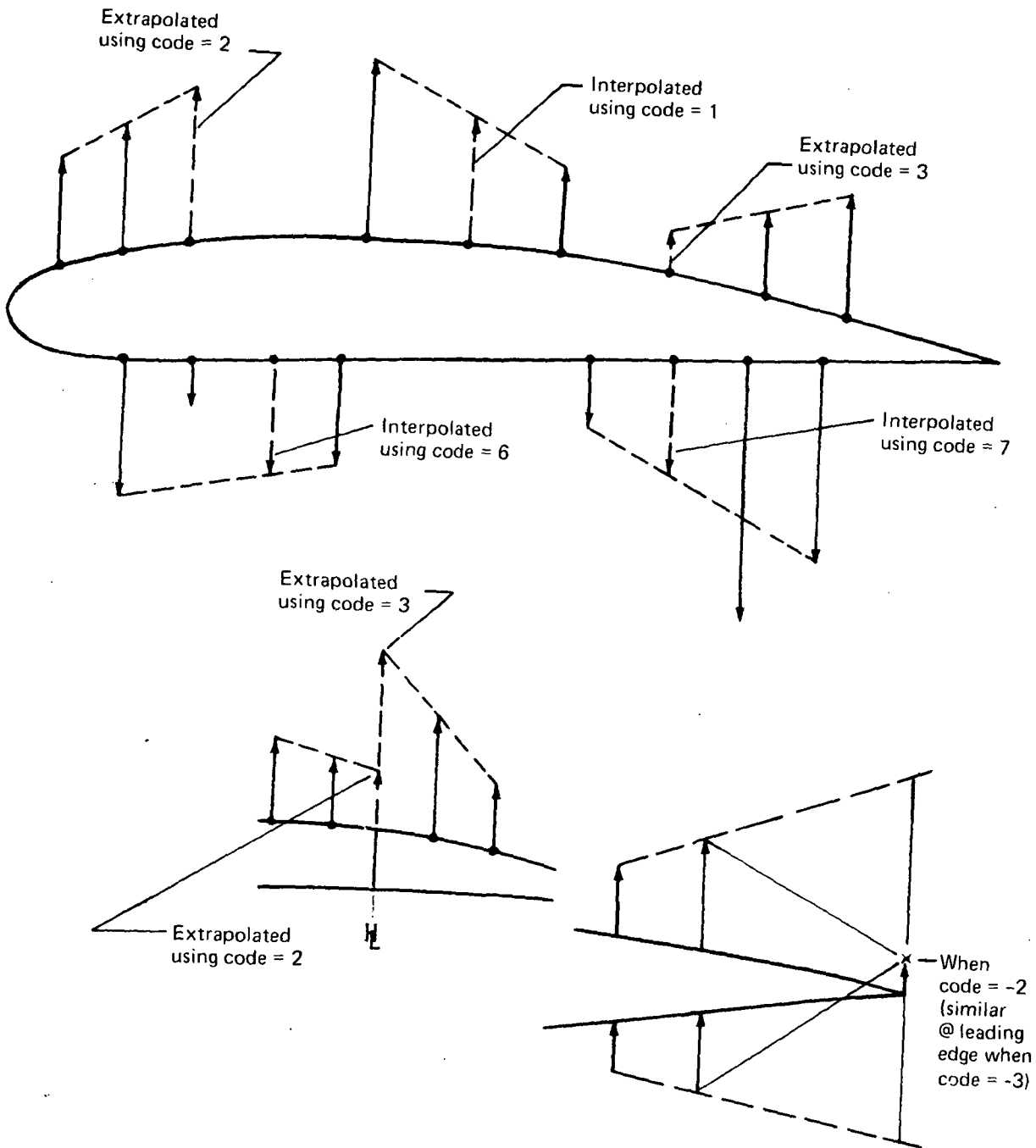


Figure B-1.—Codes Used To Interpolate and Extrapolate

If  $CODE_i = 0$ , use pressure as entered on tape (measured pressure)

= 20, use pressure as entered on tape (previously replaced value)

= 1, interpolate from adjacent points

= 2, extrapolate from two preceding points

= 3, extrapolate from two following points

= 4, set equal to preceding point

= 5, set equal to following point

= 6, interpolate using points (i-2) and (i+1)

= 7, interpolate using points (i-1) and (i+2)

If  $CODE_i =$  negative of above, evaluate as above but average with corresponding point on opposite surface—used for leading and trailing edges of section only

where

i identifies the position of the point from the leading edge of the upper or lower surface per section

Editing of the pressure data is done in the following order:

1. Each section is done separately.
2. Each surface (upper or lower) per section is done in the following sequence:
  - a. Starting at leading edge, points with codes of 1, 2, and 4
  - b. Starting at trailing edge, points with codes of 3, 5, 6, and 7
3. Leading- and trailing-edge points with negative codes are evaluated. Upper and lower surface codes need not both be negative and need not be the same negative code.
4. Extrapolated pressure coefficients are checked to see that they are greater than vacuum and less than stagnation pressure. These limits are shown in figure B-2 for the range of Mach numbers tested. This option was not used for theoretical data.
  - a. Vacuum, equation valid for all Mach numbers

$$C_{p, \text{vacuum}} = - \frac{2.0}{\gamma M^2} \quad (\text{B-1})$$

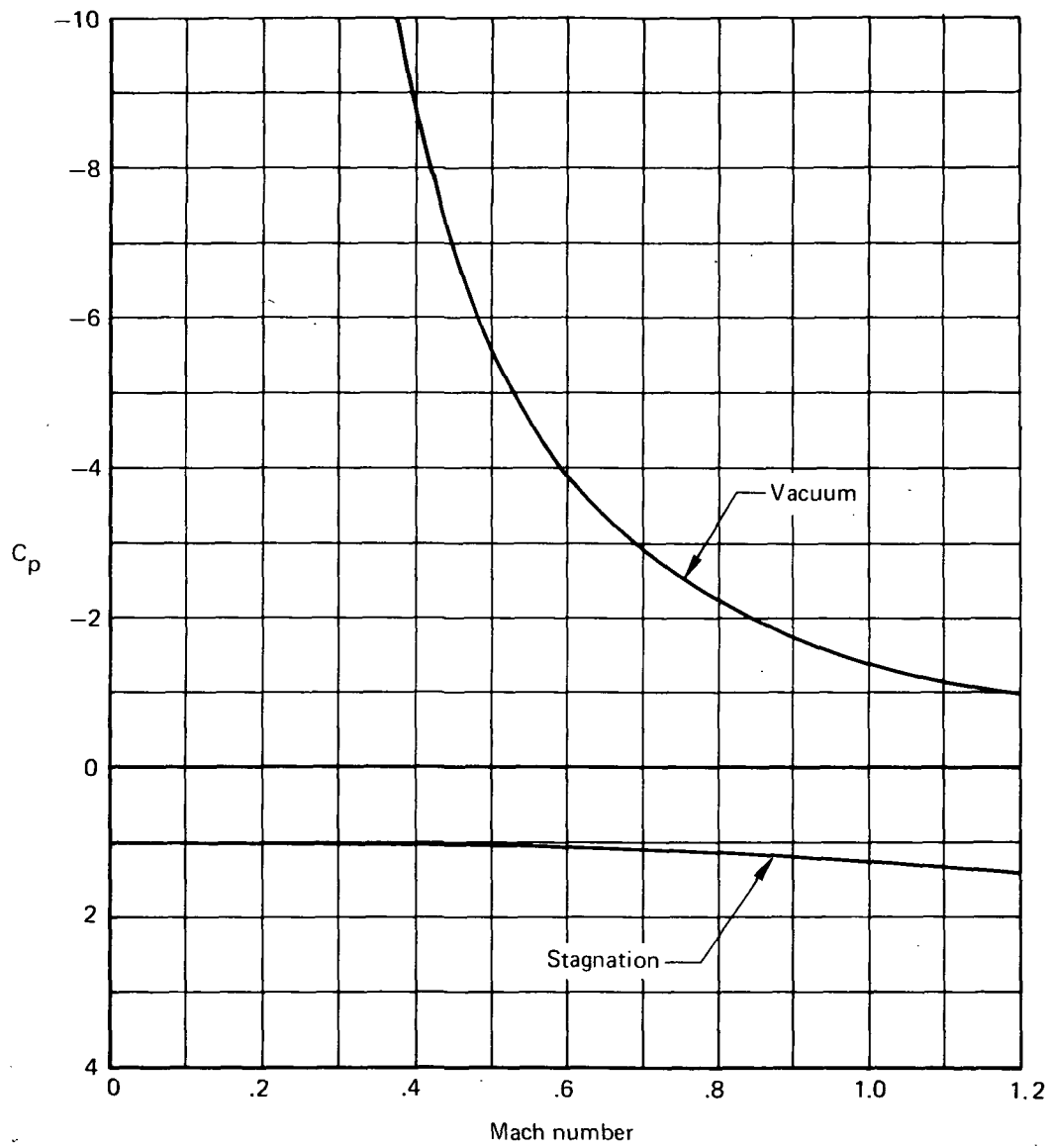


Figure B-2.—Pressure Limits Applied to Experimental Data

b. Stagnation pressure, equation is dependent on type of flow

For isentropic flow:

$$C_{p,stag} = \frac{2.0}{\gamma M^2} \left\{ \left[ 1.0 + 0.5(\gamma - 1.0)M^2 \right]^{\frac{\gamma}{\gamma-1.0}} - 1.0 \right\} \quad (B-2)$$

Across a normal shock wave:

$$C_{p,stag} = \frac{2.0}{\gamma M^2} \left\{ \left[ \frac{\gamma + 1.0}{2.0} M^2 \right]^{\frac{\gamma}{\gamma-1.0}} \left[ \frac{\gamma + 1.0}{2.0 \gamma M^2 - (\gamma-1.0)} \right]^{\frac{1.0}{\gamma-1.0}} - 1.0 \right\} \quad (B-3)$$

Equation (B-2) is used for  $M \leq 1.0$ . An average of equations (B-2) and (B-3) is used for  $M > 1.0$ .

where

M is Mach number

$\gamma$  is gas constant  $\approx 1.40$  for air

### CALCULATION OF NET PRESSURE COEFFICIENTS

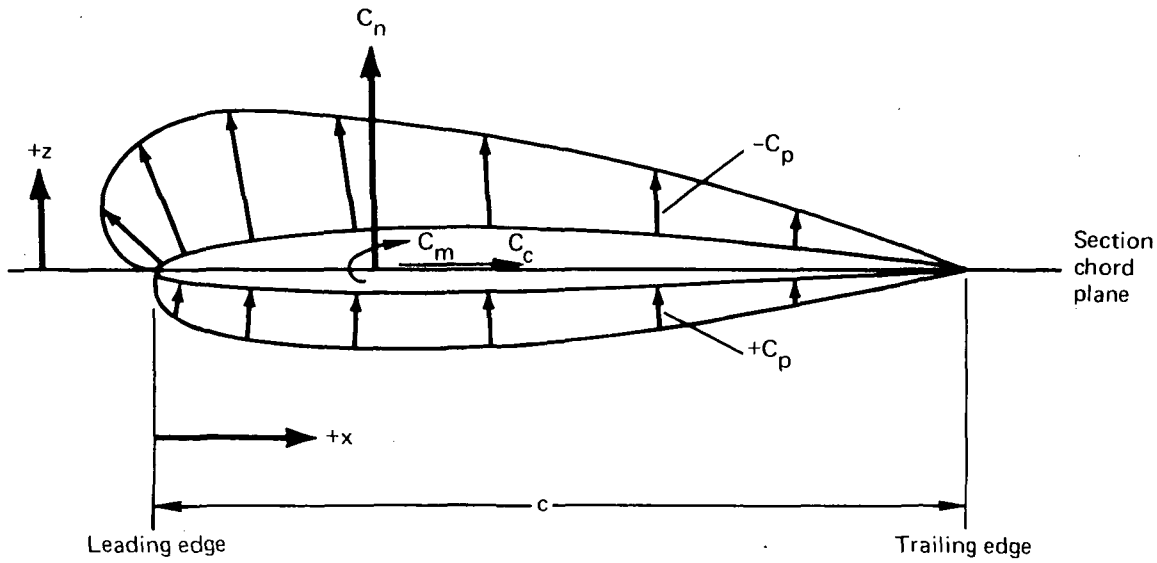
The net lift distribution on the section is calculated by:

$$C_{p,net} = C_{p,lower} - C_{p,upper} \quad (B-4)$$

### INTEGRATION OF PRESSURE DATA

To account for the effects on integrated coefficients of the deflected control surfaces, each streamwise section (of which there are NSECT) is divided into segments (of which there are NSEG). These segments are the leading-edge control surface, wing box, and trailing-edge control surface. The upper and lower surfaces of each are integrated separately over the number of points available ((number of orifices + 2) = NP1) and are based on the segment chord length  $c$ . Sign conventions are shown in the following sketch. The equations, which use a rectangular integration process, follow.





### Segment Coefficients

Integration of the pressures for each segment per surface per section is the first step.

- Normal force coefficient  $C_{n,s}$

$$C_{n,s} = 0.5 \sum_{i=2}^{NP1} \left[ (C_p)_i + (C_p)_{i-1} \right] \left[ \left( \frac{x}{c} \right)_i - \left( \frac{x}{c} \right)_{i-1} \right] \quad (B-5)$$

$$C_{n,s,net} = C_{n,s,lower} - C_{n,s,upper} \quad (B-6)$$

- Chord force coefficient  $C_{c,s}$

$$C_{c,s} = 0.5 \sum_{i=2}^{NP1} \left[ (C_p)_i + (C_p)_{i-1} \right] \left[ \left( \frac{z}{c} \right)_i - \left( \frac{z}{c} \right)_{i-1} \right] \quad (B-7)$$

$$C_{c,s,net} = C_{c,s,upper} - C_{c,s,lower} \quad (B-8)$$

- Pitching moment coefficient about segment leading edge  $C_{m,s}$

$$\begin{aligned}
 C_{m,s} &= 0.5 \sum_{i=2}^{NP1} \left[ (C_p)_i + (C_p)_{i-1} \right] \left[ \left( \frac{x}{c} \right)_{i-1} + \frac{\left( \frac{x}{c} \right)_i - \left( \frac{x}{c} \right)_{i-1}}{2.0} \right] \left[ \left( \frac{x}{c} \right)_i - \left( \frac{x}{c} \right)_{i-1} \right] \\
 &= 0.25 \sum_{i=2}^{NP1} \left[ (C_p)_i + (C_p)_{i-1} \right] \left[ \left( \frac{x}{c} \right)_i^2 - \left( \frac{x}{c} \right)_{i-1}^2 \right]
 \end{aligned} \tag{B-9}$$

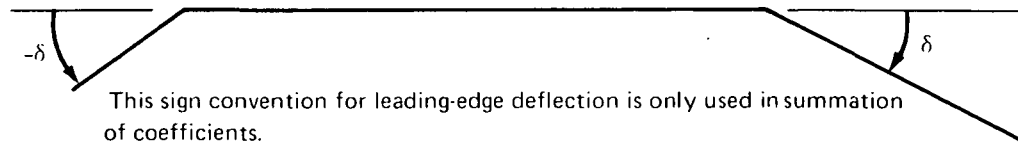
$$C_{m,s,net} = C_{m,s,upper} - C_{m,s,lower} \tag{B-10}$$

- Pitching moment coefficient about  $0.25c$  of segment  $C_{m,0.25c,s}$

$$C_{m,0.25c,s} = C_{m,s} + 0.25 C_{n,s} \tag{B-11}$$

### Section Coefficients

Total section coefficients are obtained by summing the segment coefficients, taking into account segment deflections as defined in the following sketch and segment chord lengths. These coefficients are based on the section chord length  $c_T$ .



- Normal force coefficient  $C_n$

$$C_n = \sum_{j=1}^{NSEG} (C_{n,s})_j \left( \frac{c_s}{c} \right)_j \cos \delta_j - \sum_{j=1}^{NSEG} (C_{c,s})_j \left( \frac{c_s}{c} \right)_j \sin \delta_j \tag{B-12}$$

- Chord force coefficient  $C_c$

$$C_c = \sum_{j=1}^{NSEG} (C_{c,s})_j \left( \frac{c_s}{c} \right)_j \cos \delta_j + \sum_{j=1}^{NSEG} (C_{n,s})_j \left( \frac{c_s}{c} \right)_j \sin \delta_j \tag{B-13}$$

- Pitching moment coefficient about section leading edge  $C_m$

$$C_m = \sum_{j=1}^{NSEG} (C_{m,s})_j \left(\frac{c_s}{c}\right)^2 + \left[ (C_{n,s})_1 (1.0 - \cos \delta_1) + (C_{c,s})_1 \sin \delta_1 \right] \left(\frac{c_s}{c}\right)_1^2 - \sum_{j=2}^{NSEG} \left[ (C_{n,s})_j \cos \delta_j - (C_{c,s})_j \sin \delta_j \right] \left(\frac{c_s}{c}\right)_j \left[ \frac{x_{L.E.,s} - x_{L.E.}}{c} \right] \quad (B-14)$$

where

$c_s$  is segment chord, cm

$c$  is section chord, cm

$\delta$  is deflection of segment relative to section chord plane, leading edge up, degrees

$x_{L.E.,s}$  is leading edge of segment, cm

$x_{L.E.}$  is leading edge of section, cm

- Pitching moment coefficient about  $0.25c$  of section  $C_{m.25c}$

$$C_{m.25c} = C_m + 0.25 C_n \quad (B-15)$$

### Total Surface Coefficients

To obtain total surface coefficients, the assumption is made that the section coefficients apply for a finite distance on both sides of each row of orifices. The equations for total surface coefficients are as follows:

- Normal force coefficient  $C_N$

$$C_N = \frac{1}{S} \sum_{k=1}^{NSECT} (C_n)_k (S_h)_k \quad (B-16)$$

- Chord force coefficient  $C_C$

$$C_C = \frac{1}{S} \sum_{k=1}^{NSECT} (C_c)_k (S_h)_k \quad (B-17)$$

- Bending moment coefficient  $C_B$

$$C_B = \frac{1}{S(b/2)} \sum_{k=1}^{\text{NSECT}} (C_n)_k (S_{hy})_k \quad (\text{B-18})$$

- Pitching moment coefficient  $C_M$  about 0.25 M.A.C.

$$C_M = \frac{1}{S\bar{c}} \sum_{k=1}^{\text{NSECT}} \left( (C_m)_k (S_{hc})_k + (C_n)_k (S_h)_k \left[ x_{\text{ref}} - \left[ (x_{\text{L.E.}})_k - x_{\text{L.E.,M.A.C.}} \right] \right] \right) \quad (\text{B-19})$$

where

$\bar{c}$  is reference chord for pitching moment, cm

$x_{\text{L.E.,M.A.C.}}$  is leading edge of M.A.C., cm

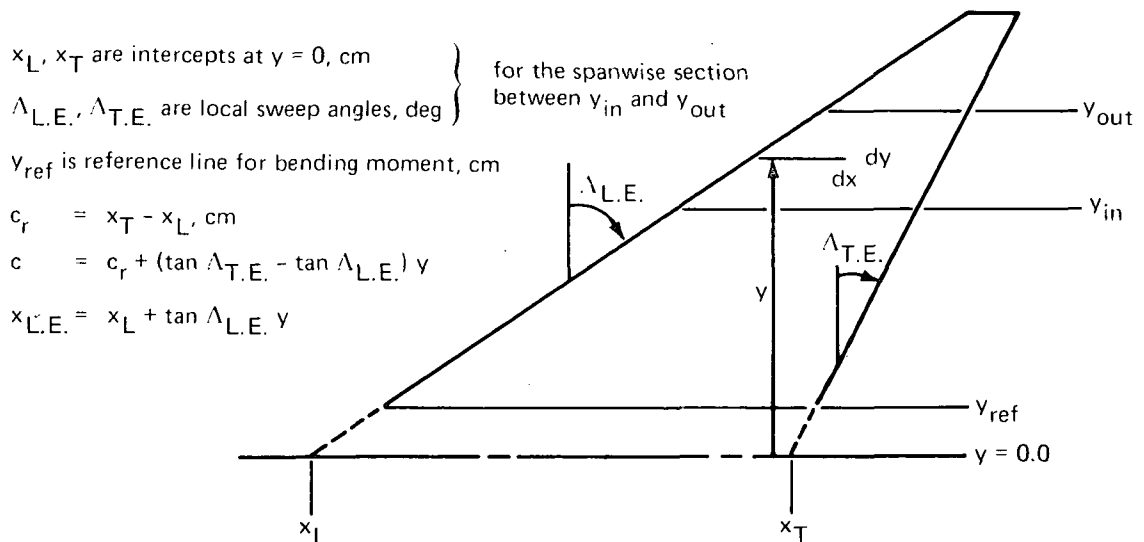
$x_{\text{ref}}$  is reference station for pitching moment, cm (0.25 M.A.C.)

$x_{\text{L.E.}}$  is leading edge of section chord, cm

$b/2$  is reference length for bending moment, cm

### Determination of Geometric Constants Required for Integration

To obtain total surface coefficients, the assumption is made that the section coefficients apply for a finite distance on both sides of each row of orifices. The input geometry required to calculate the areas, and products of area and length required for the summation of total surface coefficients, are shown in the following sketch.



- Section area:

$$\begin{aligned}
 S_h &= \int_{y_{in}}^{y_{out}} \int_{x_L + \tan \Lambda_{L.E.} y}^{x_T + \tan \Lambda_{T.E.} y} dy dx \\
 &= c_r (y_{out} - y_{in}) + 0.5 (\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.}) (y_{out}^2 - y_{in}^2) \quad (B-20)
 \end{aligned}$$

- Product of section area and mean chord:

$$\begin{aligned}
 S_{hc} &= \int_{y_{in}}^{y_{out}} \int_{x_L + \tan \Lambda_{L.E.} y}^{x_T + \tan \Lambda_{T.E.} y} c dy dx \\
 &= c_r^2 (y_{out} - y_{in}) + c_r (\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.}) (y_{out}^2 - y_{in}^2) \\
 &\quad + \frac{(\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.})^2}{3.0} (y_{out}^3 - y_{in}^3) \quad (B-21)
 \end{aligned}$$

- Product of section area and moment arm:

$$\begin{aligned}
 S_{hy} &= \int_{y_{in}}^{y_{out}} \int_{x_L + \tan \Lambda_{L.E.} y}^{x_T + \tan \Lambda_{T.E.} y} (y - y_{ref}) dy dx \\
 &= \frac{c_r - (\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.}) y_{ref}}{2.0} (y_{out}^2 - y_{in}^2) \\
 &\quad + \frac{(\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.})}{3.0} (y_{out}^3 - y_{in}^3) - c_r y_{ref} (y_{out} - y_{in}) \quad (B-22)
 \end{aligned}$$

- Product of section area and leading edge coordinate:

$$\begin{aligned}
 S_{hx} &= \int_{y_{in}}^{y_{out}} \int_{x_L + \tan \Lambda_{L.E.} y}^{x_T + \tan \Lambda_{T.E.} y} x_{L.E.} dy dx \\
 &= x_L c_r (y_{out} - y_{in}) + \frac{\tan \Lambda_{L.E.} c_r + x_L (\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.})}{2.0} (y_{out}^2 - y_{in}^2) \\
 &\quad + \tan \Lambda_{L.E.} \frac{(\tan \Lambda_{T.E.} - \tan \Lambda_{L.E.})}{3.0} (y_{out}^3 - y_{in}^3) \quad (B-23)
 \end{aligned}$$

- o Total surface reference area:

$$S = \sum_{k=1}^{N\text{SECT}} (S_h)_k \quad (\text{B-24})$$

- M.A.C. and X coordinate of M.A.C. leading edge:

$$\bar{c} = \frac{1}{S} \sum_{k=1}^{N\text{SECT}} (S_h^c)_k \quad (\text{B-25})$$

$$x_{\text{L.E.,M.A.C.}} = \frac{1}{S} \sum_{k=1}^{N\text{SECT}} (S_h^x)_k \quad (\text{B-26})$$

The required integration constants for the wing and body are shown in table B-1.

## DATA PRESENTATION

Computer programs were used to generate plots in order to minimize the amount of manual labor. The following sections describe the forms of data presentation used in this report.

### PRESSURE COEFFICIENTS

Chordwise distributions of upper surface, lower surface, and net (lower-upper) pressure coefficients are plotted as a function of local  $x/c$ . Any interpolated or extrapolated values are used in fairing the lines, but only actual measured values are plotted as symbols. In cases where the measurement at a particular orifice was not valid for a particular test point, the symbol is not shown on the plot either for local surface or net distributions. Longitudinal pressure distributions of surface pressures are presented for the body.

The variation of net pressure coefficients with angle of attack at specific orifice locations is compared with theoretical predictions.

Isobar plots are drawn on the surface planform after interpolating the pressure coefficients from the input locations (for this model all interpolated and extrapolated data from the integration program were used) to a more dense rectangular grid of streamwise lines (orifice stations are retained) and constant percent chord lines. This is a linear interpolation and extrapolation process which ignores the presence of all discontinuities such as deflected control surfaces. The final isobars in the regions near such discontinuities will therefore be inaccurate.

**Table B-1.—Integration Constants**

Reference area = 3128.45 cm<sup>2</sup>

M.A.C. = 75.311 cm

Half span = 50.80 cm

Pitching moment referenced to 0.25 M.A.C.

Bending moment referenced to  $0.086 \frac{b}{2}$  ( $y_{ref} = 4.374$  cm)

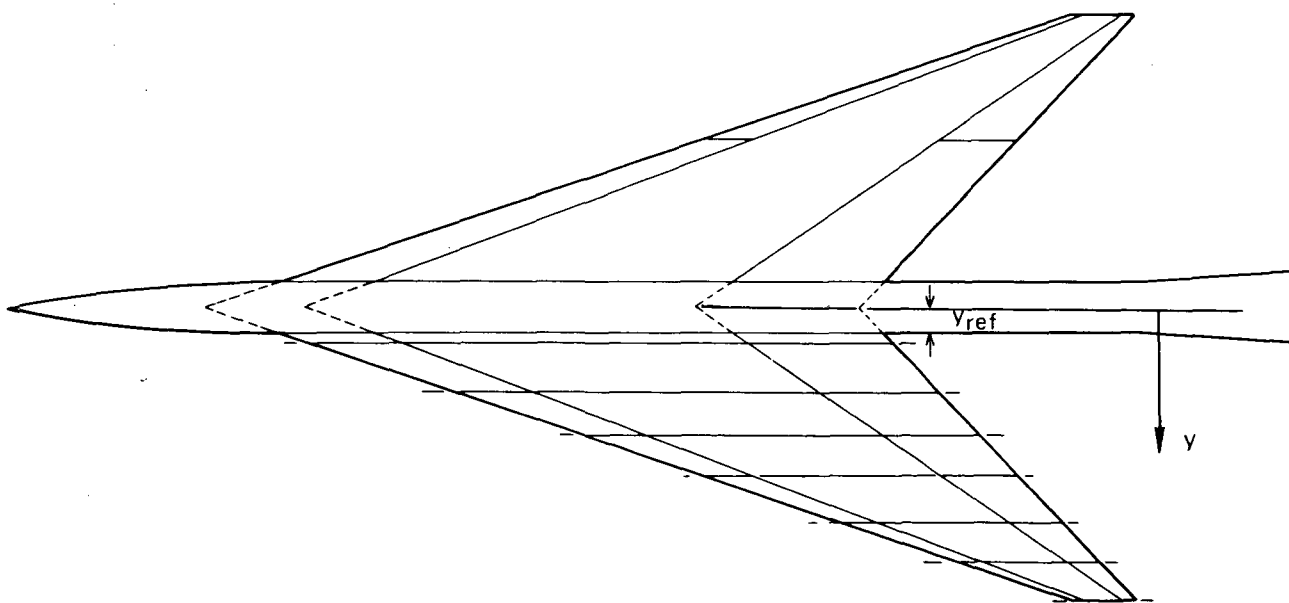
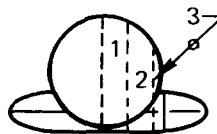
L.E. of M.A.C. @ B.S. 87.760 cm

**Wing**

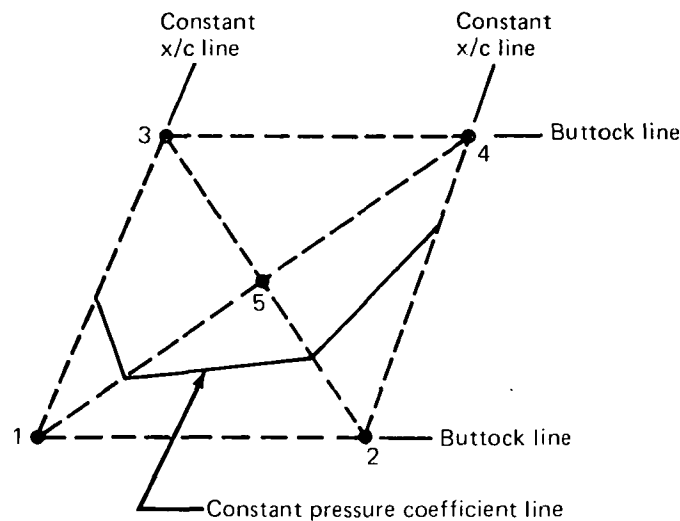
$2y/b$	$\frac{\Delta y}{(b/2)}$	Area cm <sup>2</sup>	Area • chord cm <sup>3</sup>	Area • (y-y <sub>ref</sub> ) cm <sup>3</sup>
0.09	0.0425	219.69	22 357.	167.
0.20	0.1575	733.51	67 415.	4 206.
0.35	0.1500	580.54	44 374.	7 857.
0.50	0.1400	437.93	27 084.	9 148.
0.65	0.1600	377.64	17 722.	10 729.
0.80	0.1300	210.35	6 794.	7 528.
0.93	0.1400	129.79	2 487.	5 505.

**Body**

Longitudinal section	Area cm <sup>2</sup>	Area • L cm <sup>3</sup>
1	356.61	81 258.
2	504.32	114 916.
3	70.94	16 164.



Each set of four adjacent points in the rectangular grid is treated in turn and a fifth point is added to form four triangles as shown in the following sketch. The pressure coefficient at the center point is calculated by averaging the outer four.



The values of pressure coefficient which will be mapped are determined by marking off a series of specified increments above and below zero, up to the maximum and minimum pressure coefficients which exist in the rectangular grid. The upper and lower surfaces are treated separately and can have different increments between isobars.

The isobars are drawn by checking each triangle to determine if the pressure coefficients at the ends of any triangle side are above and below the desired value, in which case the isobar must cross that triangle side. The location of the crossing is found by linear interpolation between the end points, and when two adjacent triangle sides are found to contain the desired pressure coefficient a small segment of the isobar is drawn. As each set of four points is processed, the whole isobar will be constructed from many of these small segments. A letter symbol identifying the pressure coefficient value is generated wherever an isobar crosses one of the rows of orifices.

### SECTION AND SPANWISE LOADING CHARACTERISTICS

Section aerodynamic coefficients  $C_n$  and  $C_m$  are presented as a function of angle of attack.

The spanwise loading is illustrated by plots of the loading parameters  $C_n c / \bar{c}$  and  $C_{m,25c} c^2 / \bar{c}^2$  along the span of the surfaces.

### TOTAL SURFACE CHARACTERISTICS

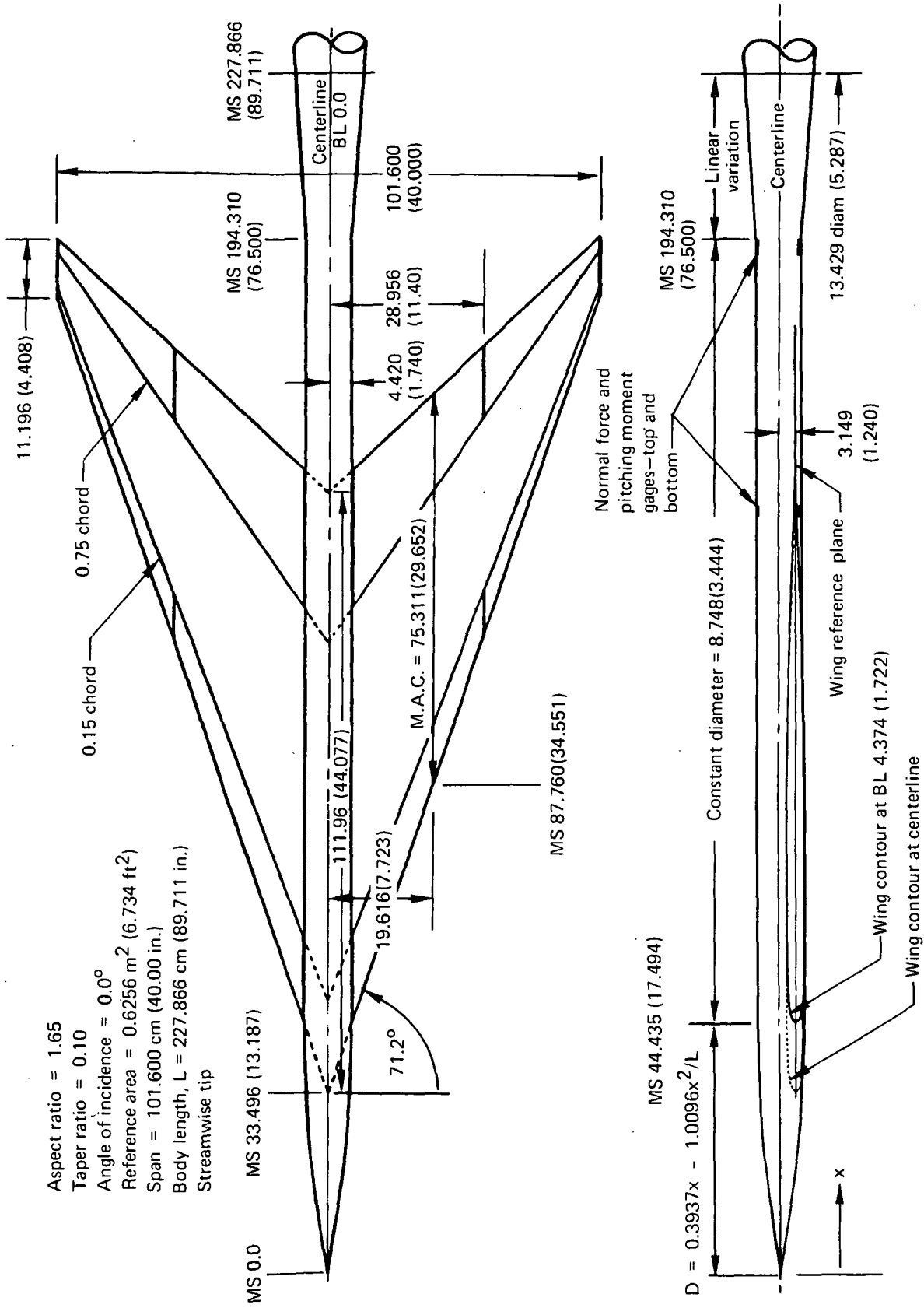
The total surface coefficients  $C_N$ ,  $C_M$ , and  $C_B$  are shown as a function of angle of attack.



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All dimensions in centimeters (inches)

Figure 1.—General Arrangement and Characteristics

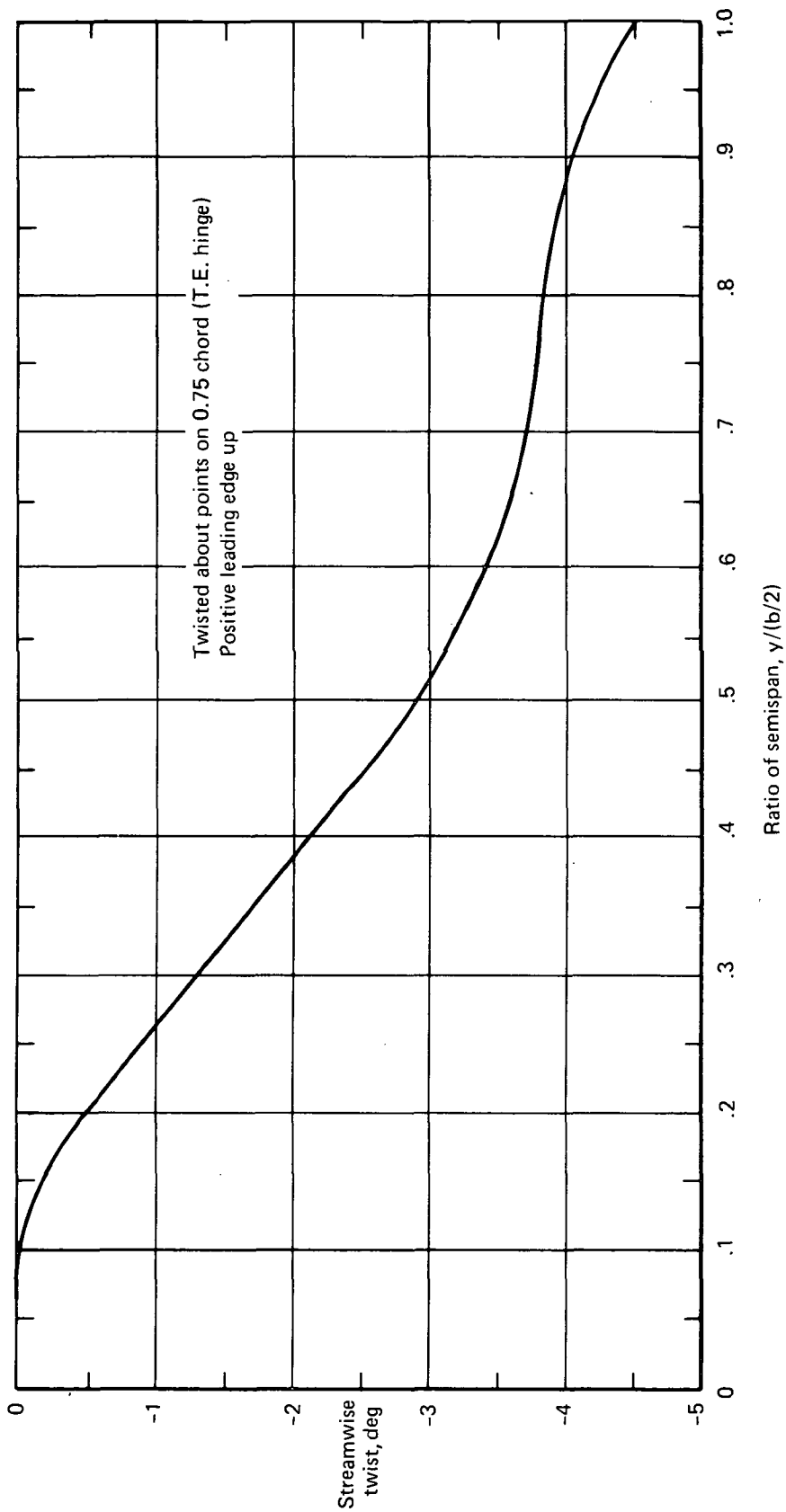


Figure 2.—Spanwise Twist Distribution for the Model Wing

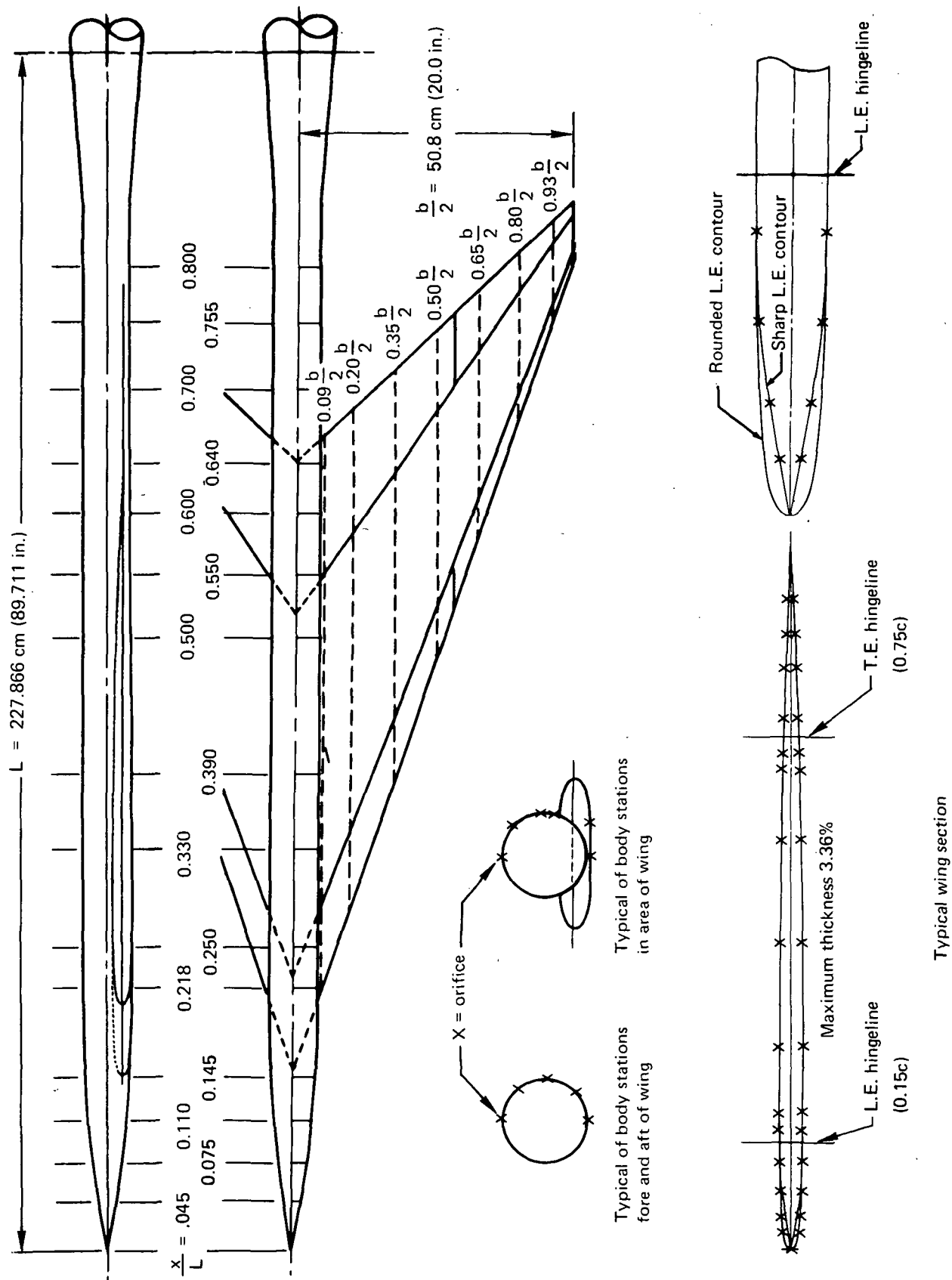


Figure 3.—Pressure Orifice Locations

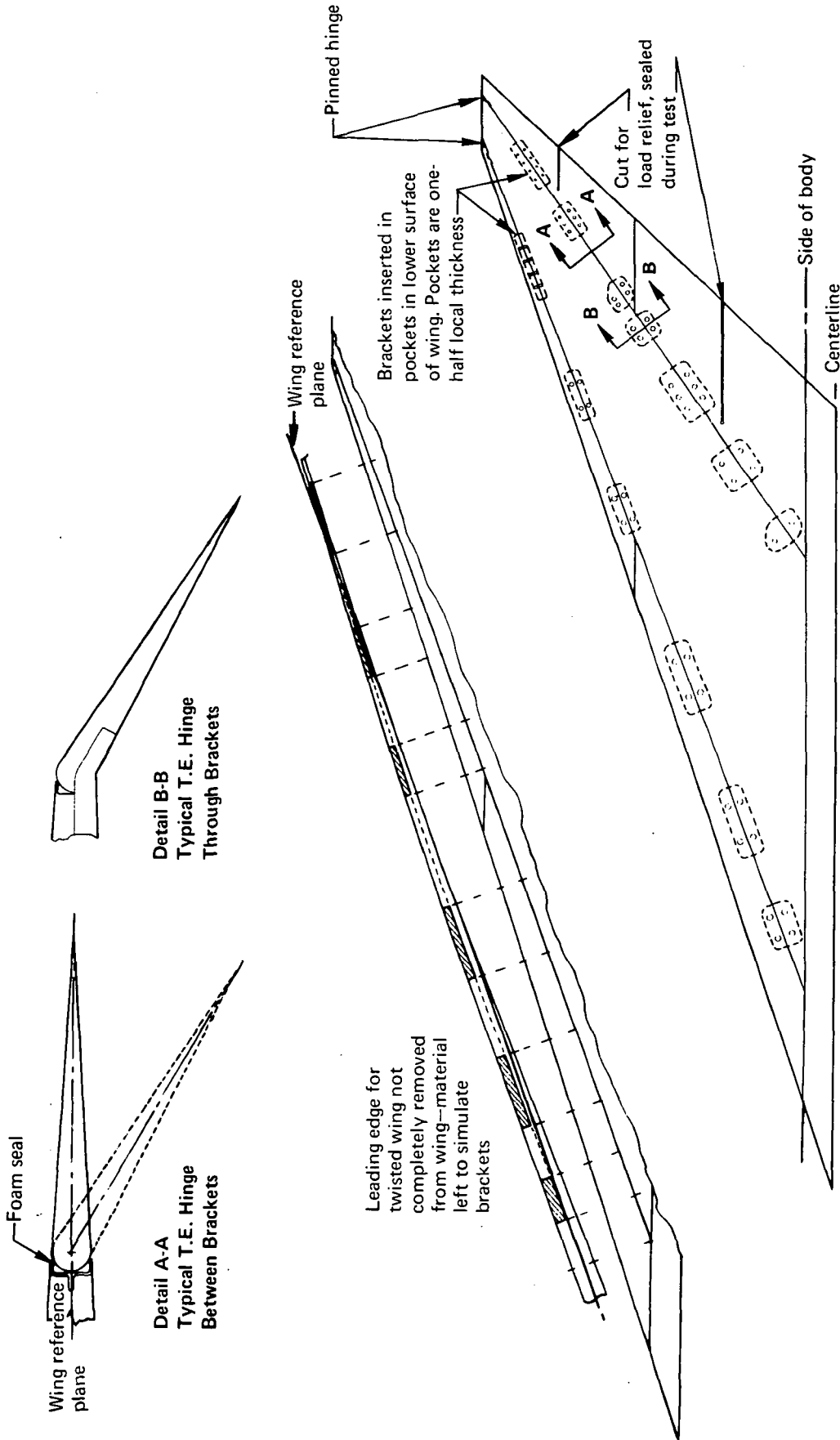
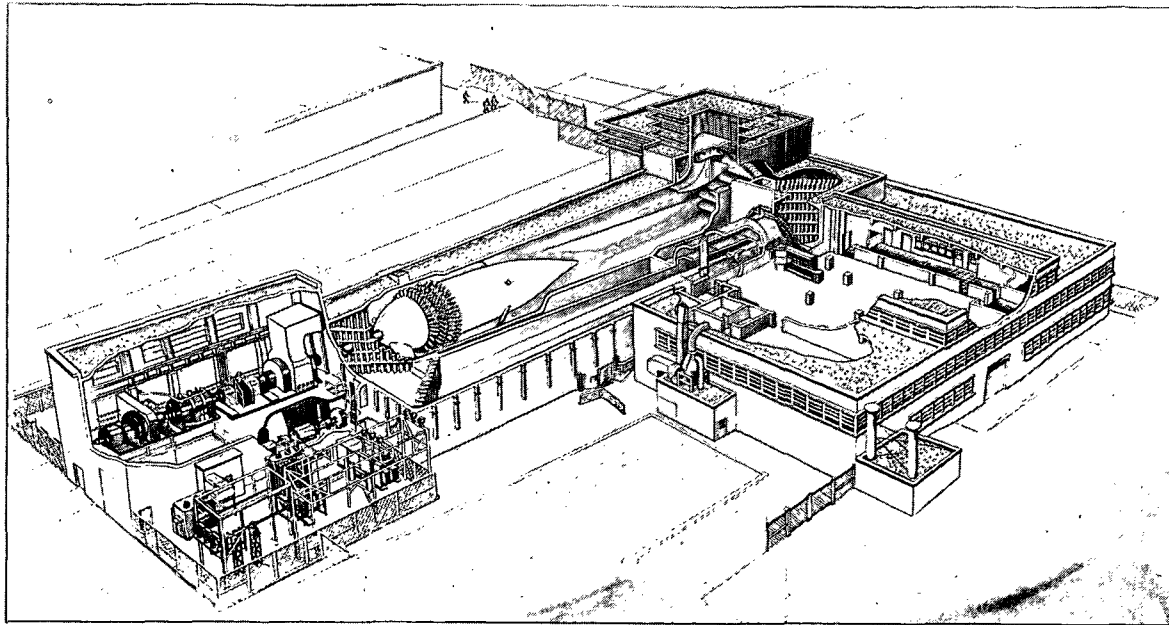
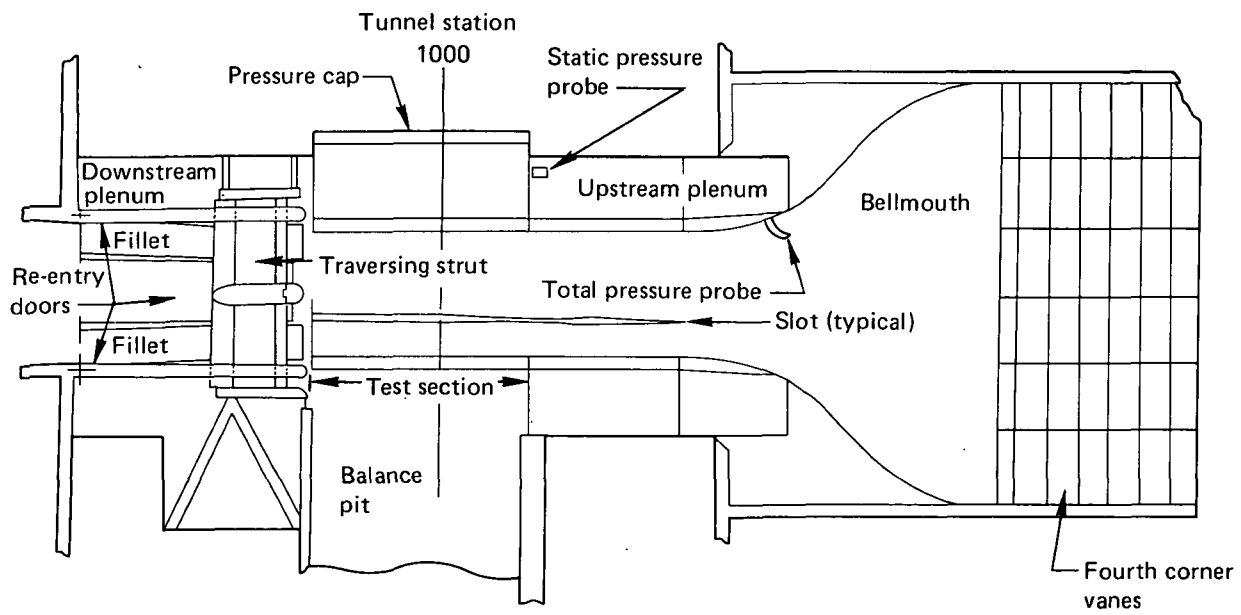


Figure 4.—Control Surface Bracket Details



(a) Schematic



(b) Test Section

Figure 5.—Boeing Transonic Wind Tunnel

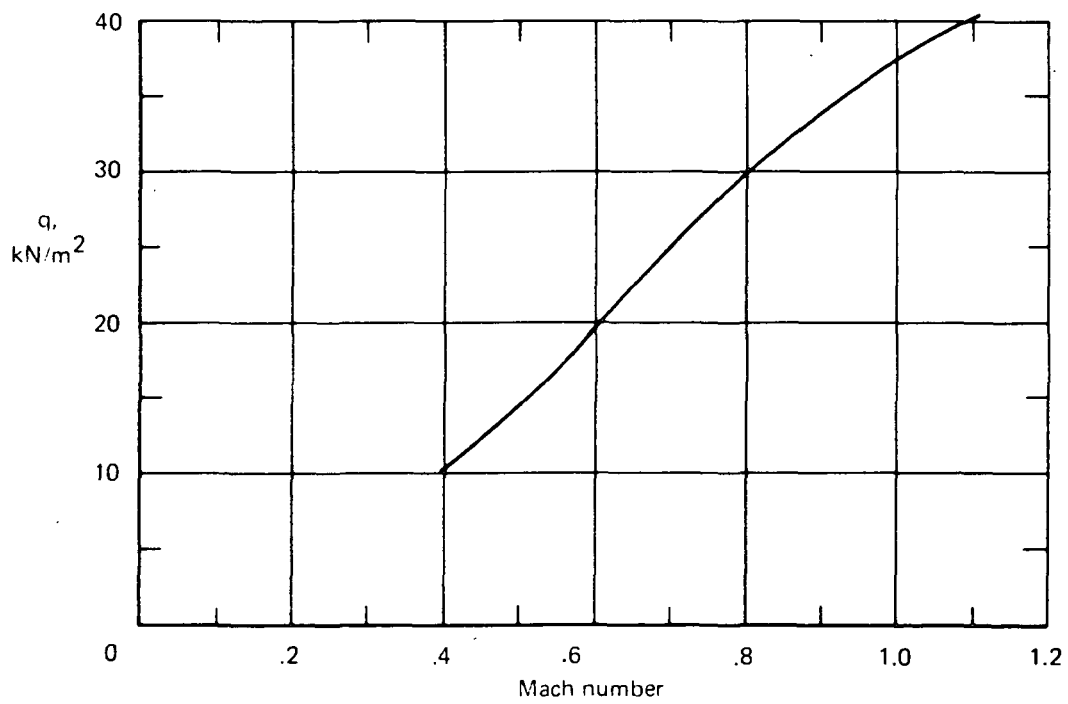
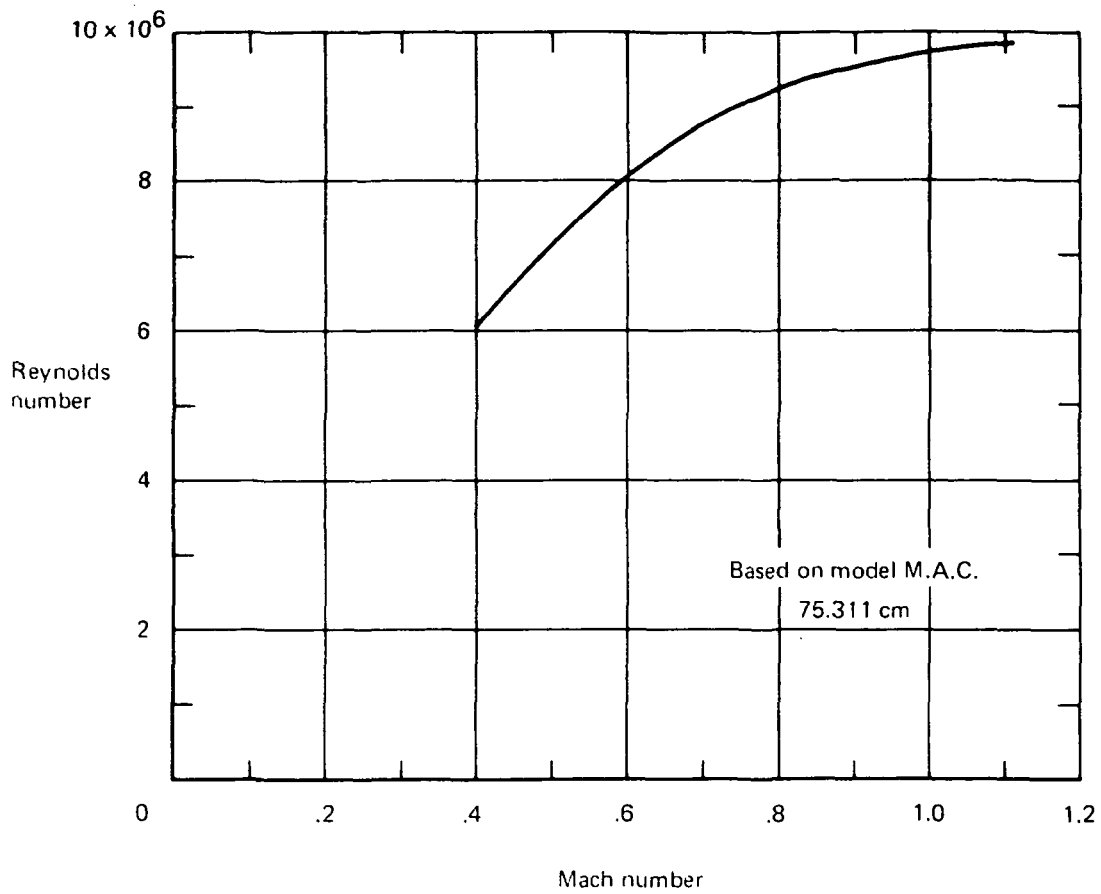


Figure 6.—Variation of Reynolds Number and Dynamic Pressure With Mach Number



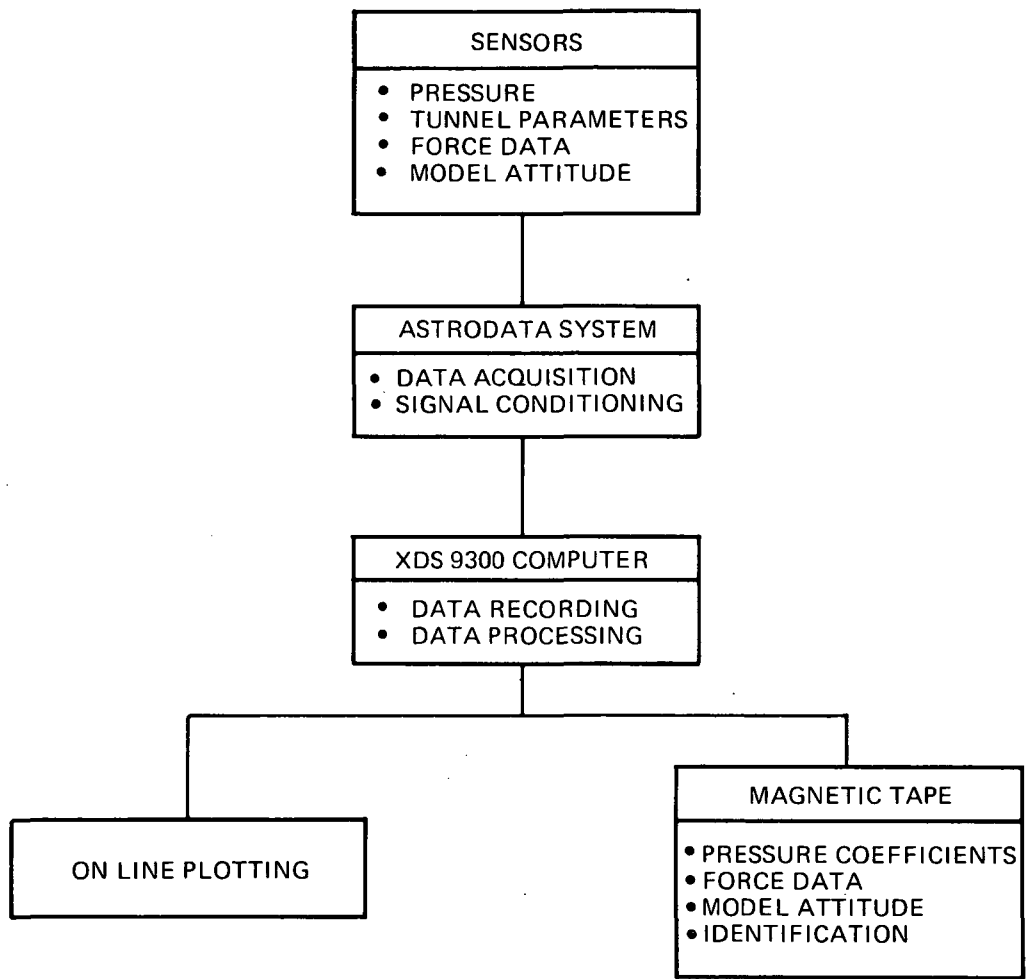
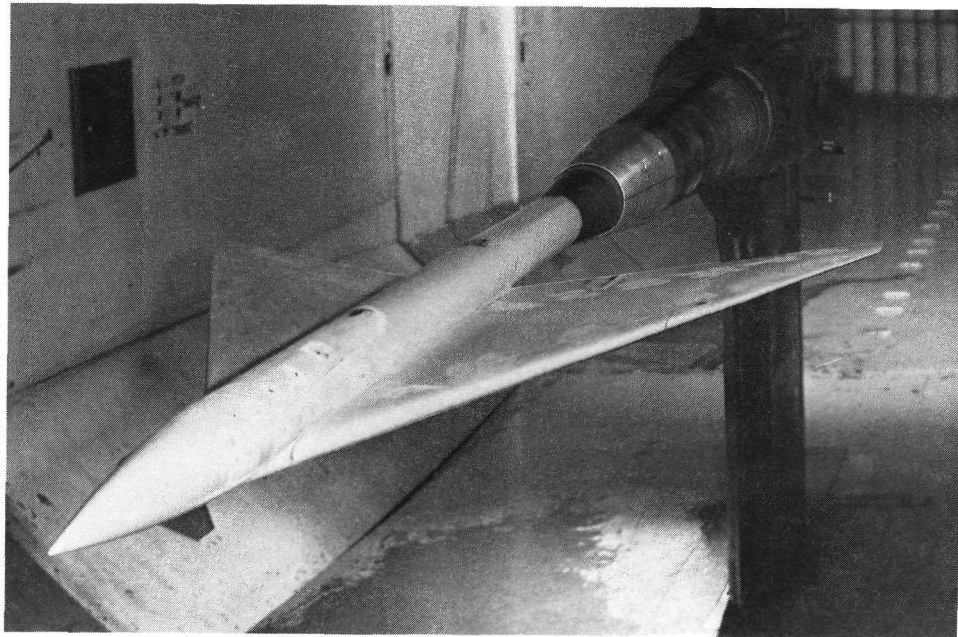
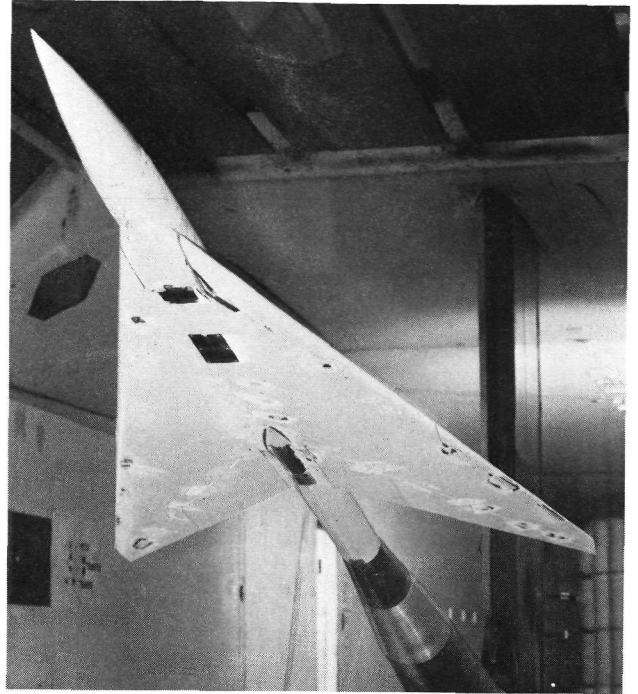
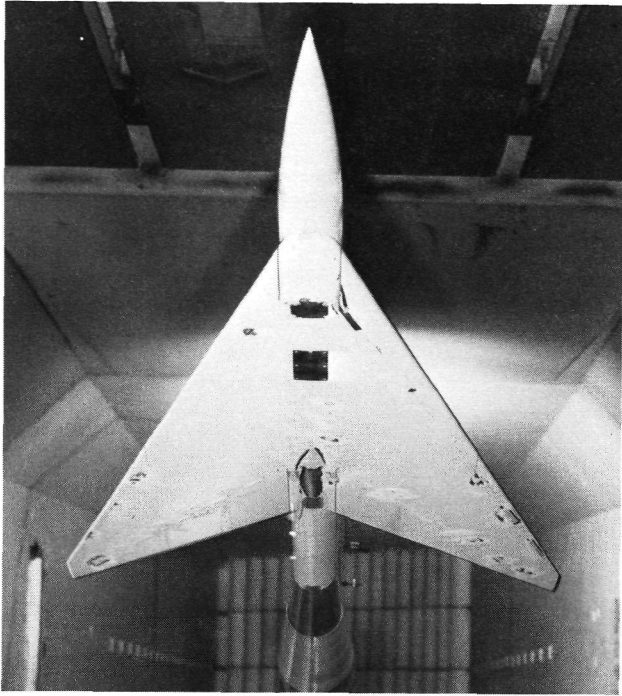
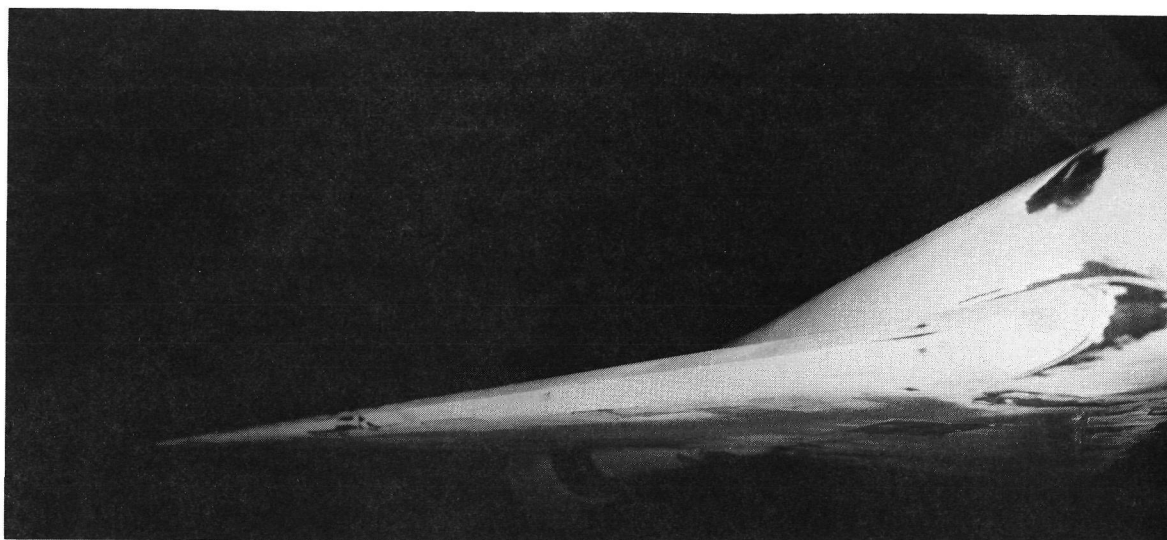


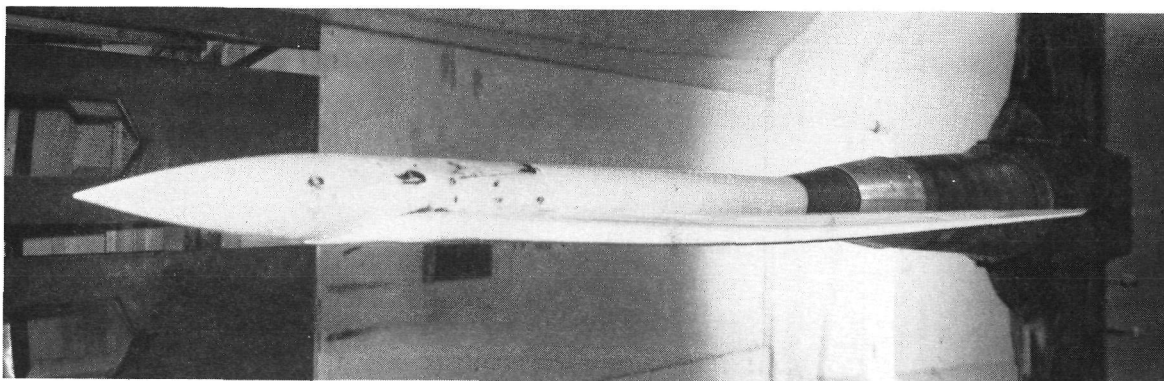
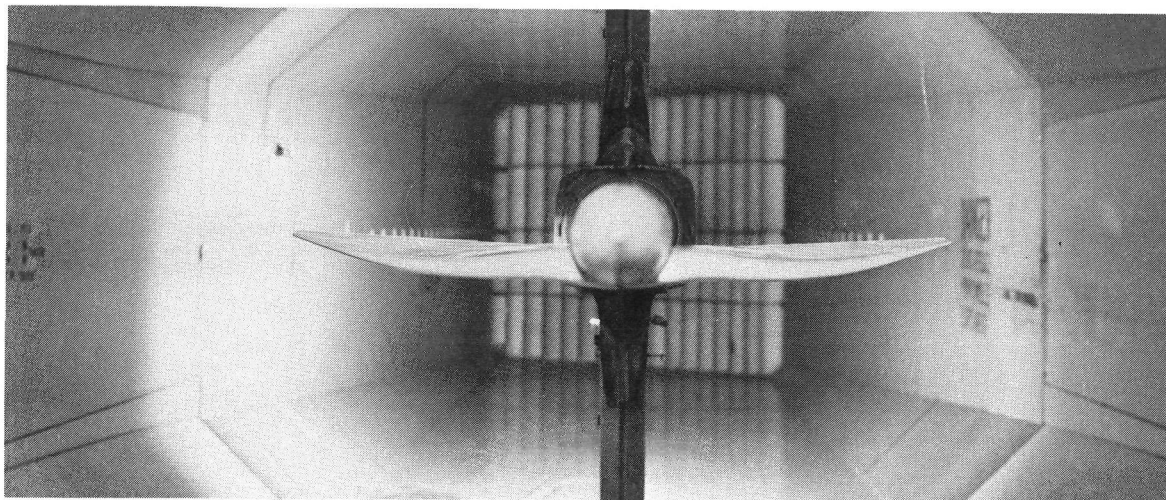
Figure 7.— Data Acquisition and Reduction System—Boeing Transonic Wind Tunnel



*Figure 8.—Wind Tunnel Photographs—Flat Wing, Rounded L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$*



*Figure 9.—Wind Tunnel Photograph—Flat Wing, Sharp L.E.; L.E. Deflection, Full Span = 0.0°;  
T.E. Deflection, Full Span = 0.0°*



*Figure 10.—Wind Tunnel Photographs—Twisted Wing, Rounded L.E.; L.E. Deflection, Full Span = 0.0°;  
T.E. Deflection, Full Span = 4.1°*

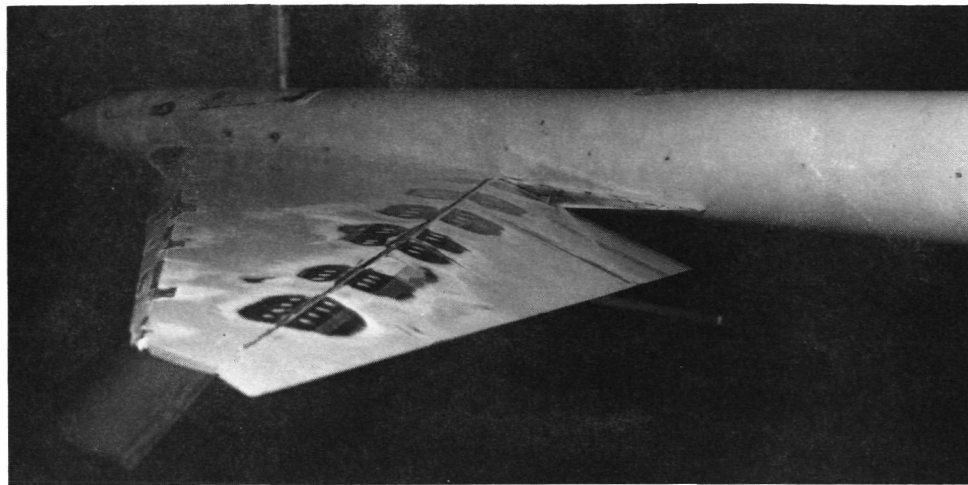


Figure 11.—Wind Tunnel Photograph—Flat Wing, Rounded L.E.; L.E. Deflection, Full Span =  $12.8^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$

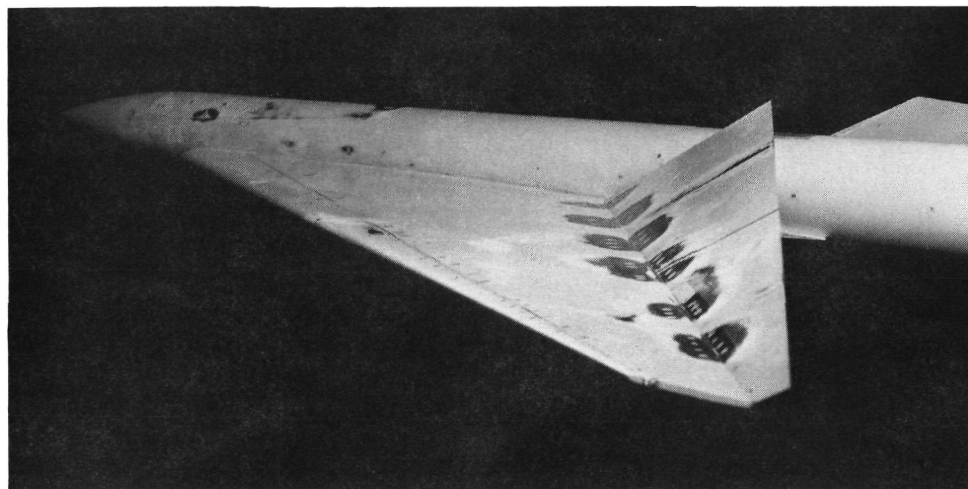


Figure 12.—Wind Tunnel Photograph—Flat Wing, Rounded L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $-30.2^\circ$

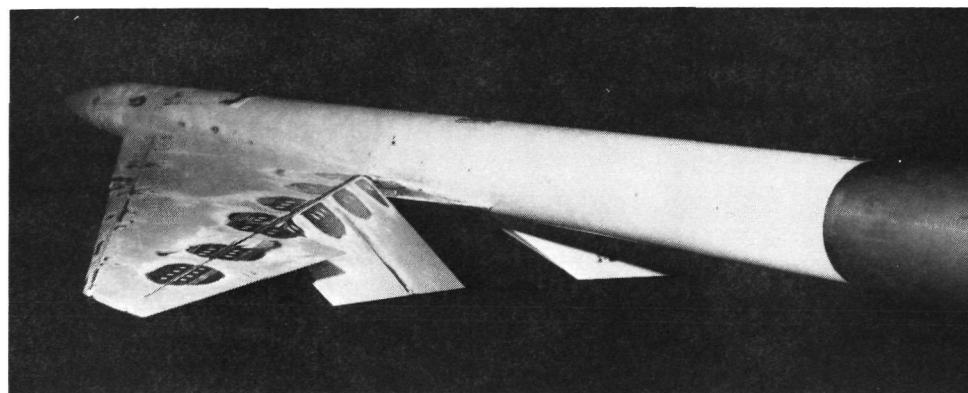
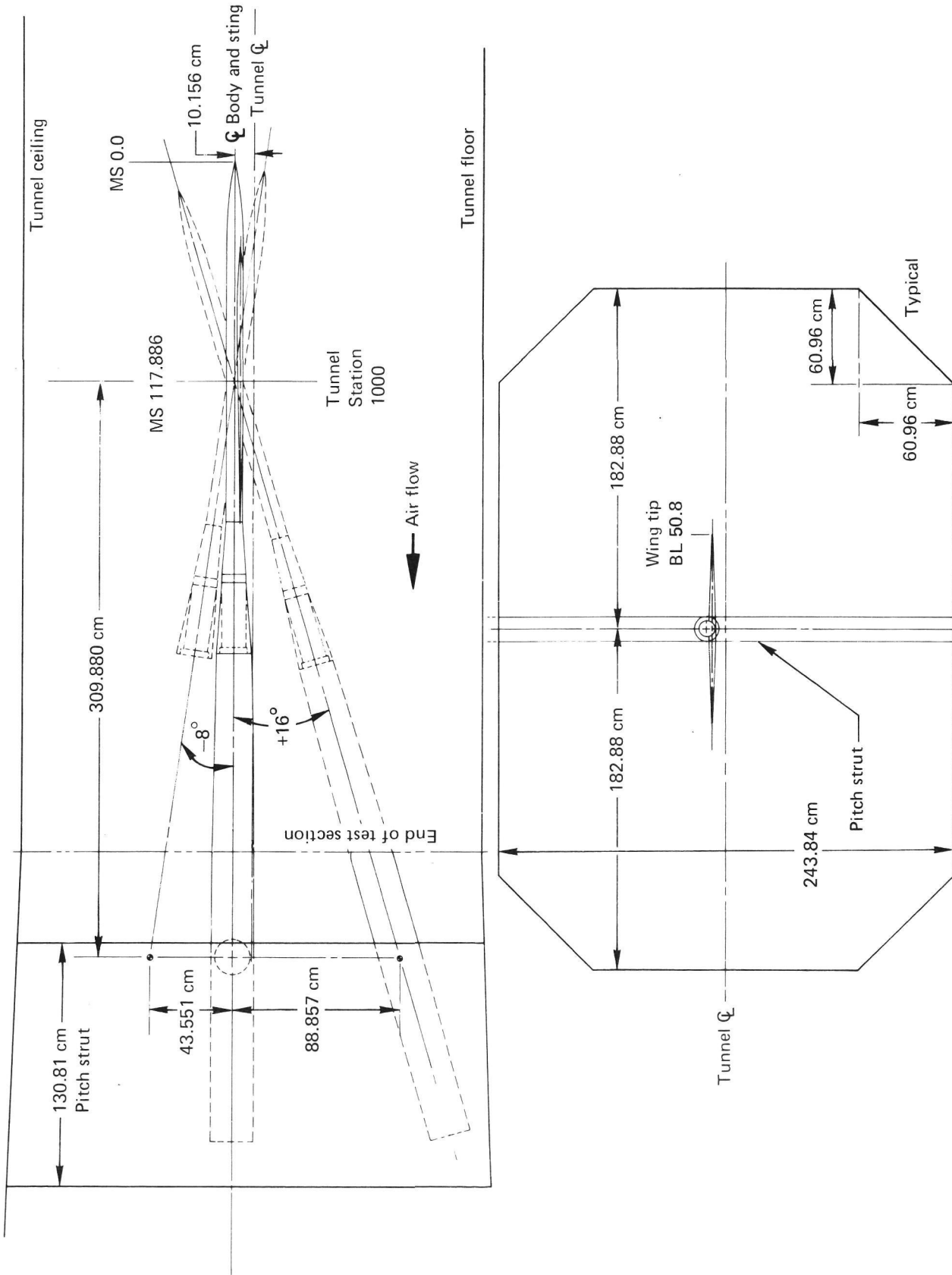
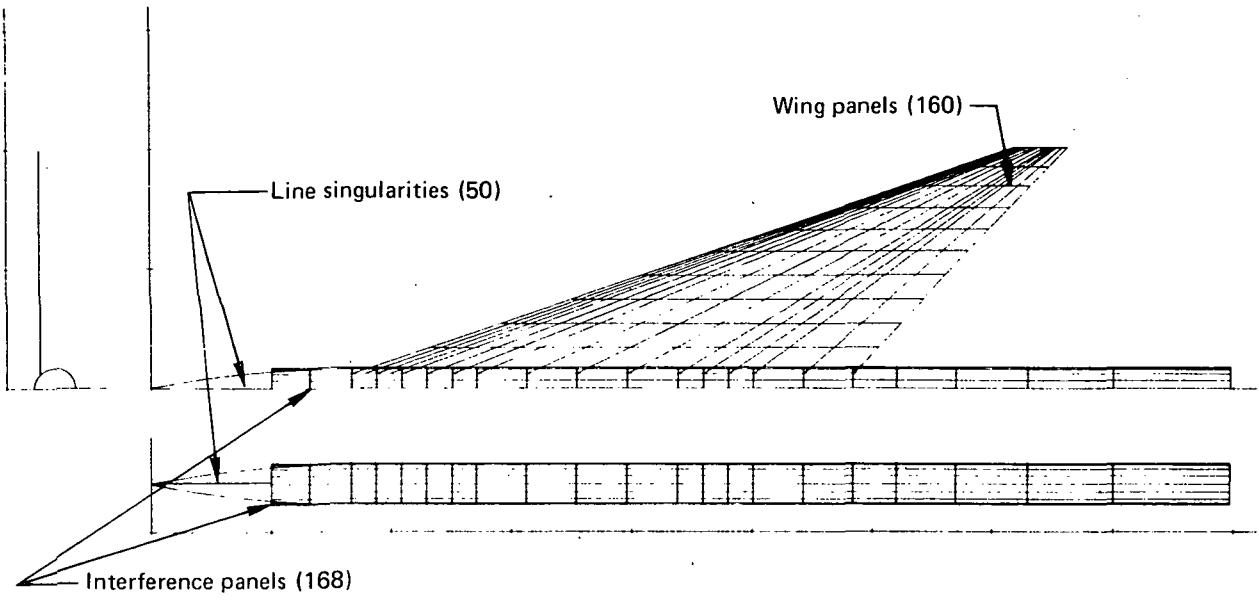


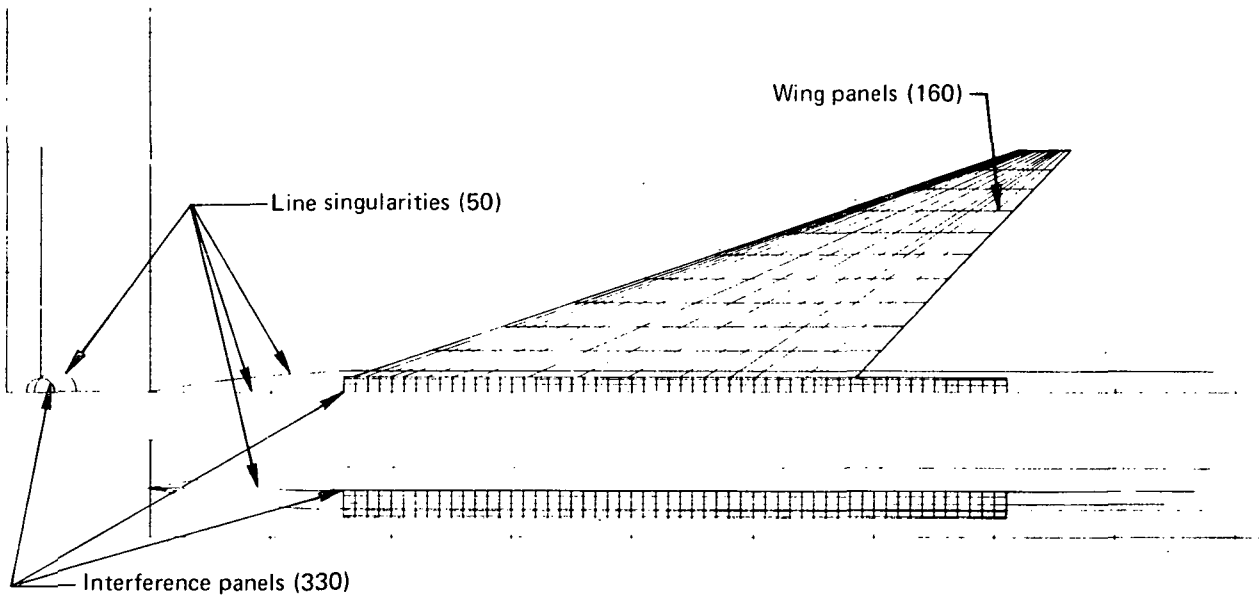
Figure 13.—Wind Tunnel Photograph—Flat Wing, Rounded L.E.; L.E. Deflection, Inboard =  $0.0^\circ$ , Outboard =  $12.8^\circ$ ; T.E. Deflection, Inboard =  $17.7^\circ$ , Outboard =  $0.0^\circ$



View Looking Aft  
 Figure 14.—Model Installation Diagram



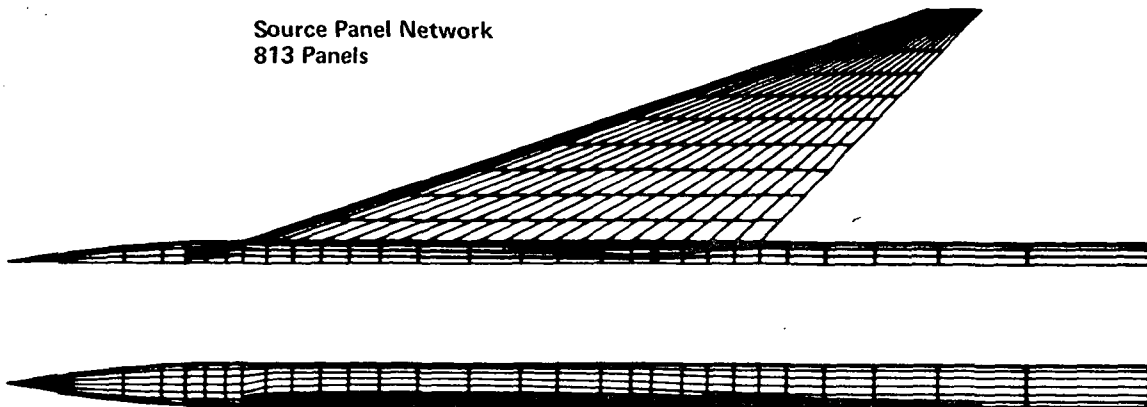
(a) Arrangement of Panels Used for Subsonic Mach Numbers



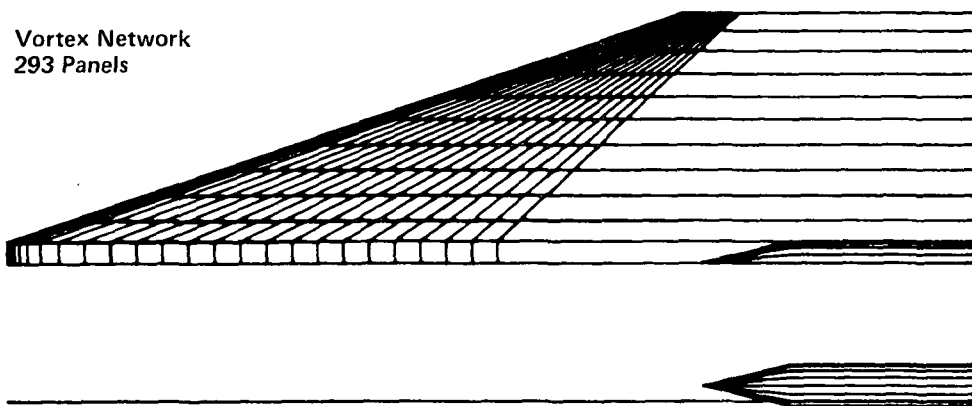
(b) Arrangement of Panels Used for Supersonic Mach Numbers

Figure 15. —Paneling for FLEXSTAB Computer Program

Source Panel Network  
813 Panels

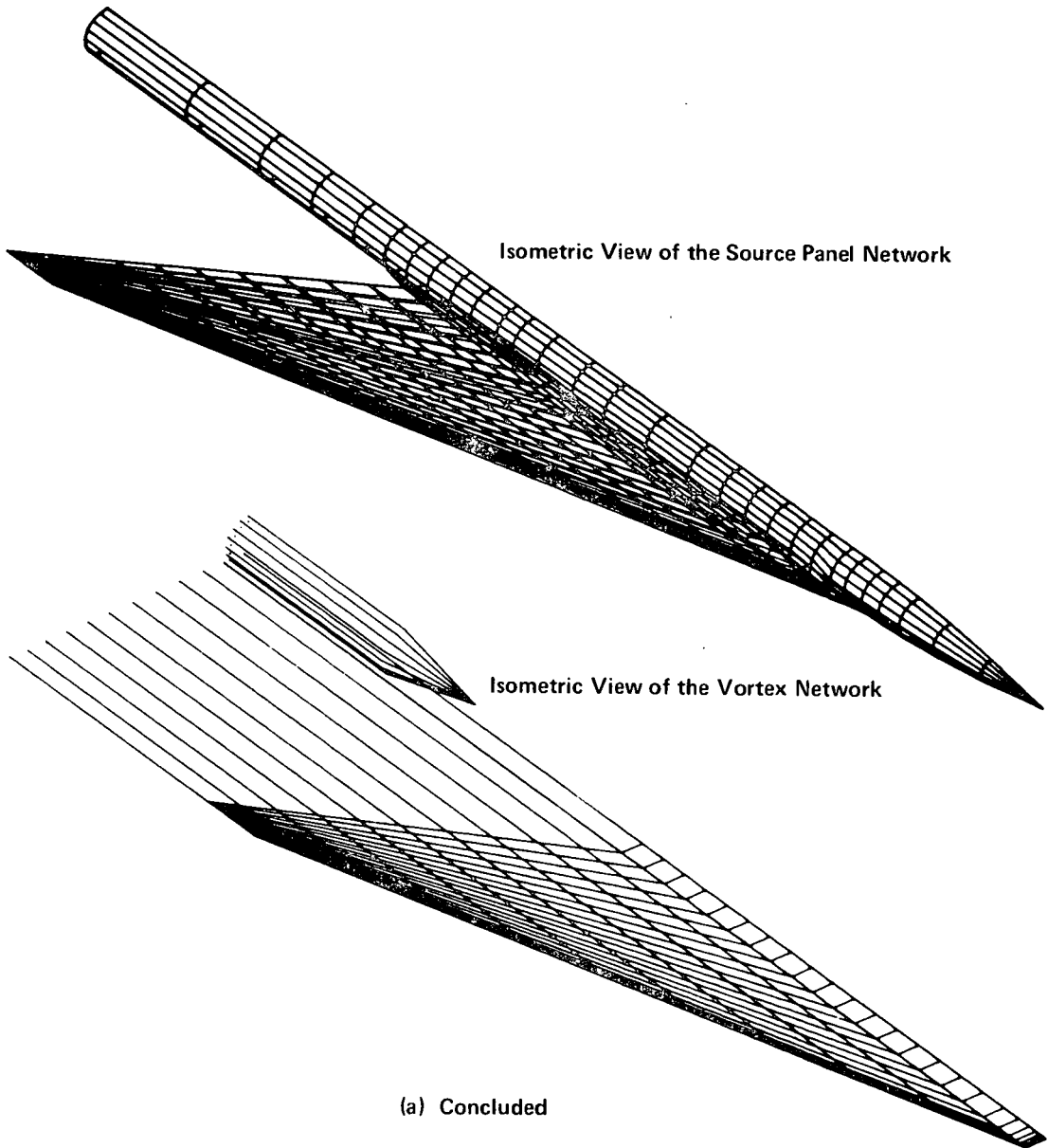


Vortex Network  
293 Panels



(a) Flat Wing, Round Leading Edge, 1106 Singularities

Figure 16.—Paneling for TEA-230 Computer Program

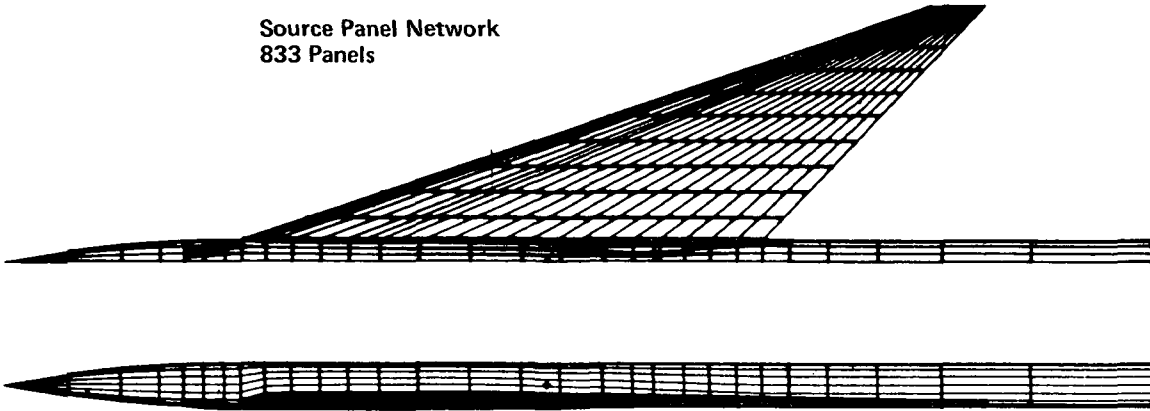


(a) Concluded

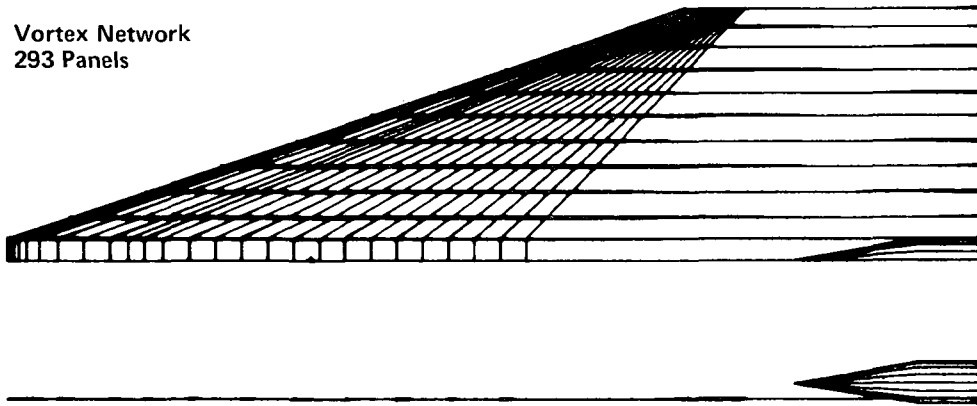
Figure 16.—(Continued)



Source Panel Network  
833 Panels



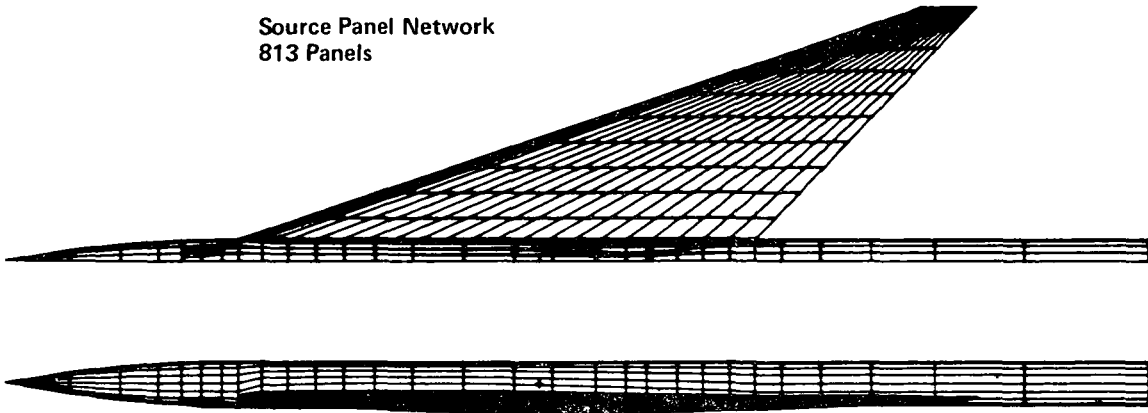
Vortex Network  
293 Panels



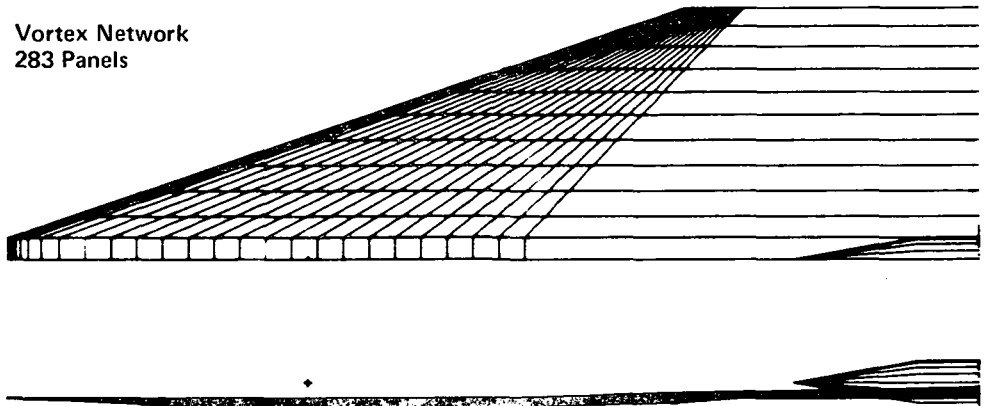
(b) Flat Wing, Sharp Leading Edge, 1126 Singularities

*Figure 16.-(Continued)*

Source Panel Network  
813 Panels



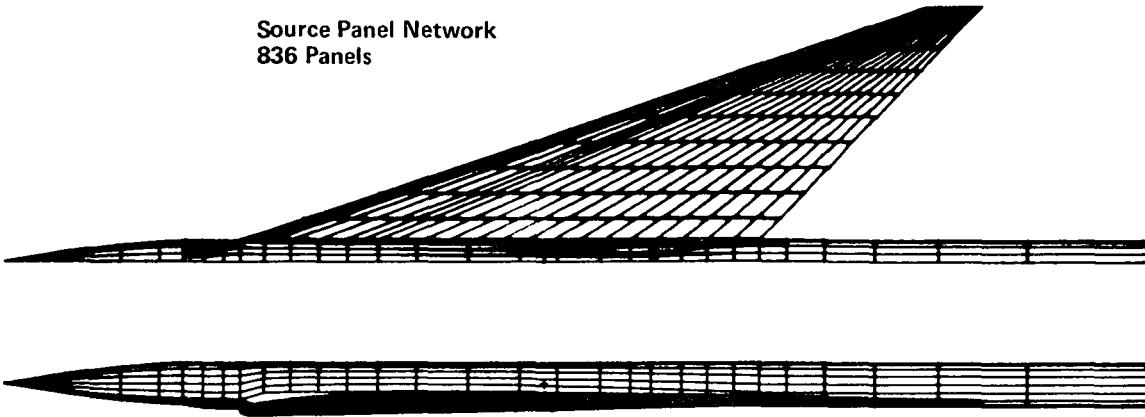
Vortex Network  
283 Panels



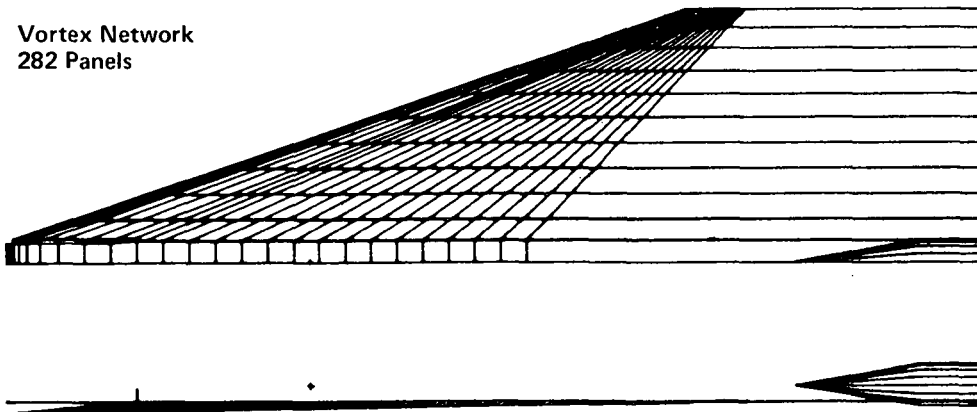
(c) Twisted Wing, Round Leading Edge, 1096 Singularities

Figure 16.—(Continued)

Source Panel Network  
836 Panels



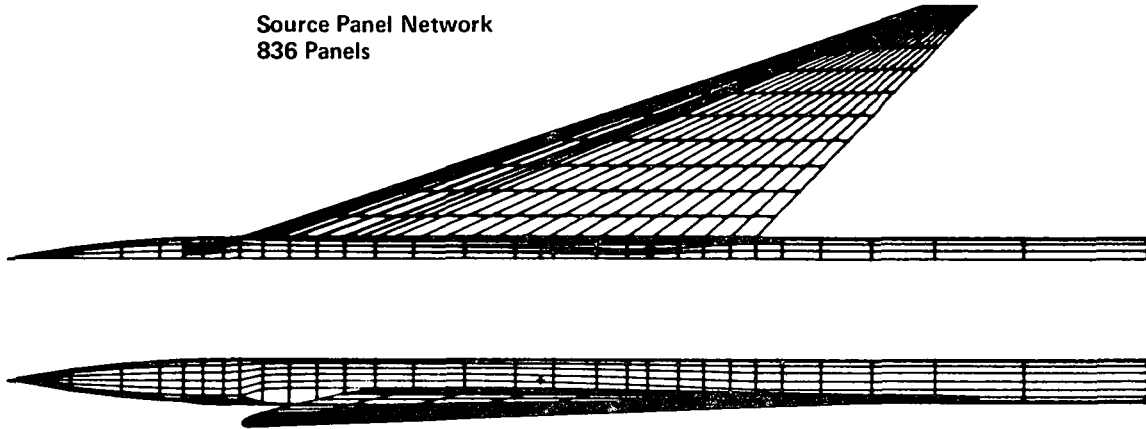
Vortex Network  
282 Panels



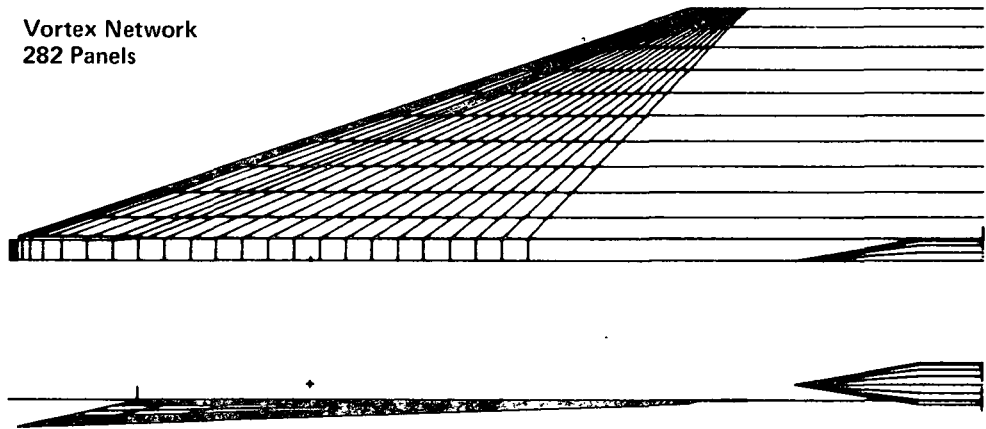
(d) Flat Wing, Leading Edge Deflection  $5.1^\circ$ , 1118 Singularities

Figure 16.— (Continued)

Source Panel Network  
836 Panels



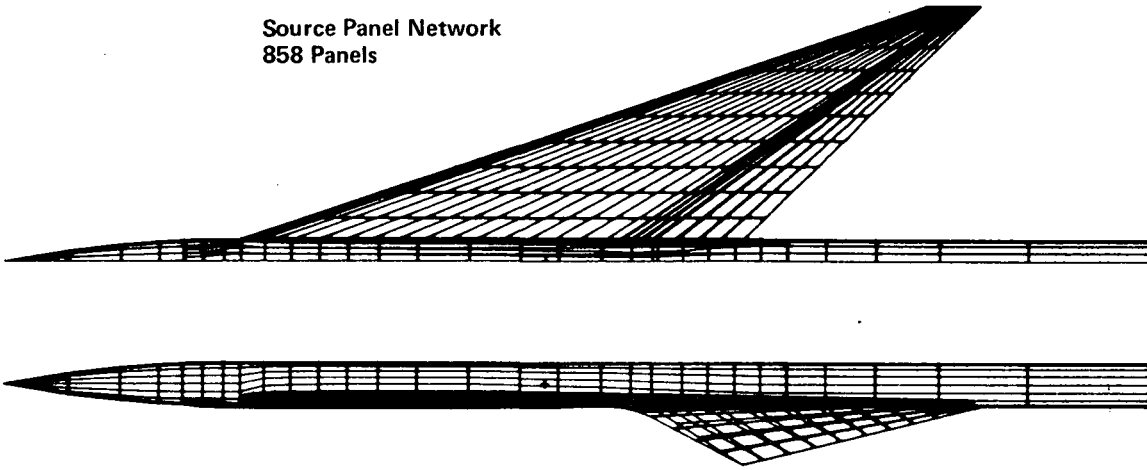
Vortex Network  
282 Panels



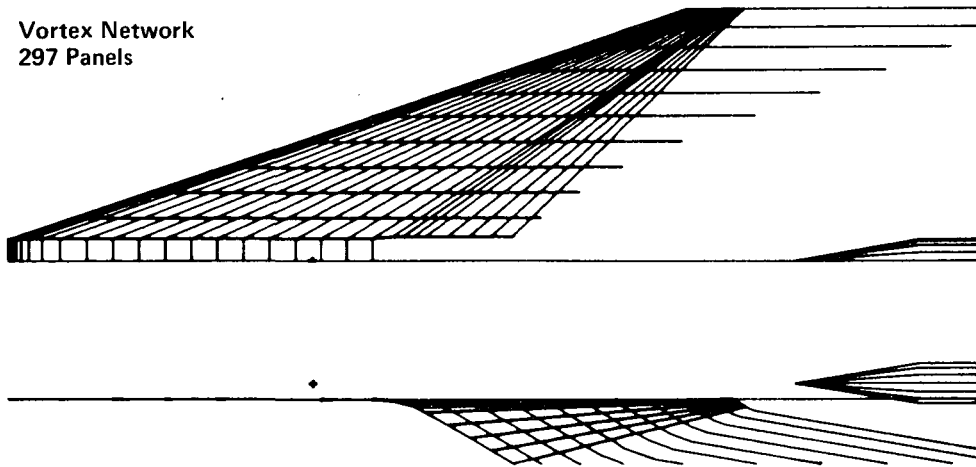
(e) Flat Wing, Leading Edge Deflection  $12.8^\circ$ , 1118 Singularities

Figure 16.—(Continued)

Source Panel Network  
858 Panels



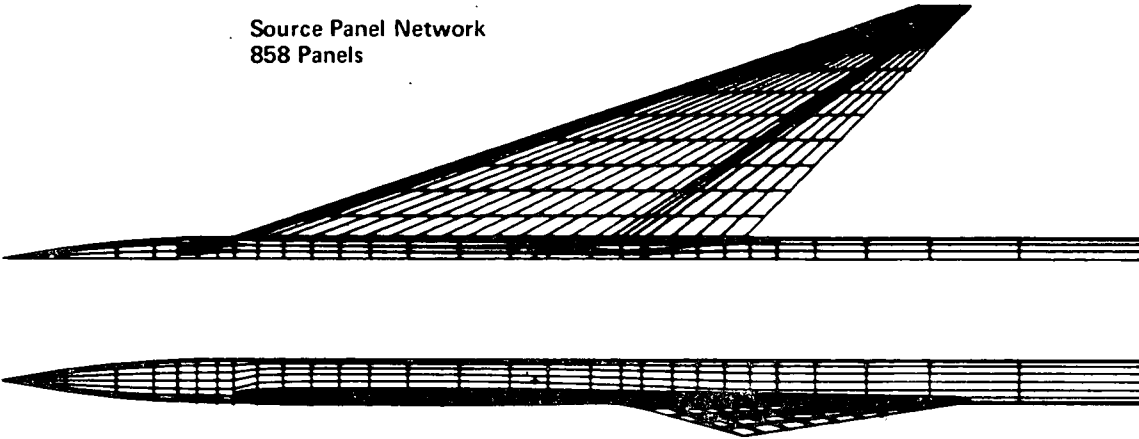
Vortex Network  
297 Panels



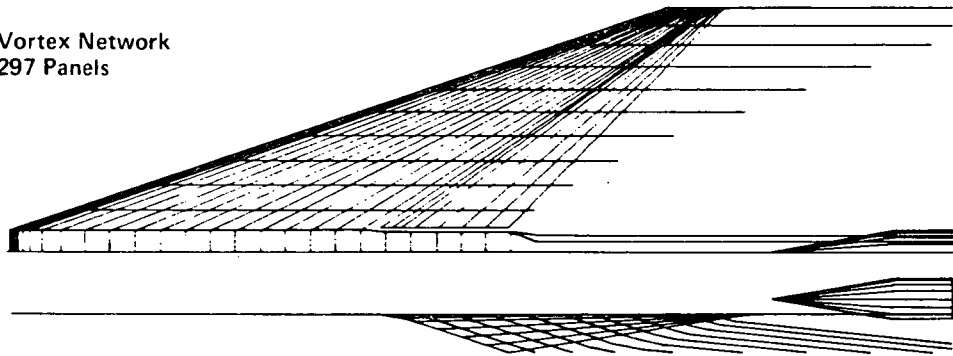
(f) Flat Wing, Trailing Edge Deflection  $30.2^\circ$ , 1155 Singularities

Figure 16.— (Continued)

Source Panel Network  
858 Panels



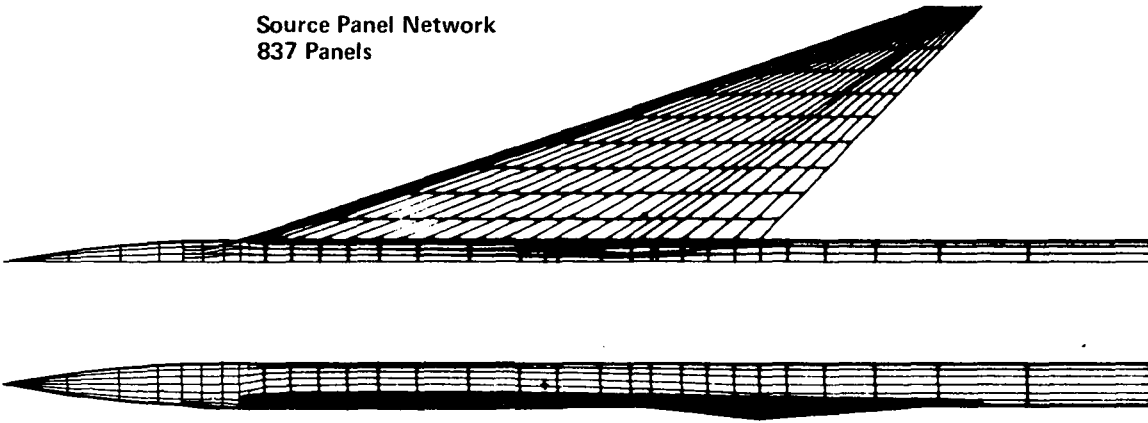
Vortex Network  
297 Panels



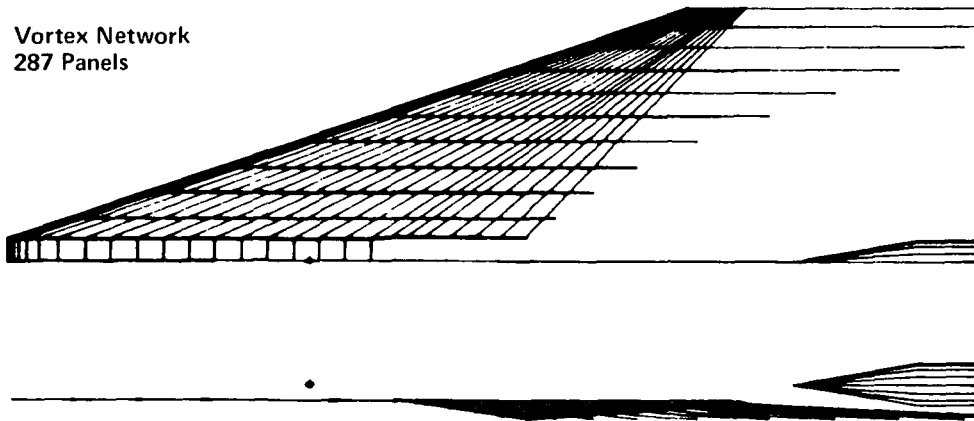
(g) Flat Wing, Trailing Edge Deflection  $17.7^\circ$ , 1155 Singularities

Figure 16.—(Continued)

Source Panel Network  
837 Panels



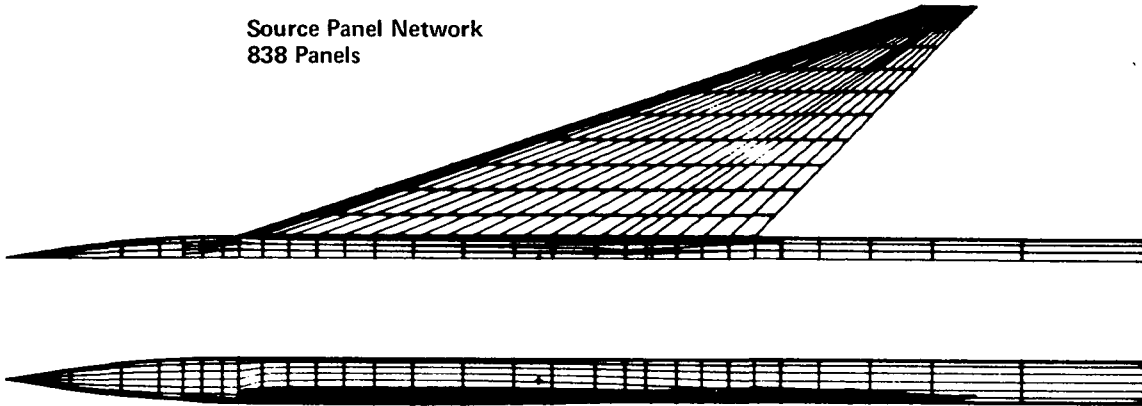
Vortex Network  
287 Panels



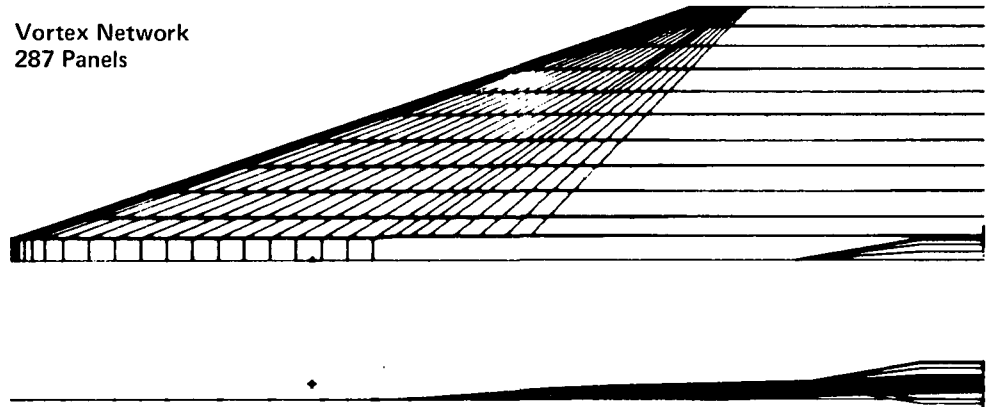
(h) Flat Wing, Trailing Edge Deflection  $8.3^\circ$ , 1124 Singularities

Figure 16.—(Continued)

Source Panel Network  
838 Panels



Vortex Network  
287 Panels



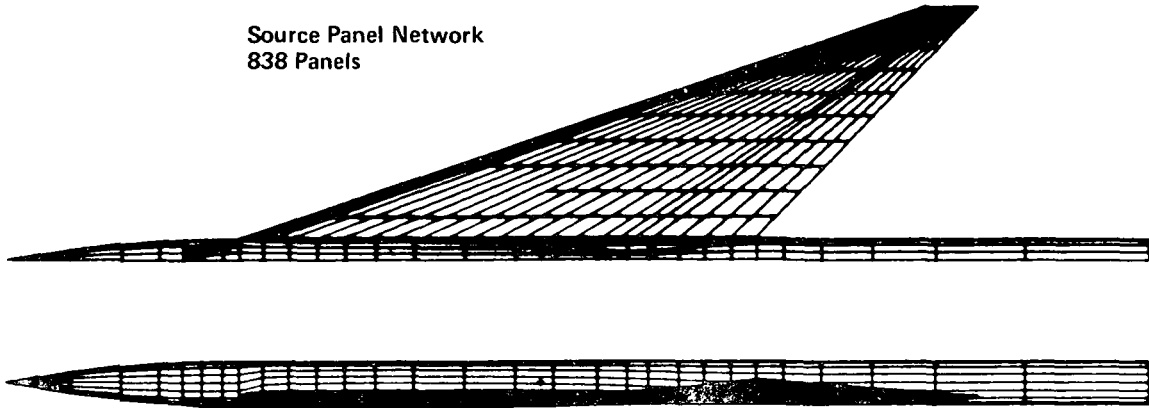
(i) Flat Wing, Trailing Edge Deflection  $-4.1^\circ$ , 1125 Singularities

*Figure 16.—(Continued)*

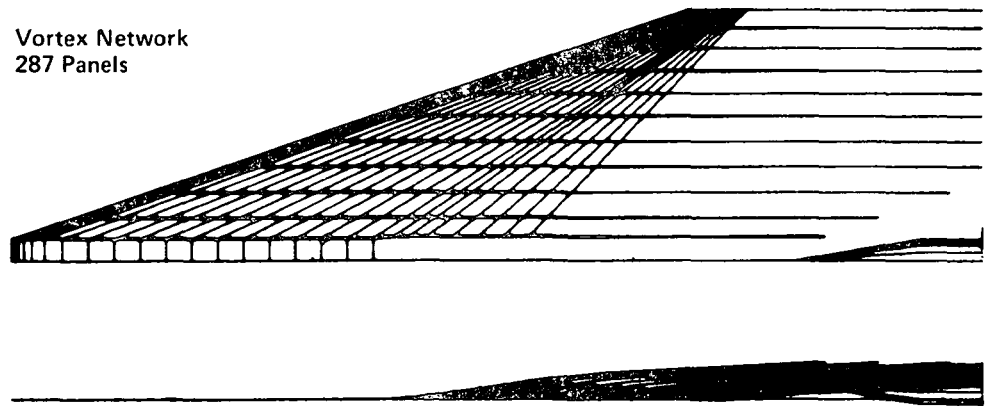


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Source Panel Network  
838 Panels

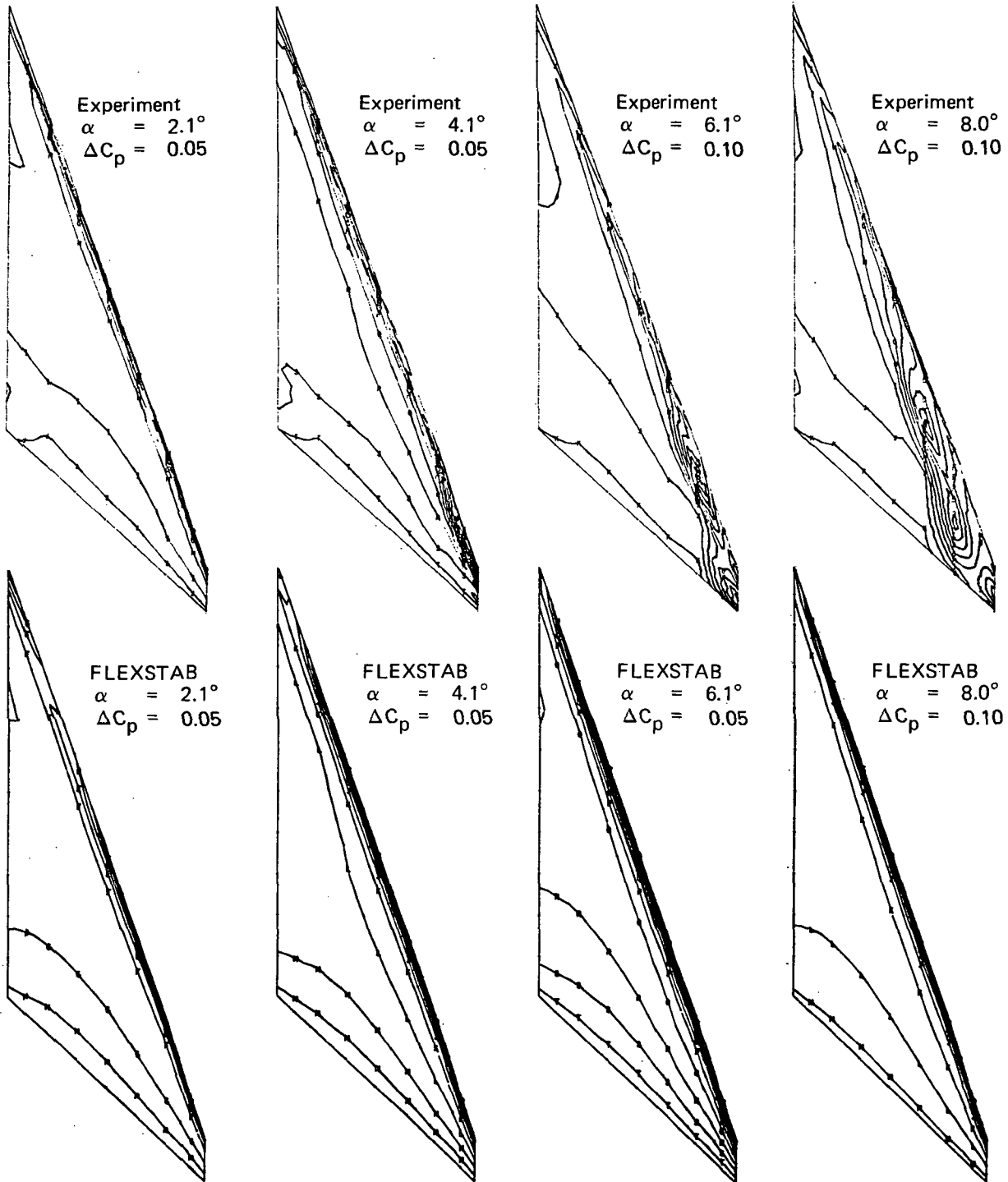


Vortex Network  
287 Panels



(j) Flat Wing, Trailing Edge Deflection  $-8.3^\circ$ , 1125 Singularities

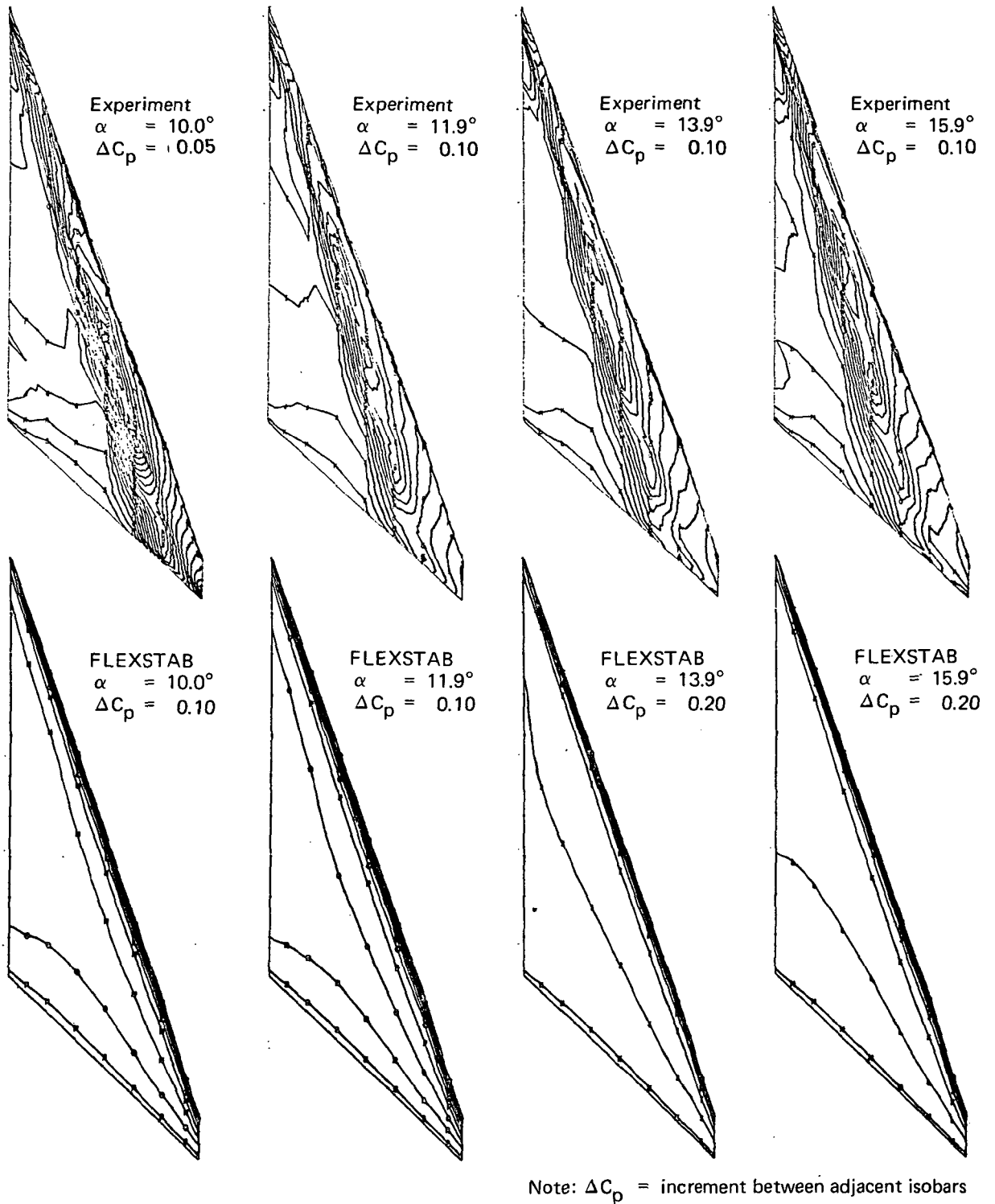
*Figure 16.—(Concluded)*



Note:  $\Delta C_p$  = increment between adjacent isobars

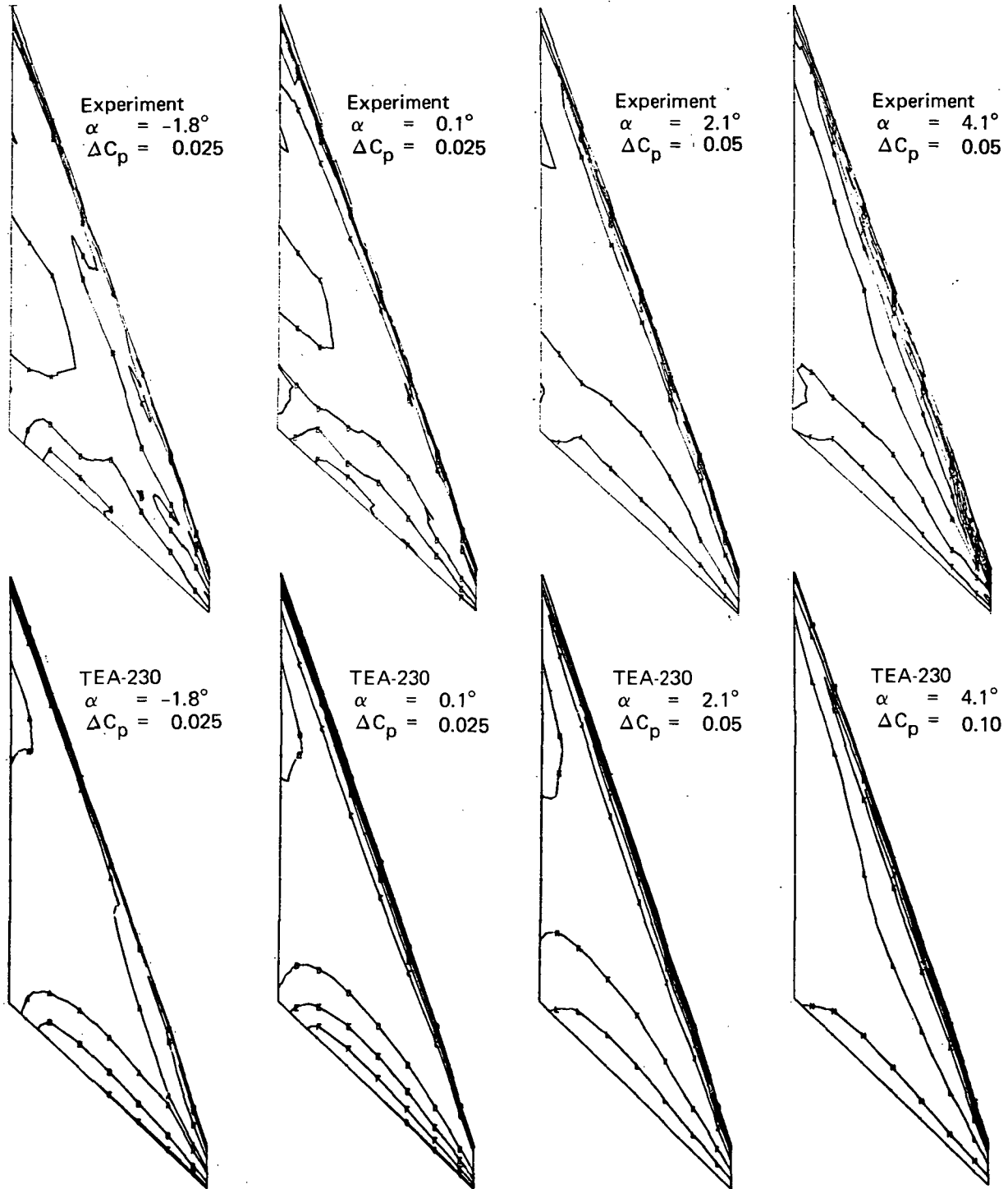
(a) Upper Surface Isobars, FLEXSTAB and Experiment

Figure 17.- Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



(a) (Concluded)

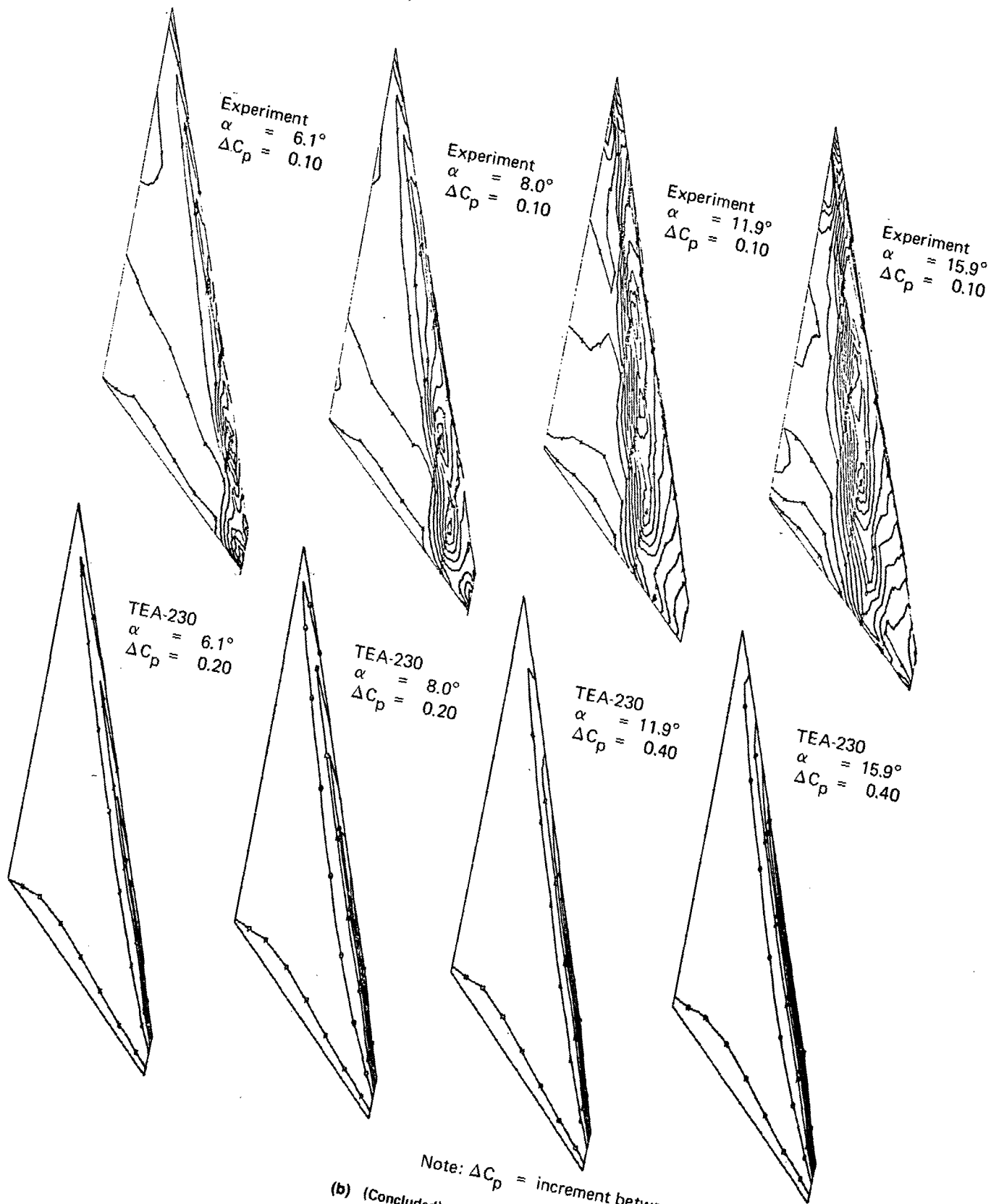
Figure 17.-(Continued)



Note:  $\Delta C_p$  = increment between adjacent isobars

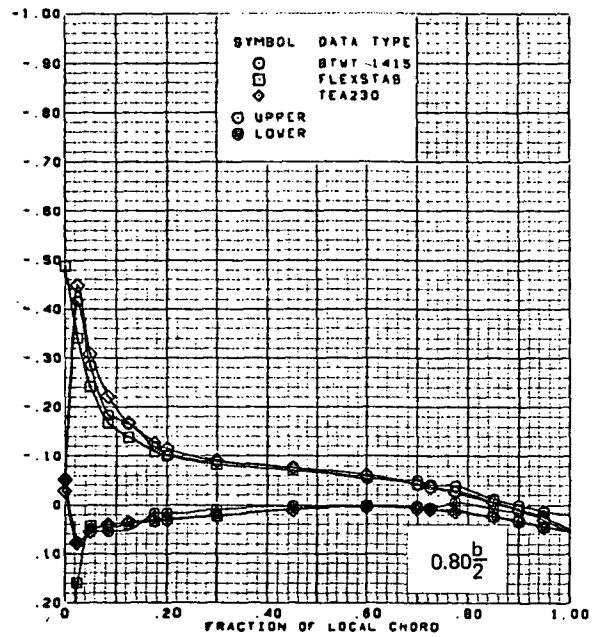
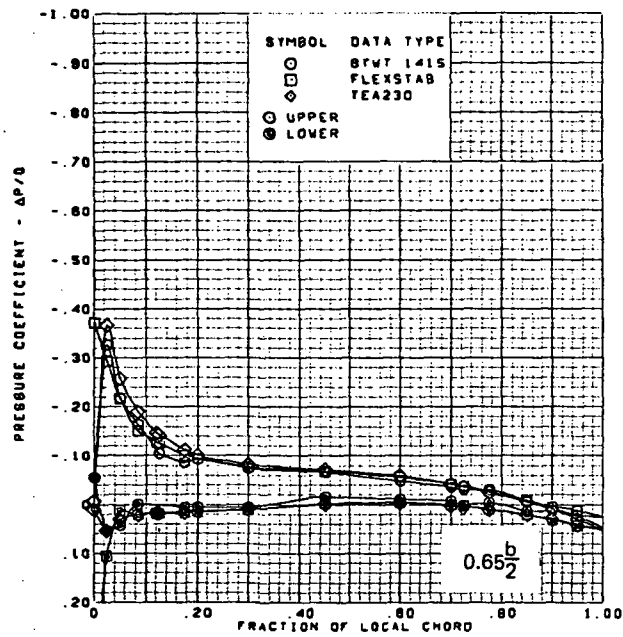
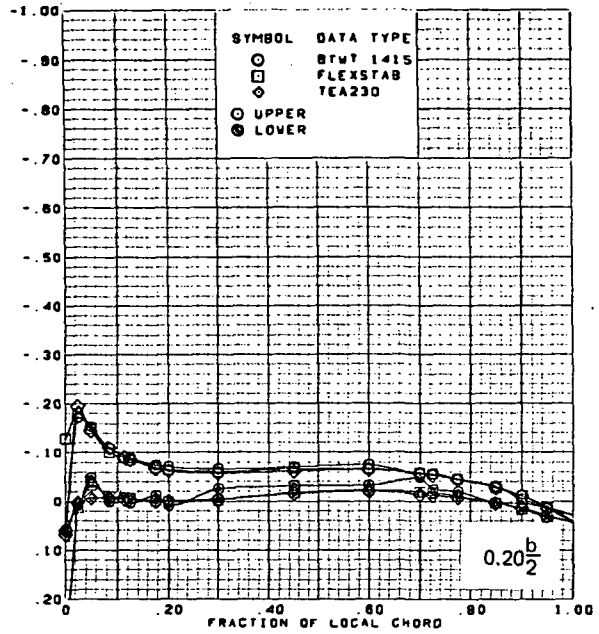
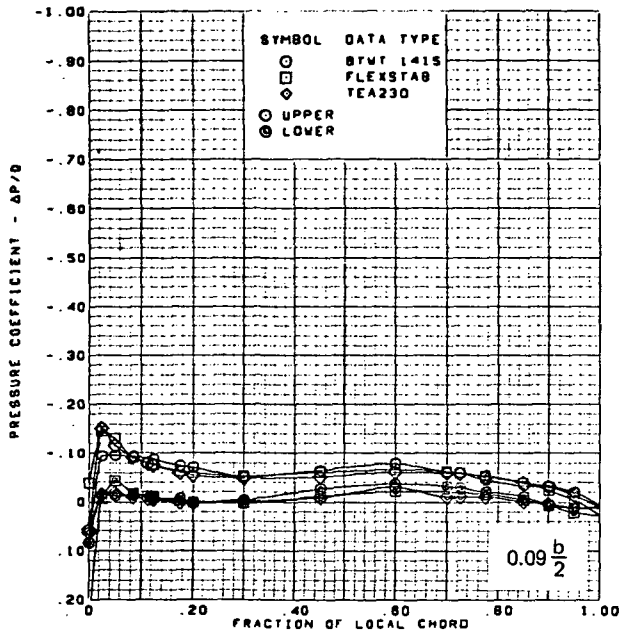
(b) Upper Surface Isobars, TEA-230 and Experiment

Figure 17.-(Continued)



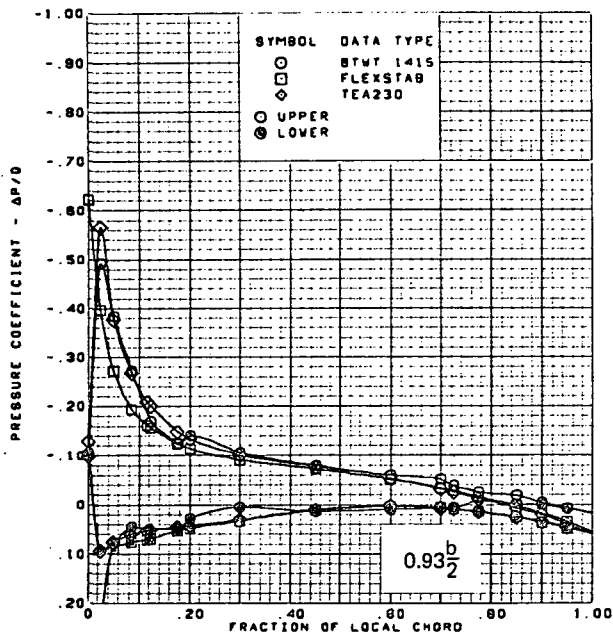
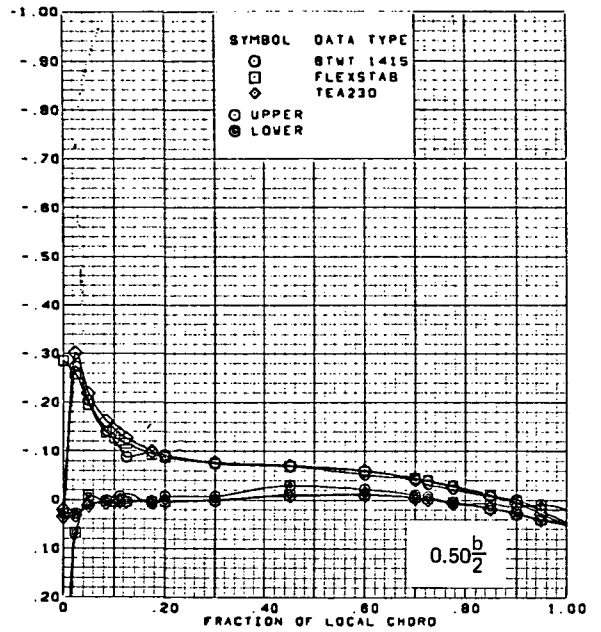
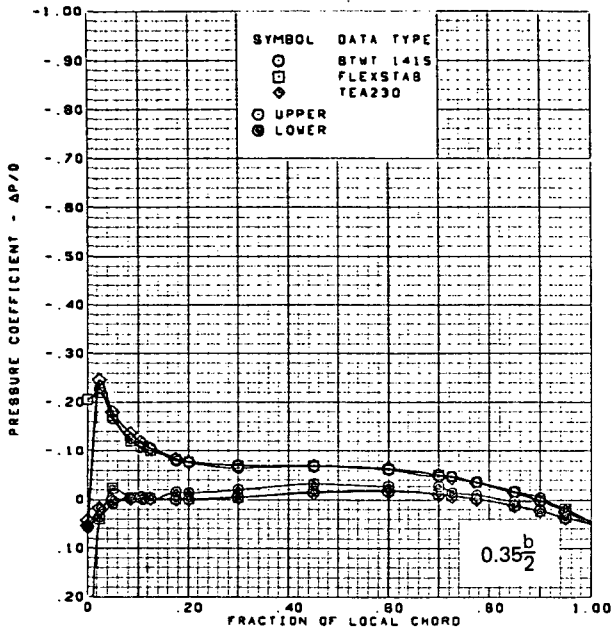
(b) (Concluded)

Figure 17.--(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha = 2.1^\circ$

Figure 17.--(Continued)

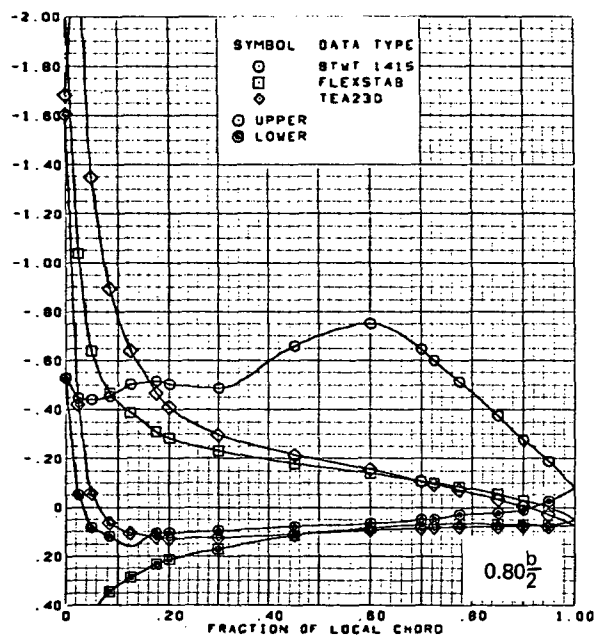
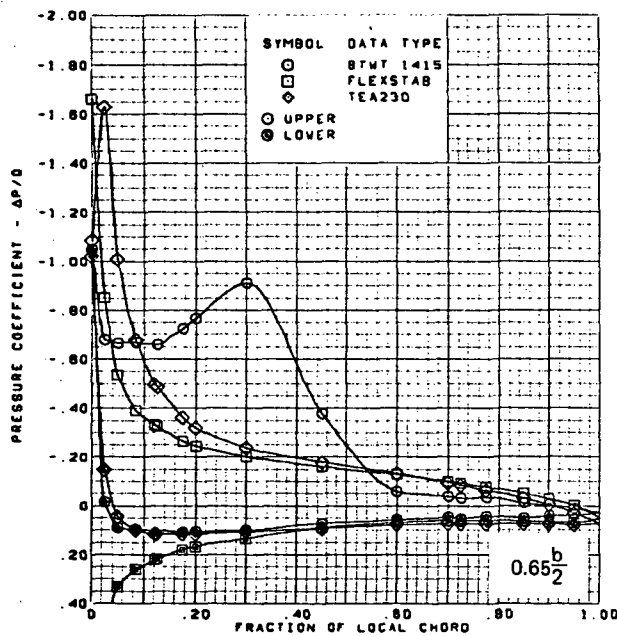
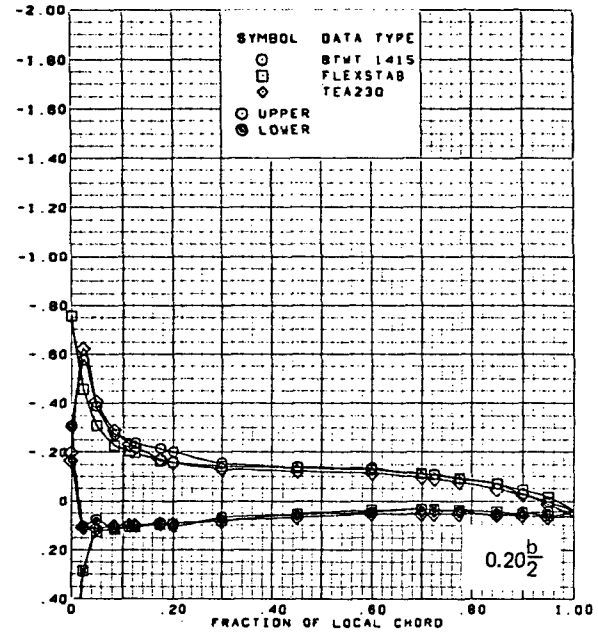
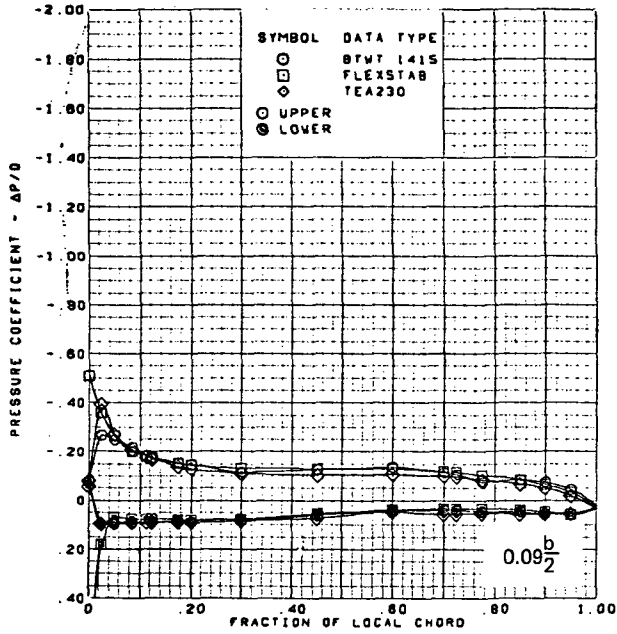


$M = 0.40$  (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(c) (Concluded)

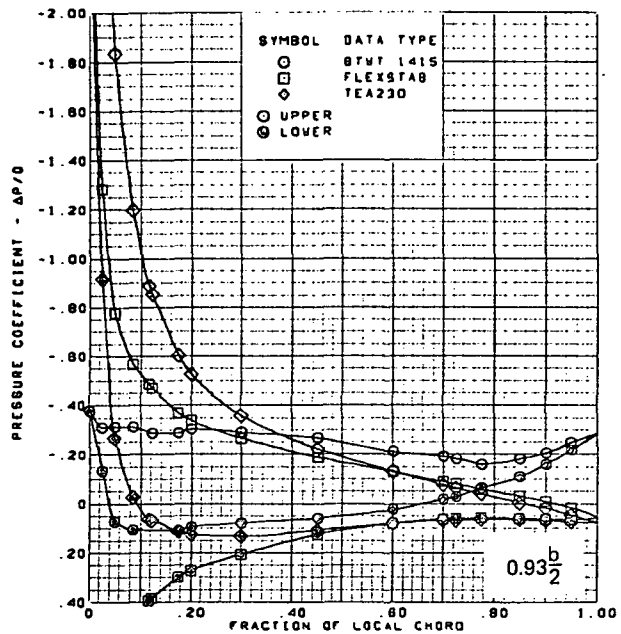
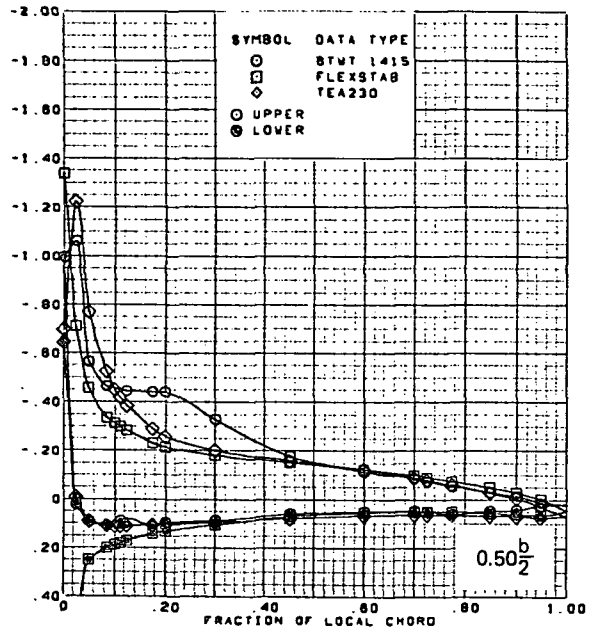
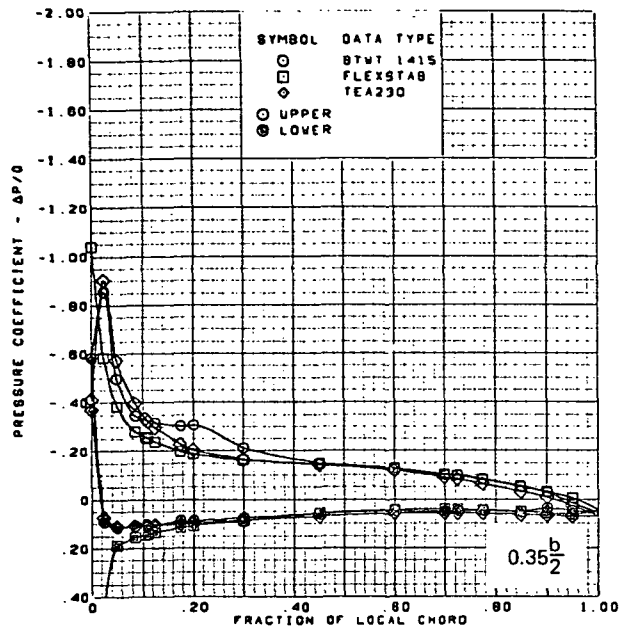
Figure 17.--(Continued)





(d) Surface Chordwise Pressure Distributions,  $\alpha = 8.0^\circ$

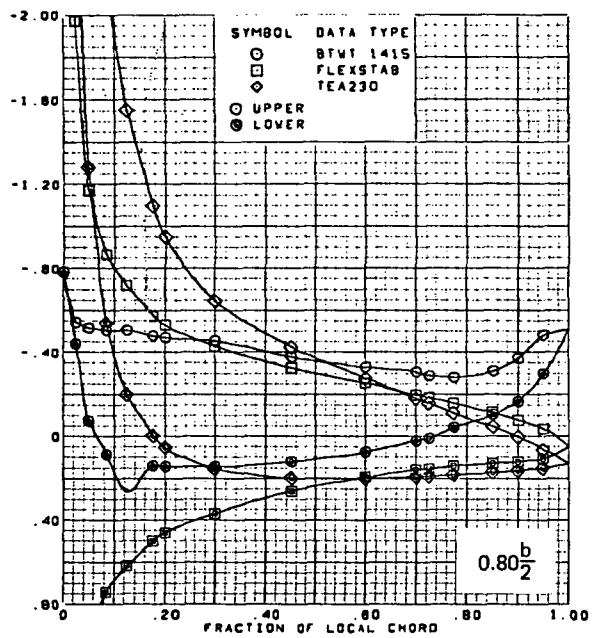
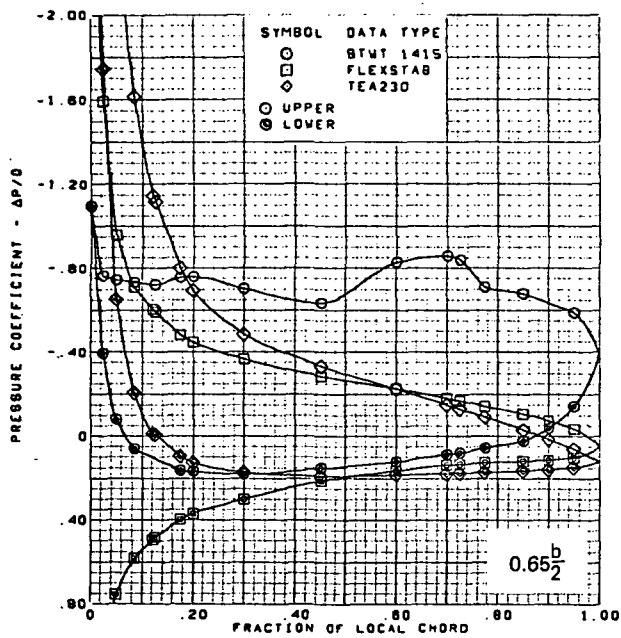
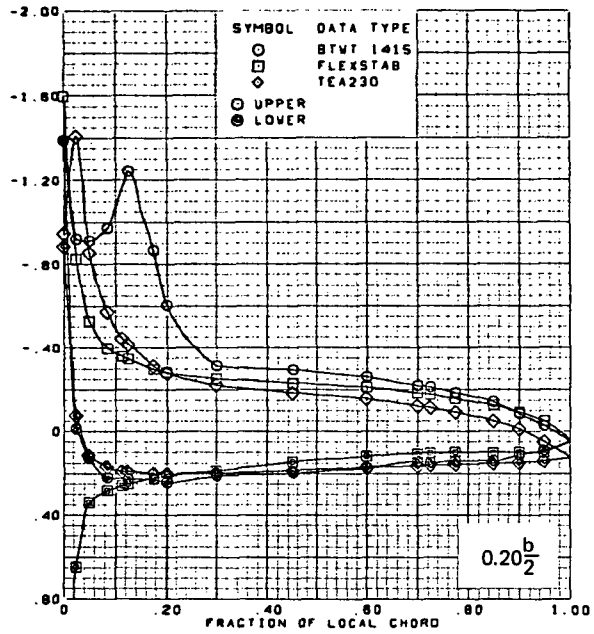
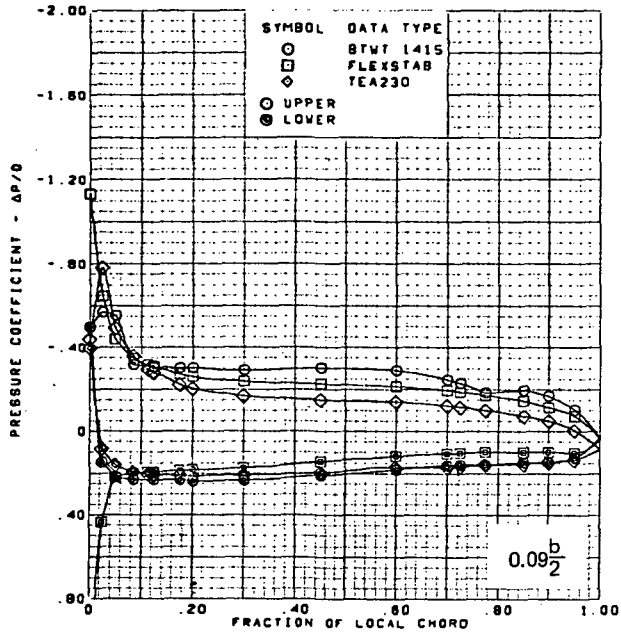
Figure 17.--(Continued)



M = 0.40 (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

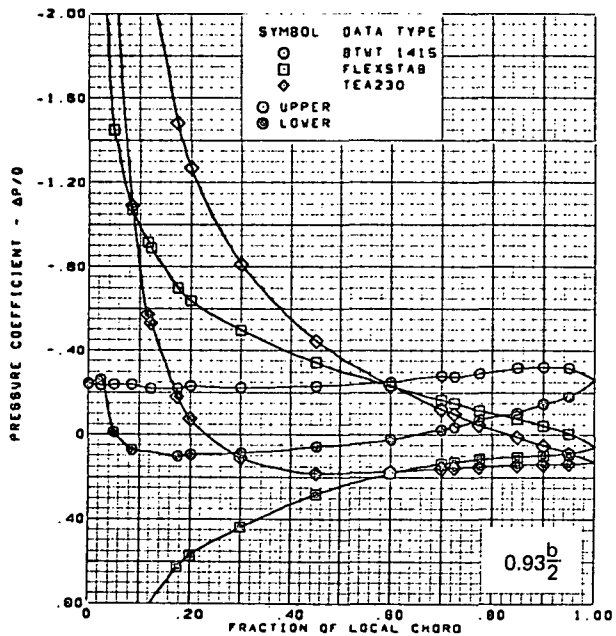
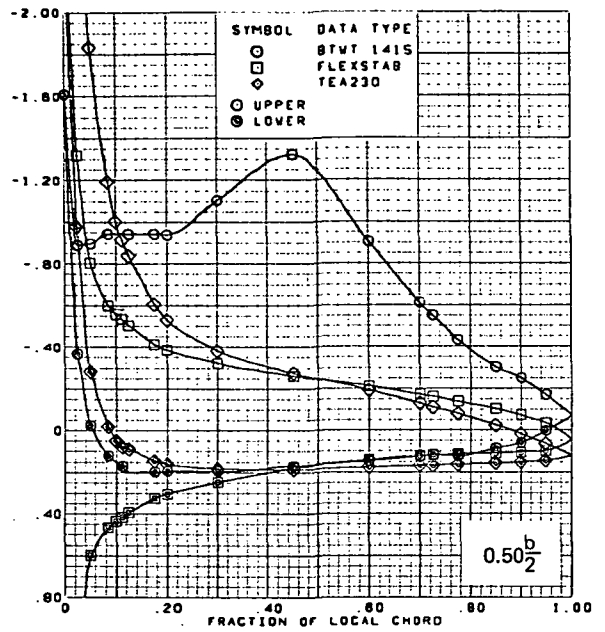
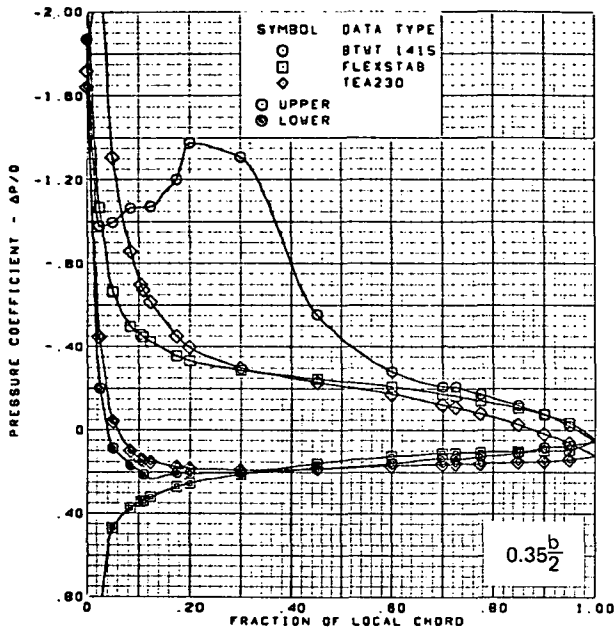
(d) (Concluded)

Figure 17.-(Continued)



(e) Surface Chordwise Pressure Distributions,  $\alpha = 15.9^\circ$

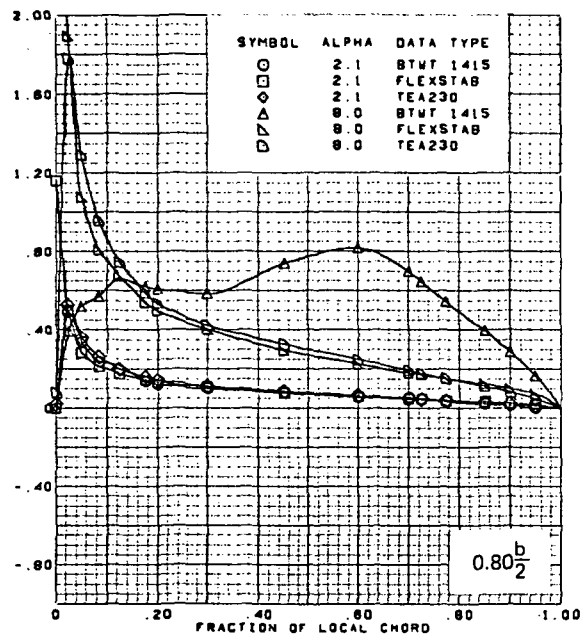
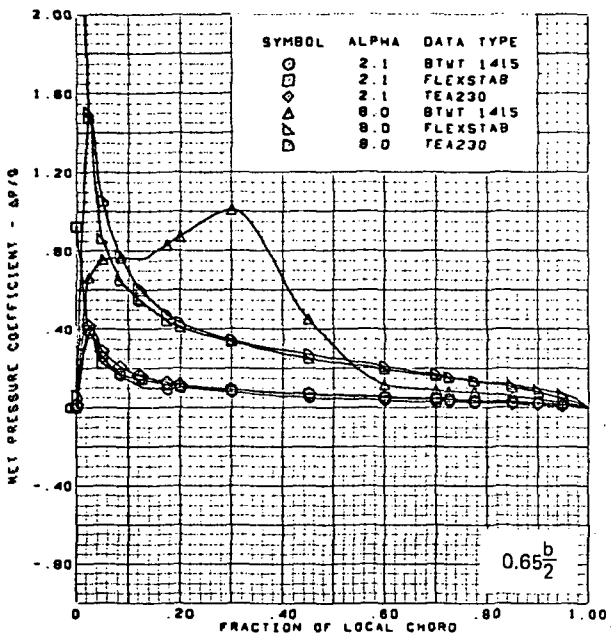
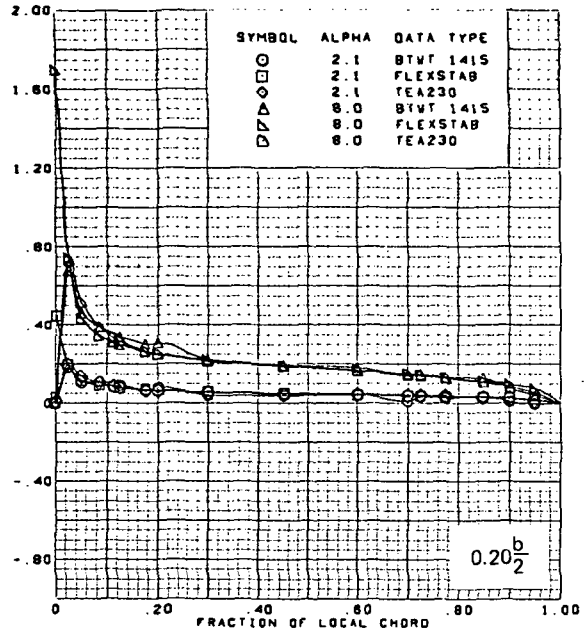
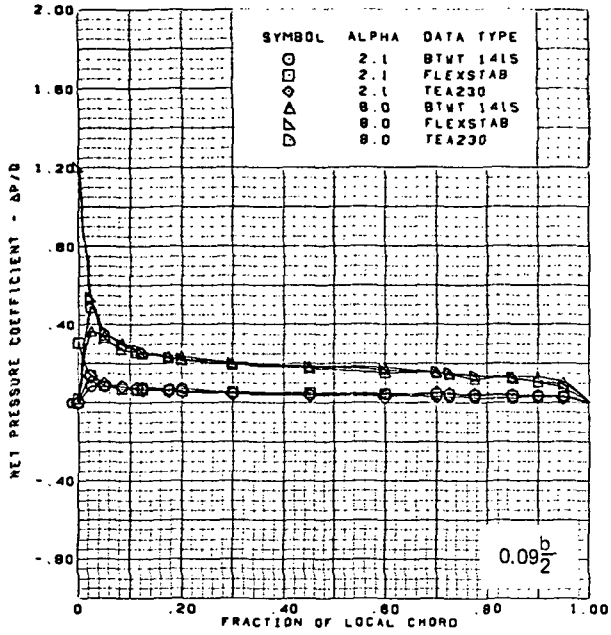
Figure 17.-(Continued)



M = 0.40 (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

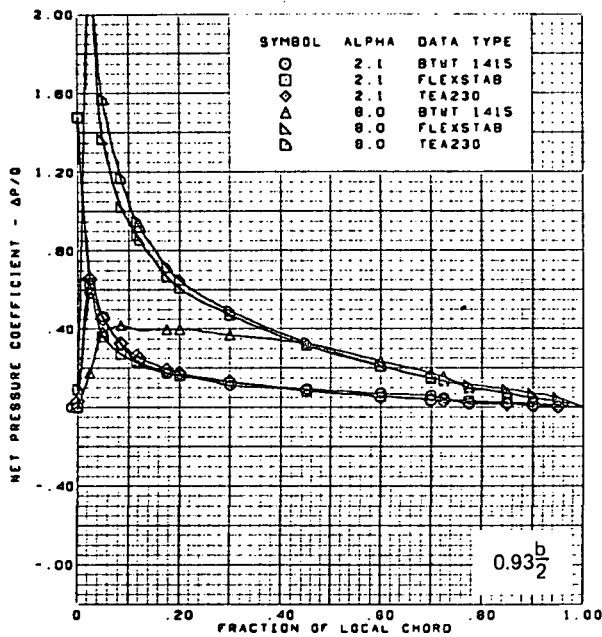
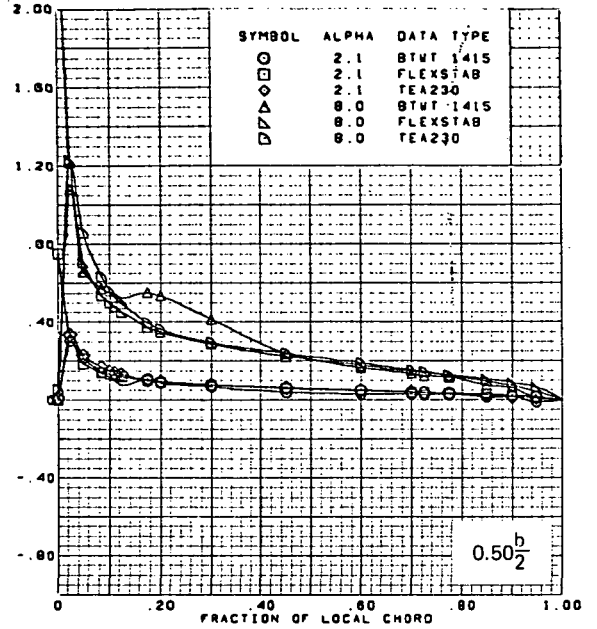
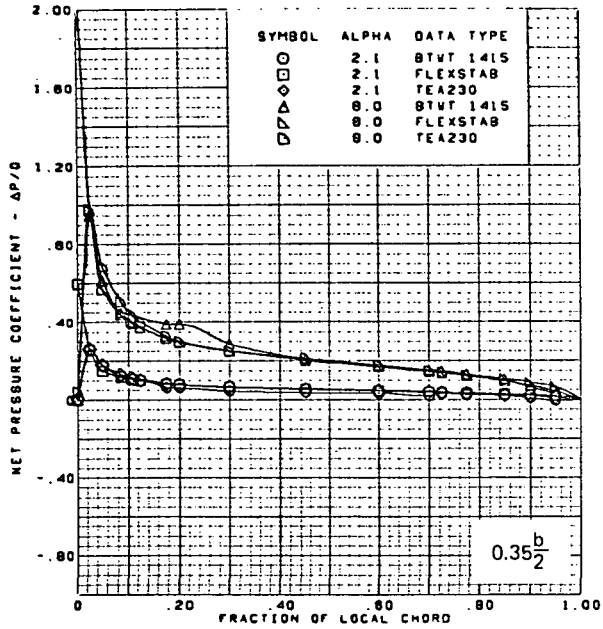
(e) (Concluded)

Figure 17.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha = 2.1^\circ, 8.0^\circ$

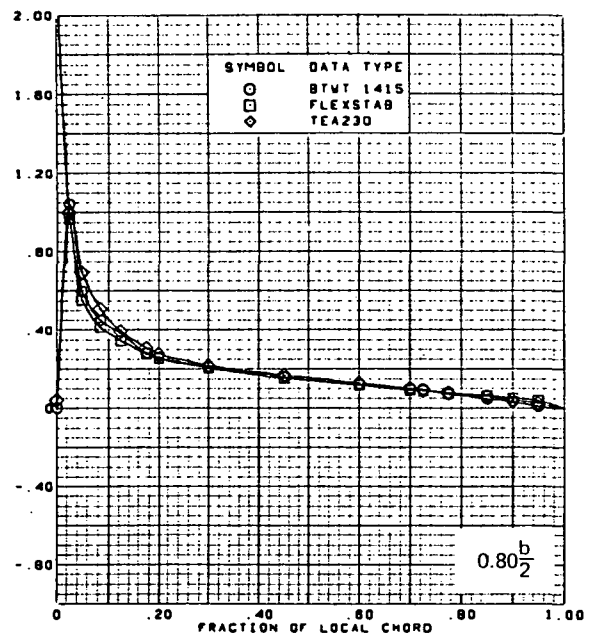
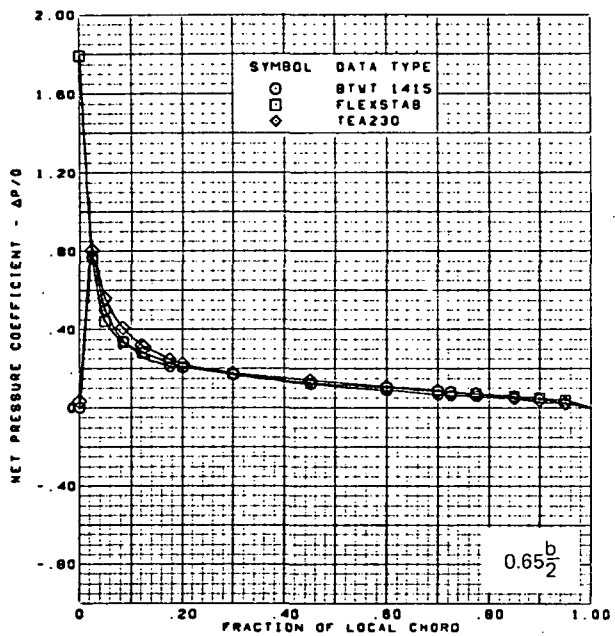
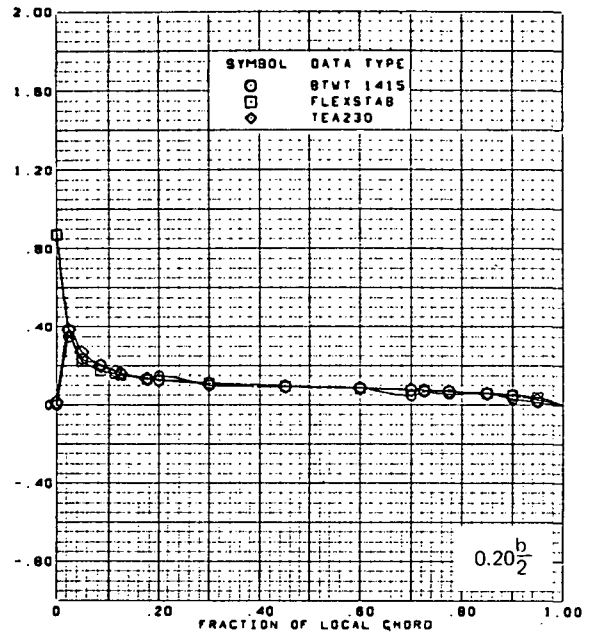
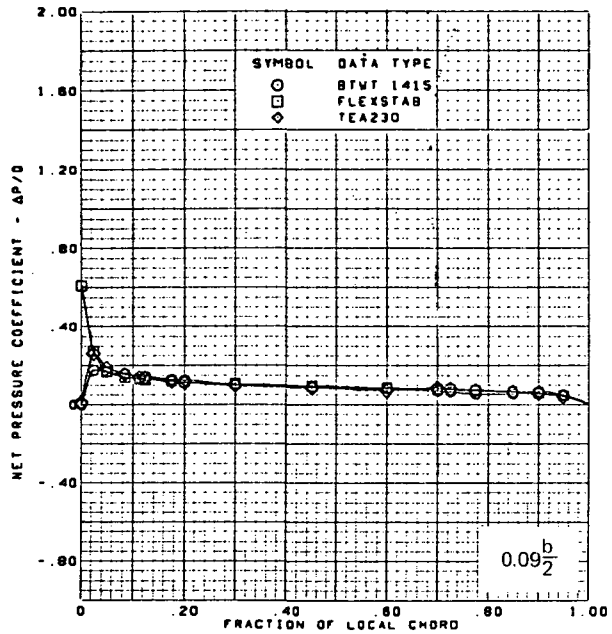
Figure 17.--(Continued)



M = 0.40 (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

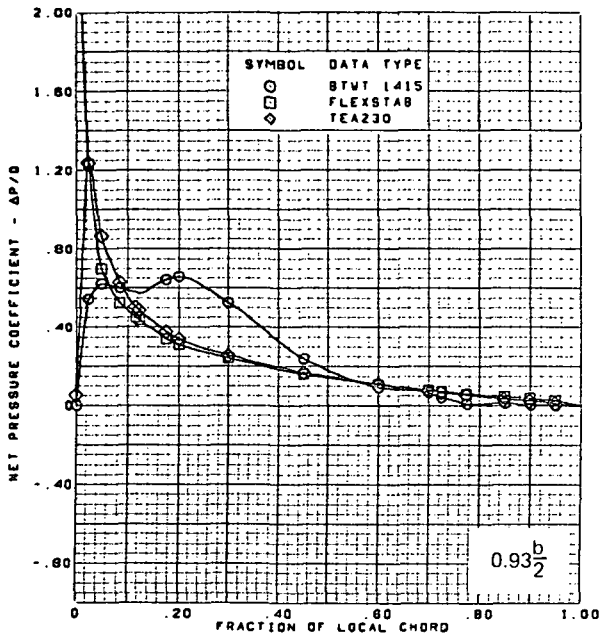
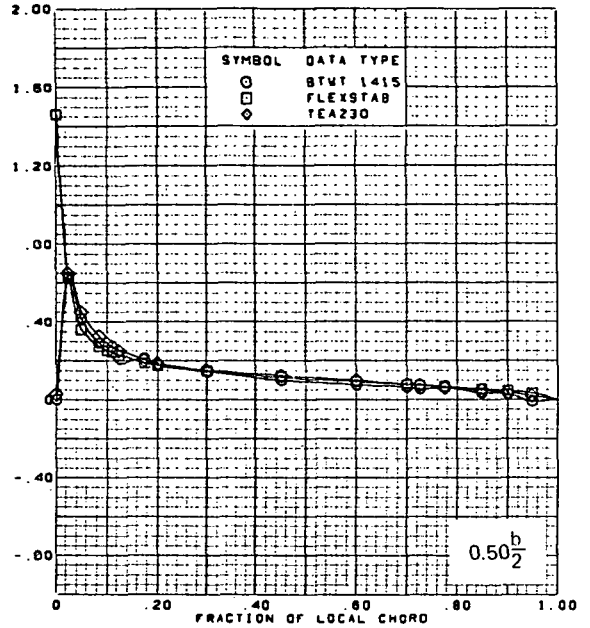
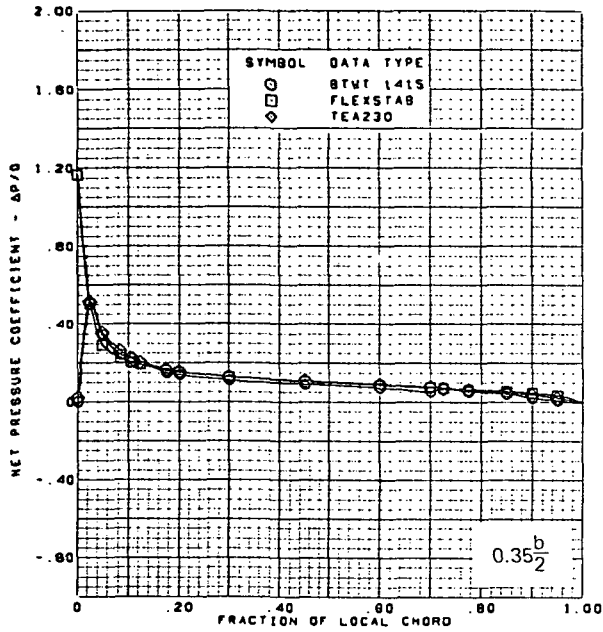
(f) (Concluded)

Figure 17.-(Continued)



(g) Net Chordwise Pressure Distributions,  $\alpha = 4.1^\circ$

Figure 17.-(Continued)

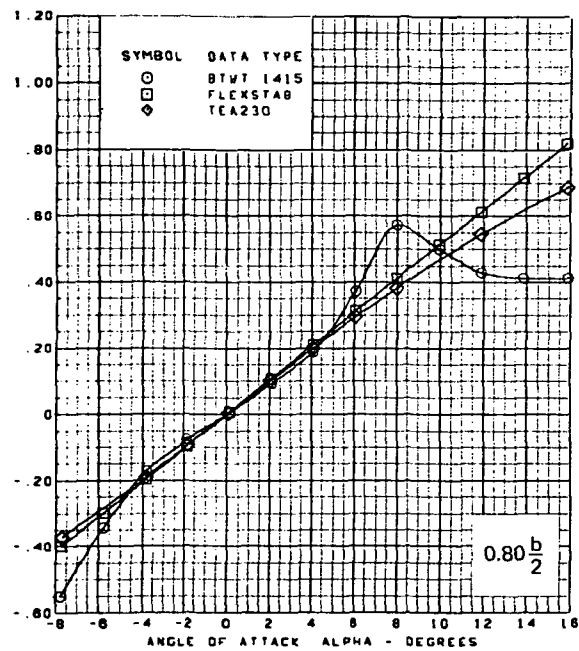
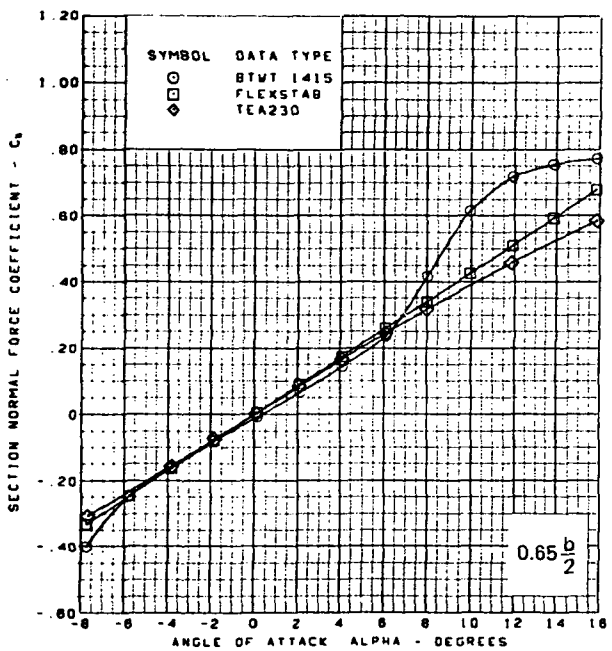
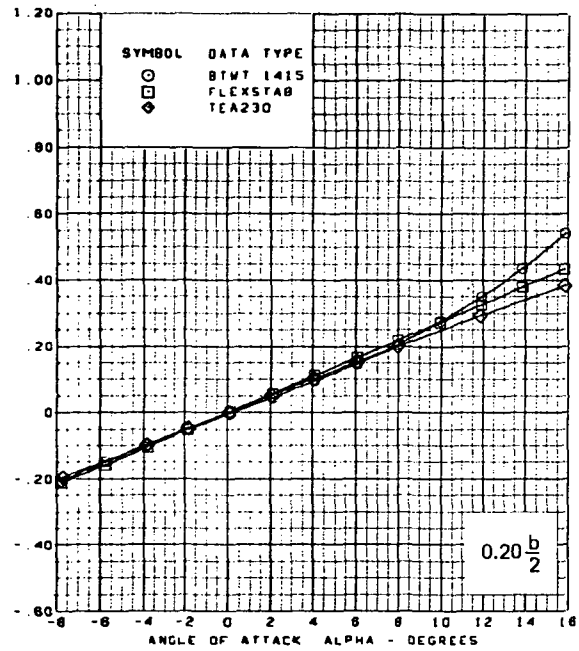
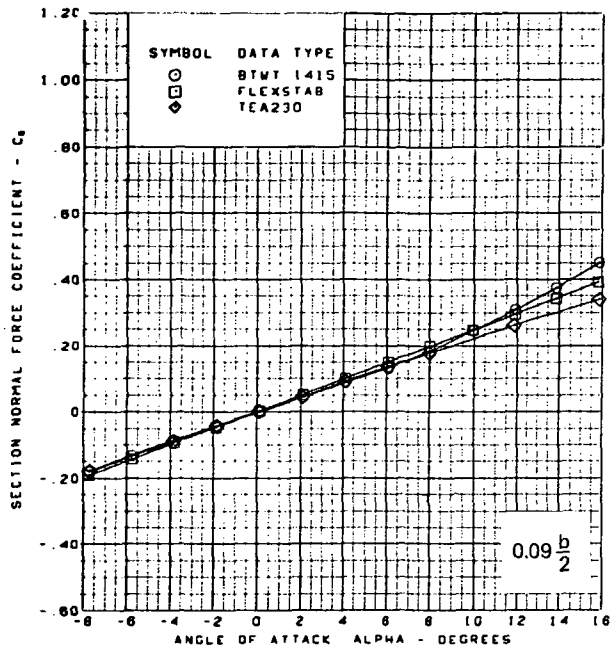


$M = 0.40$  (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(g) (Concluded)

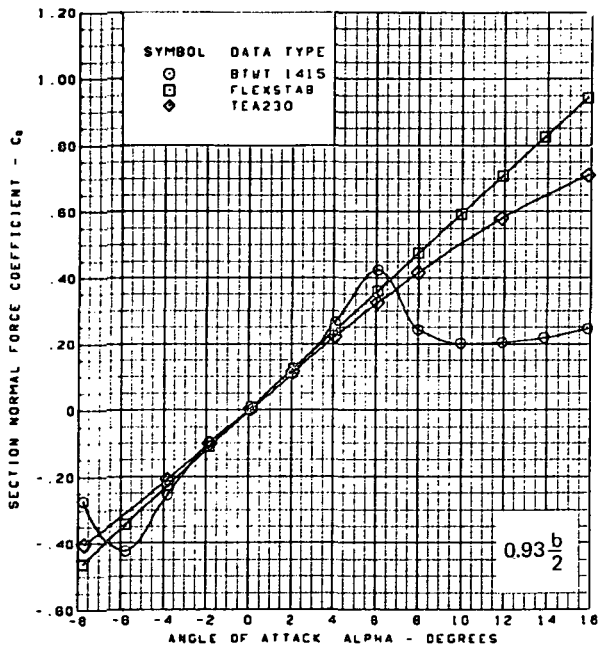
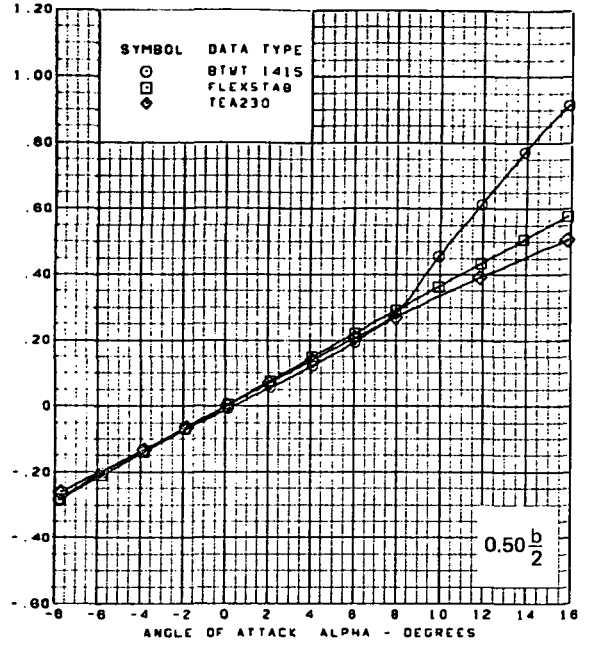
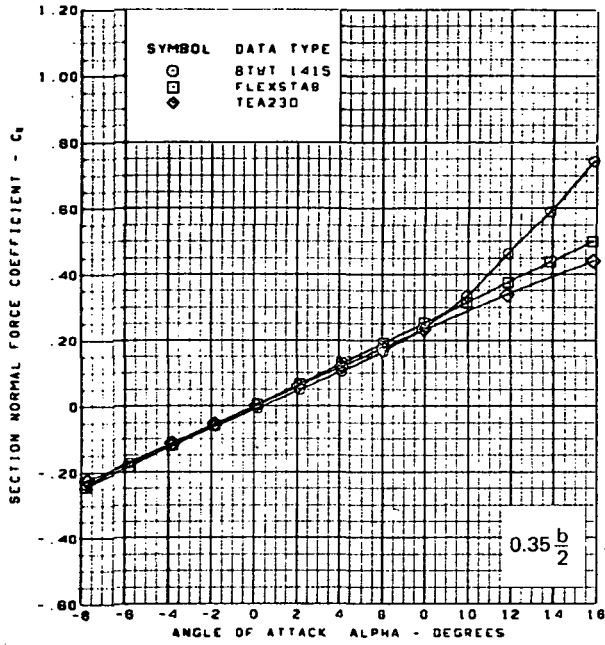
Figure 17.--(Continued)





(h) Section Aerodynamic Coefficients - Normal Force

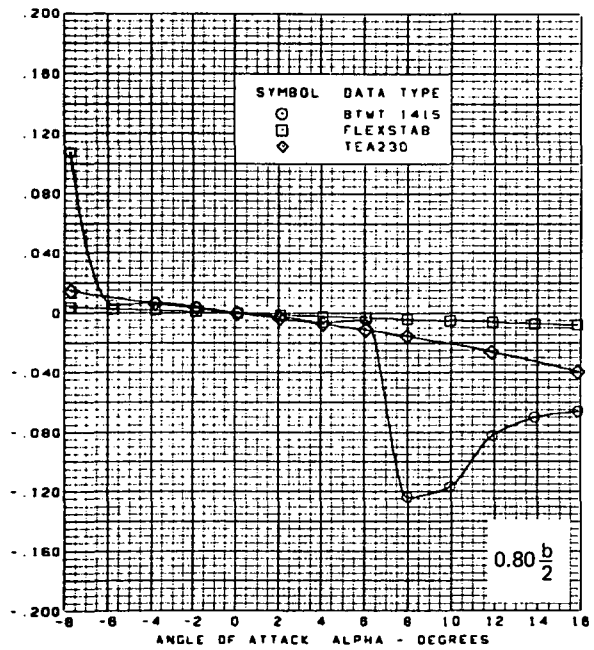
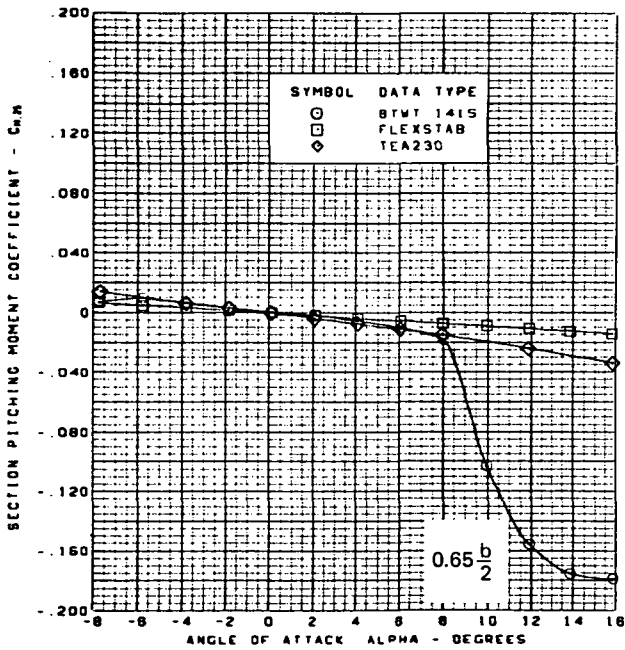
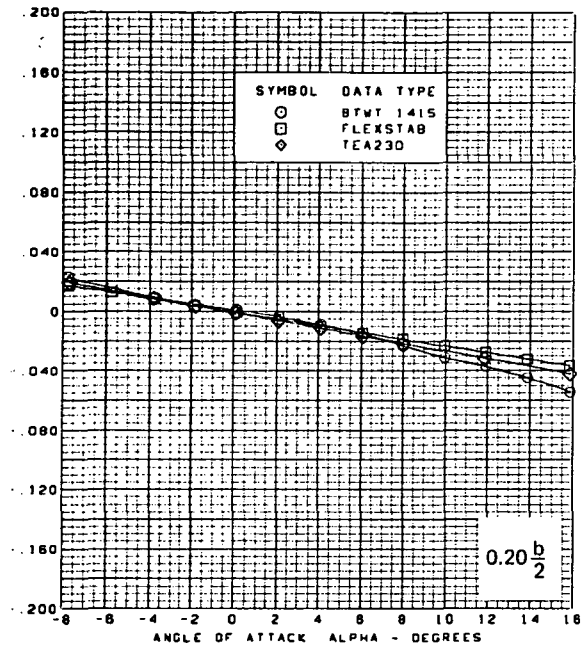
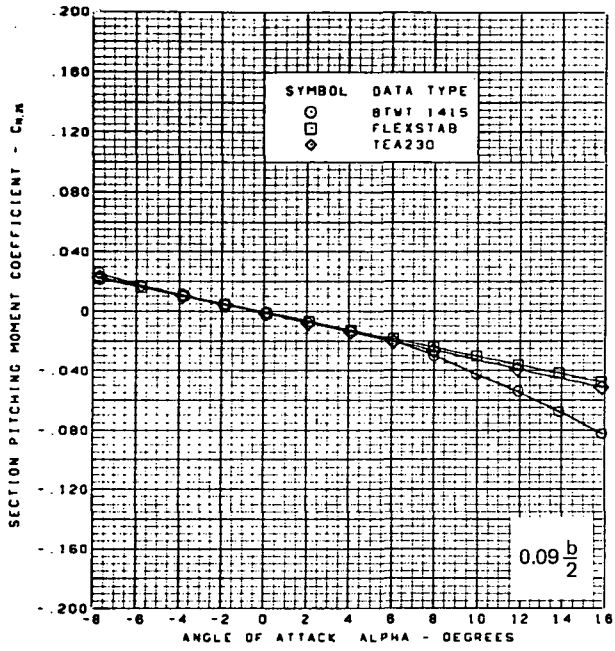
Figure 17.--(Continued)



M = 0.40 (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

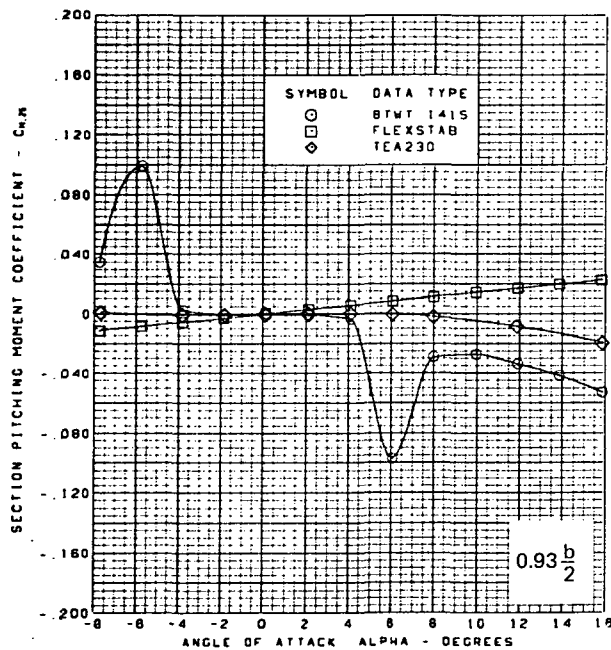
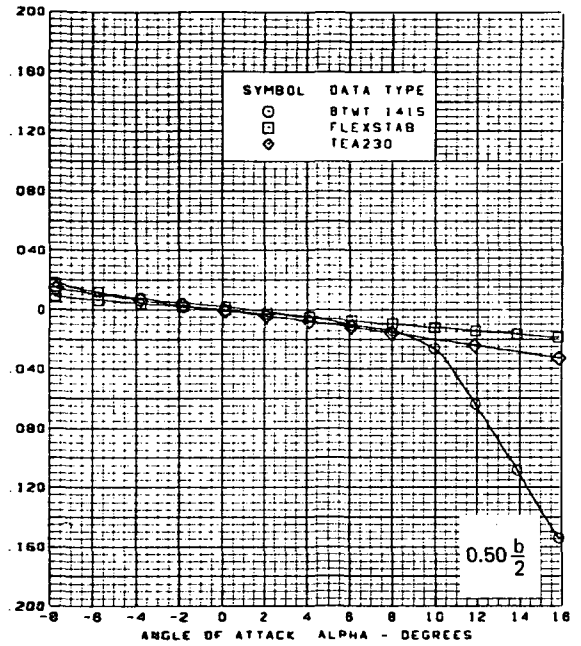
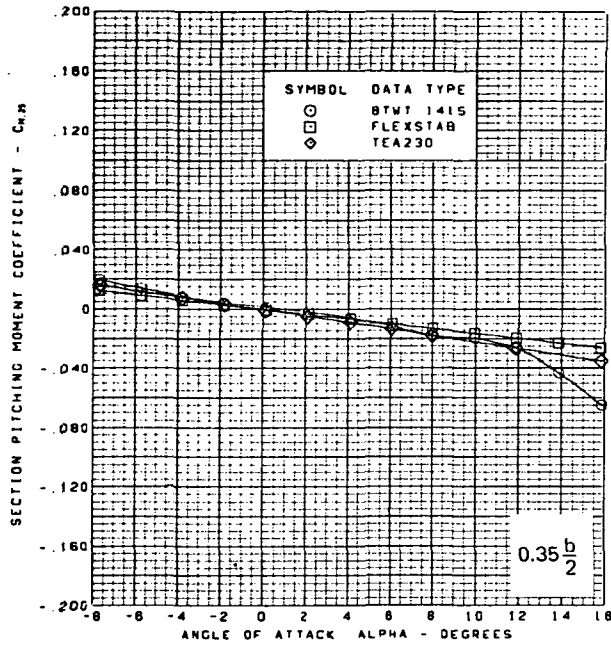
(h) (Concluded)

Figure 17.--(Continued)



(I) Section Aerodynamic Coefficients - Pitching Moment

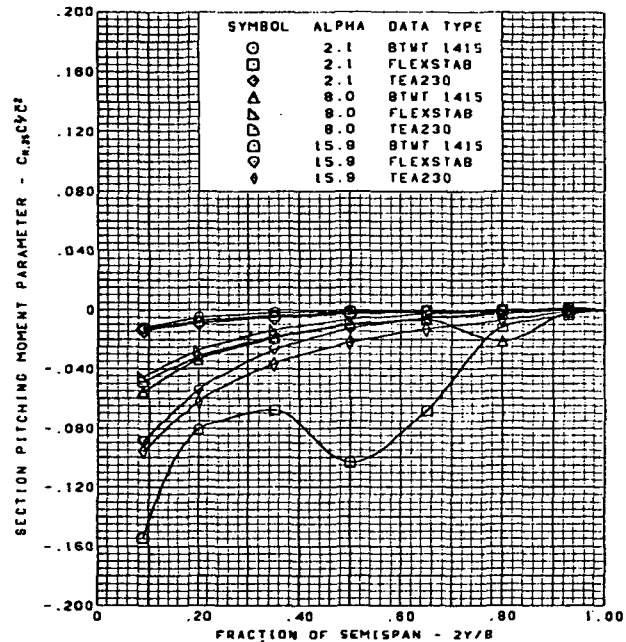
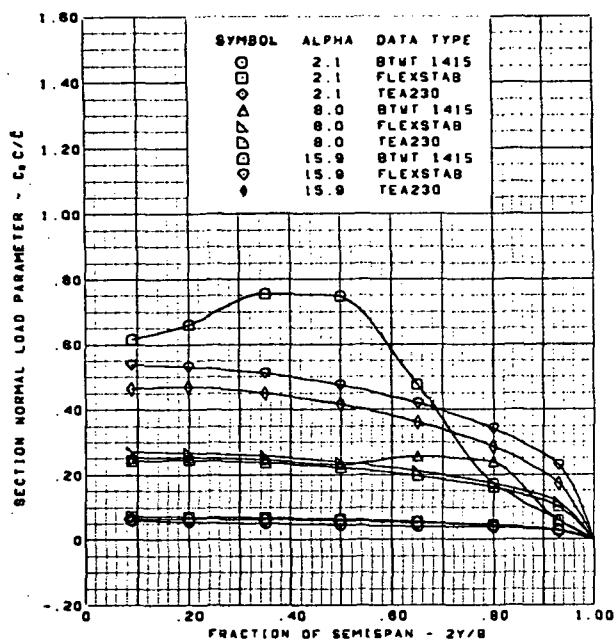
Figure 17.-(Continued)



M = 0.40 (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(j) (Concluded)

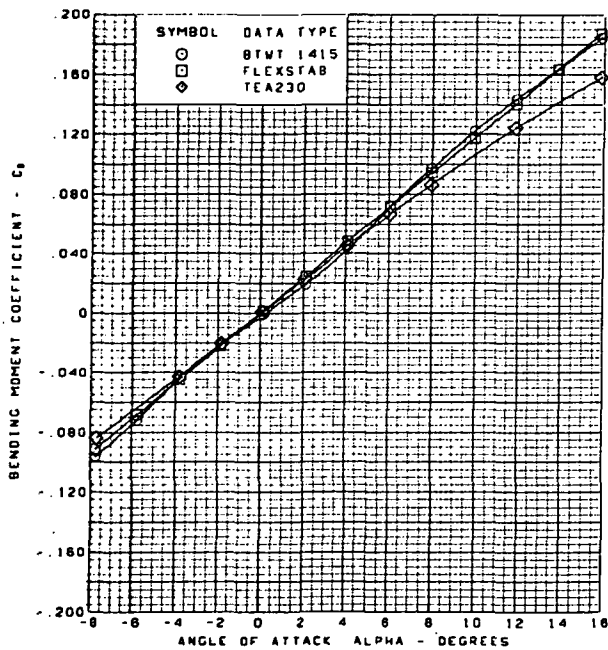
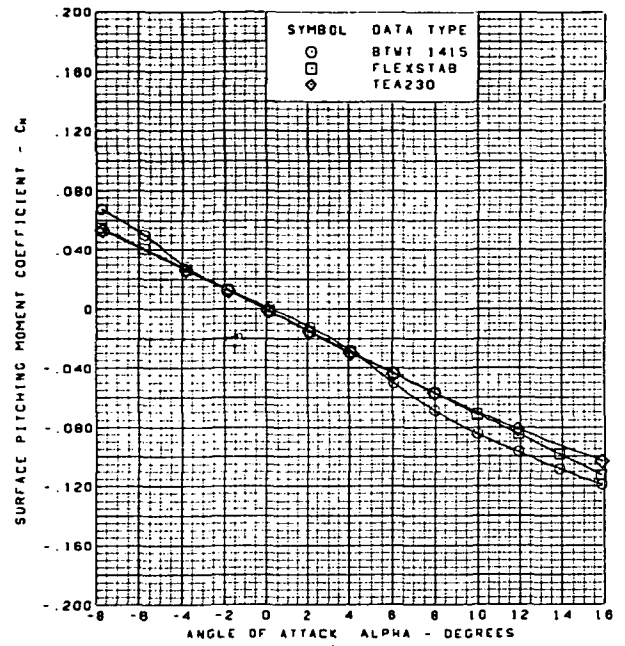
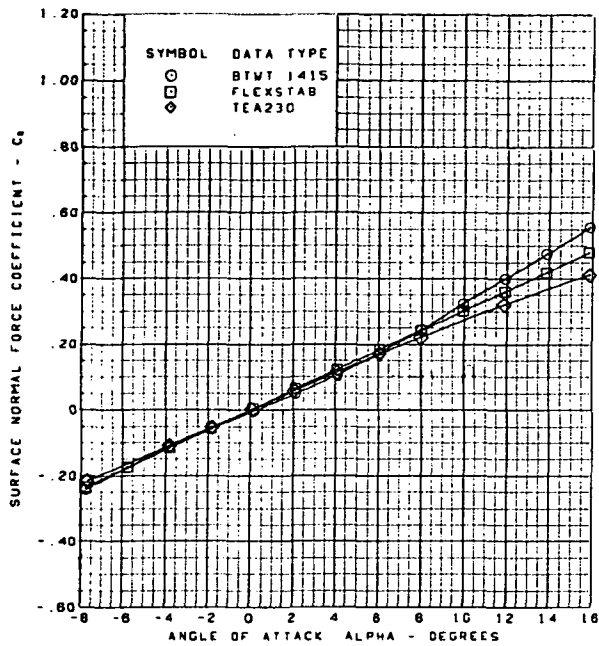
Figure 17.--(Continued)



M = 0.40 (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(j) Spanload Distributions

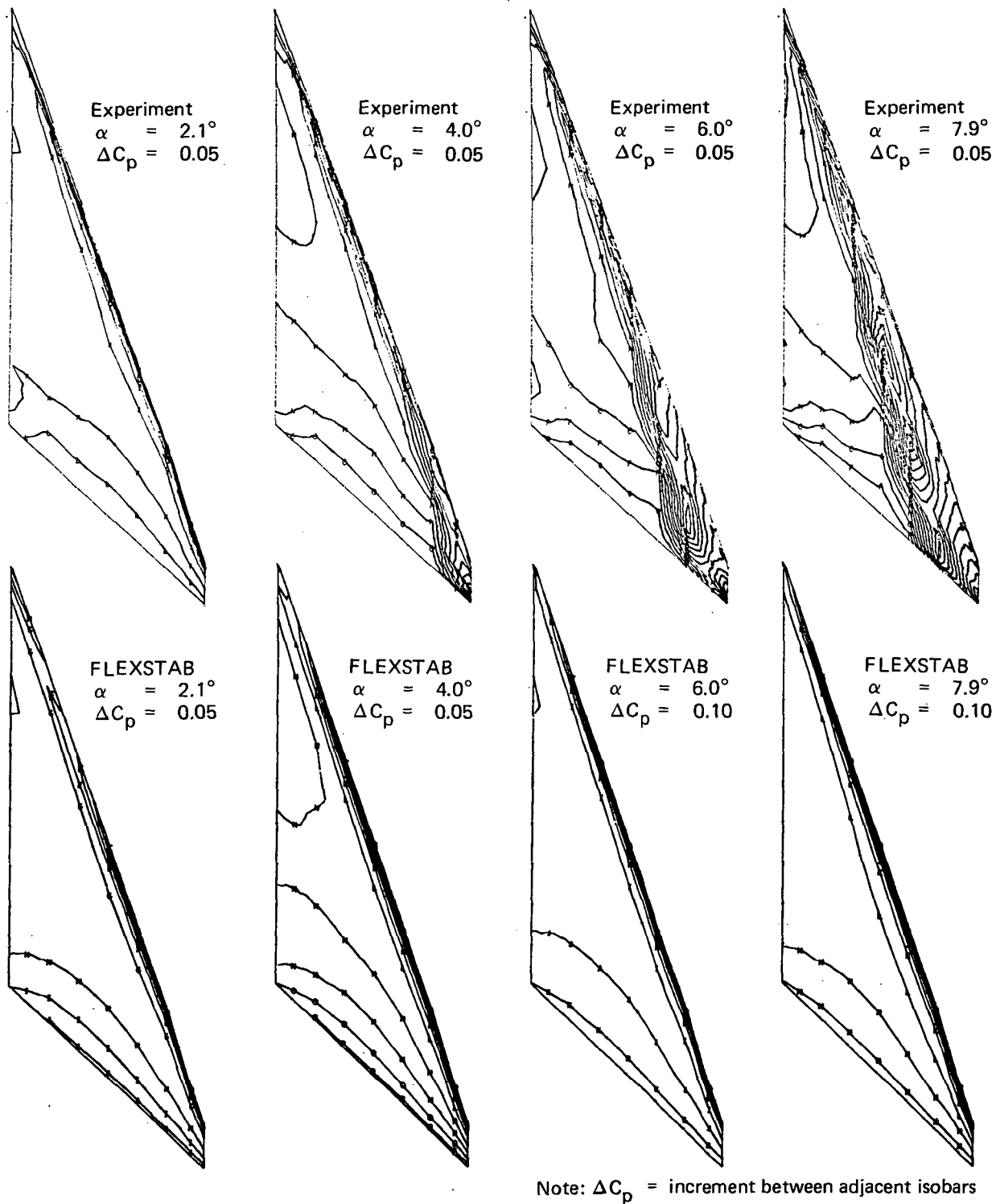
Figure 17.--(Continued)



$M = 0.40$  (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

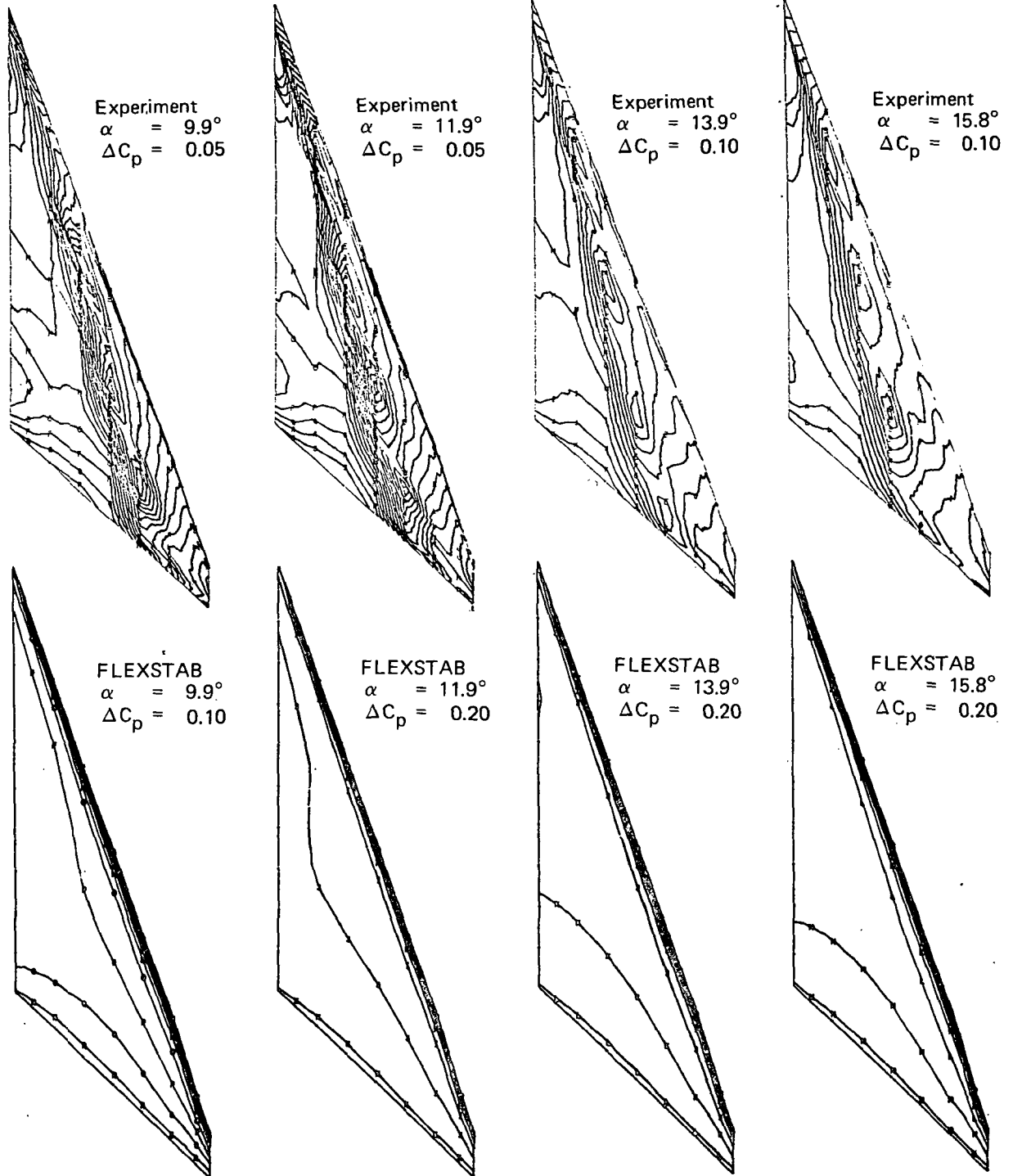
(k) Wing Aerodynamic Coefficients

Figure 17.—(Concluded)



(a) Upper Surface Isobars, FLEXSTAB and Experiment

Figure 18.—Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$

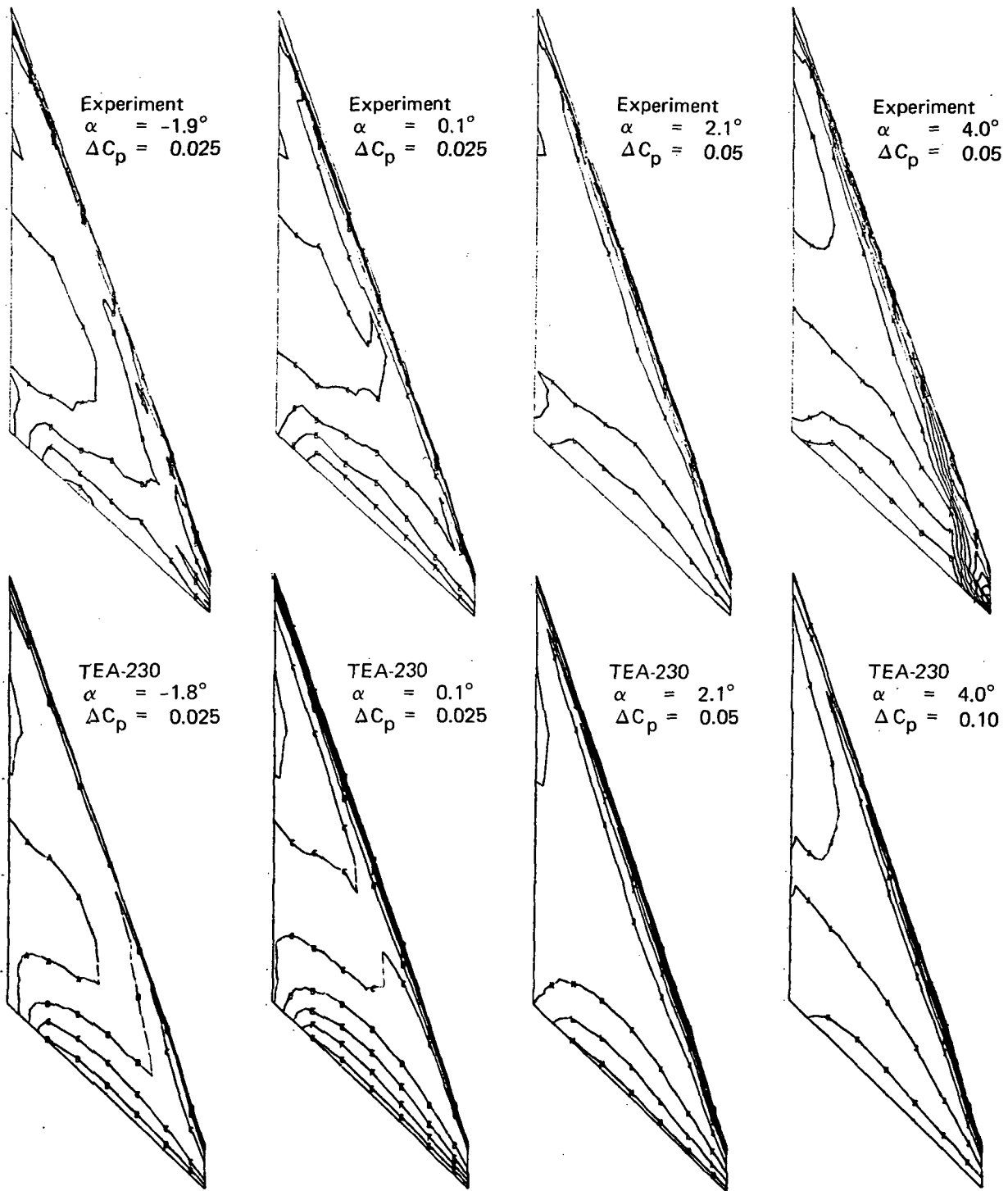


Note:  $\Delta C_p$  = increment between adjacent isobars

(a) (Concluded)

Figure 18.-(Continued)

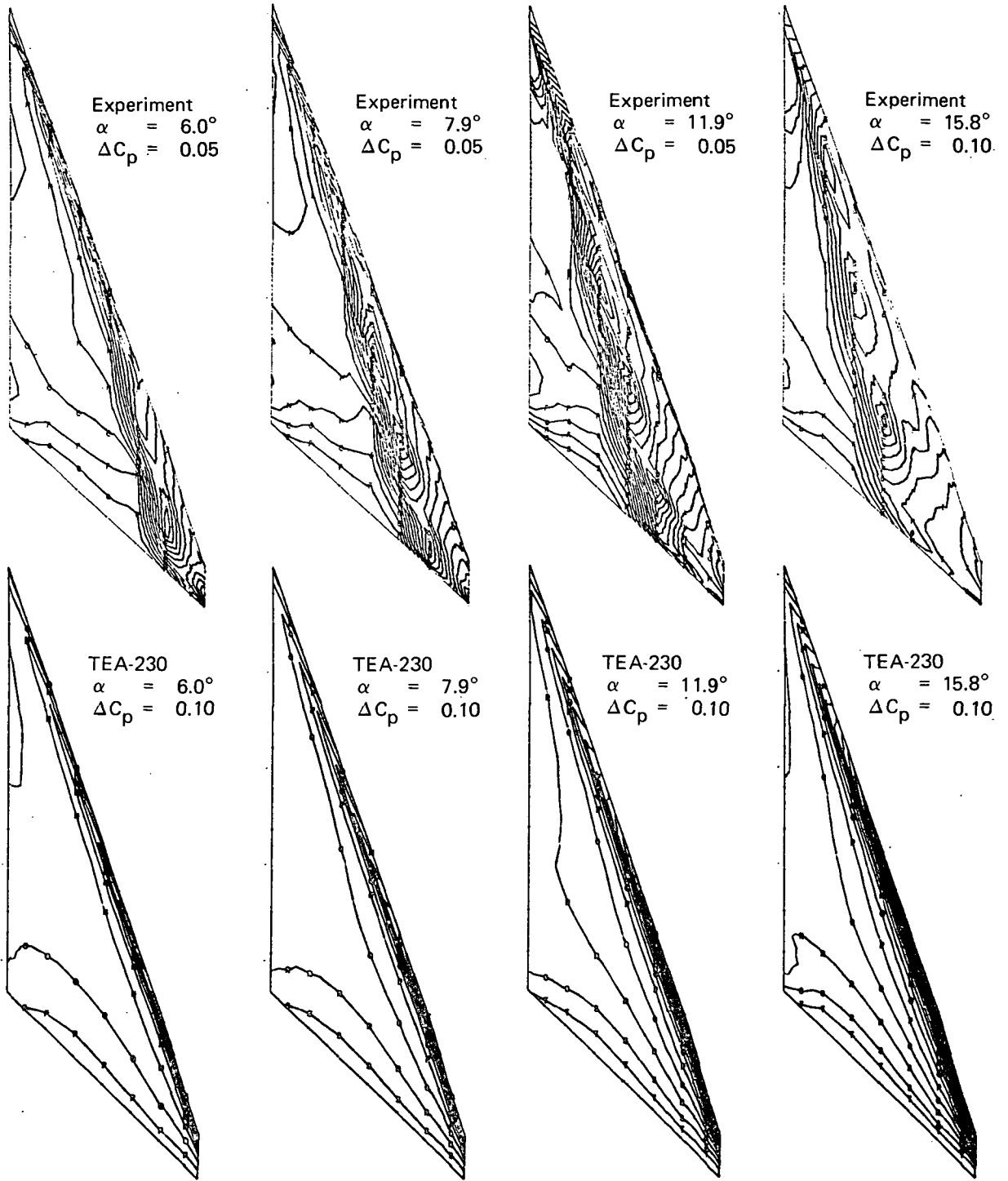




Note:  $\Delta C_p$  = increment between adjacent isobars

(b) Upper Surface Isobars, TEA-230 and Experiment

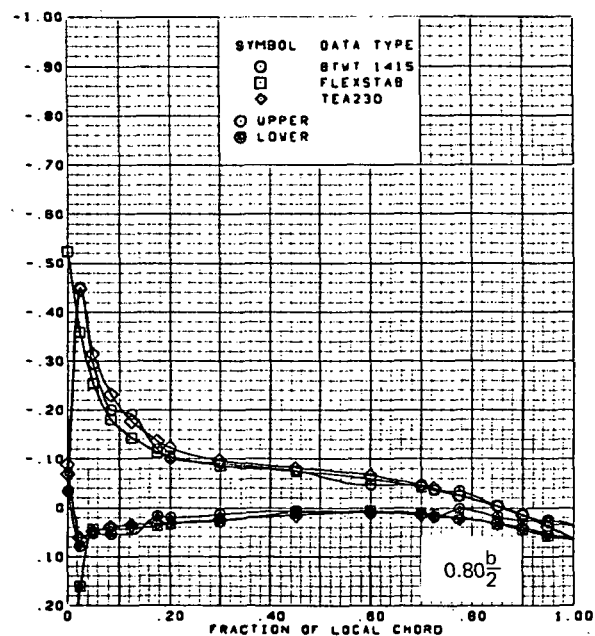
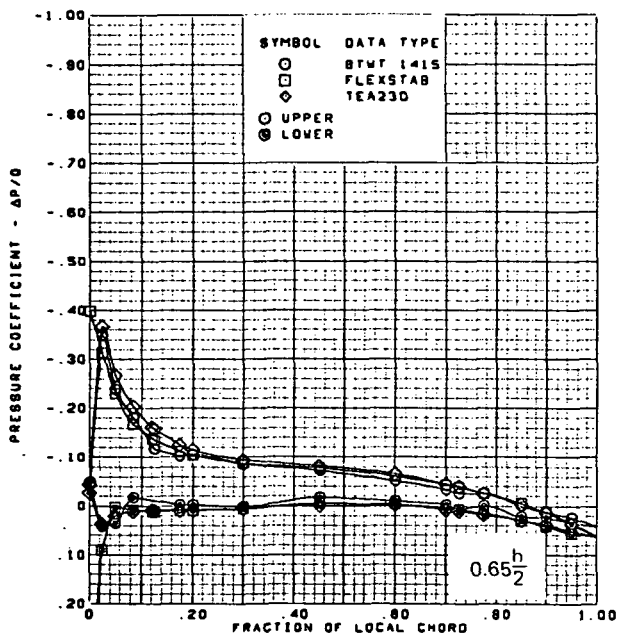
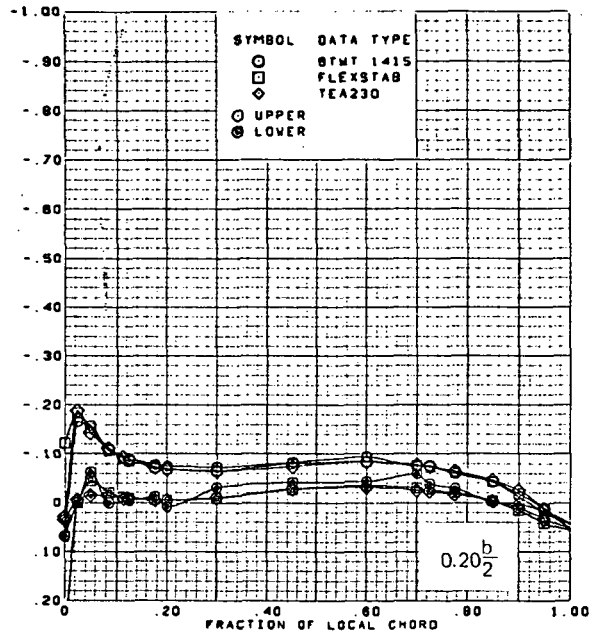
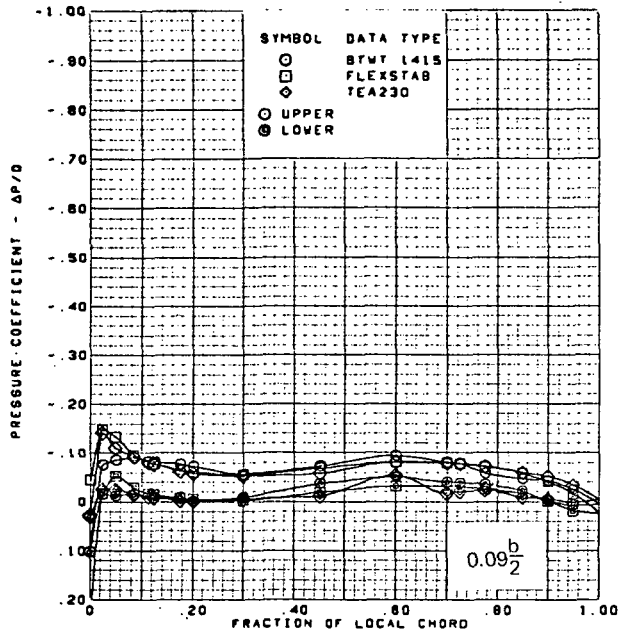
Figure 18.-(Continued)



Note:  $\Delta C_p$  = increment between adjacent isobars

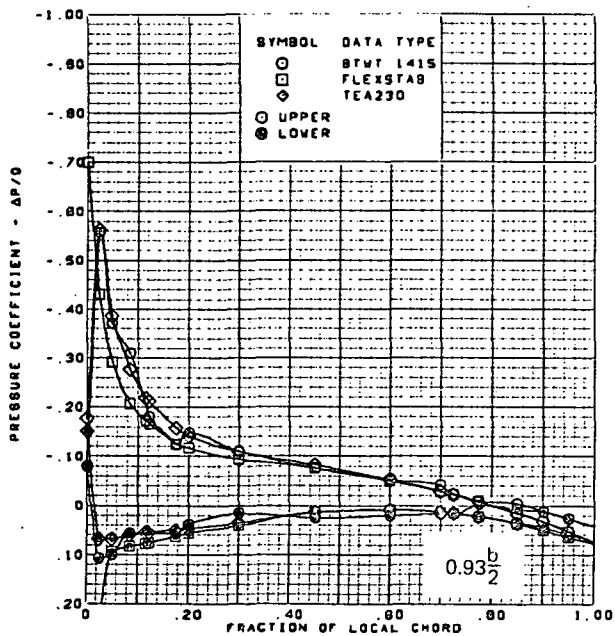
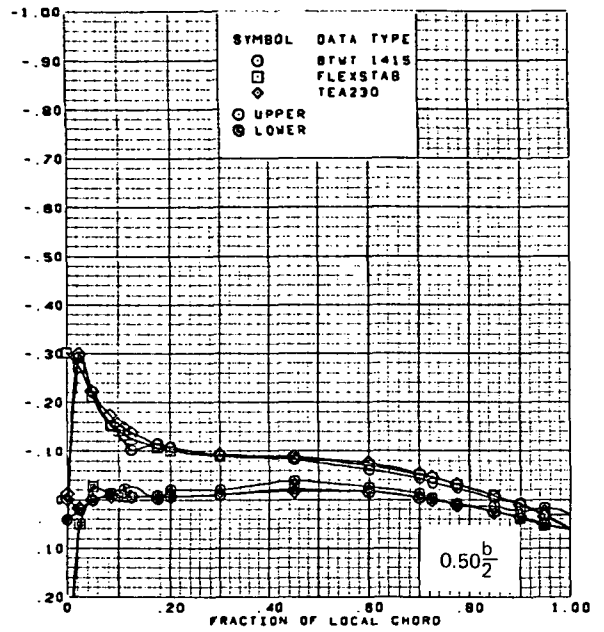
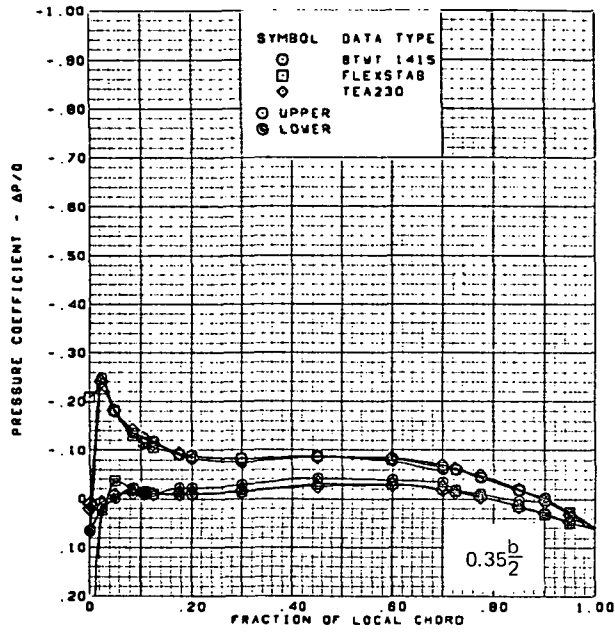
(b) (Concluded)

Figure 18.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha = 2.1^\circ$

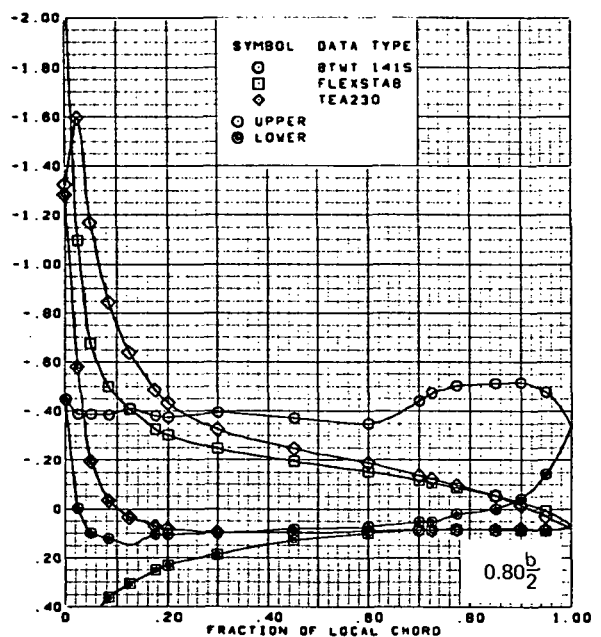
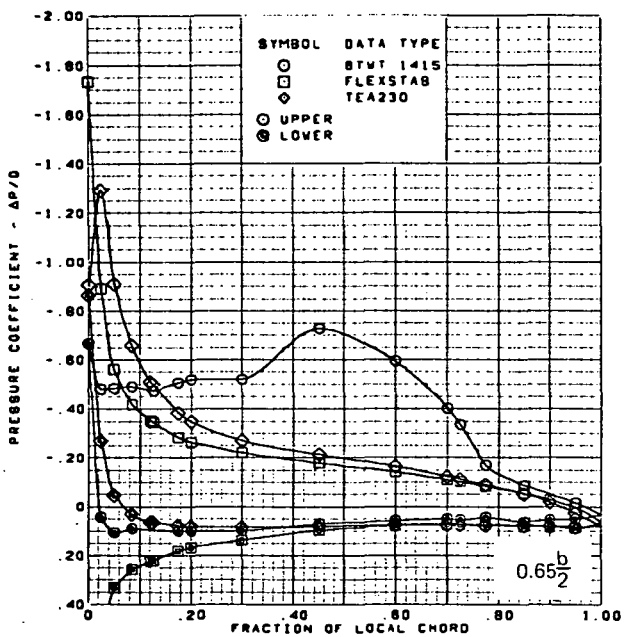
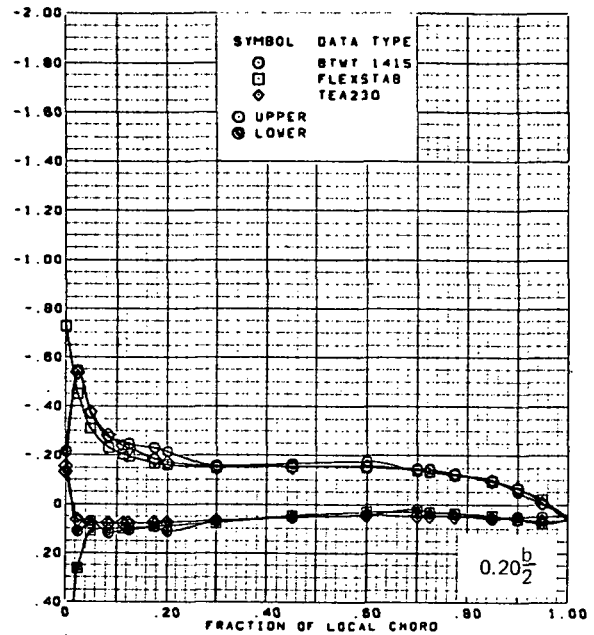
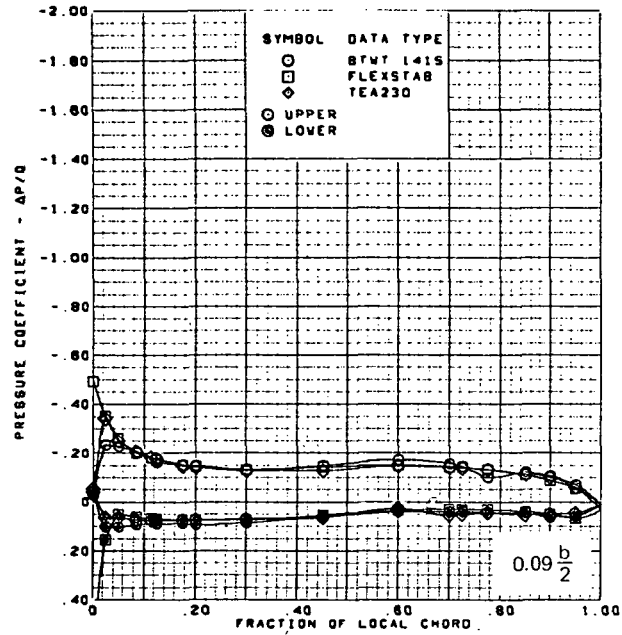
Figure 18.-(Continued)



M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

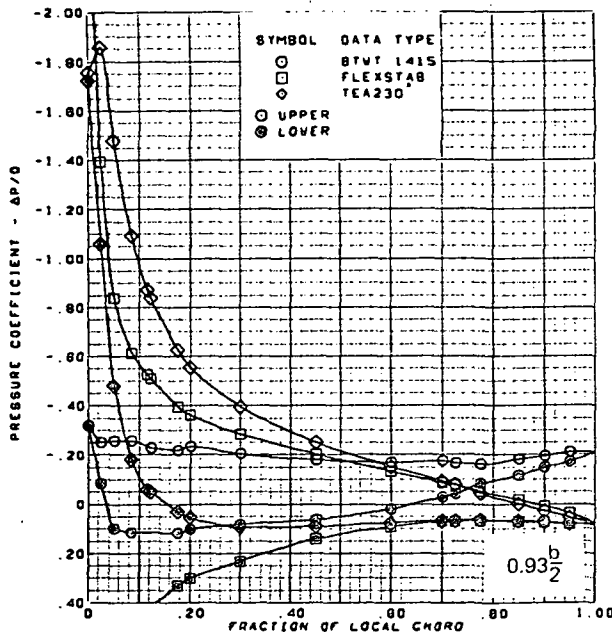
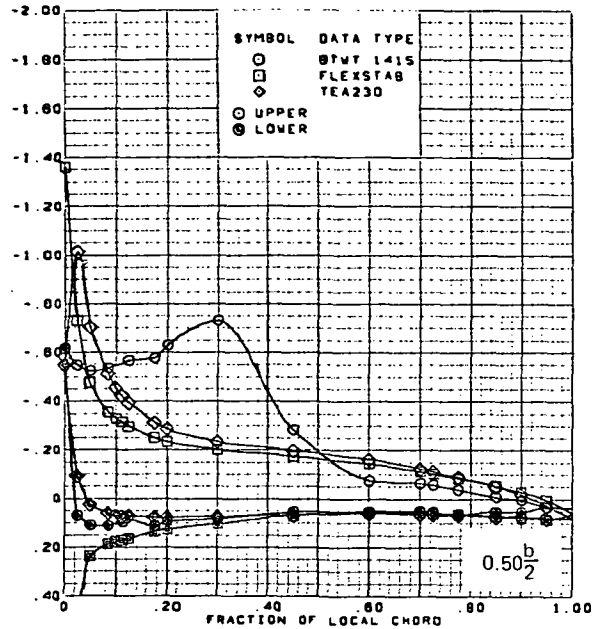
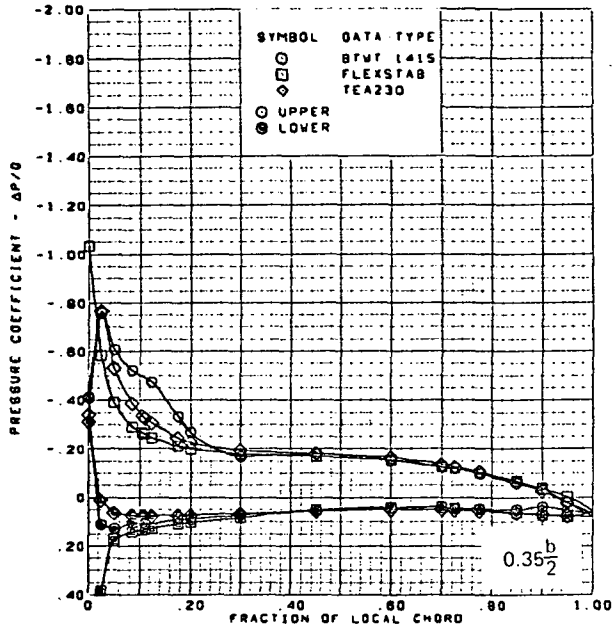
(c) (Concluded)

Figure 18.-(Continued)



(d) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

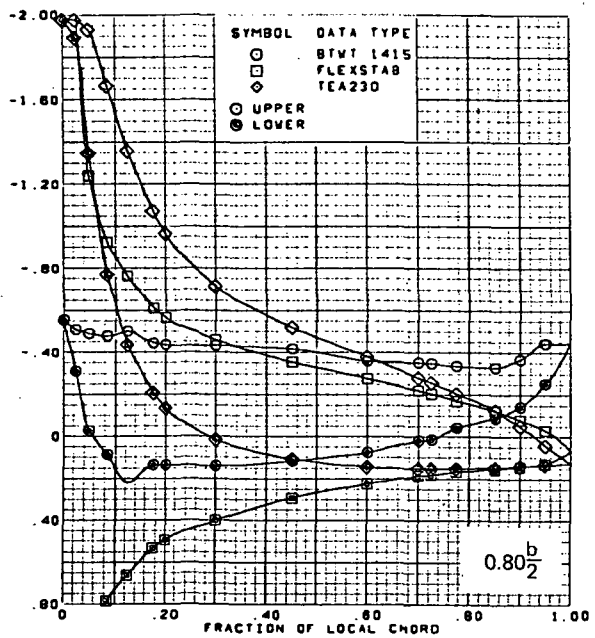
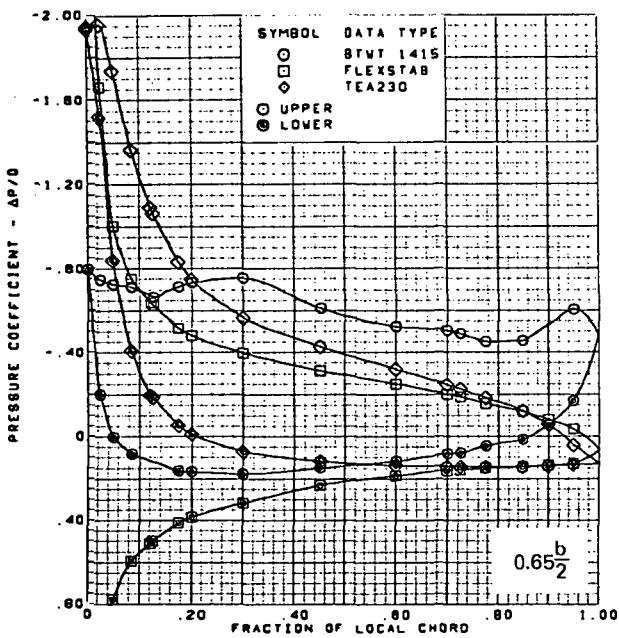
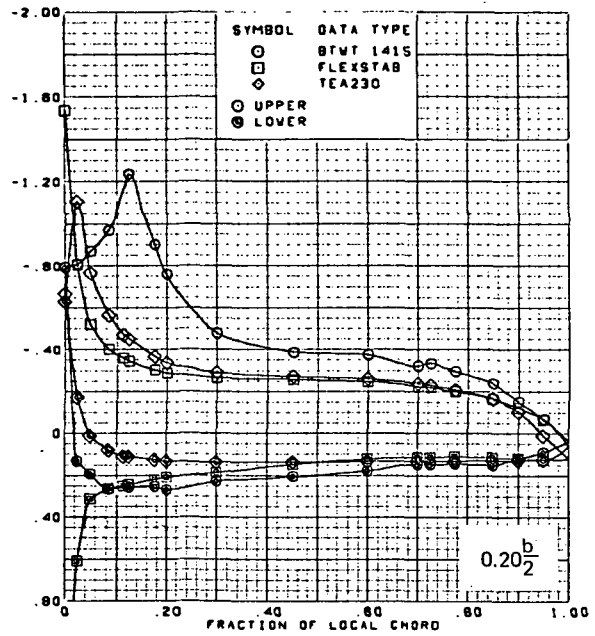
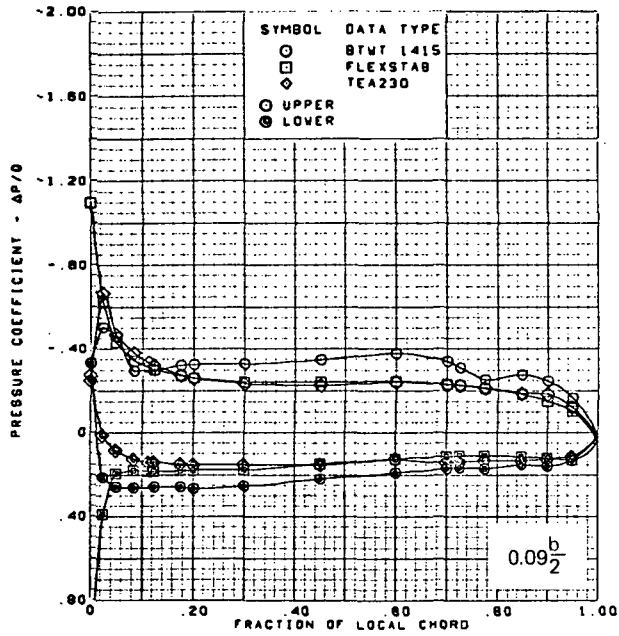
Figure 18.-(Continued)



$M = 0.85$  (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

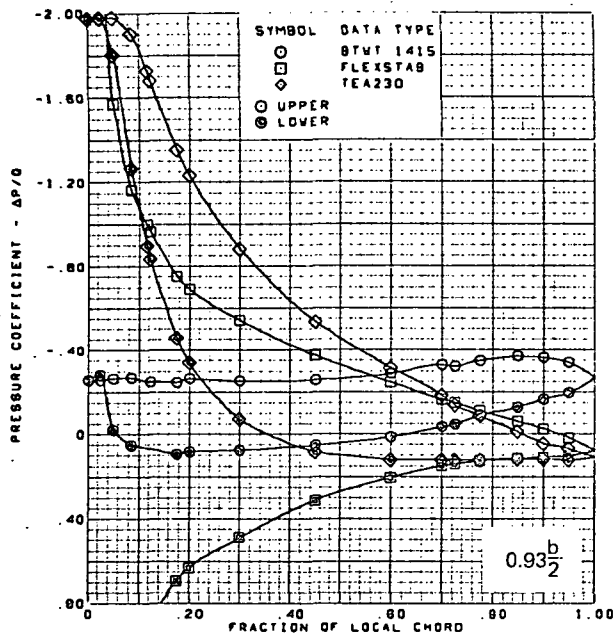
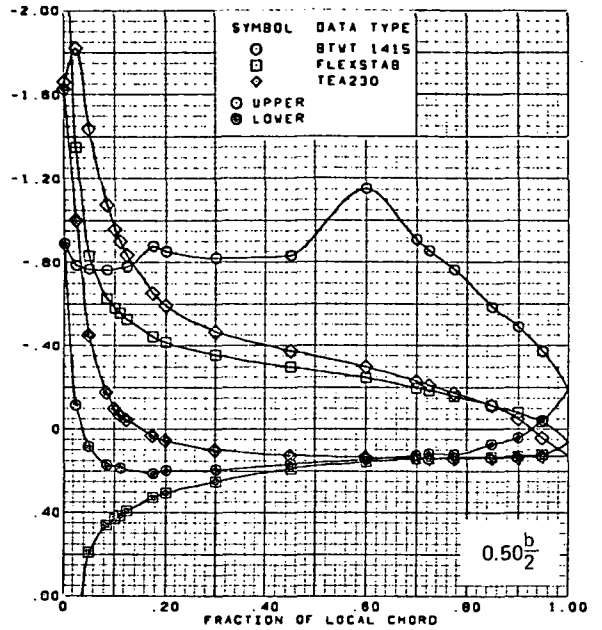
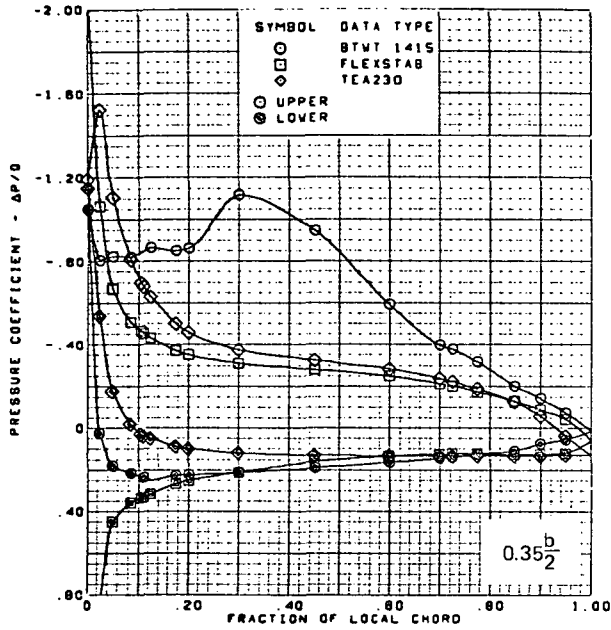
(d) (Concluded)

Figure 18.-(Continued)



(e) Surface Chordwise Pressure Distributions,  $\alpha = 15.8^\circ$

Figure 18.--(Continued)

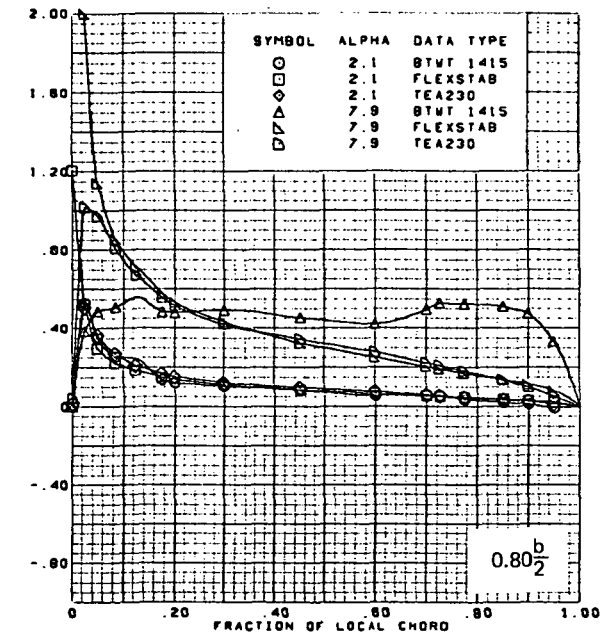
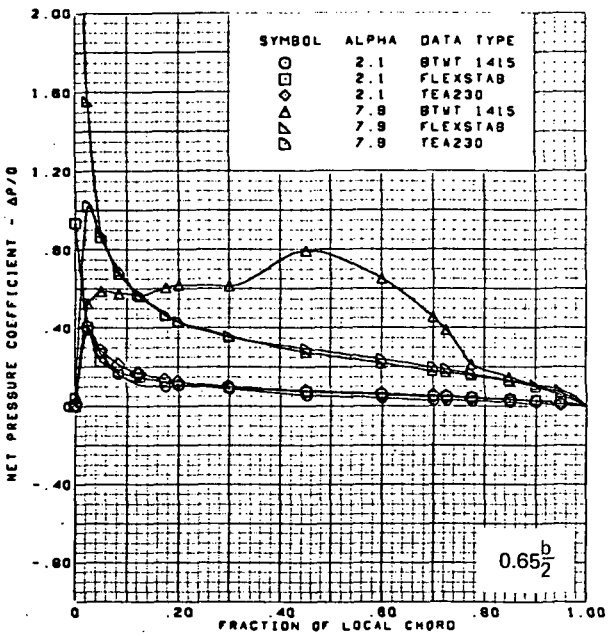
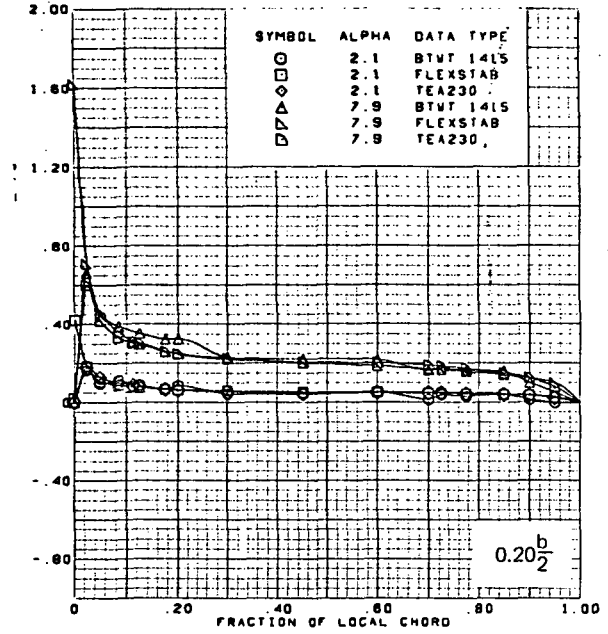
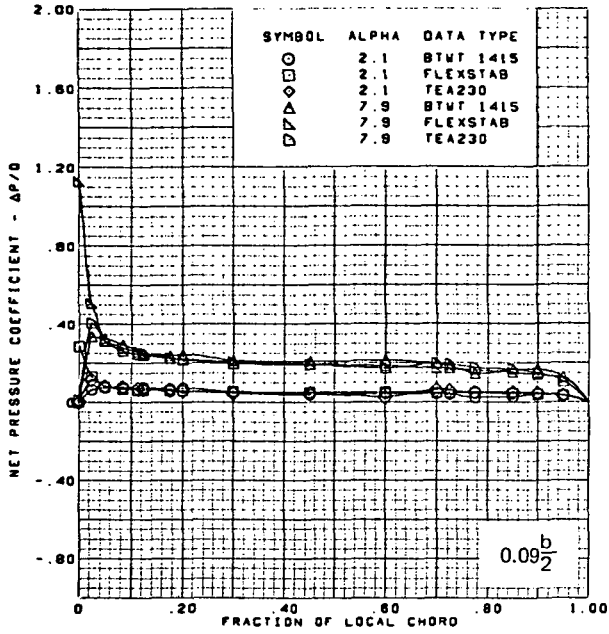


M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(e) (Concluded)

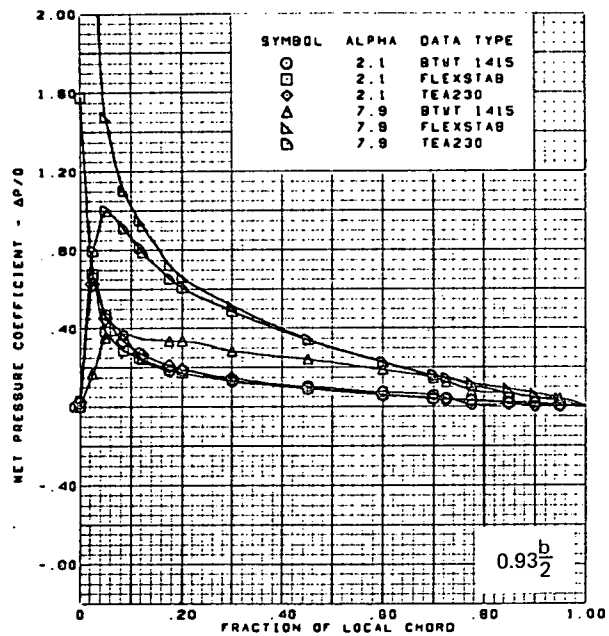
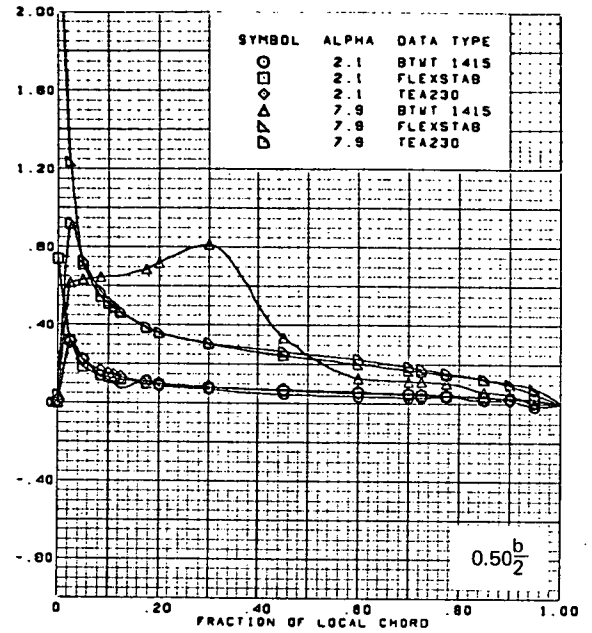
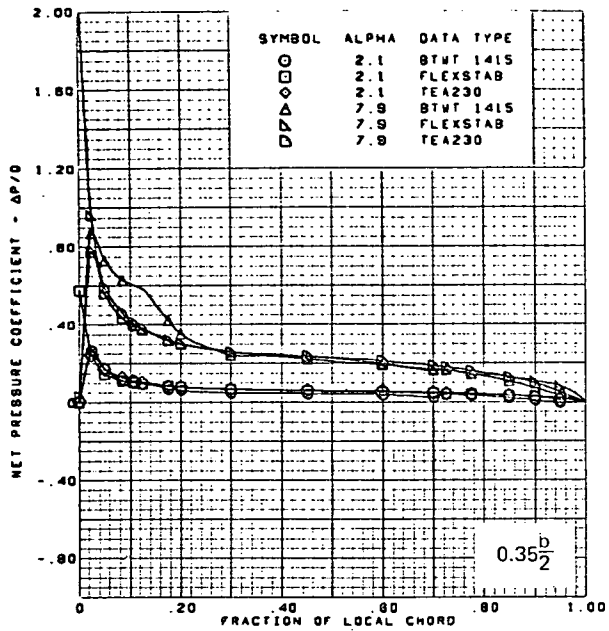
Figure 18.-(Continued)





(f) Net Chordwise Pressure Distributions,  $\alpha = 2.1^\circ, 7.9^\circ$

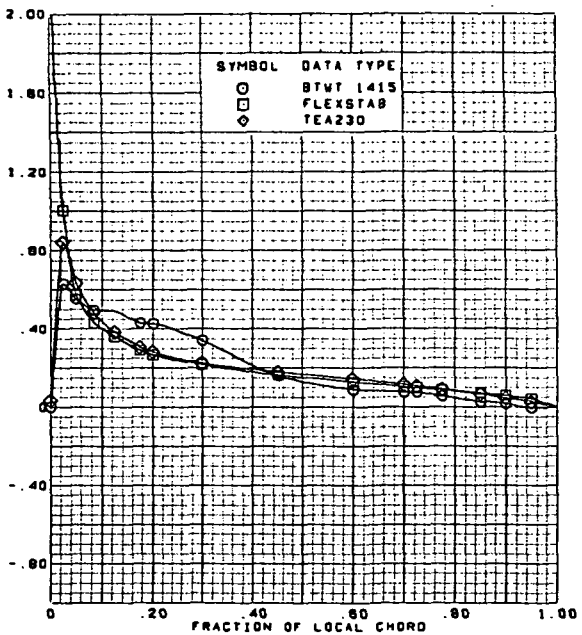
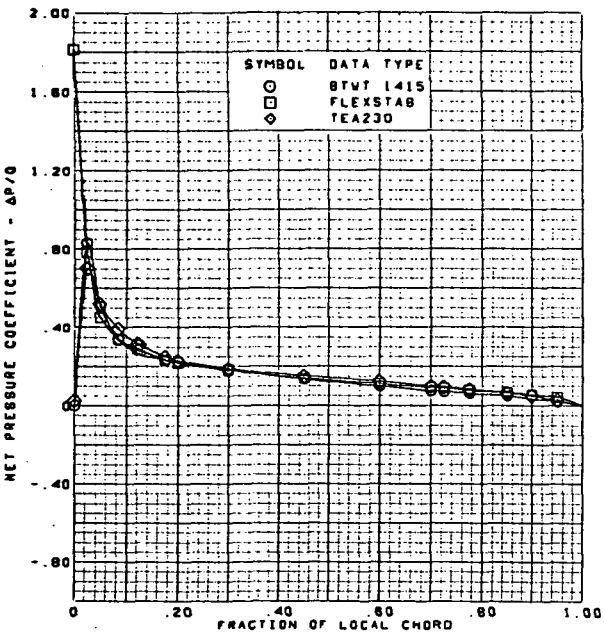
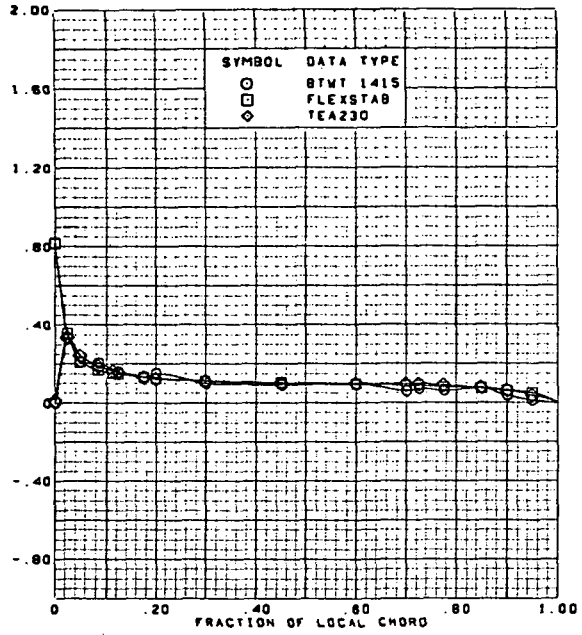
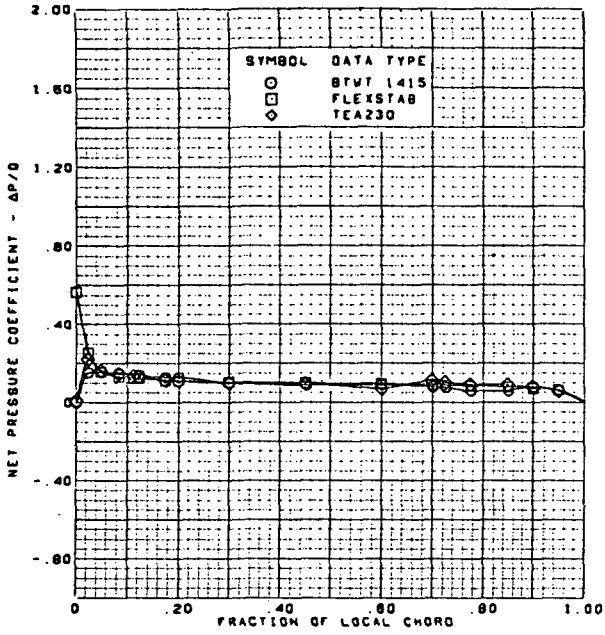
Figure 18.-(Continued)



M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

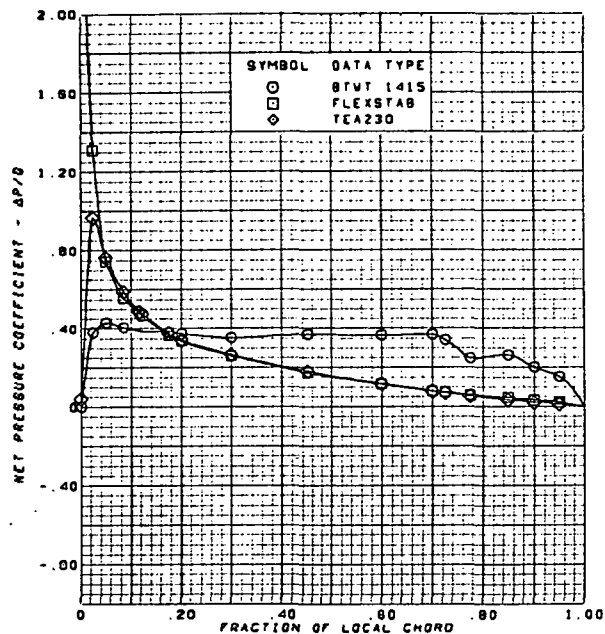
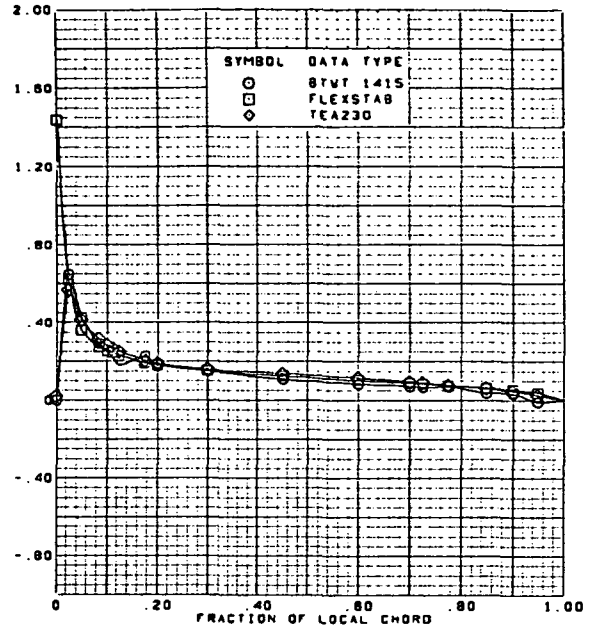
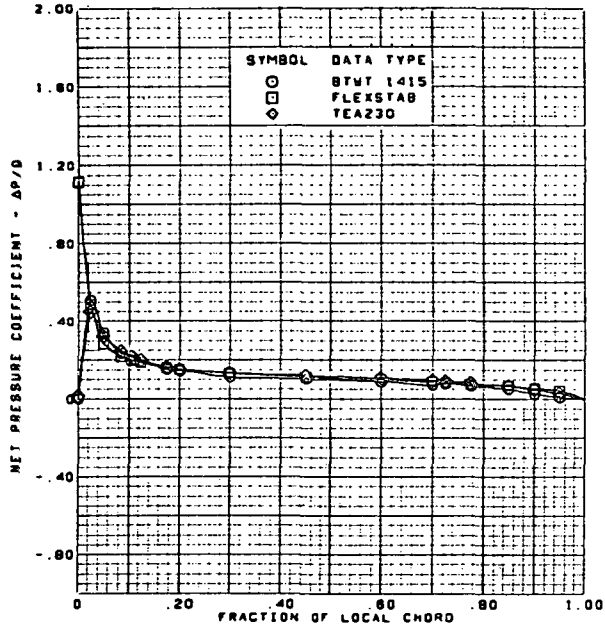
(f) (Concluded)

Figure 18.-(Continued)



(g) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

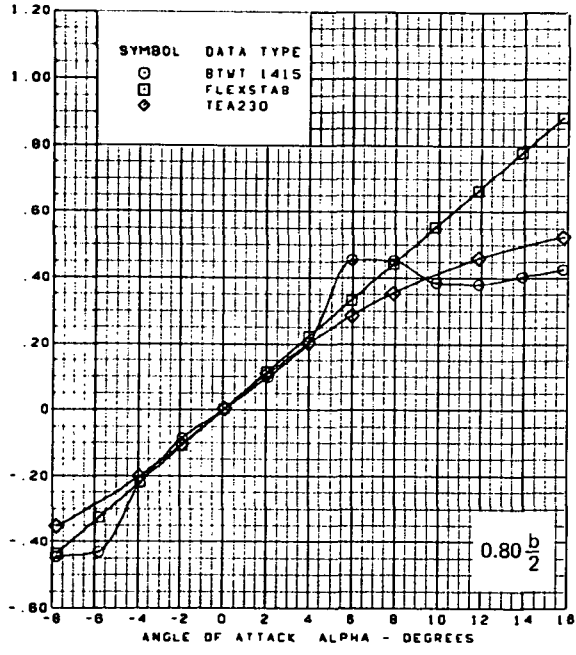
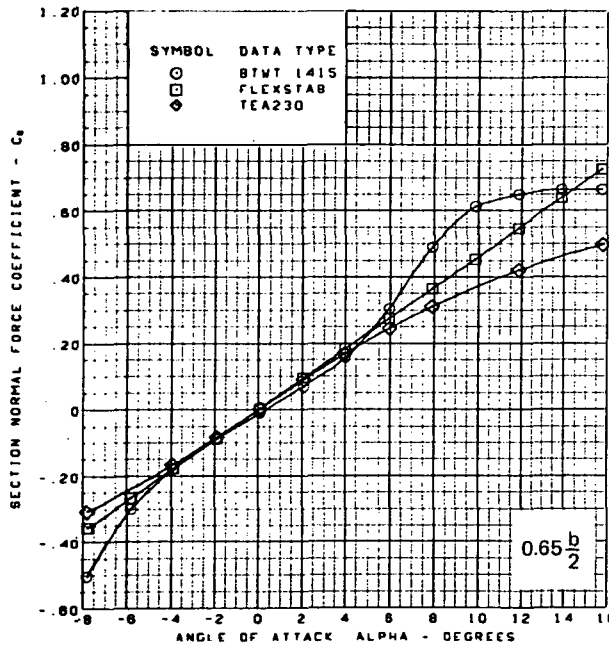
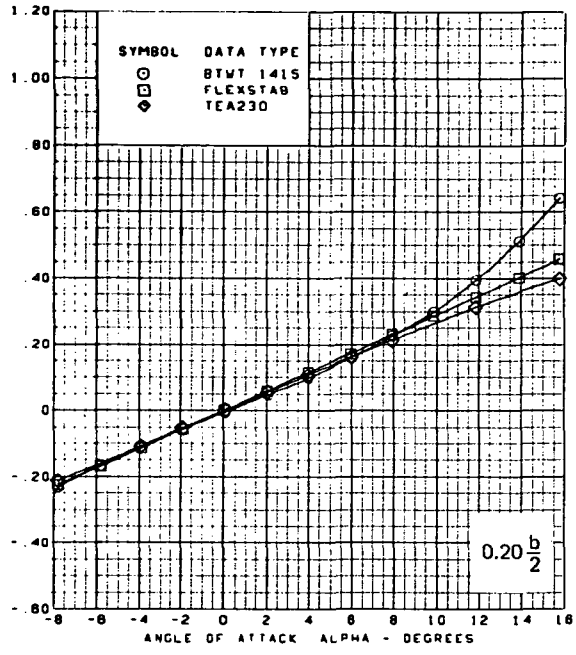
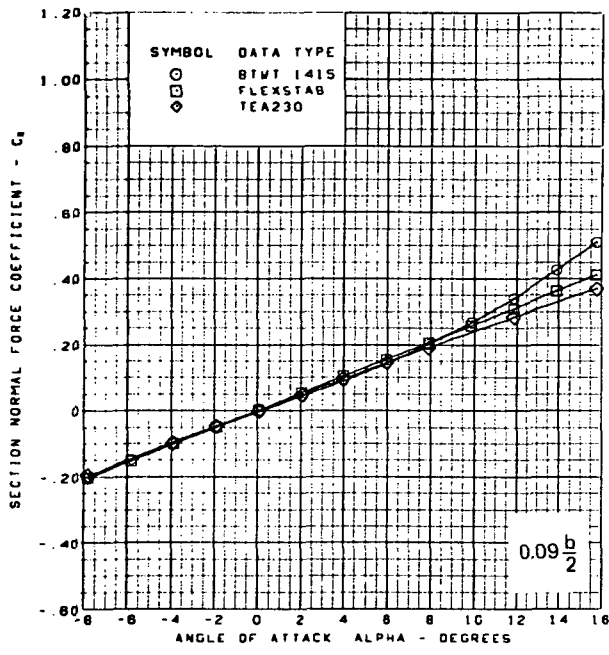
Figure 18.-(Continued)



M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

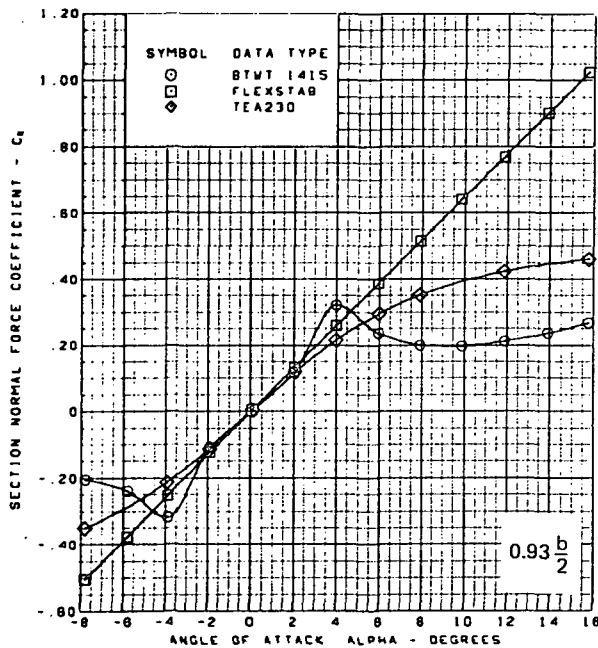
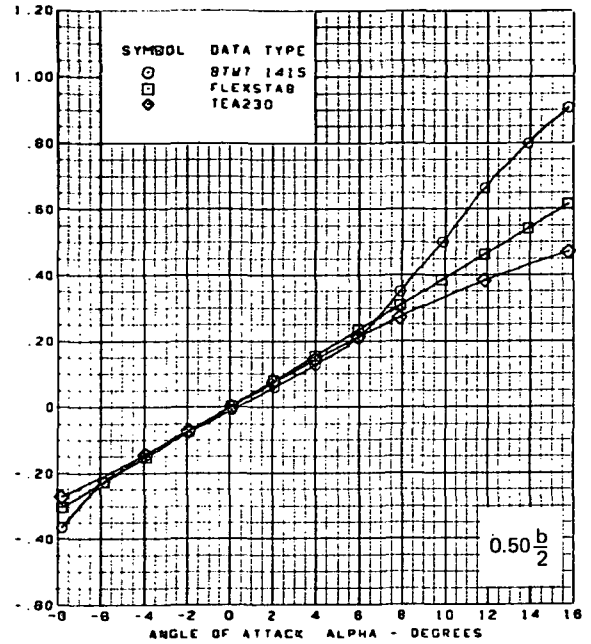
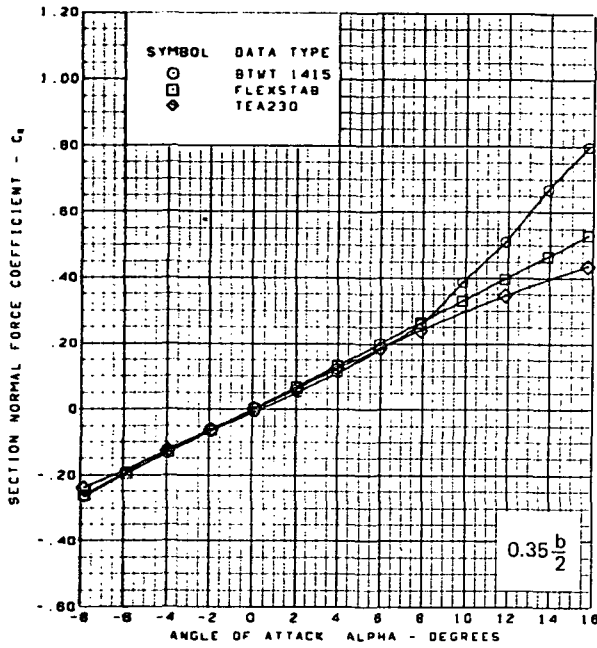
(g) (Concluded)

Figure 18.-(Continued)



(h) Section Aerodynamic Coefficients - Normal Force

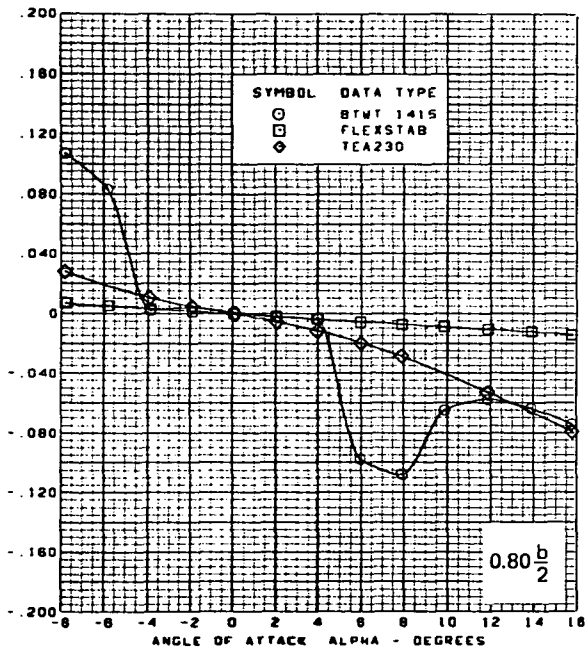
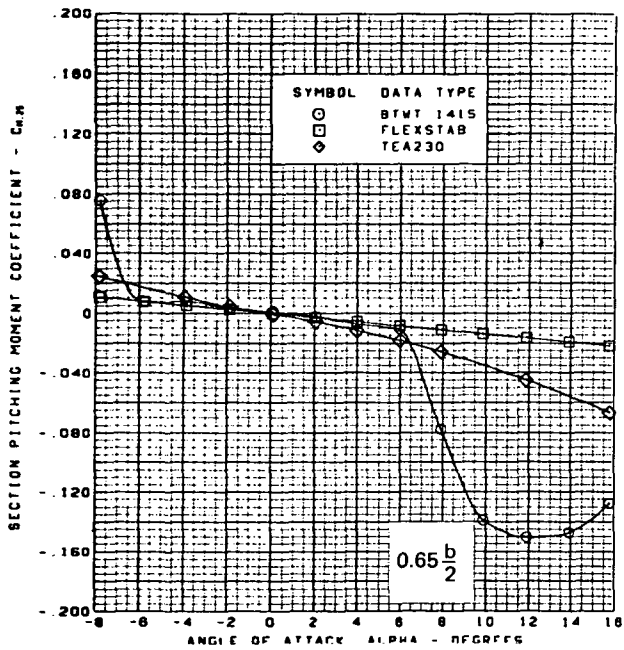
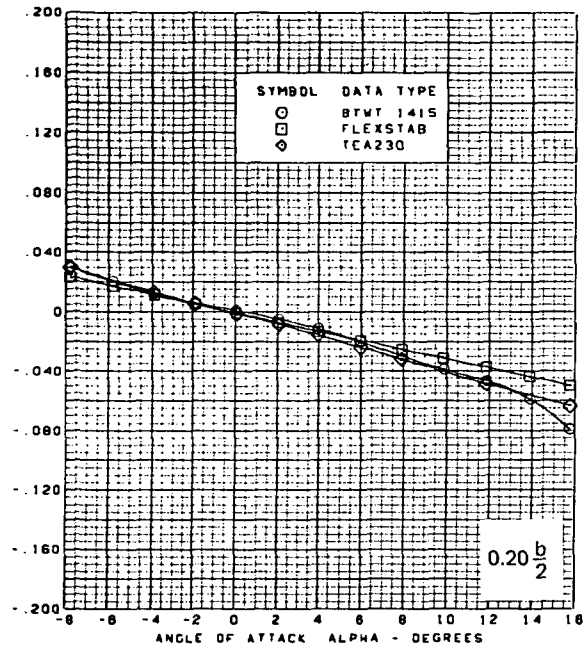
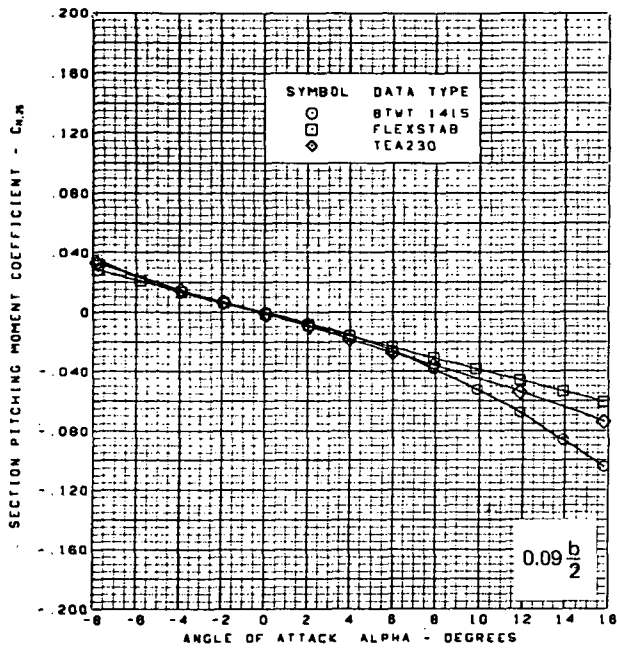
Figure 18.-(Continued)



M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

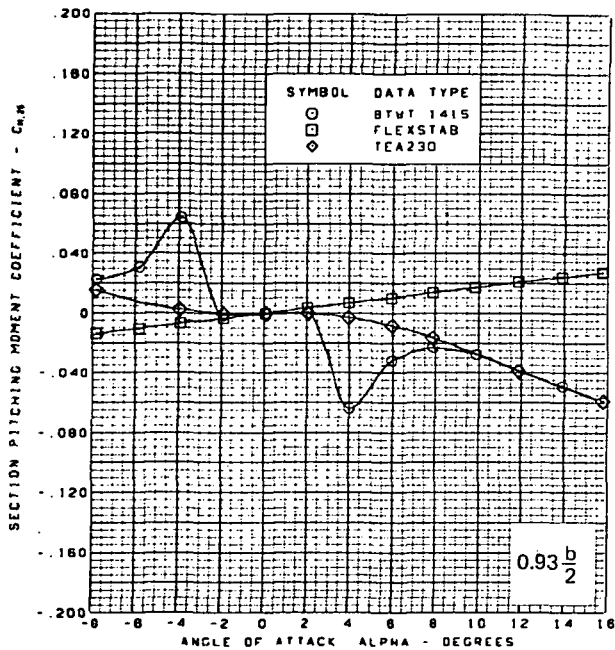
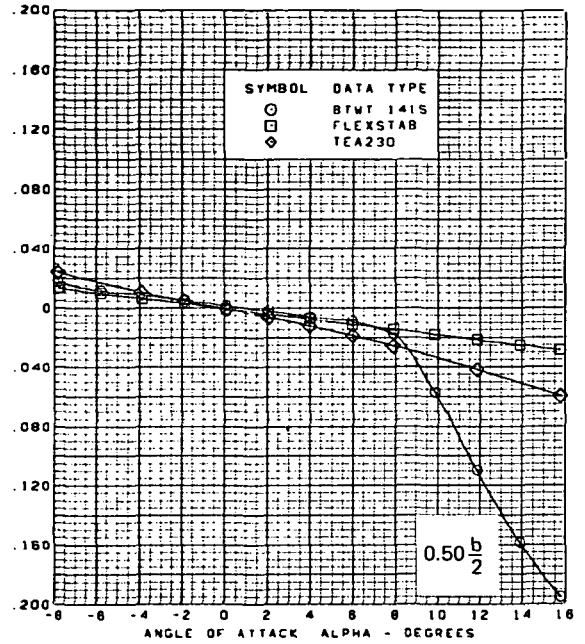
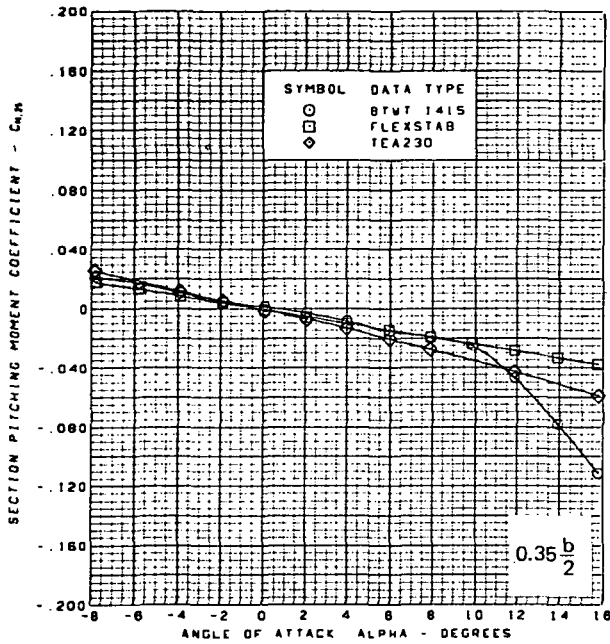
(h) (Concluded)

Figure 18.-(Continued)



(I) Section Aerodynamic Coefficients - Pitching Moment

Figure 18.-(Continued)

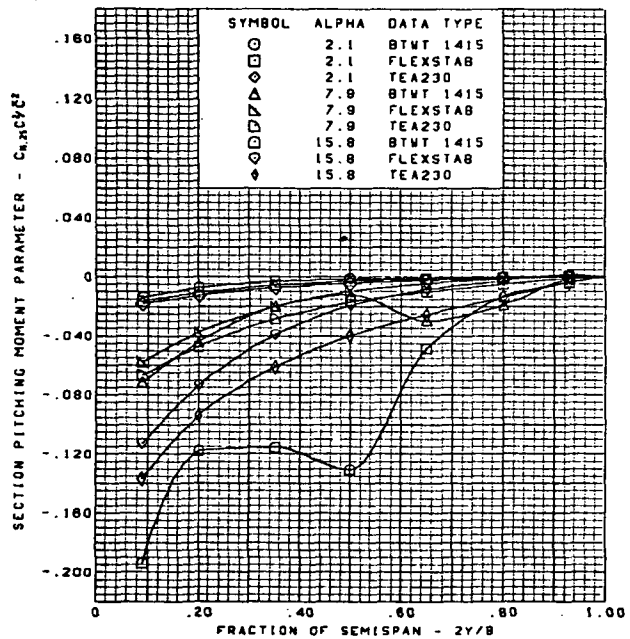
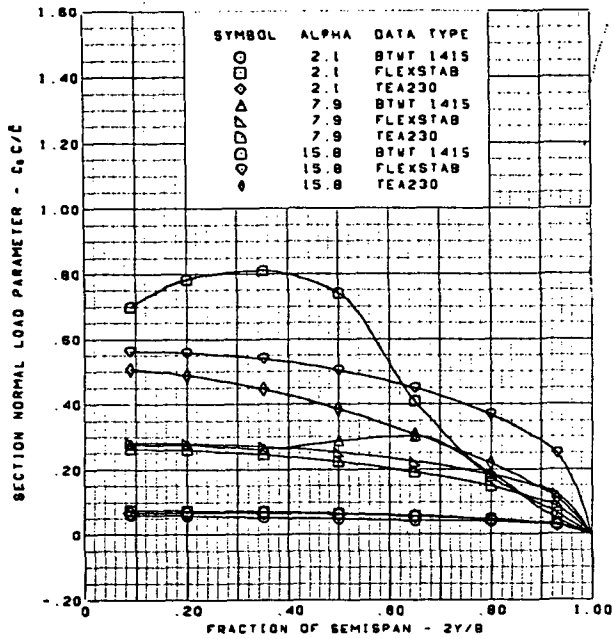


M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(i) (Concluded)

Figure 18.-(Continued)

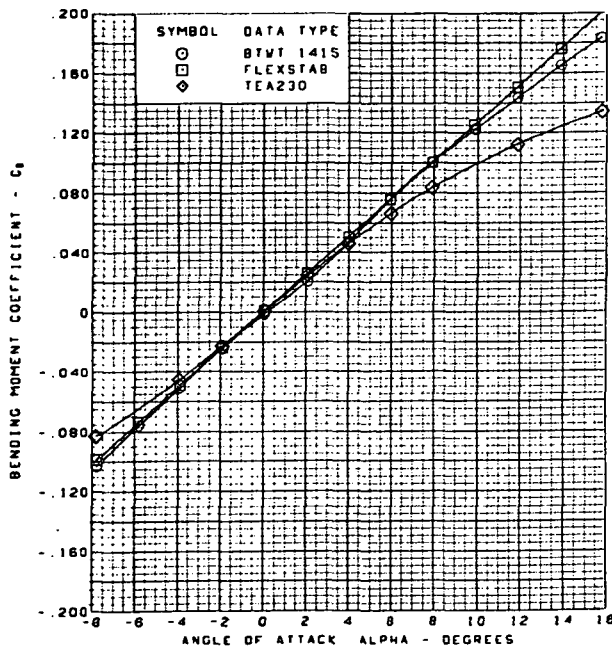
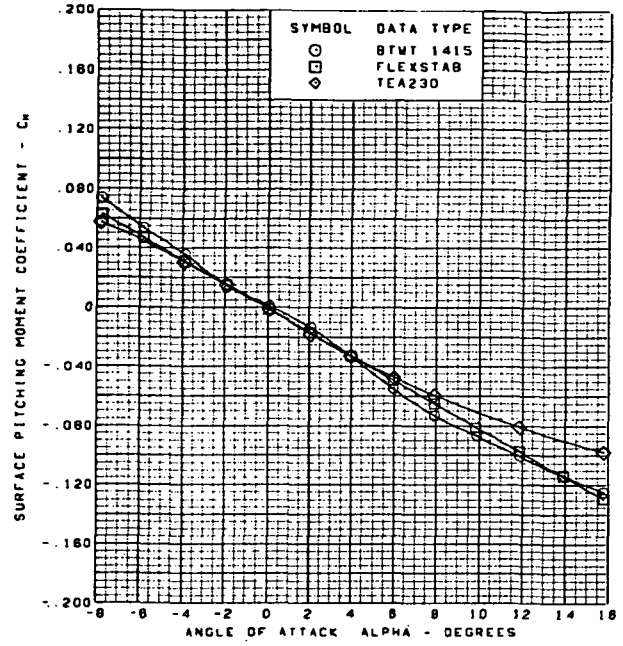
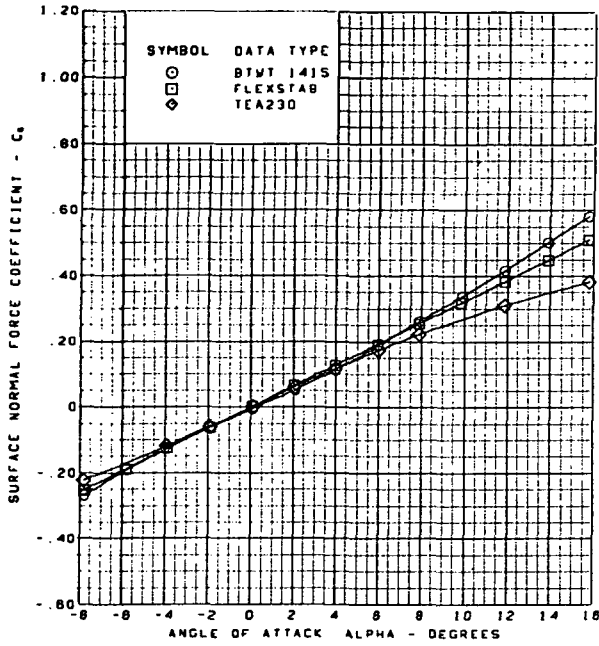




M = 0.85 (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(i) Spanload Distributions

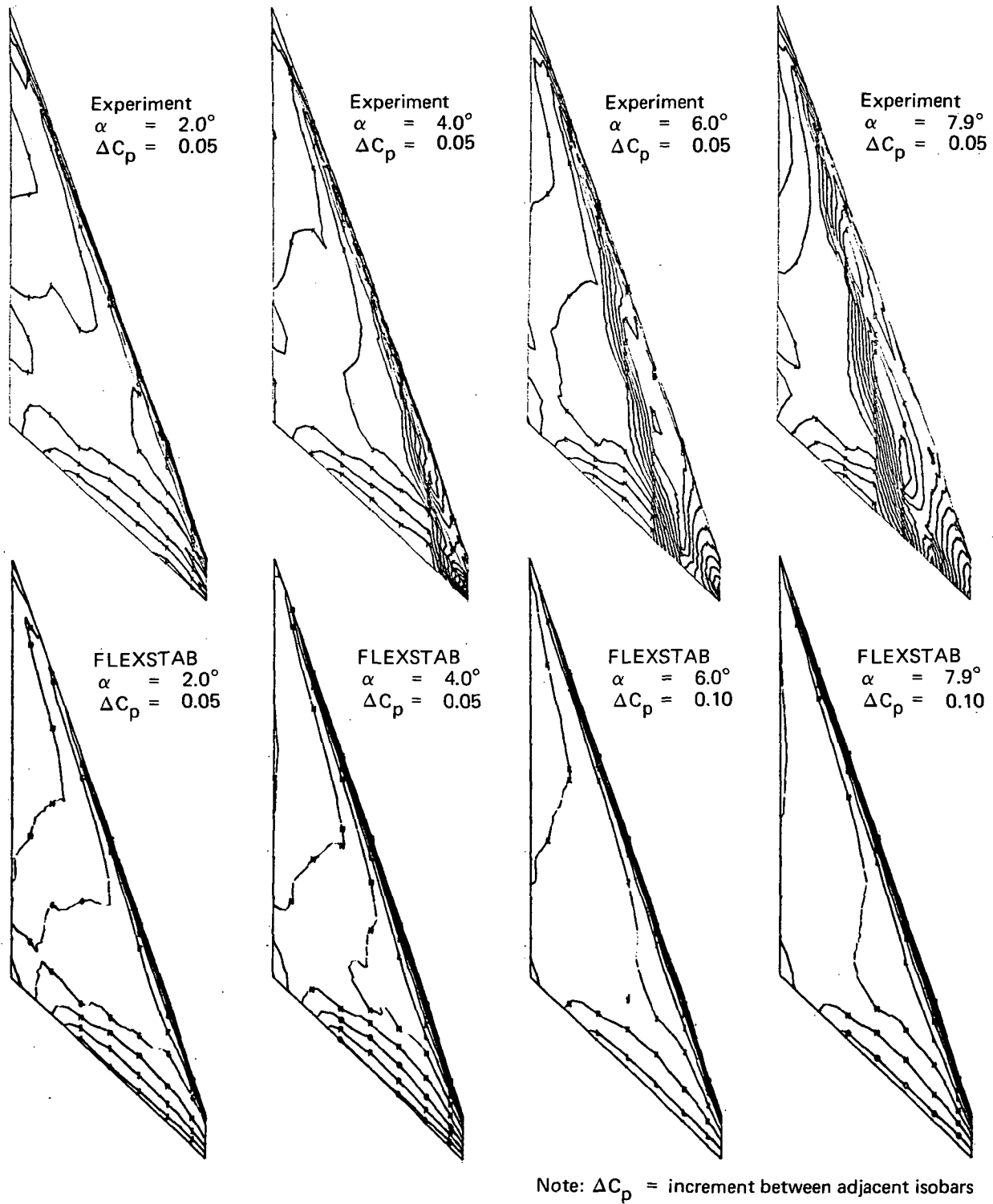
Figure 18.-(Continued)



$M = 0.85$  (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

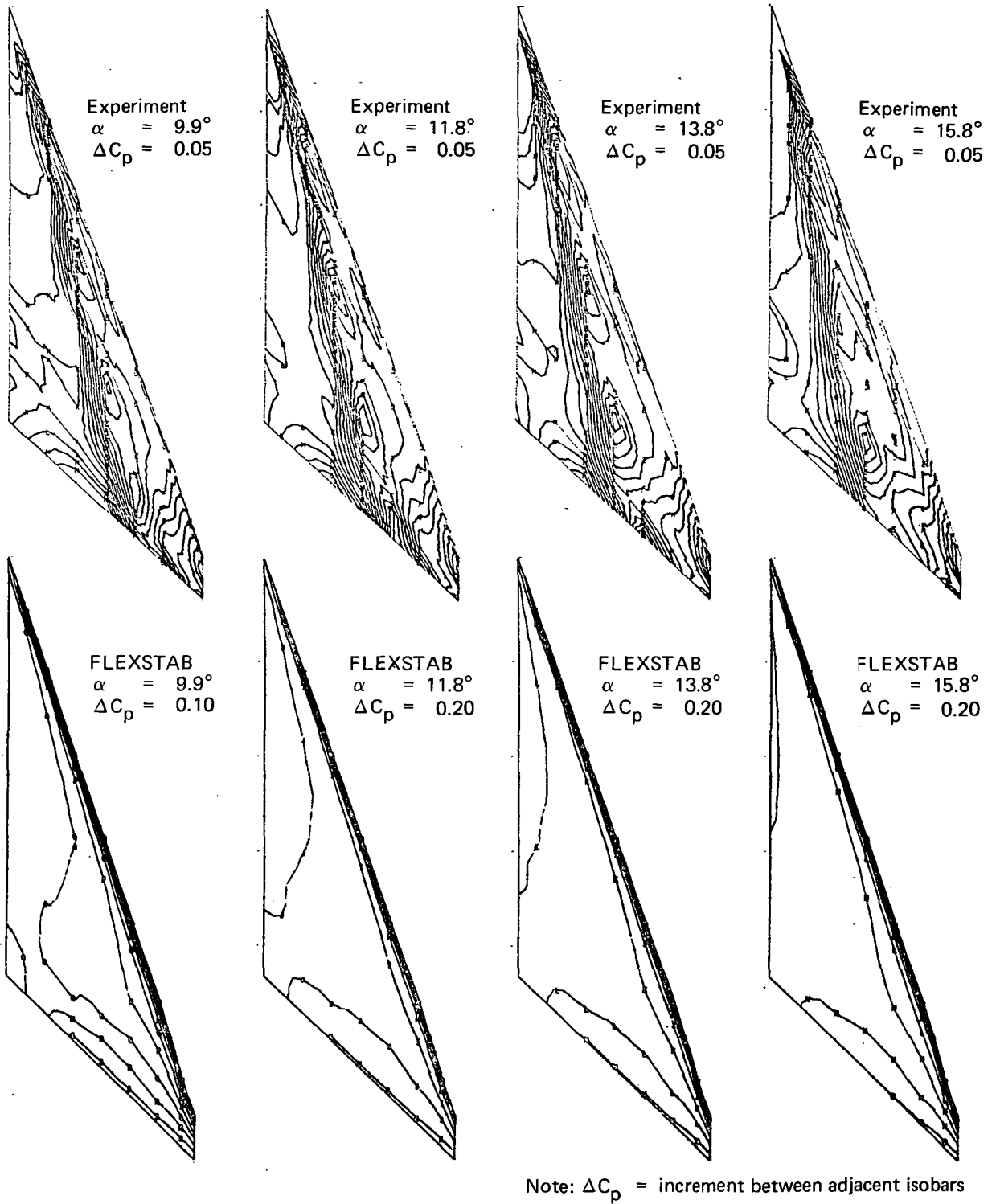
(k) Wing Aerodynamic Coefficients

Figure 18.-(Concluded)



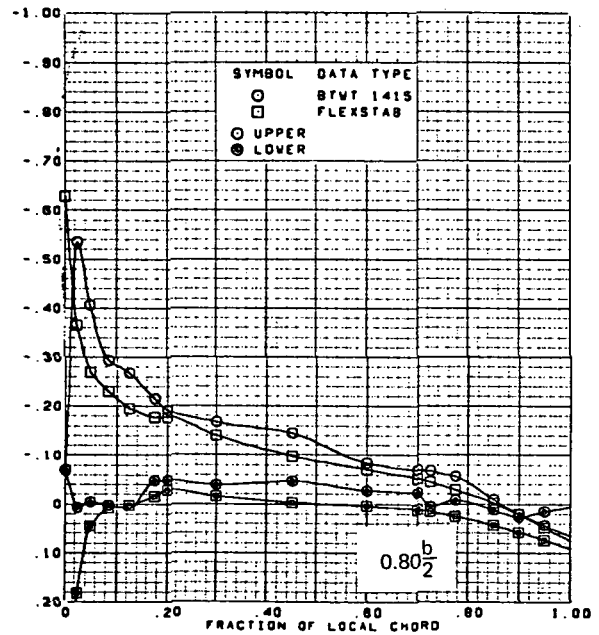
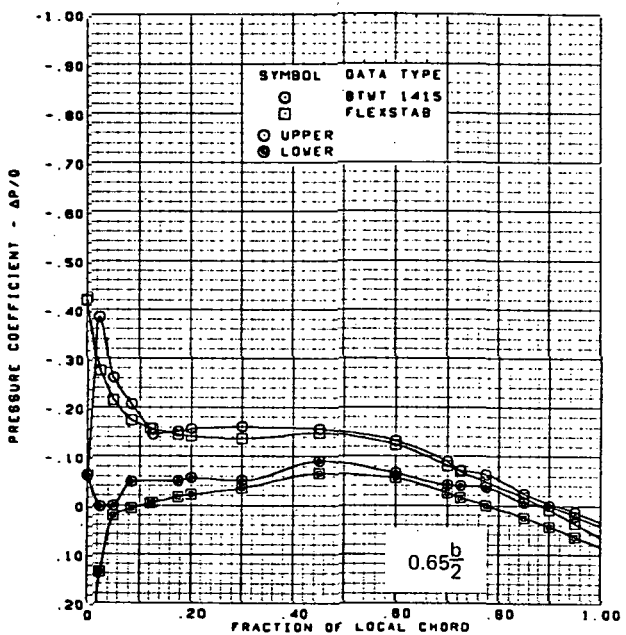
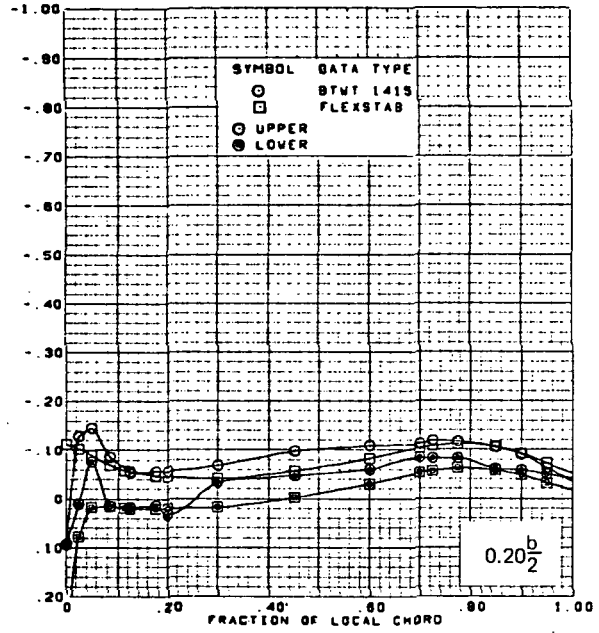
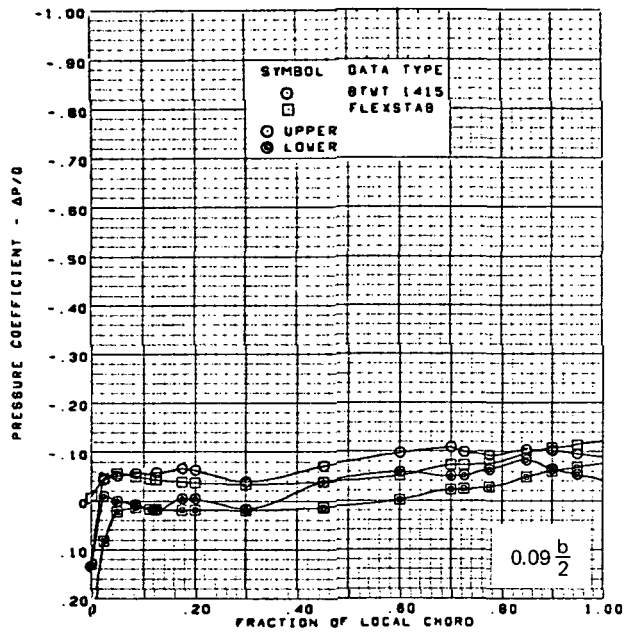
(a) Upper Surface Isobars, FLEXSTAB and Experiment

Figure 19.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



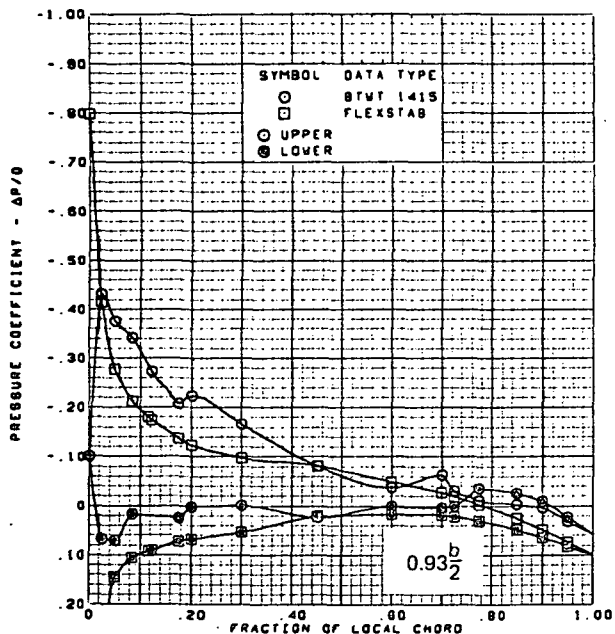
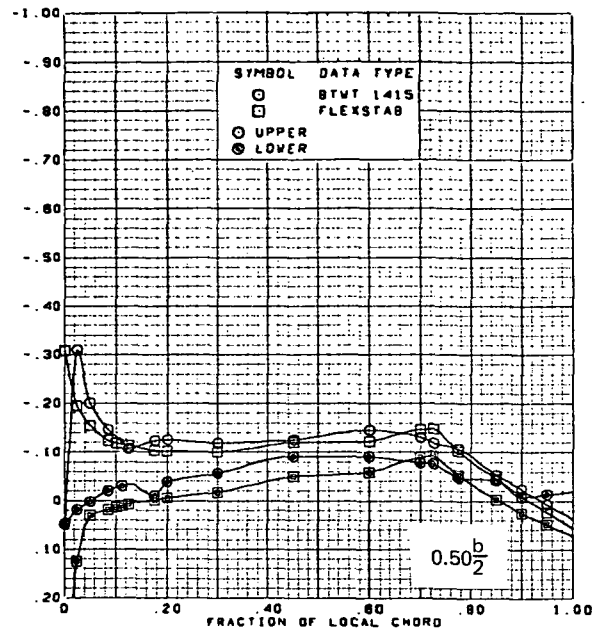
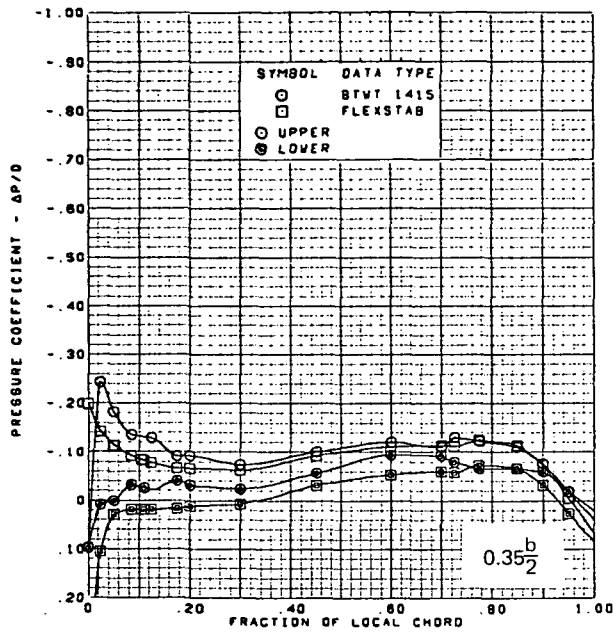
(a) (Concluded)

Figure 19.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 2.0^\circ$

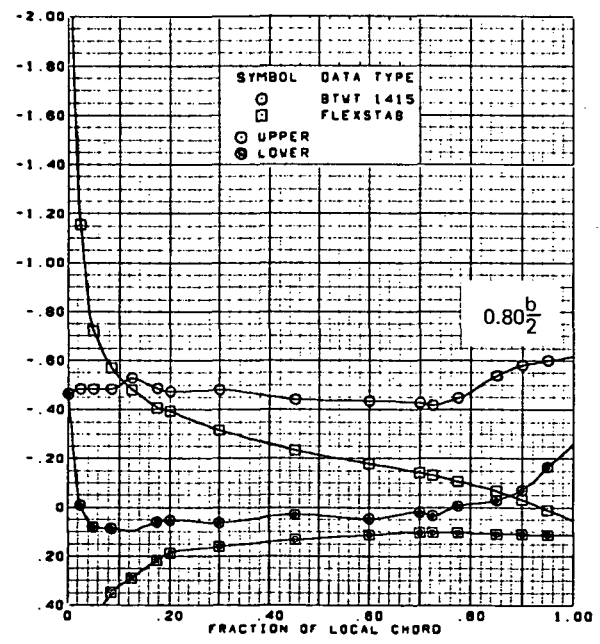
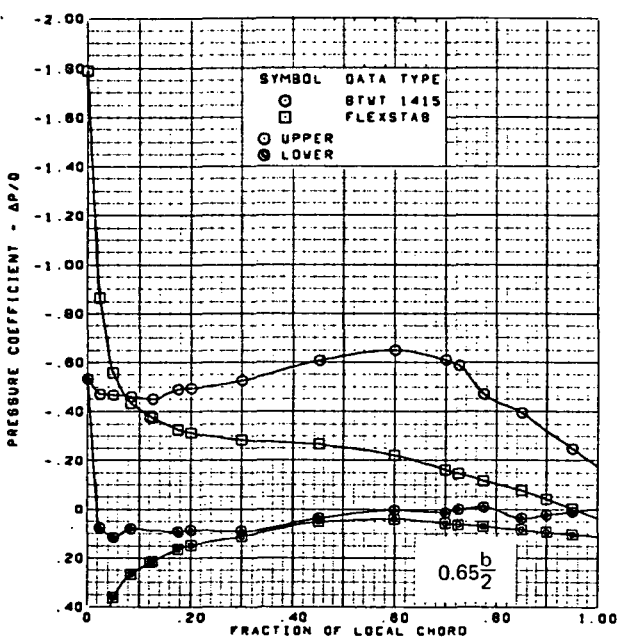
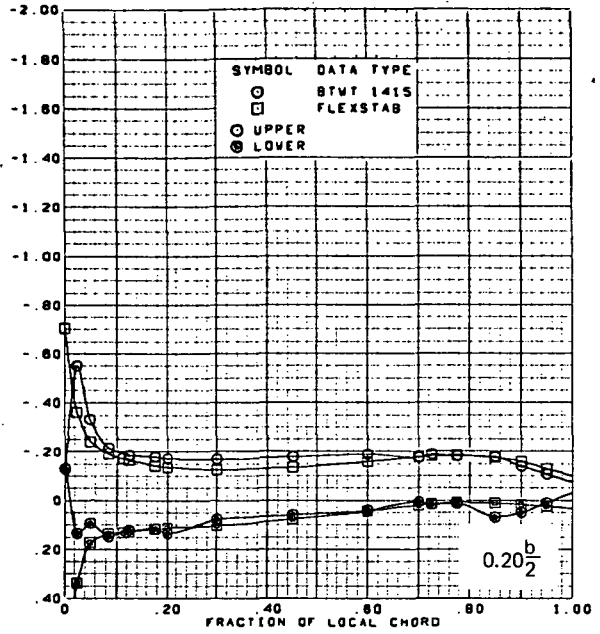
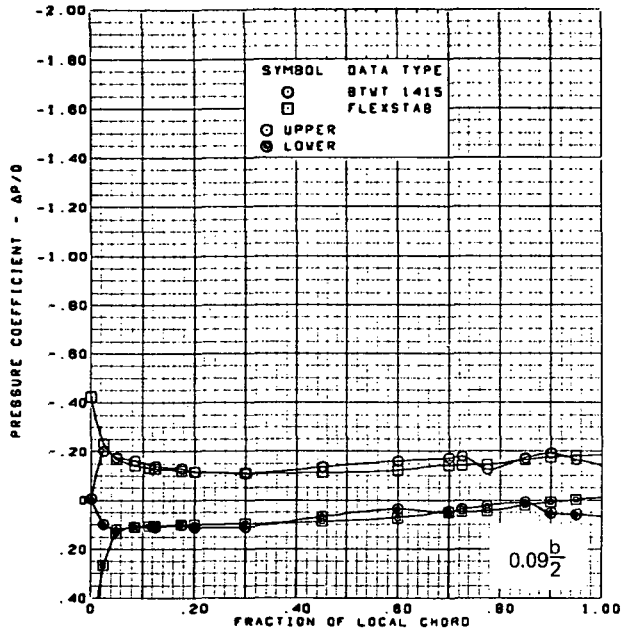
Figure 19.-(Continued)



M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

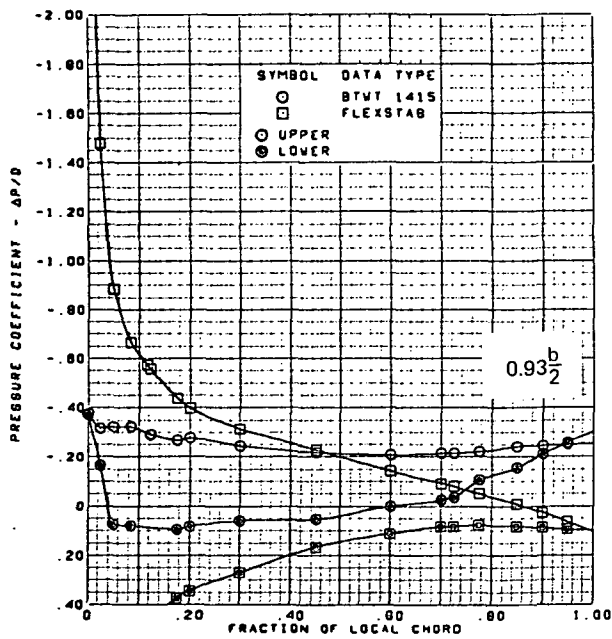
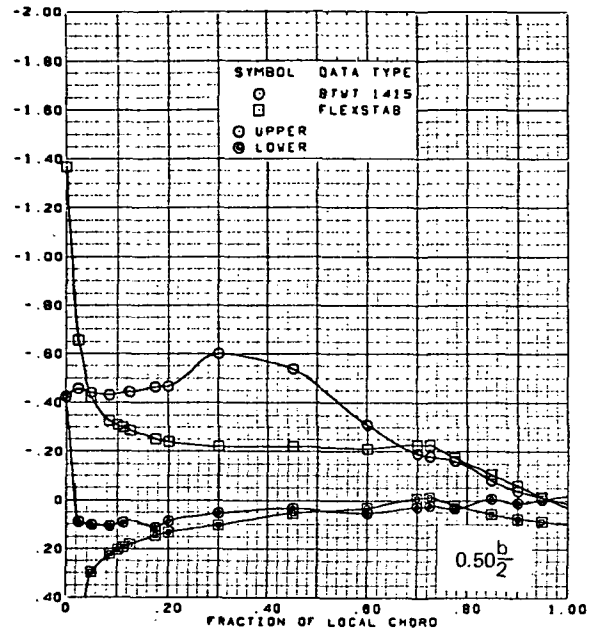
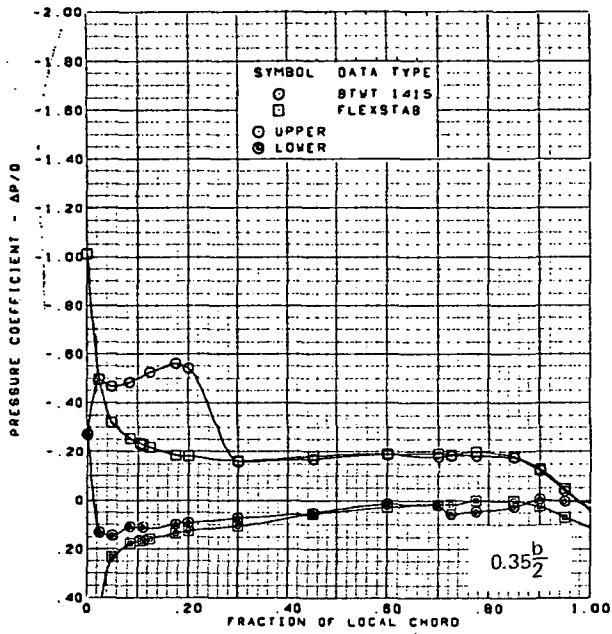
(b) (Concluded)

Figure 19.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

Figure 19.-(Continued)

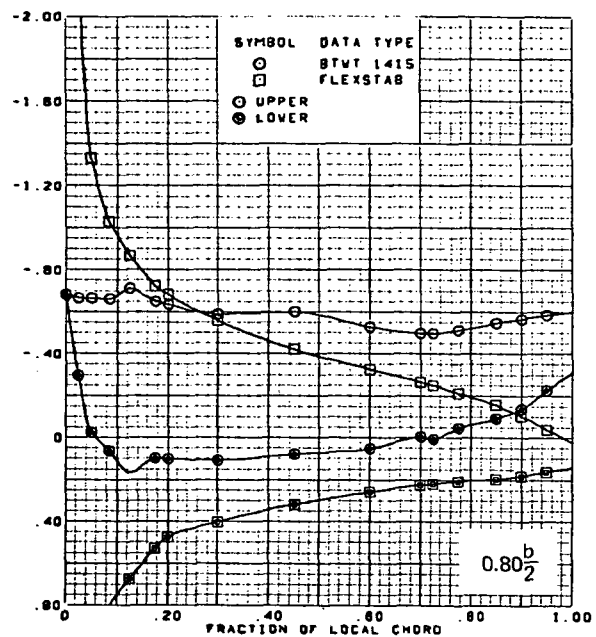
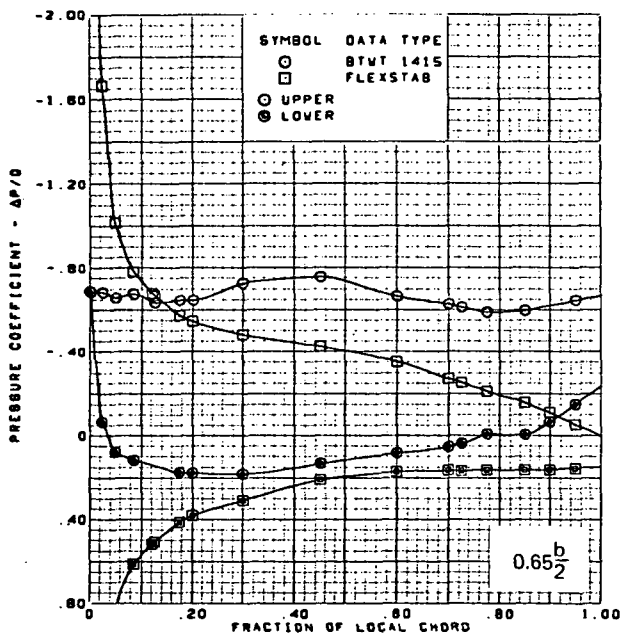
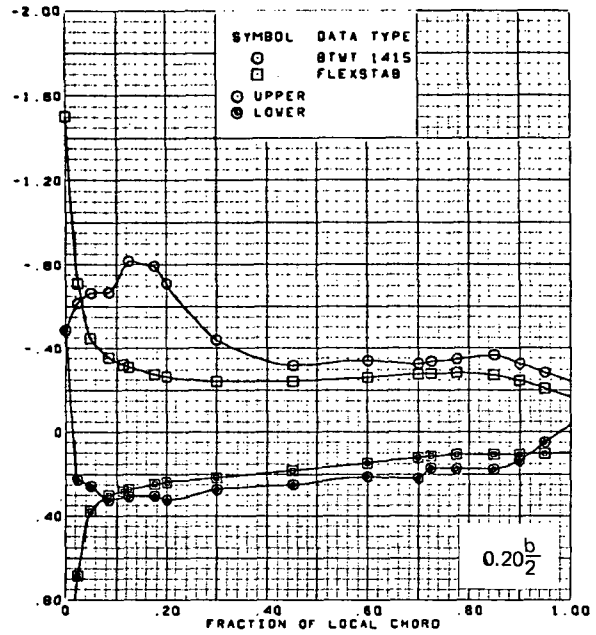
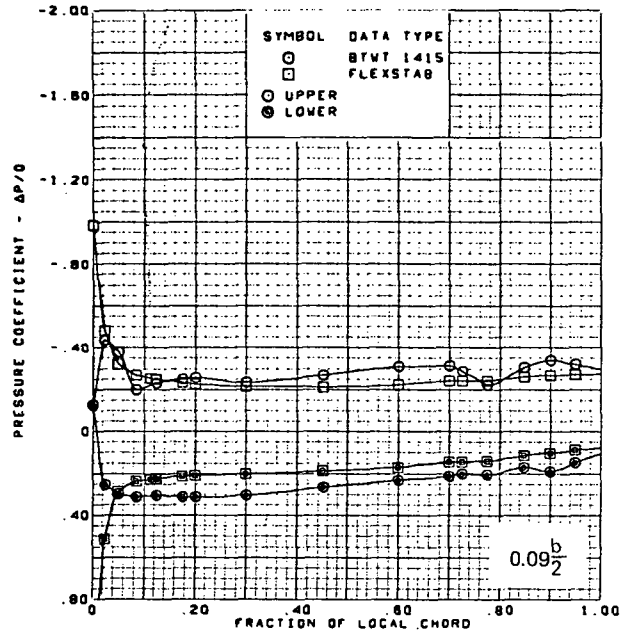


M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(c) (Concluded)

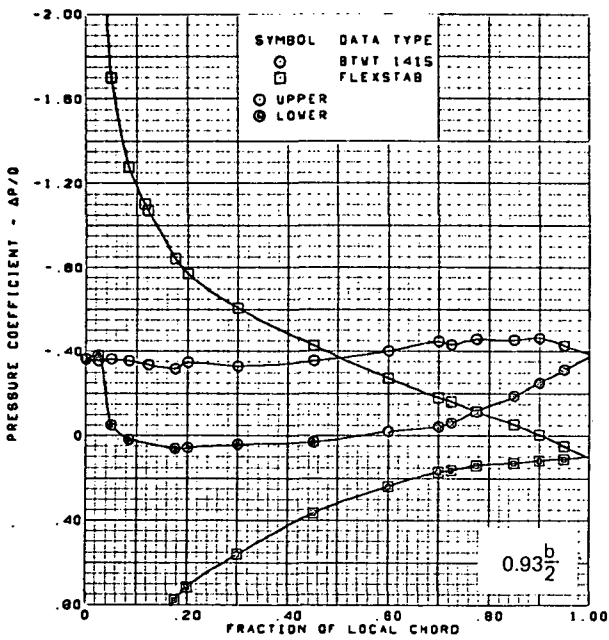
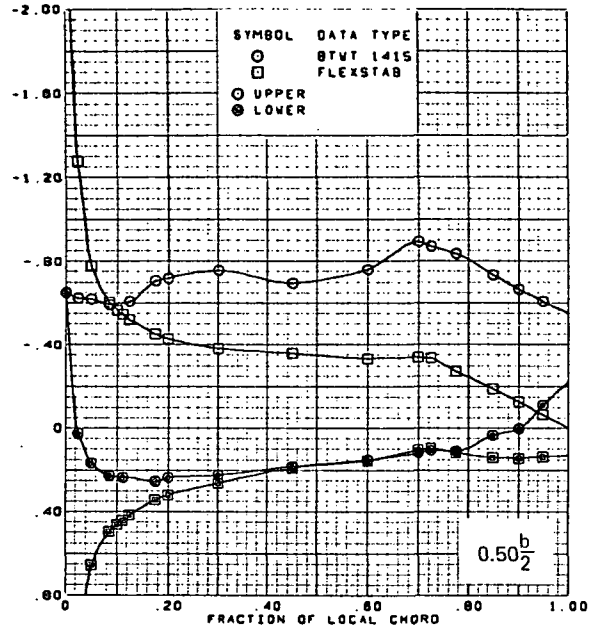
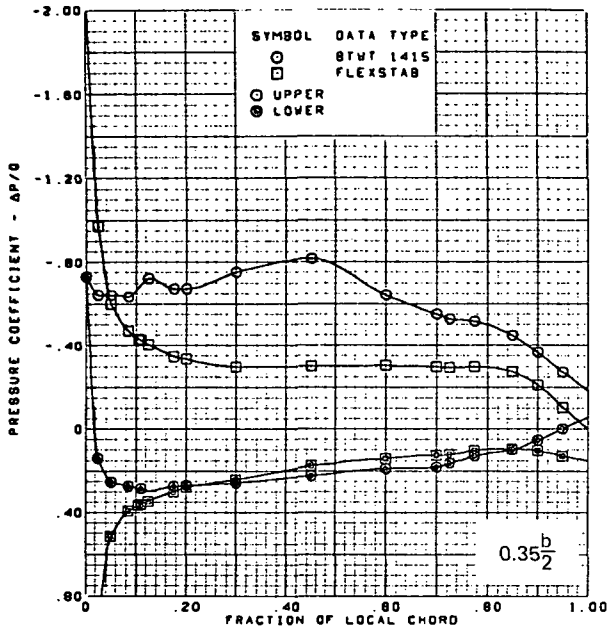
Figure 19.-(Continued)





(d) Surface Chordwise Pressure Distributions,  $\alpha = 15.8^\circ$

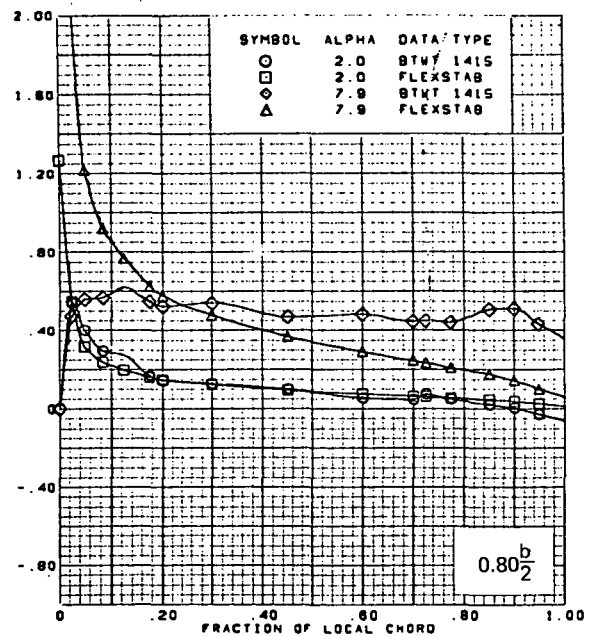
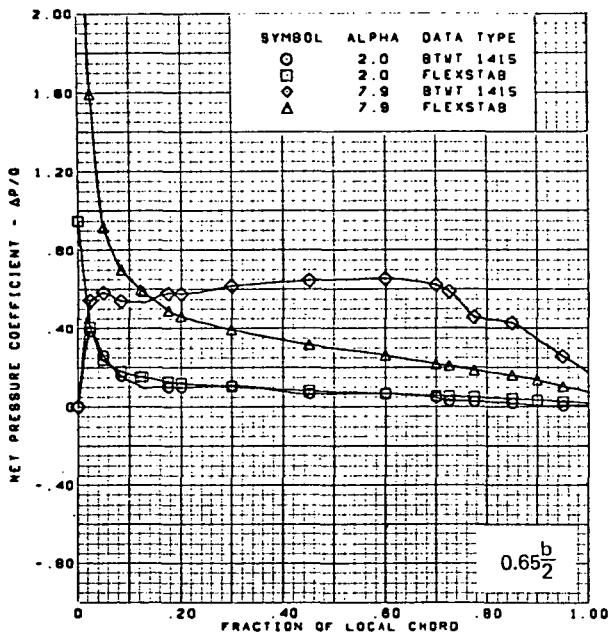
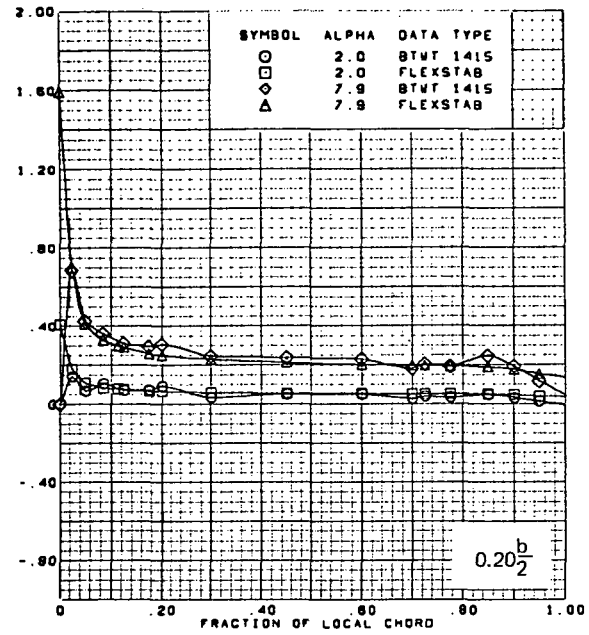
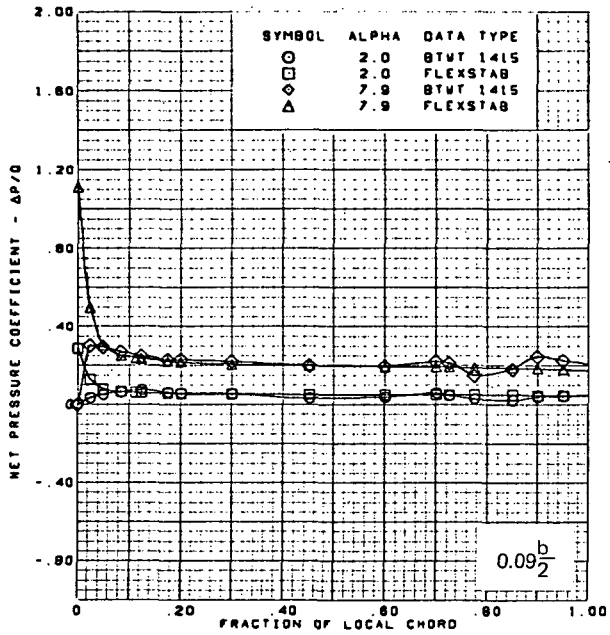
Figure 19.-(Continued)



M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

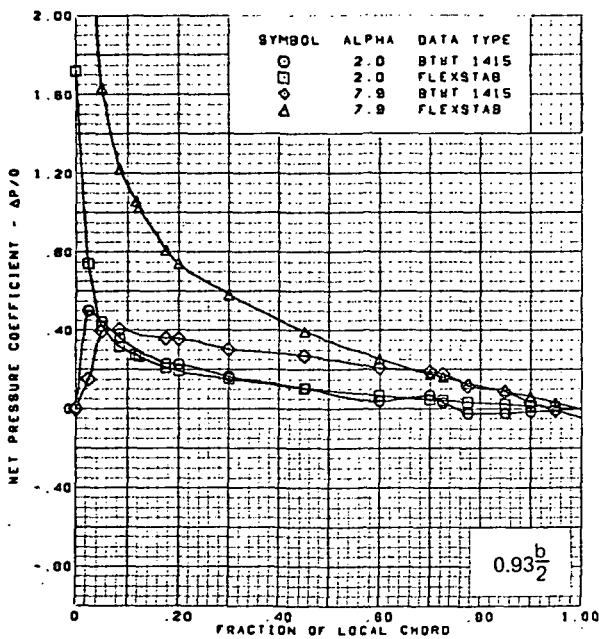
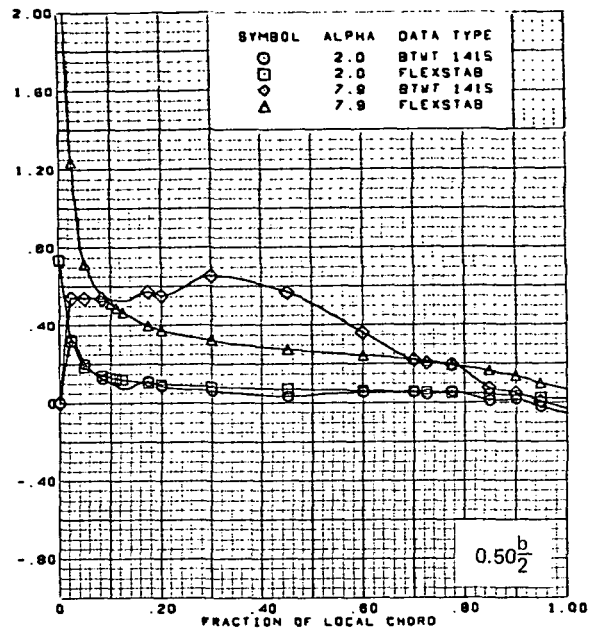
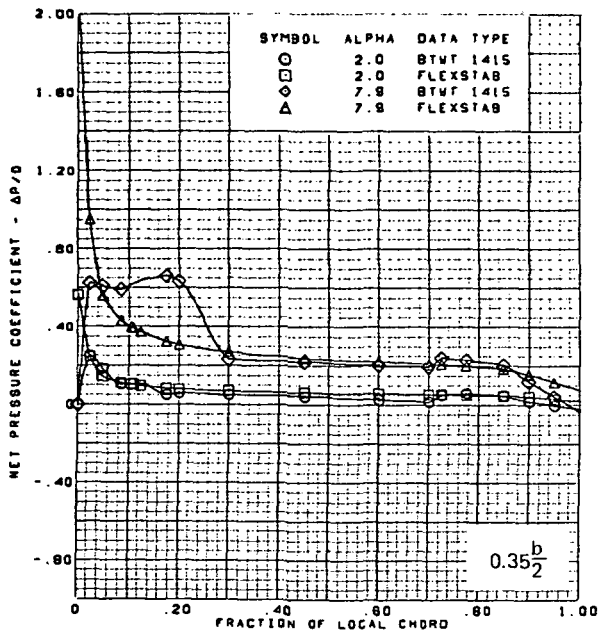
(d) (Concluded)

Figure 19.-(Continued)



(e) Net Chordwise Pressure Distributions,  $\alpha = 2.0^\circ, 7.9^\circ$

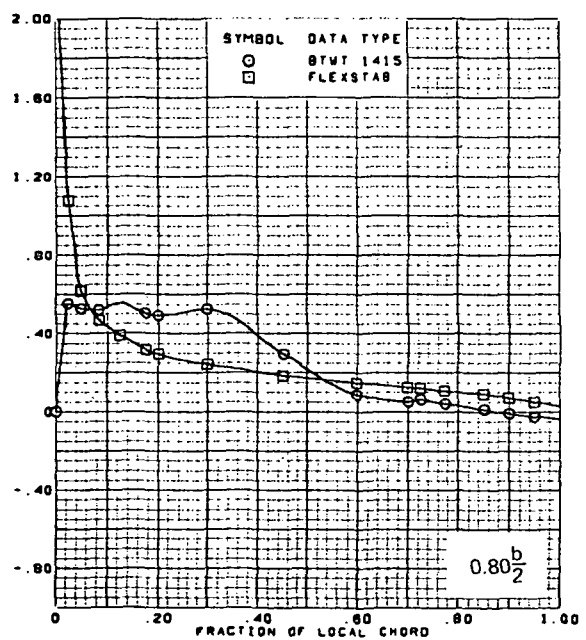
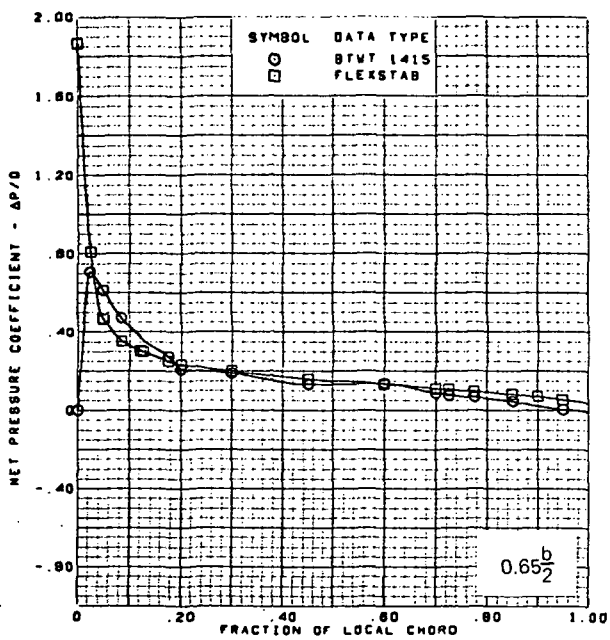
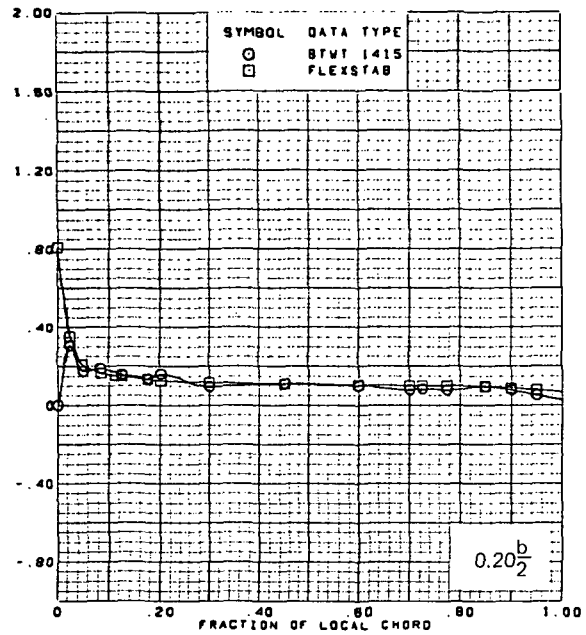
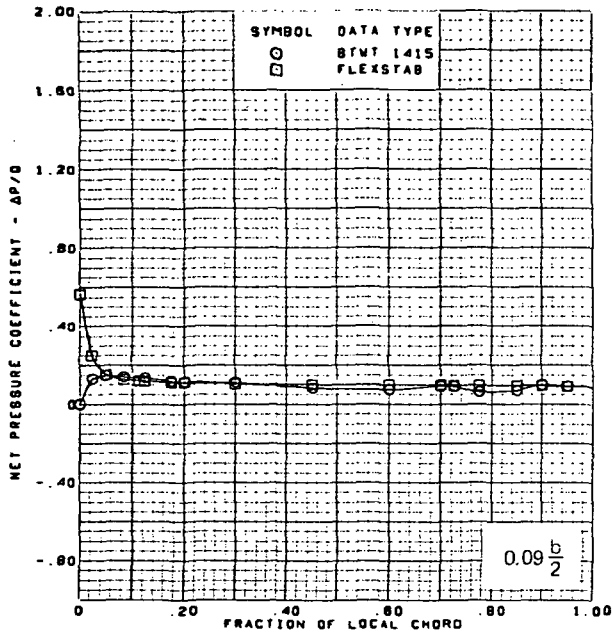
Figure 19.-(Continued)



M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

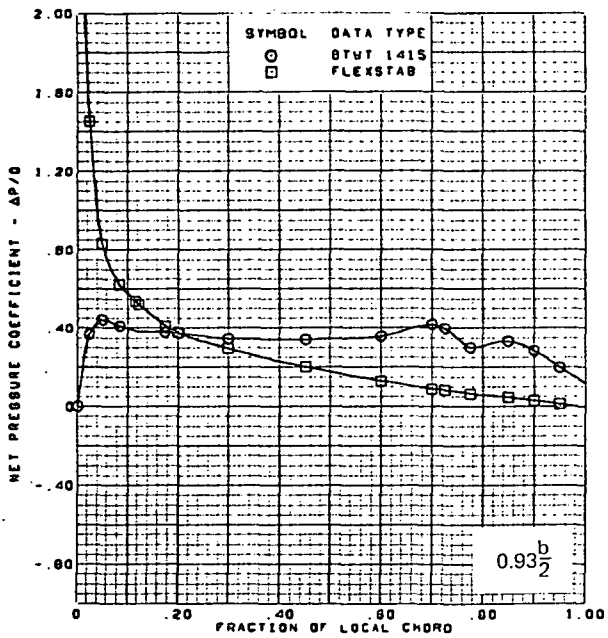
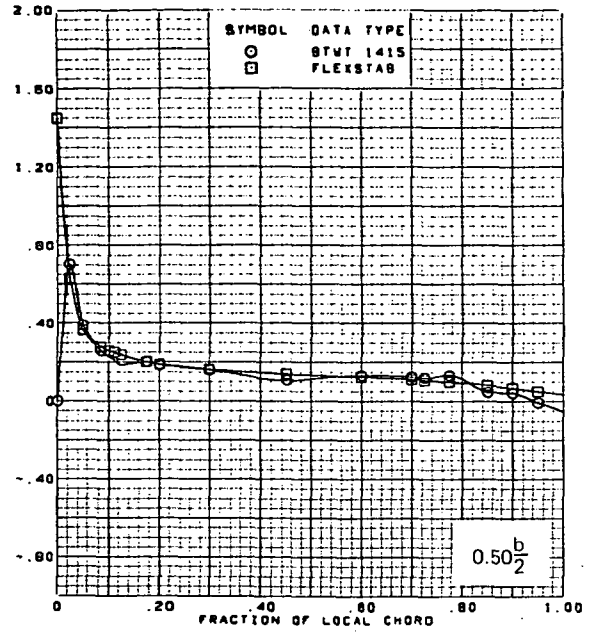
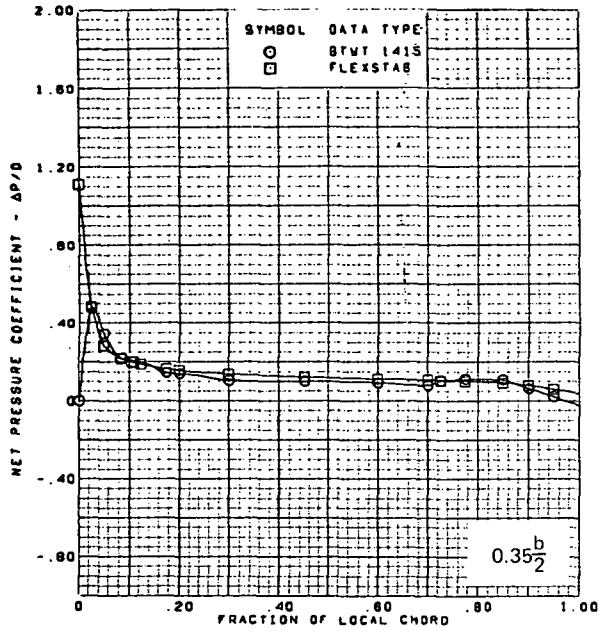
(e) (Concluded)

Figure 19.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

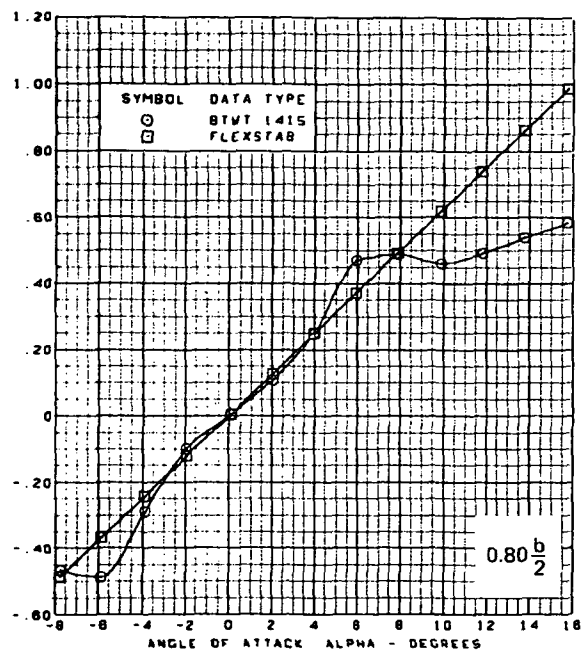
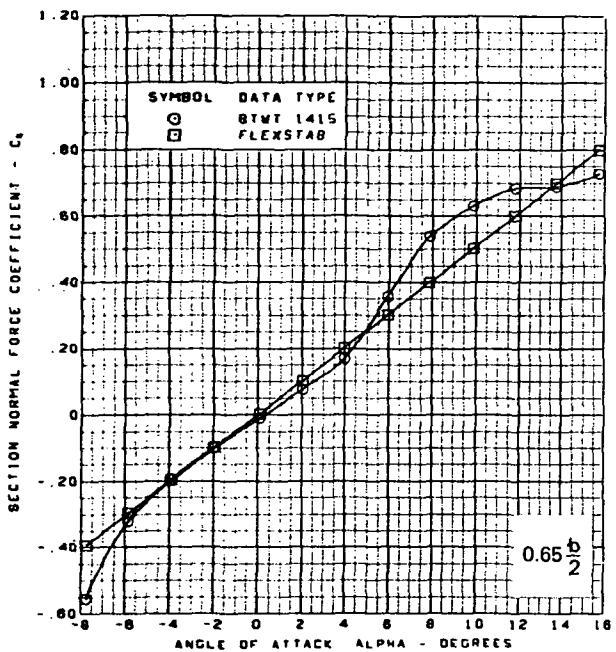
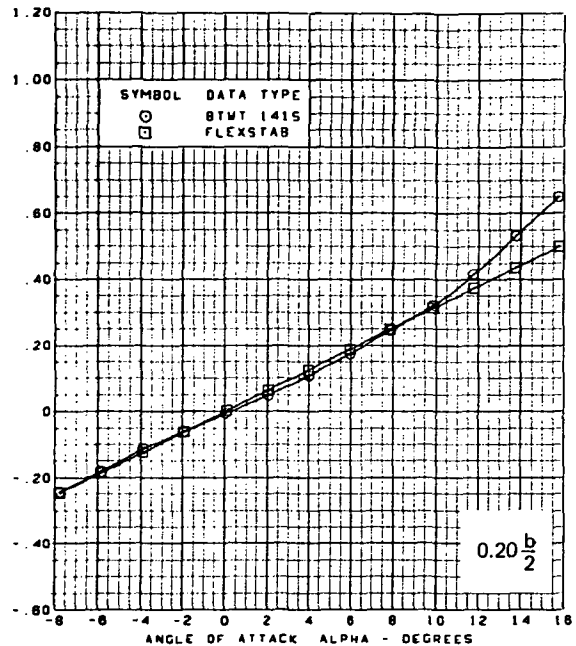
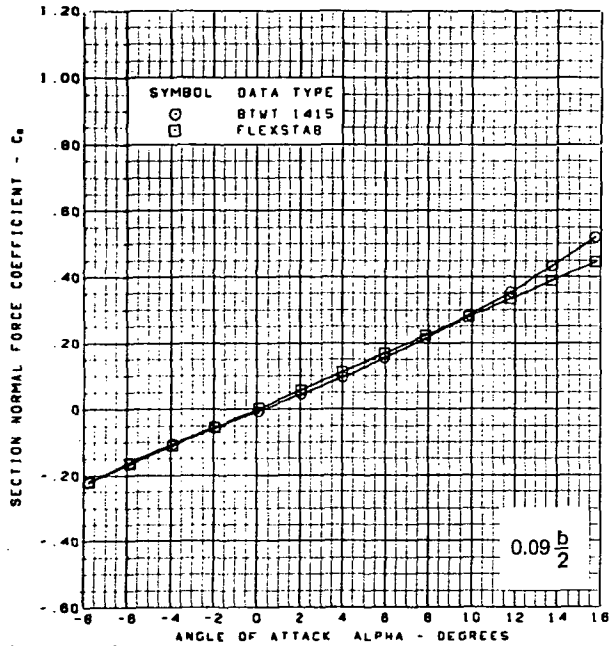
Figure 19.-(Continued)



$M = 1.05$  (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span  $\approx 0.0^\circ$   
 T.E. deflection, full span  $\approx 0.0^\circ$

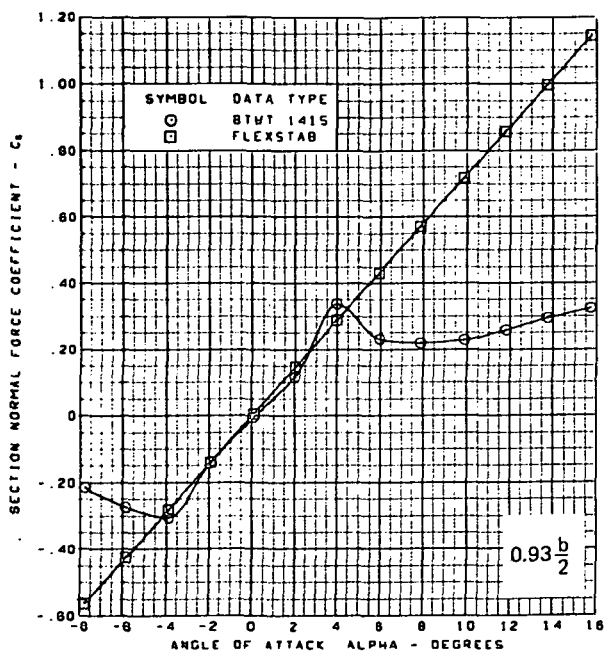
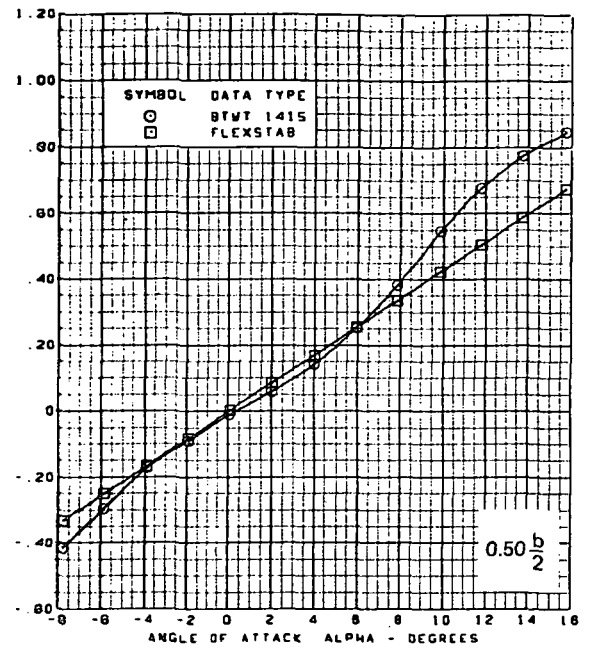
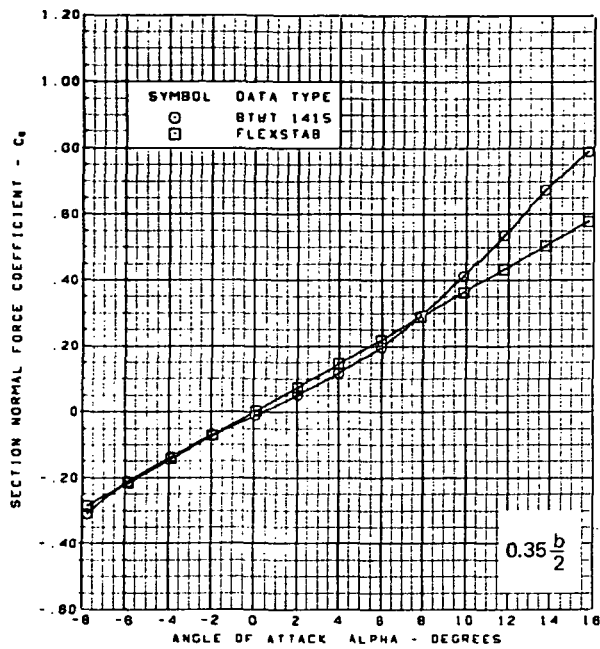
(f) (Concluded)

Figure 19.-(Continued)



(g) Section Aerodynamic Coefficients - Normal Force

Figure 19.-(Continued)

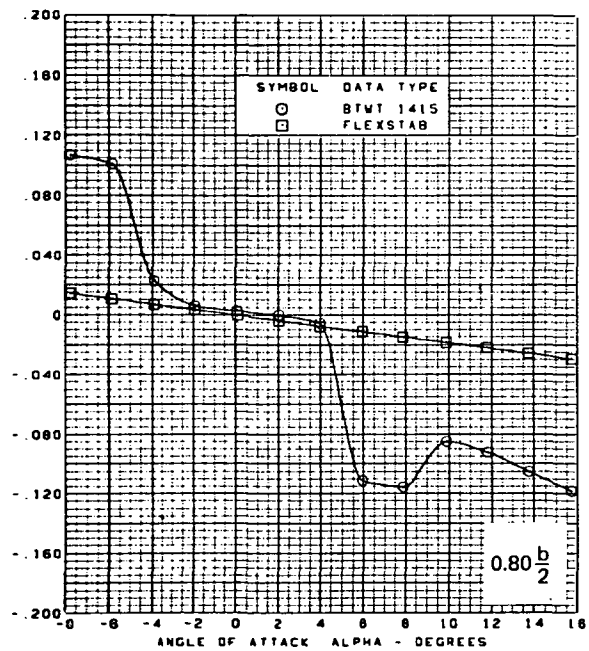
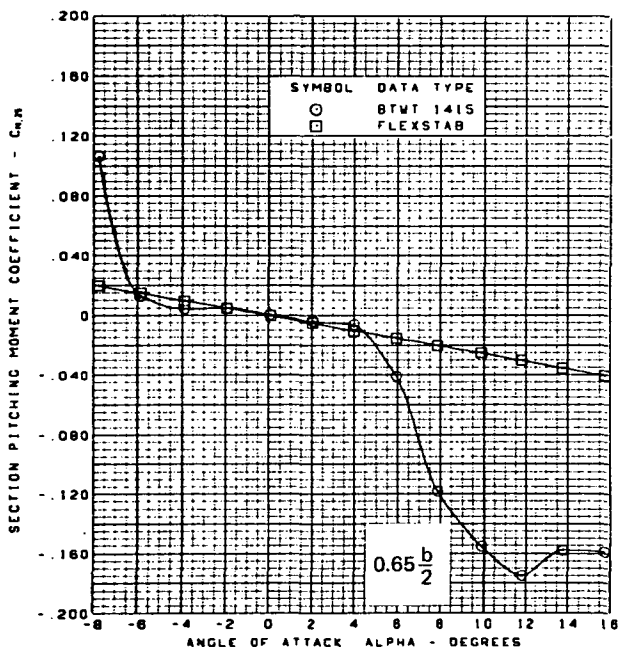
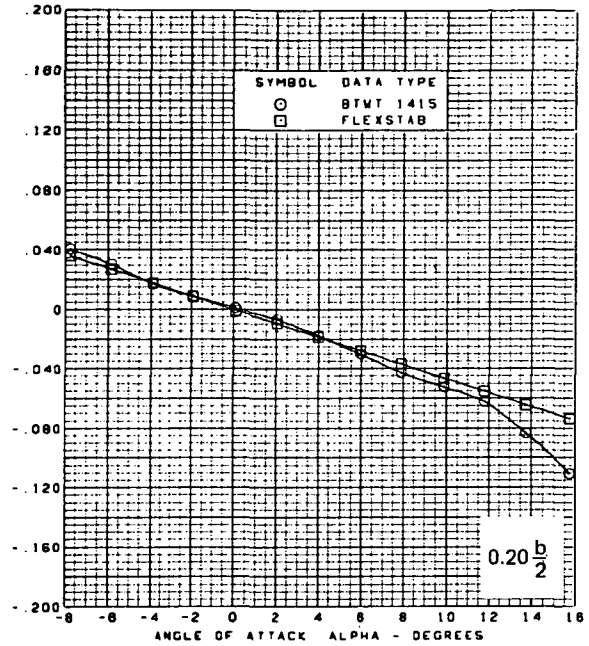
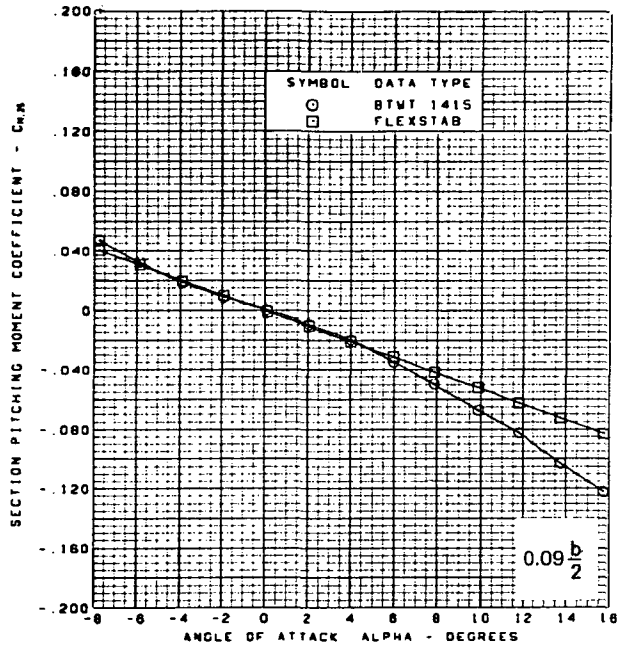


M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(g) (Concluded)

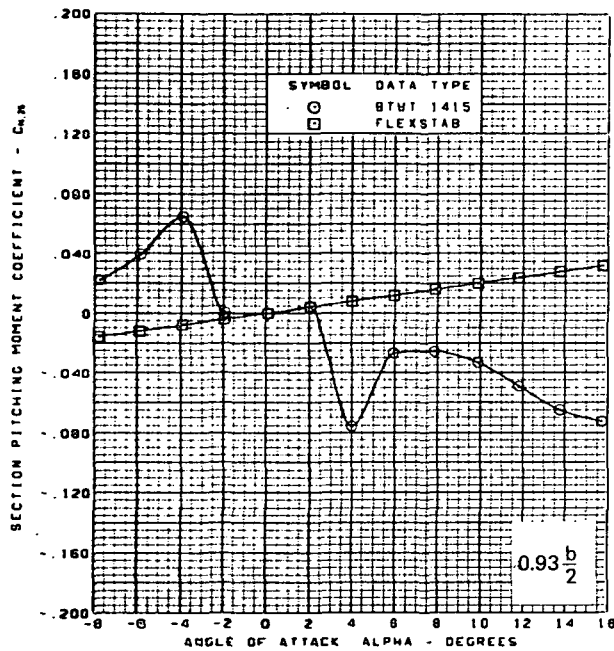
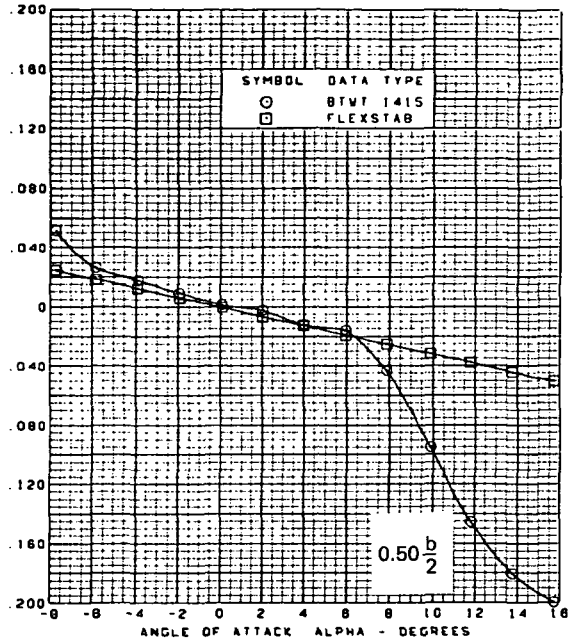
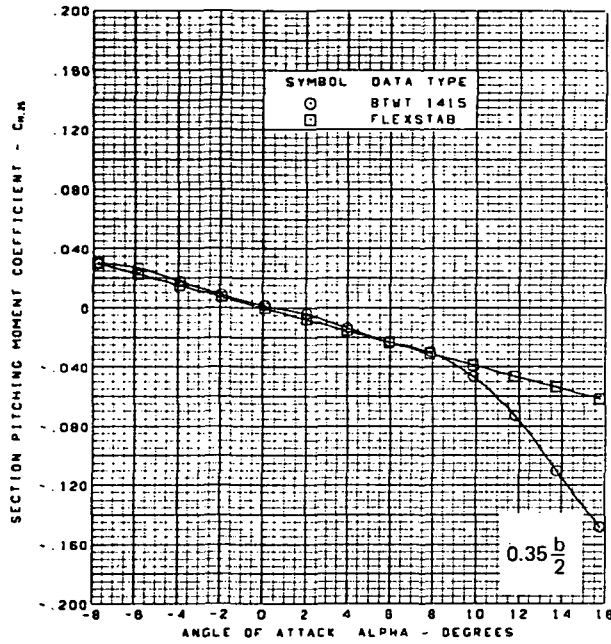
Figure 19.-(Continued)





(h) Section Aerodynamic Coefficients - Pitching Moment

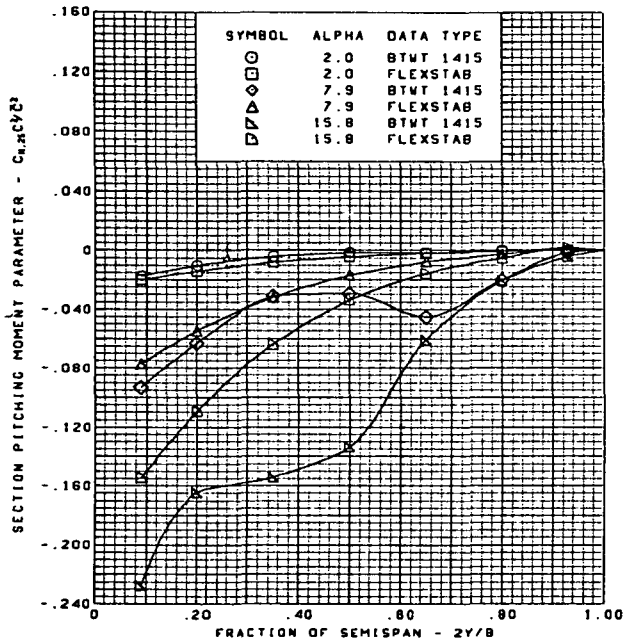
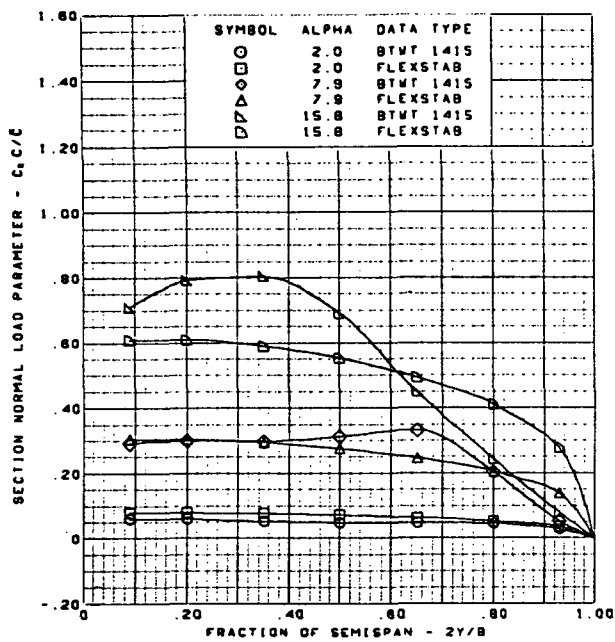
Figure 19.-(Continued)



M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(h) (Concluded)

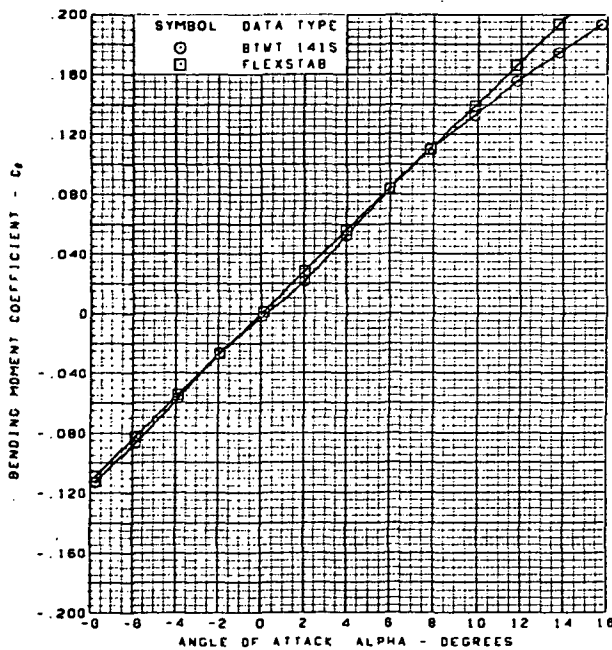
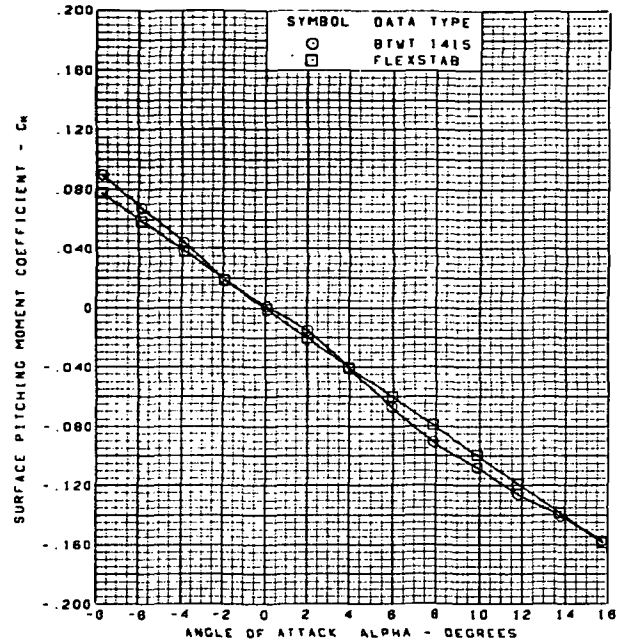
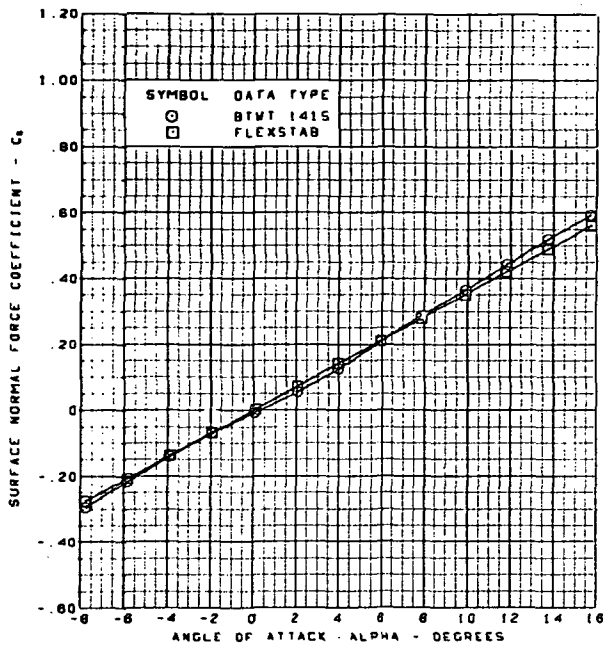
Figure 19.--(Continued)



M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(I) Spanload Distributions

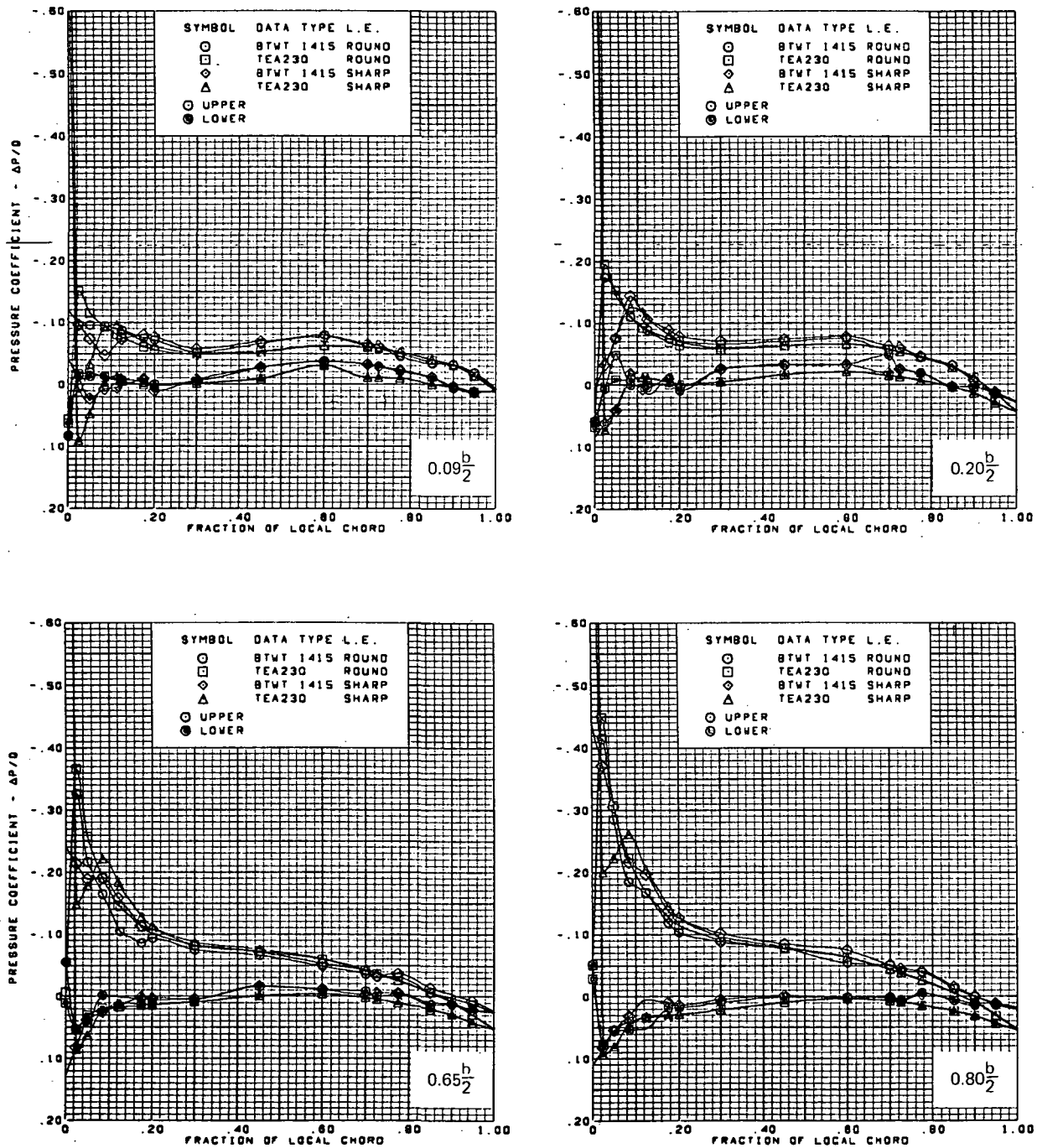
Figure 19.-(Continued)



$M = 1.05$  (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

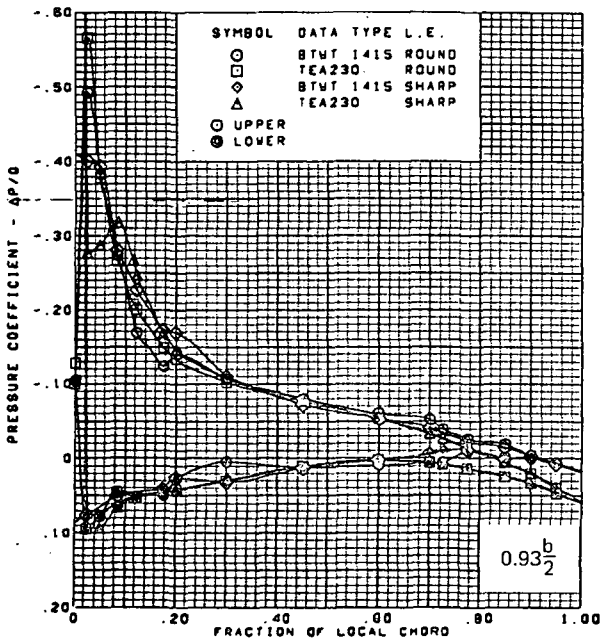
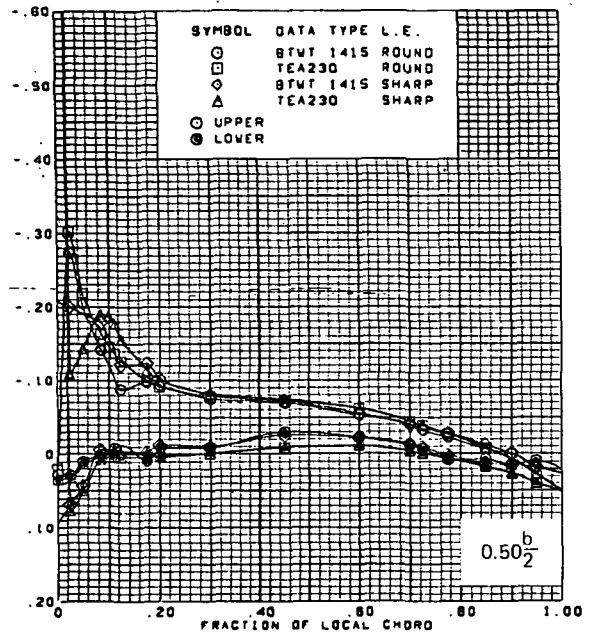
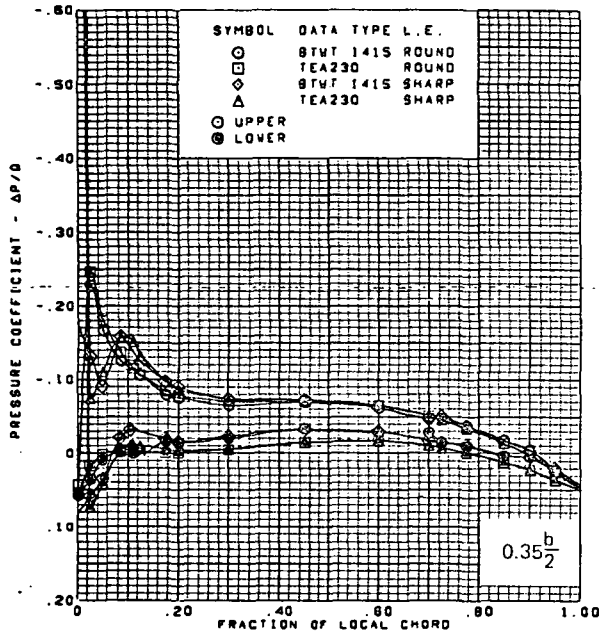
(j) Wing Aerodynamic Coefficients

Figure 19.-(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha \approx 2.0^\circ$

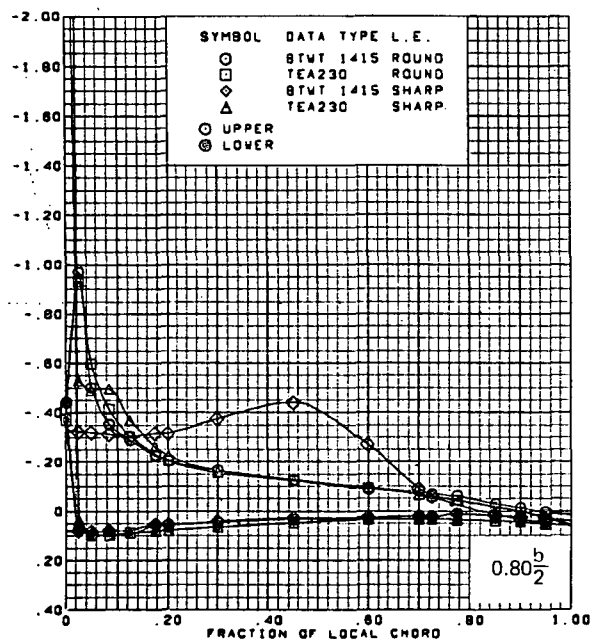
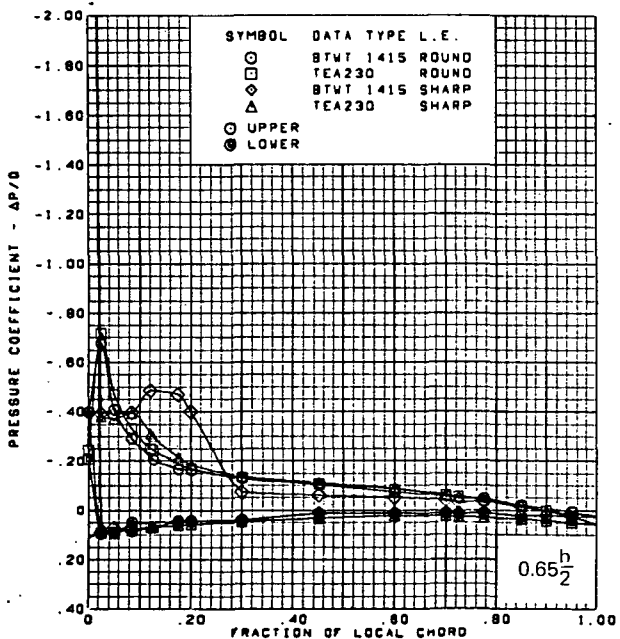
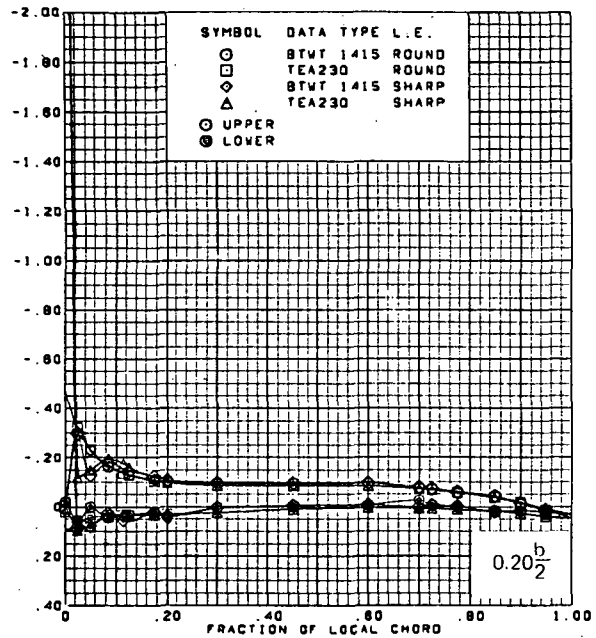
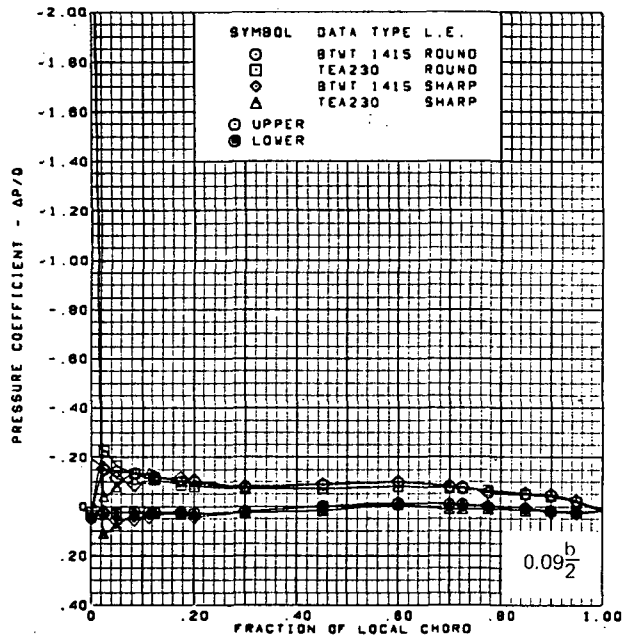
Figure 20.—Wing Theory-to-Experiment Comparison—Effect of Leading Edge Shape; Flat Wing; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



$M = 0.40$   
 $\alpha \approx 2.0^\circ$   
 Flat wing  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

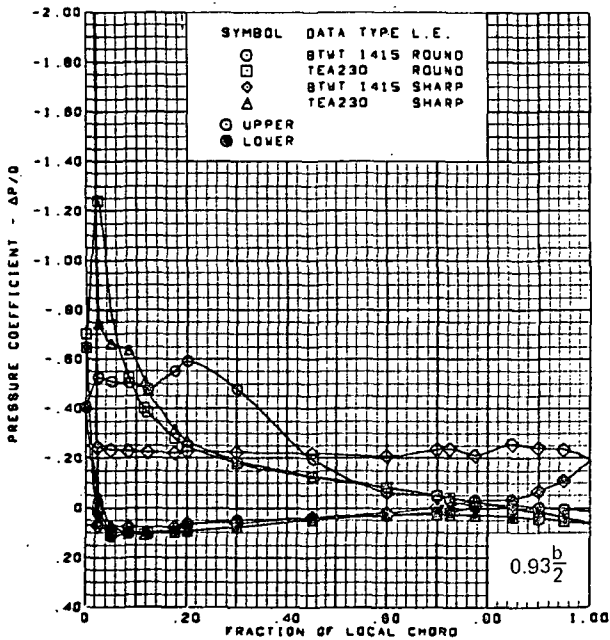
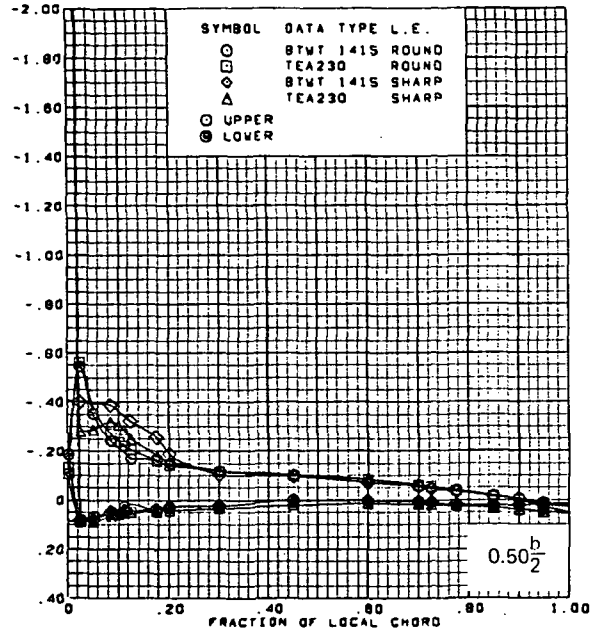
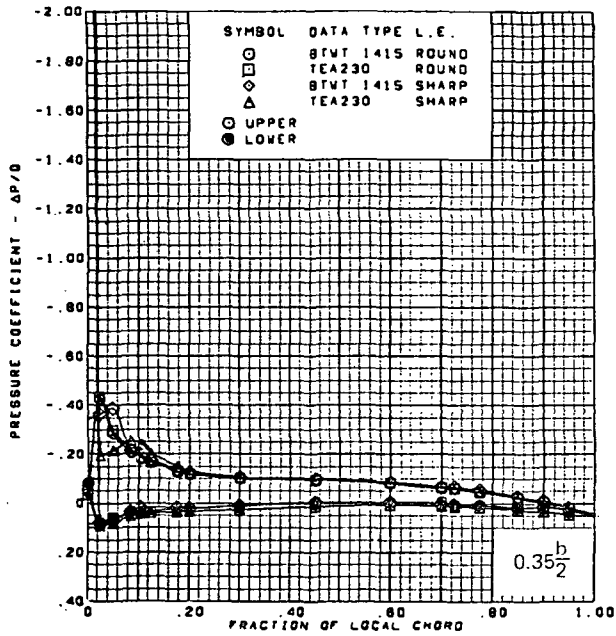
(a) | (Concluded)

Figure 20.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha \approx 4.0^\circ$

Figure 20.-(Continued)

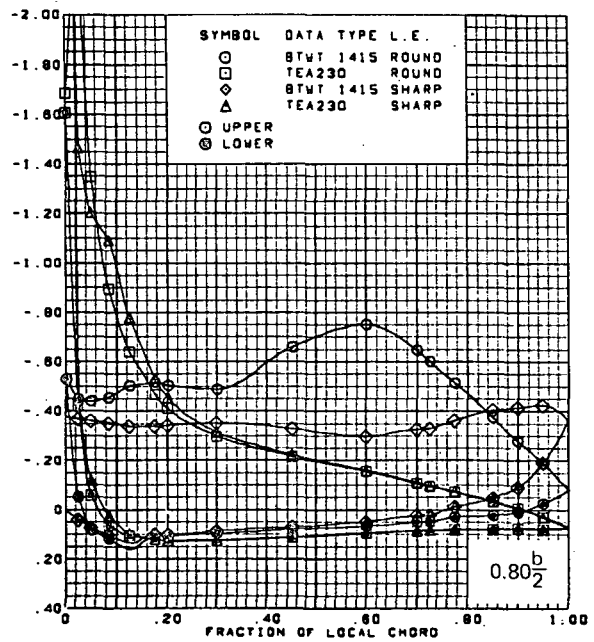
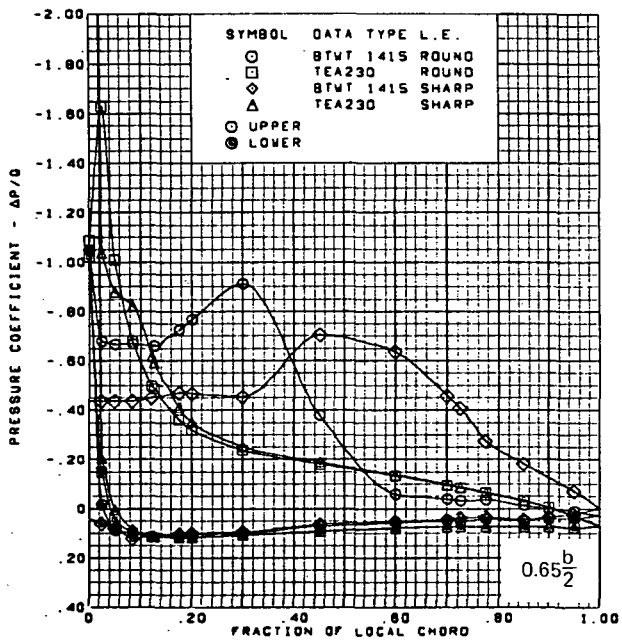
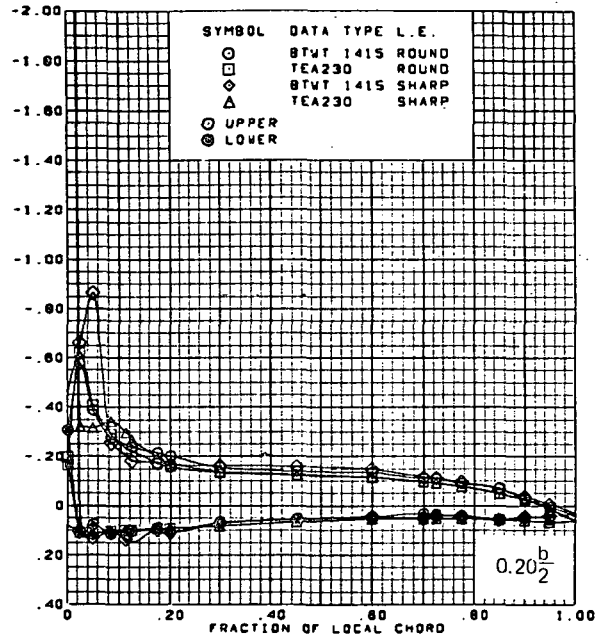
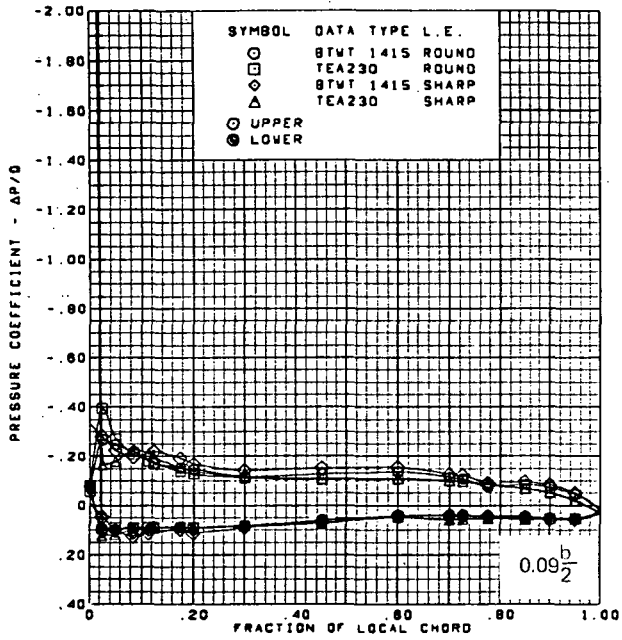


$M = 0.40$   
 $\alpha \approx 4.0^\circ$   
 Flat wing  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

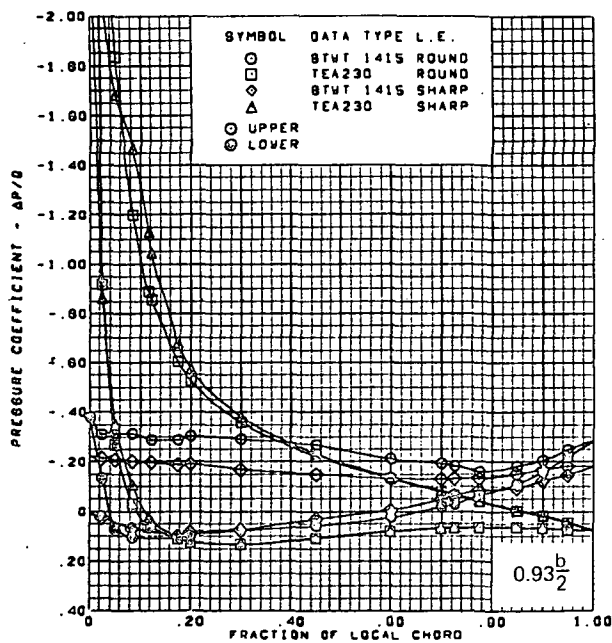
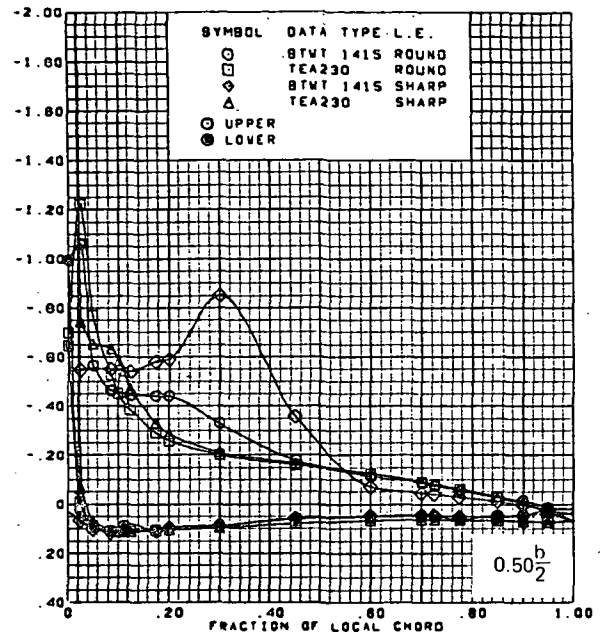
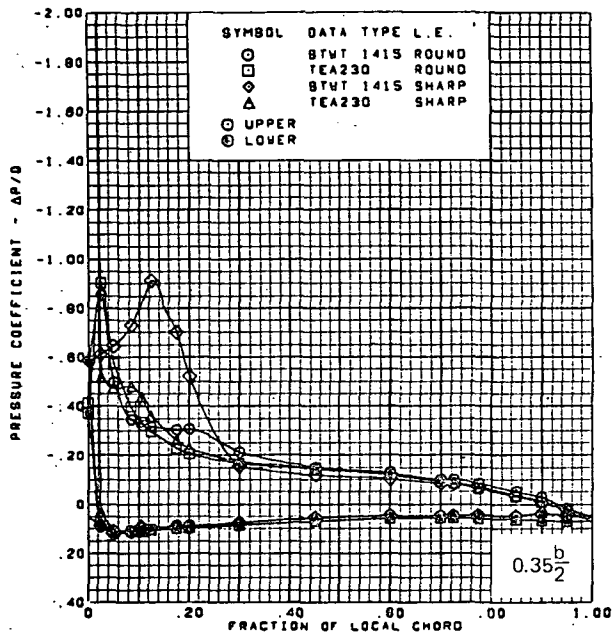
Figure 20.-(Continued)





(c) Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

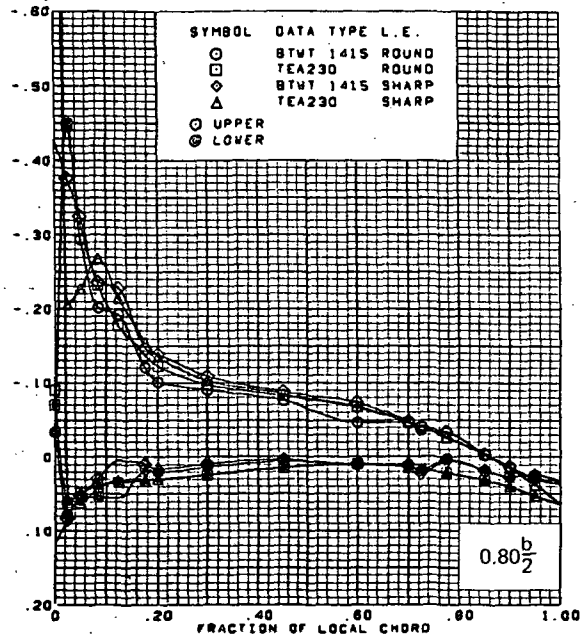
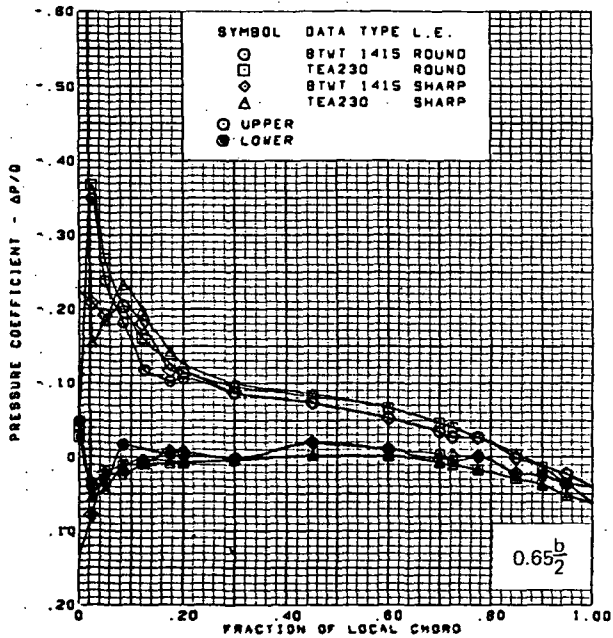
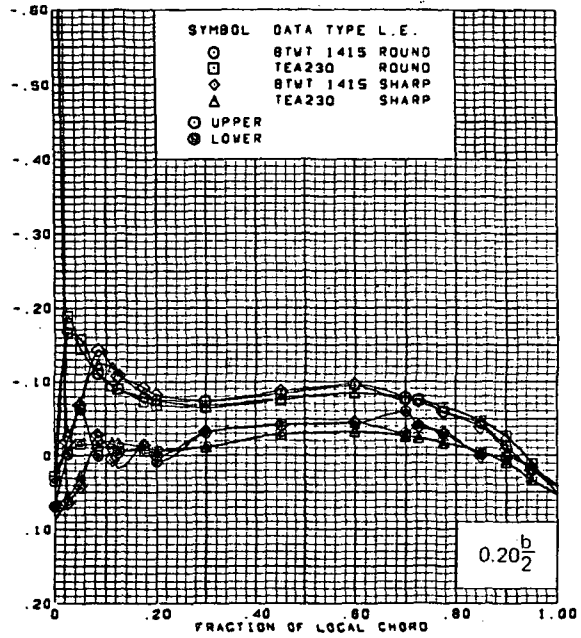
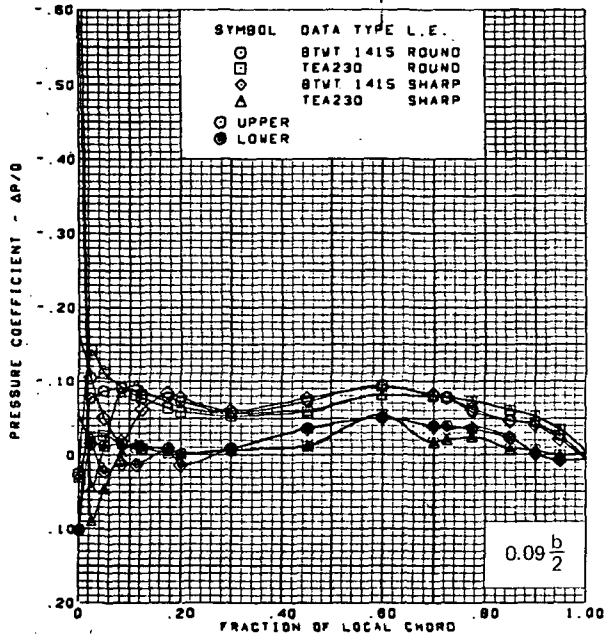
Figure 20.-(Continued)



$M = 0.40$   
 $\alpha \approx 8.0^\circ$   
 Flat wing  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

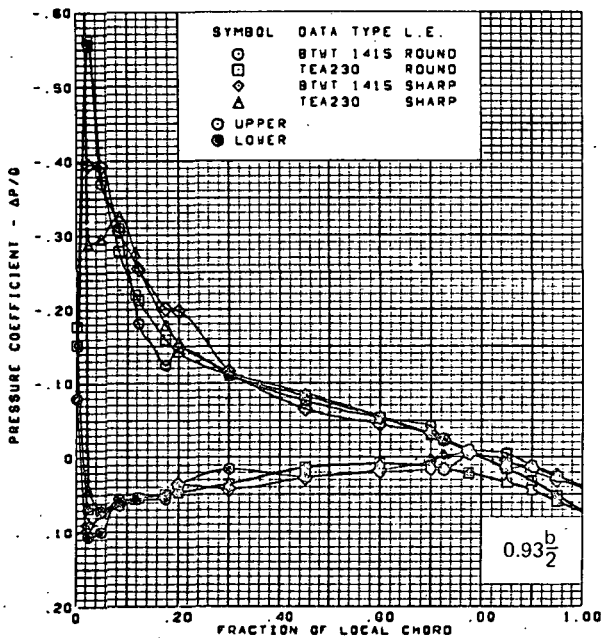
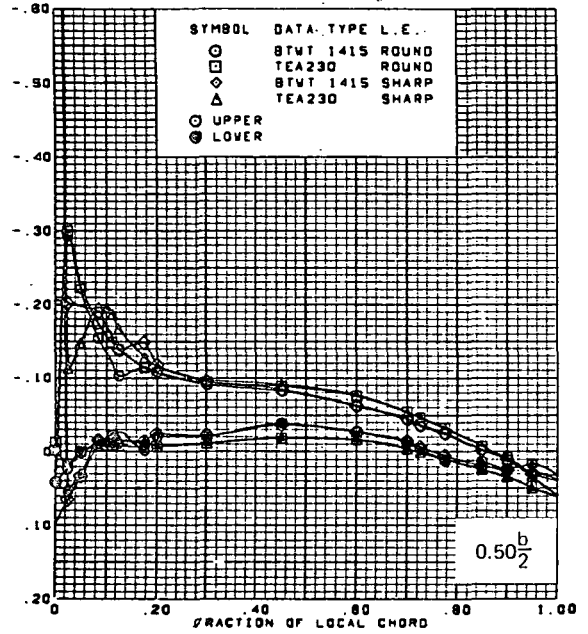
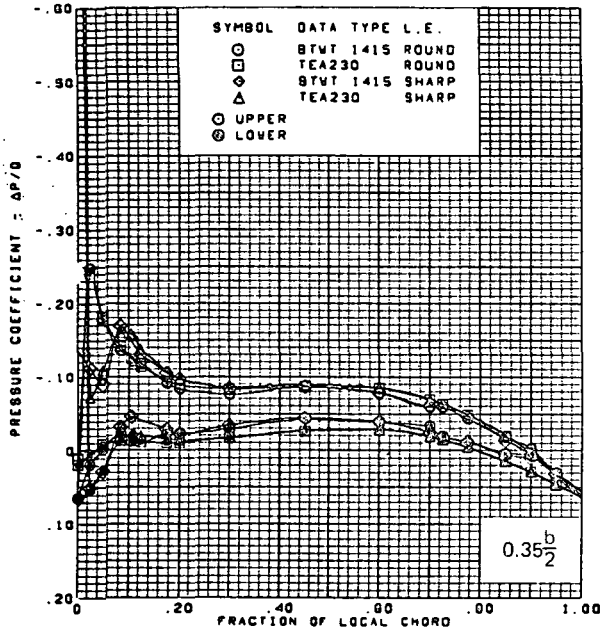
(c) (Concluded)

Figure 20.-(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha \approx 2.0^\circ$

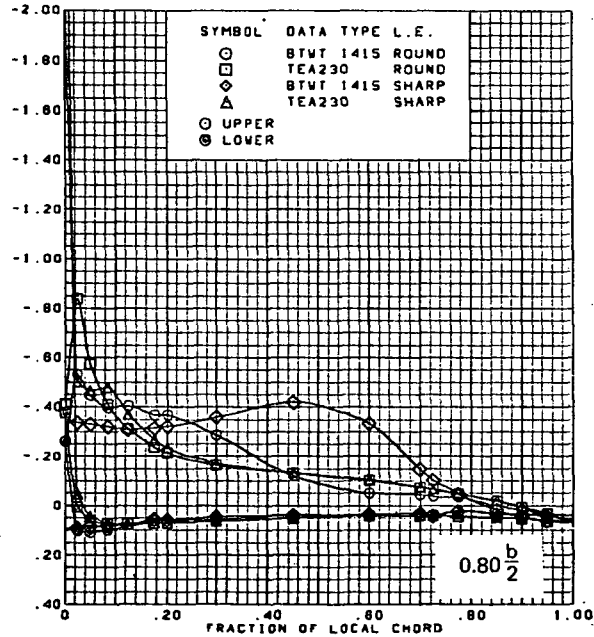
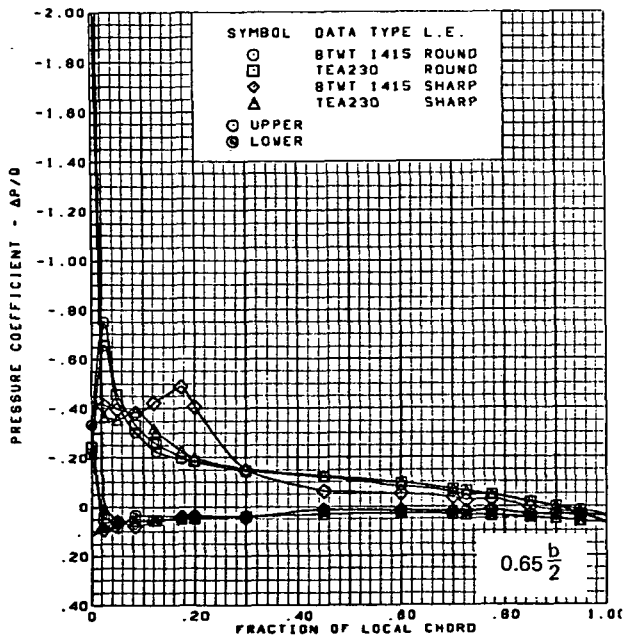
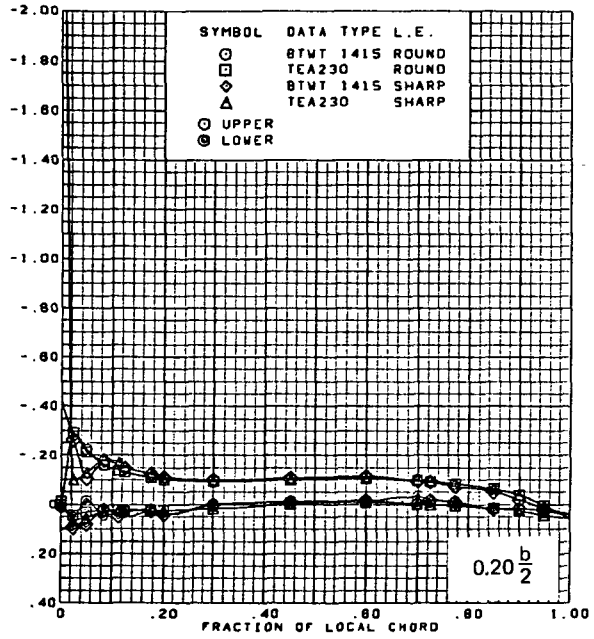
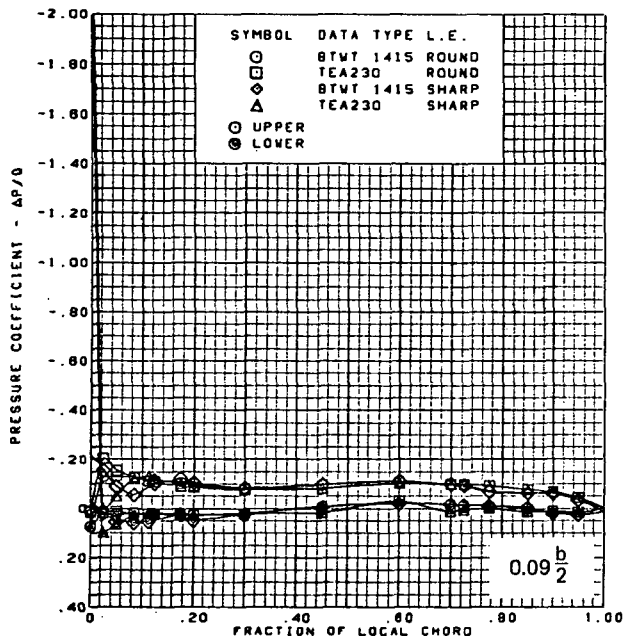
Figure 21.- Wing Theory-to-Experiment Comparison—Effect of Leading Edge Shape; Flat Wing; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$   
 $\alpha \approx 2.0^\circ$   
 Flat wing  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

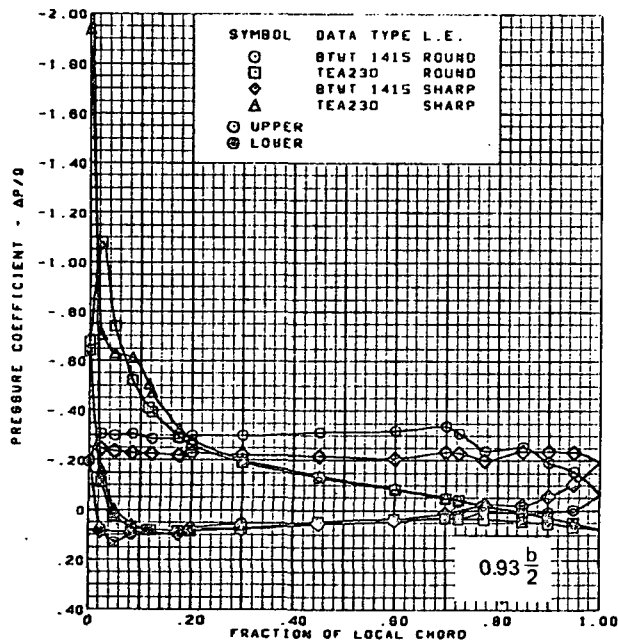
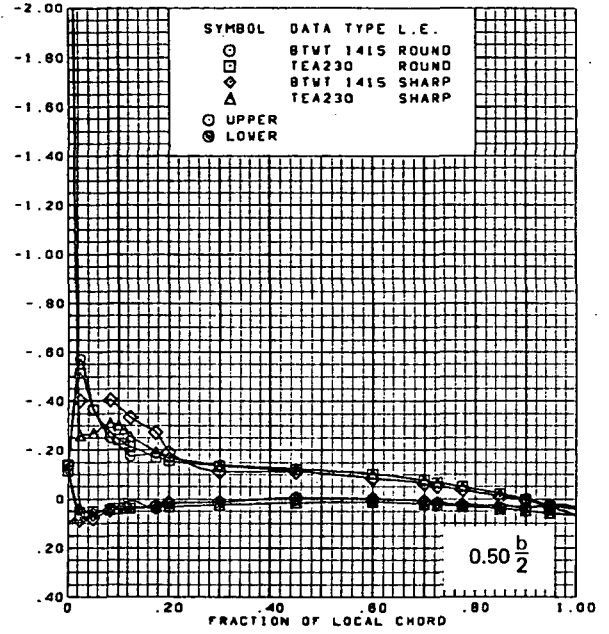
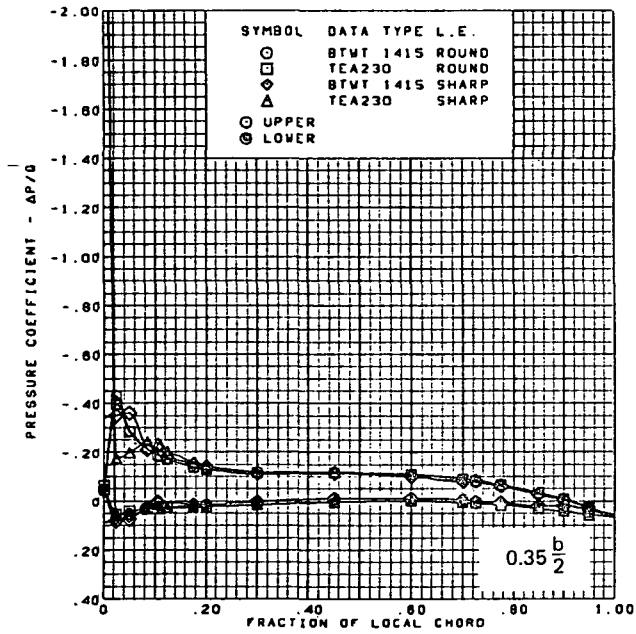
(a) (Concluded)

Figure 21.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha \approx 4.0^\circ$

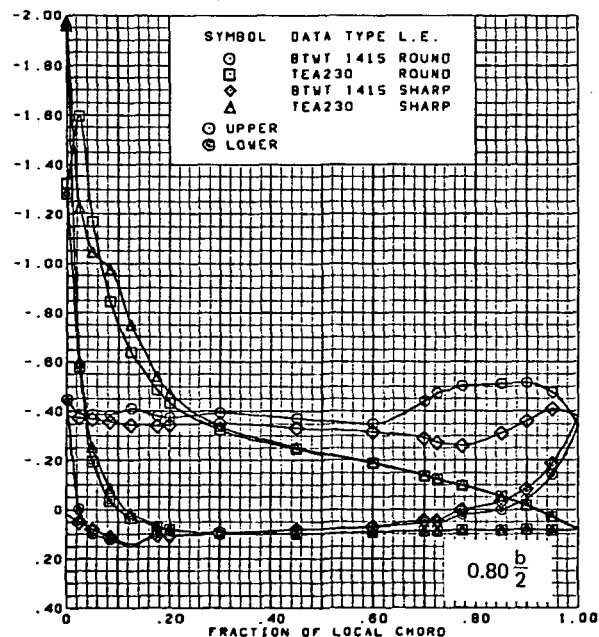
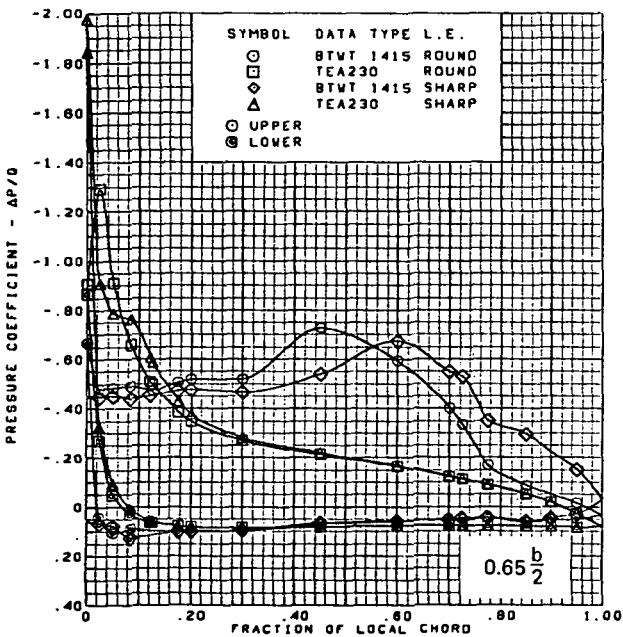
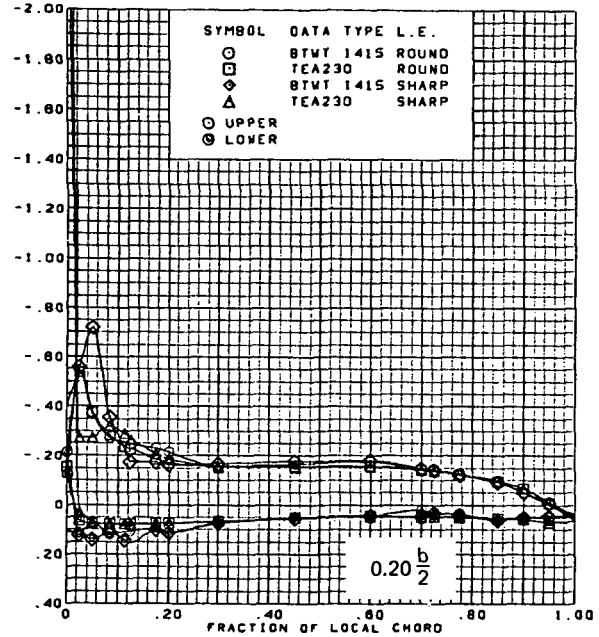
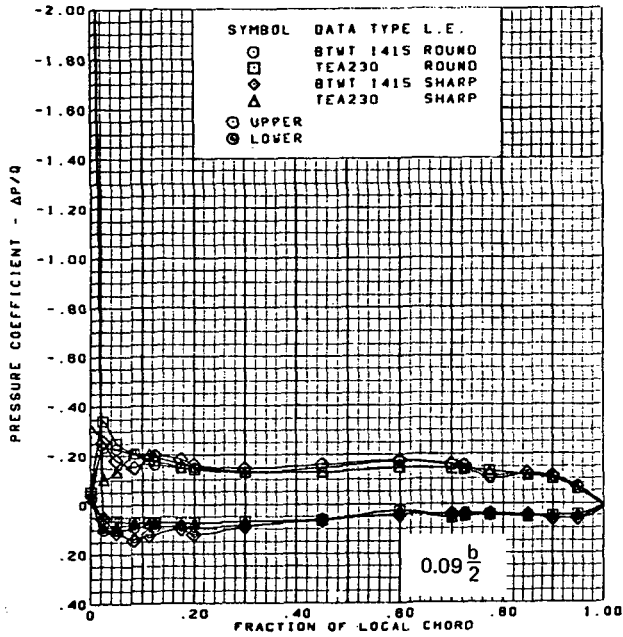
Figure 21.-(Continued)



$M = 0.85$   
 $\alpha \approx 4.0^\circ$   
 Flat wing  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

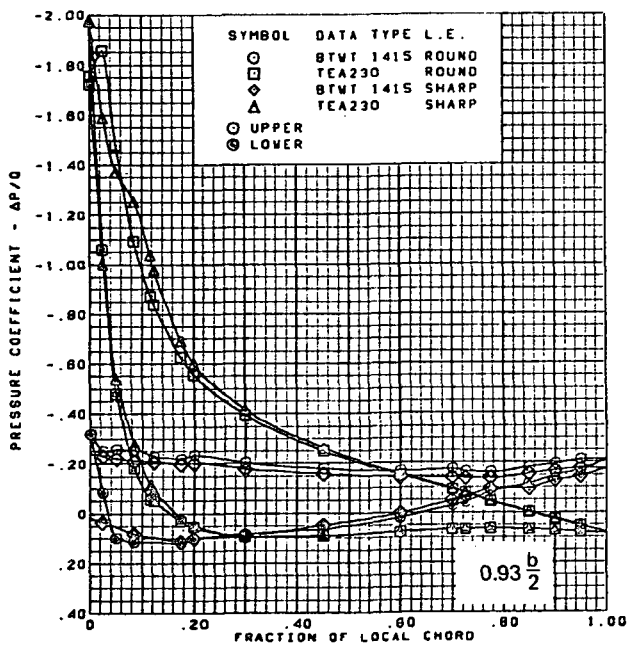
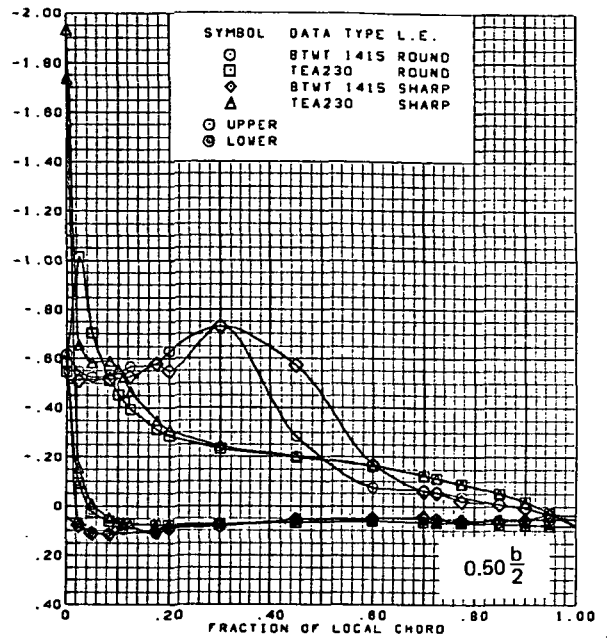
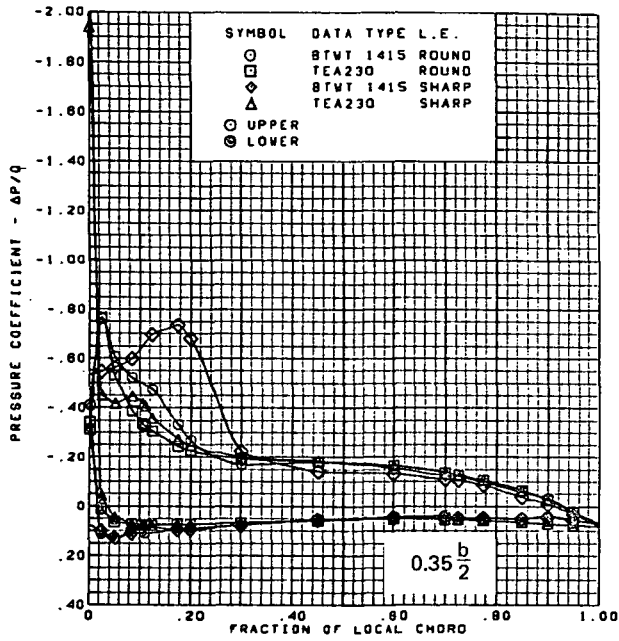
(b) (Concluded)

Figure 21.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

Figure 21.-(Continued)

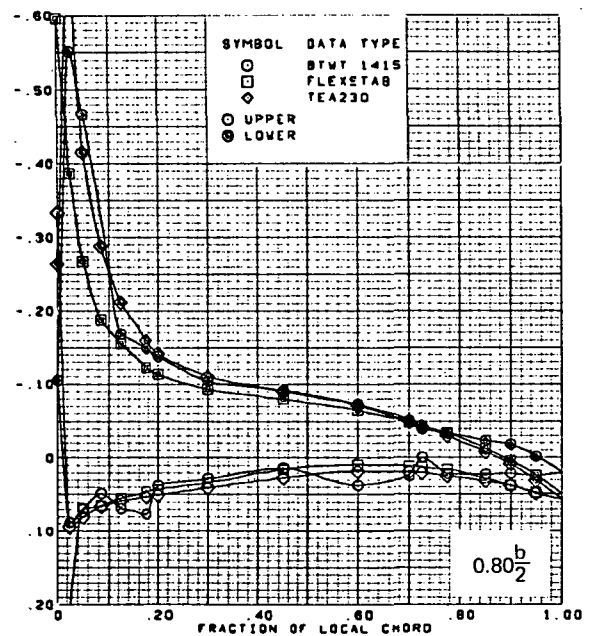
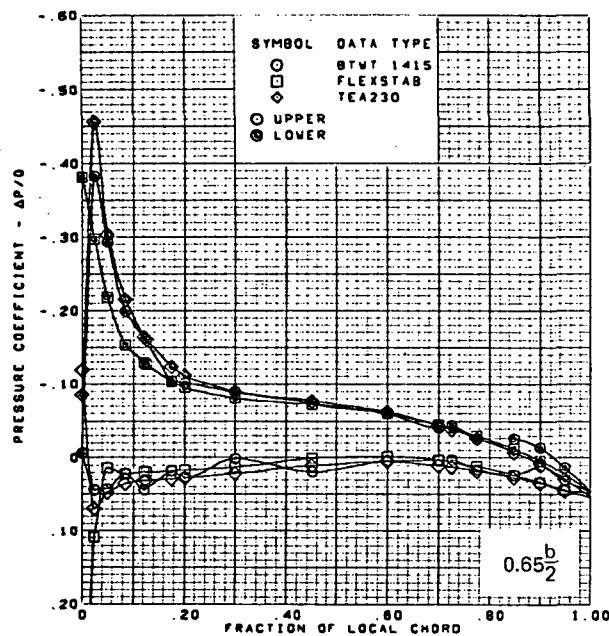
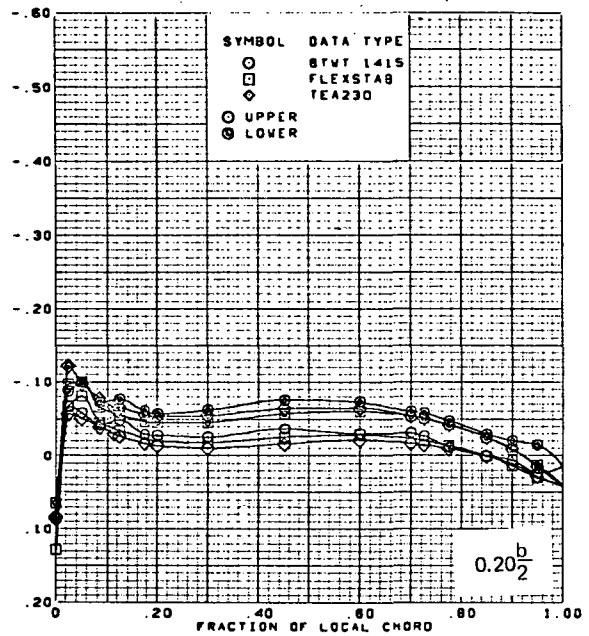
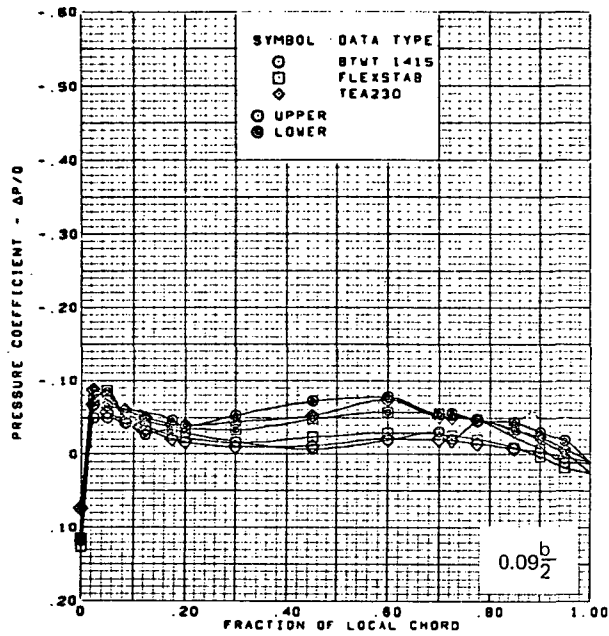


$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(c) (Concluded)

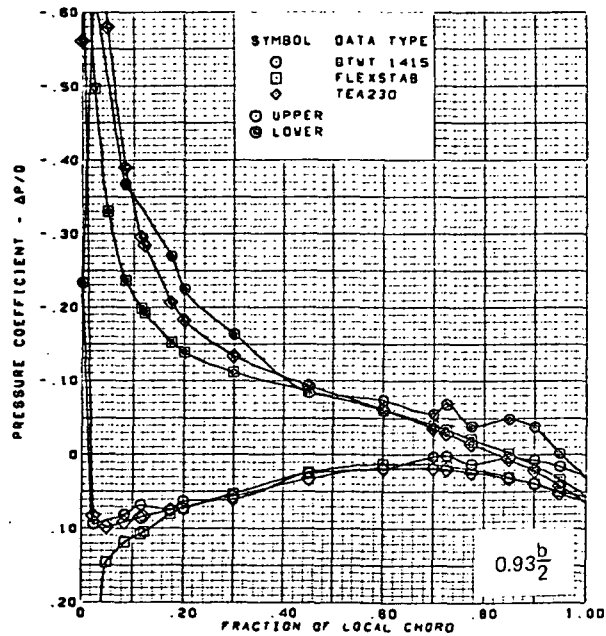
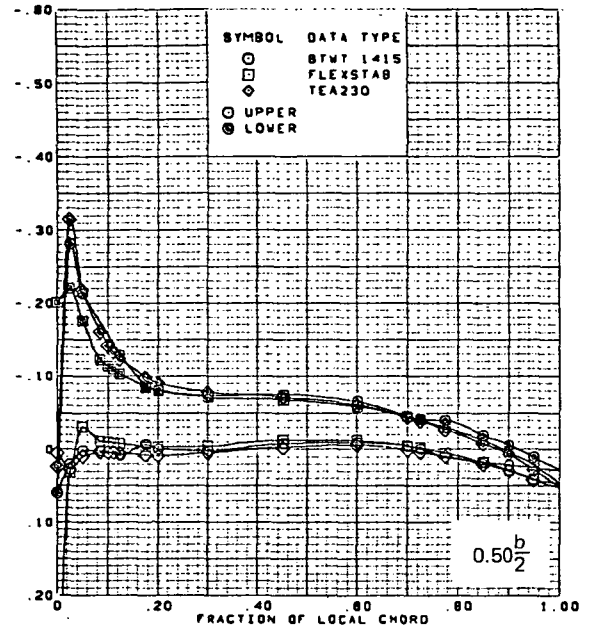
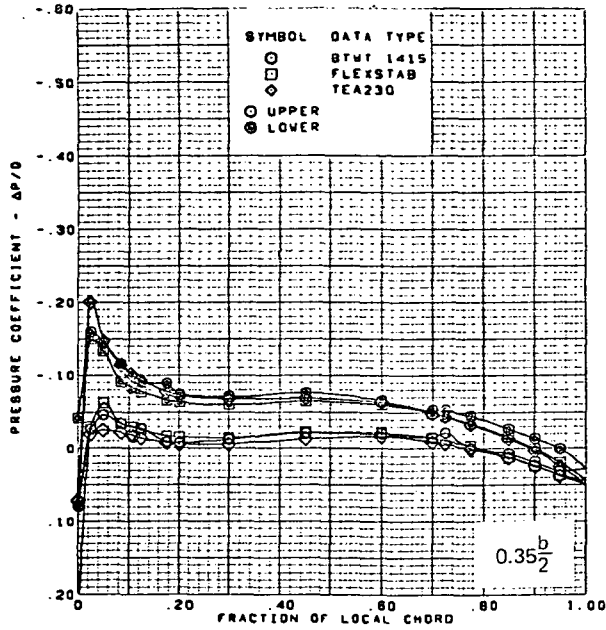
Figure 21.-(Concluded)





(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.2^\circ$

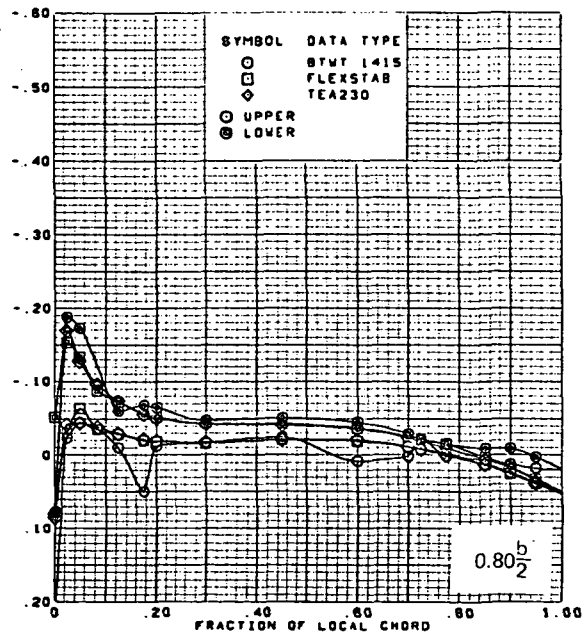
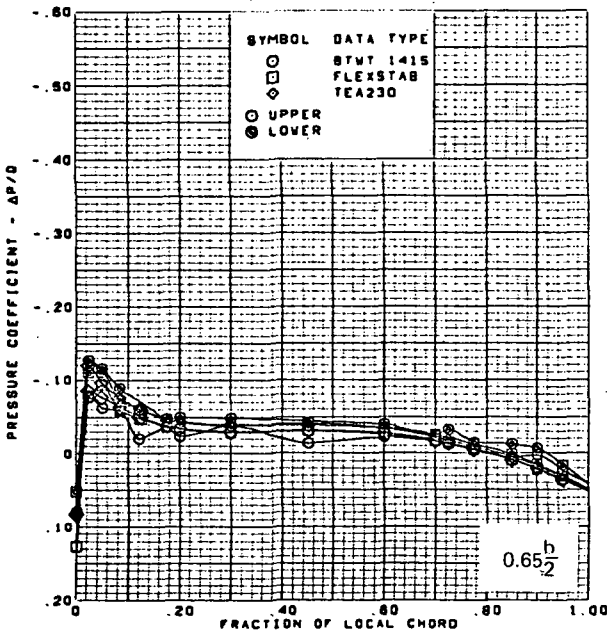
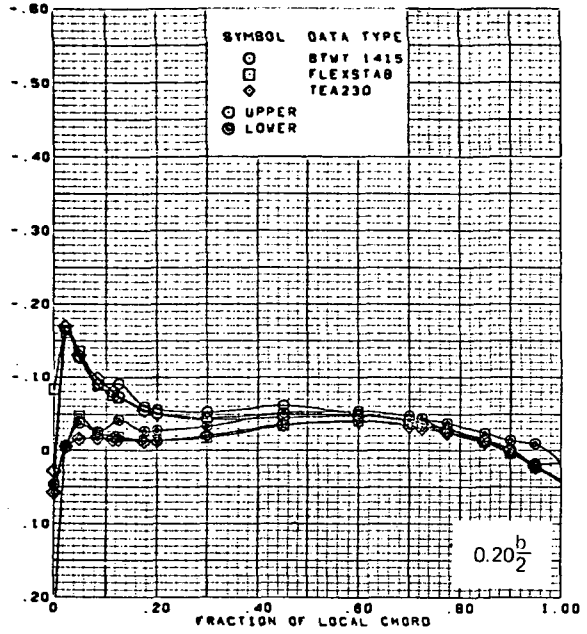
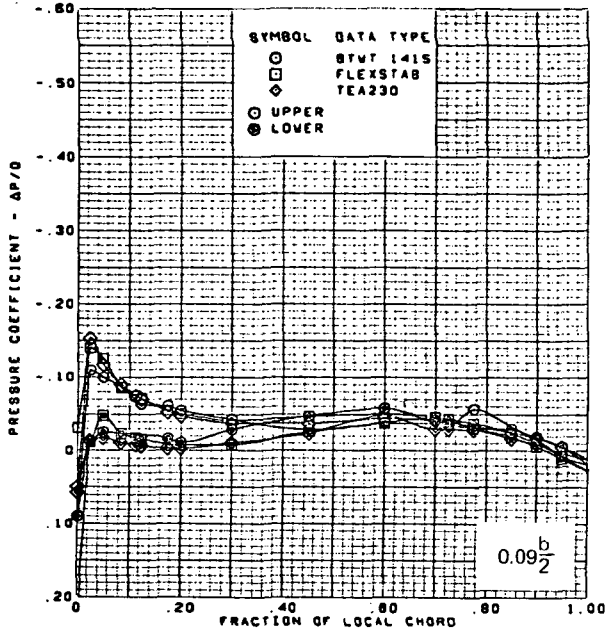
Figure 22.—Wing Theory-to-Experiment Comparison; Twisted Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



$M = 0.40$  (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

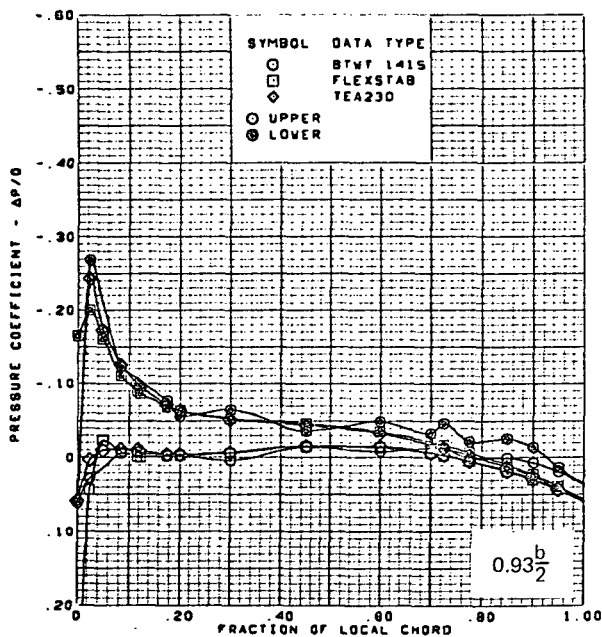
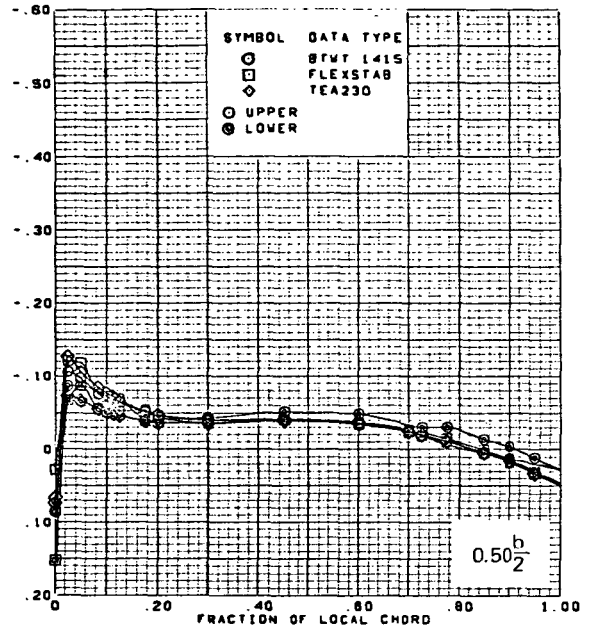
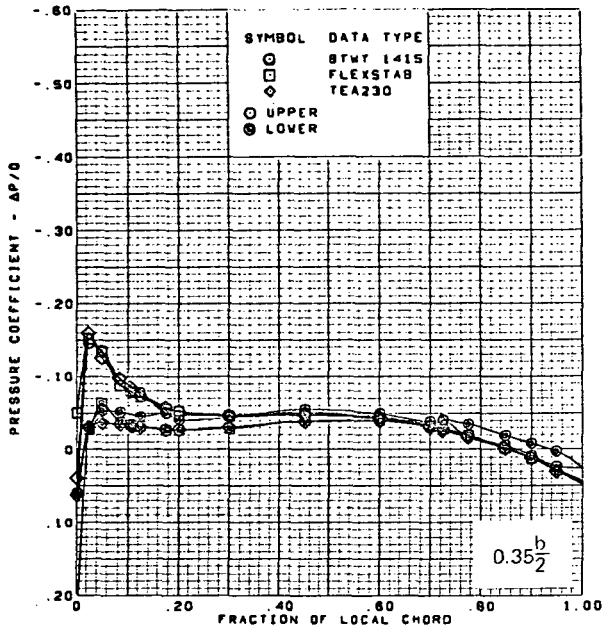
( a ) (Concluded)

Figure 22.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 2.2^\circ$

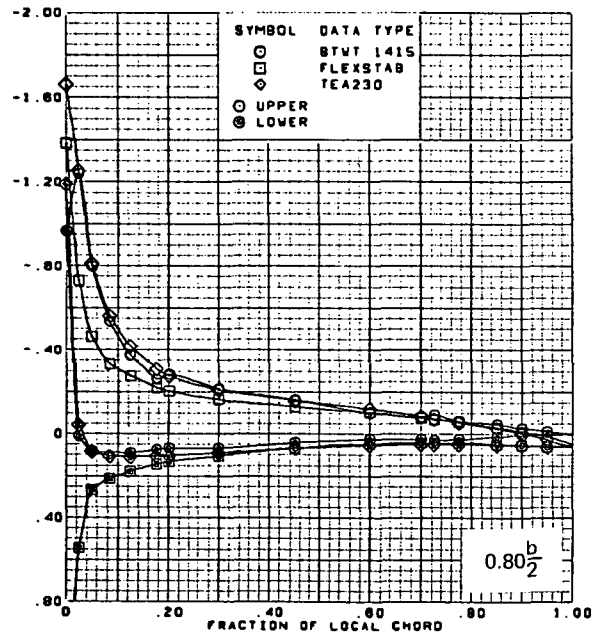
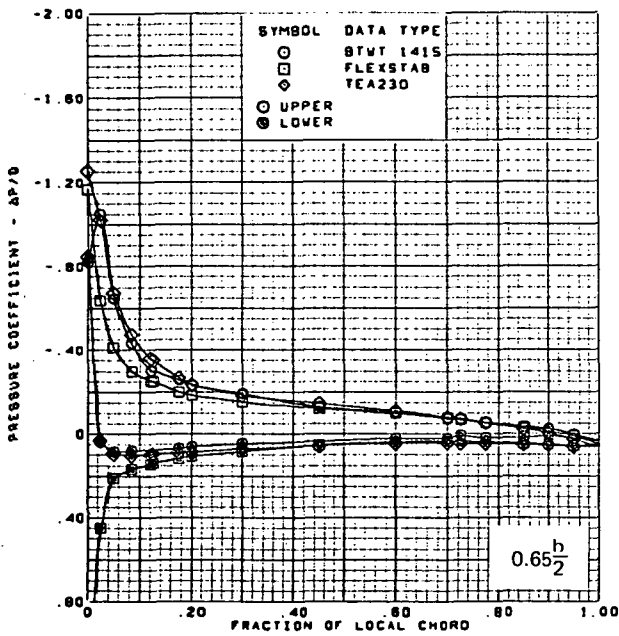
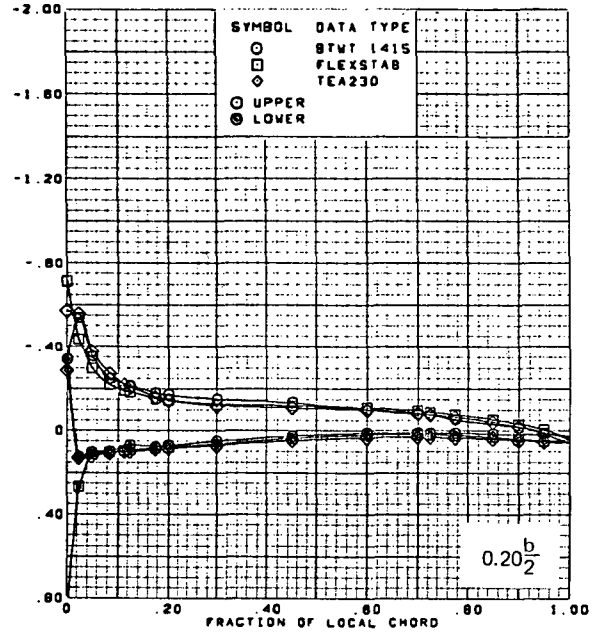
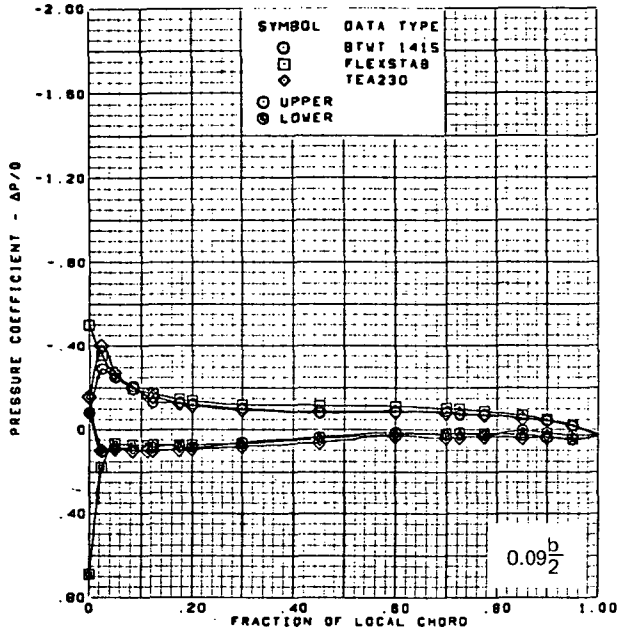
Figure 22.-(Continued)



M = 0.40 (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

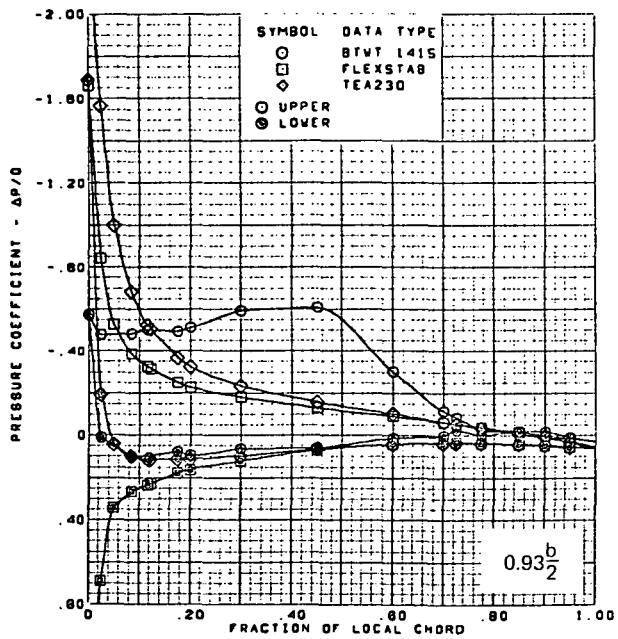
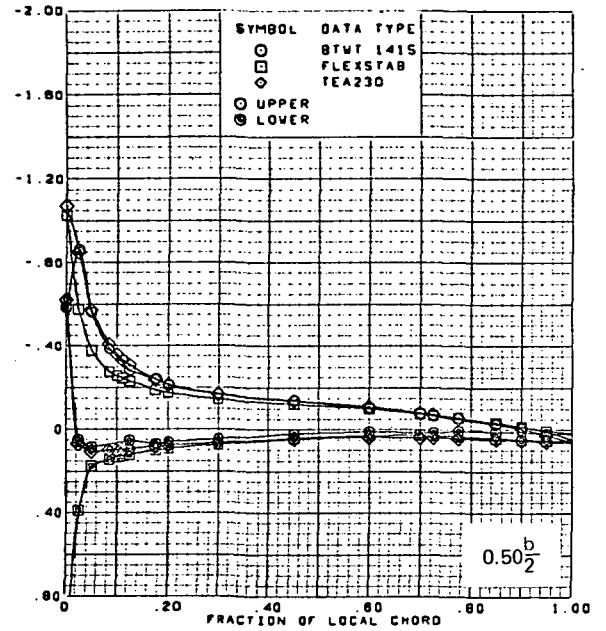
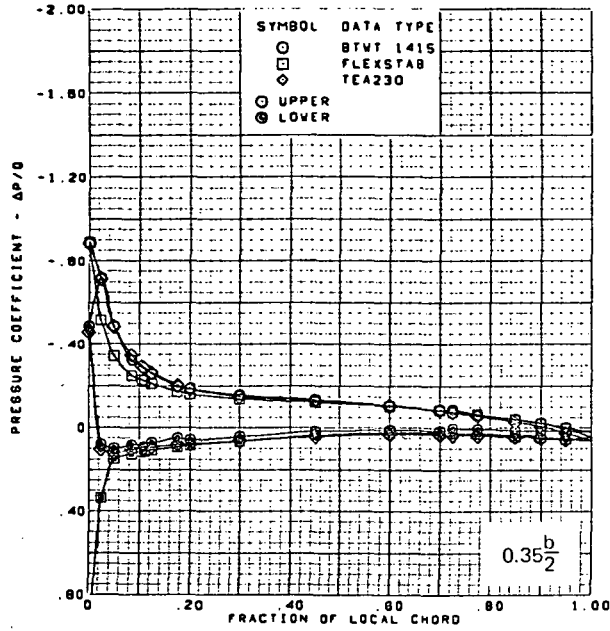
(b) (Concluded)

Figure 2'2.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha = 8.1^\circ$

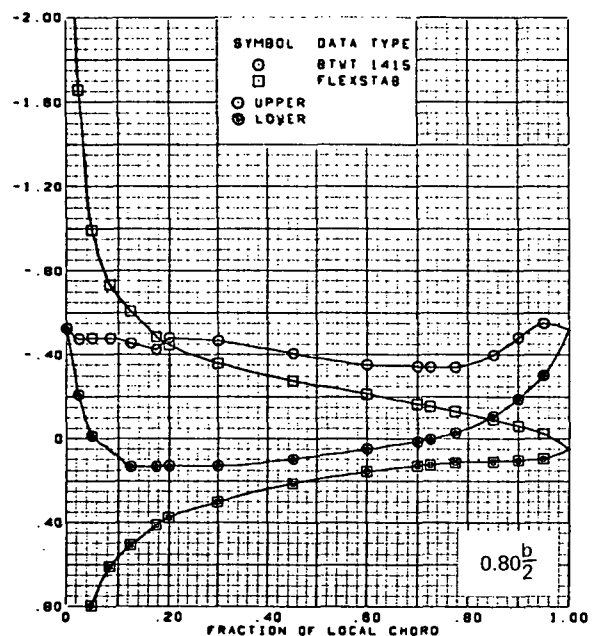
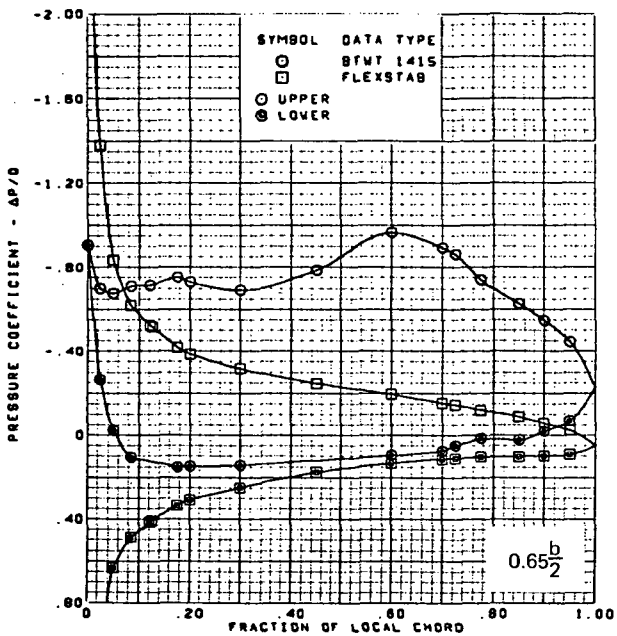
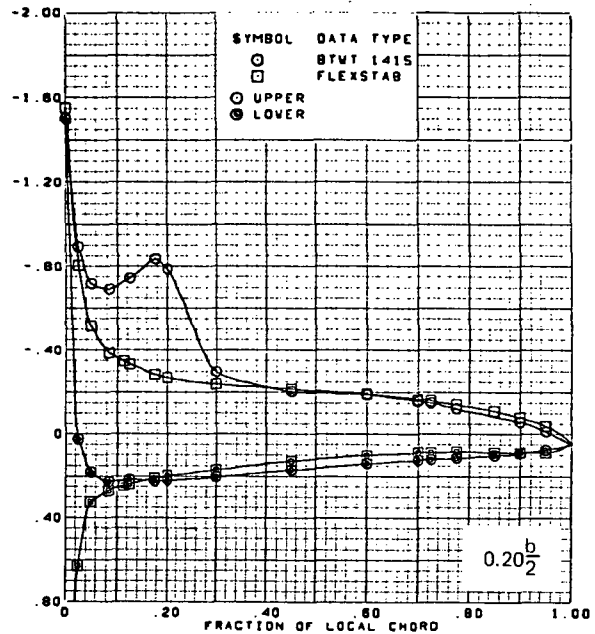
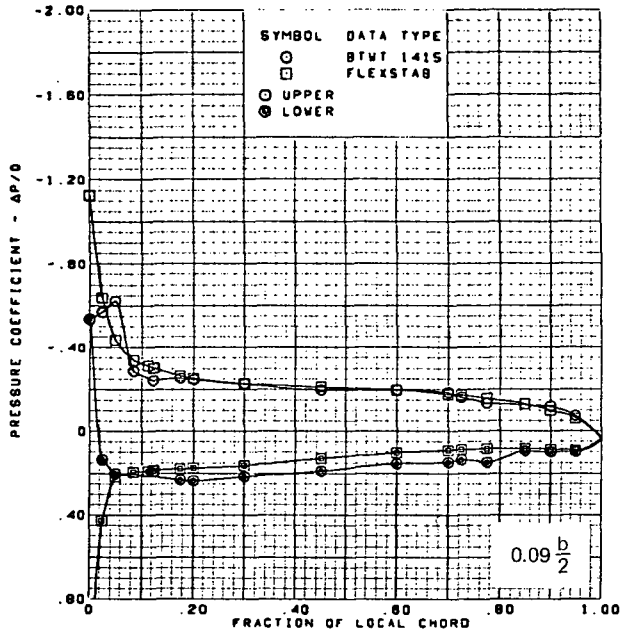
Figure 22.-(Continued)



$M = 0.40$  (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

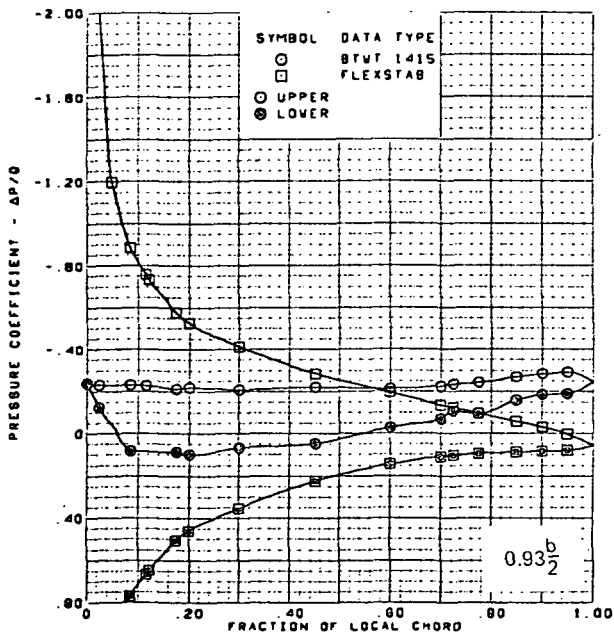
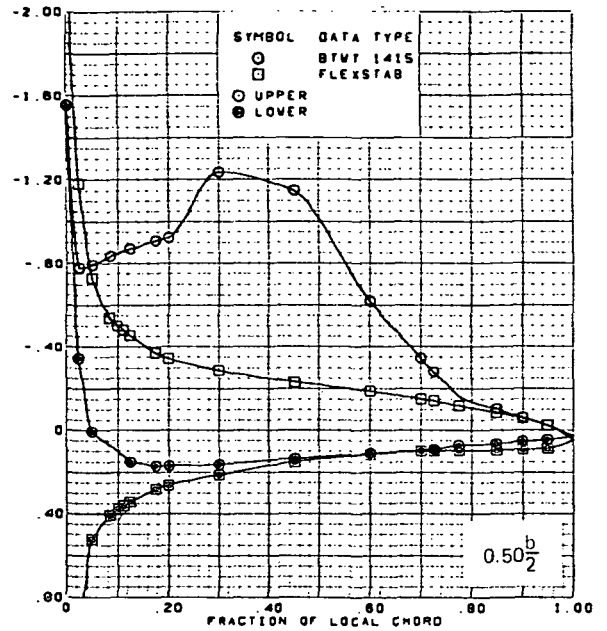
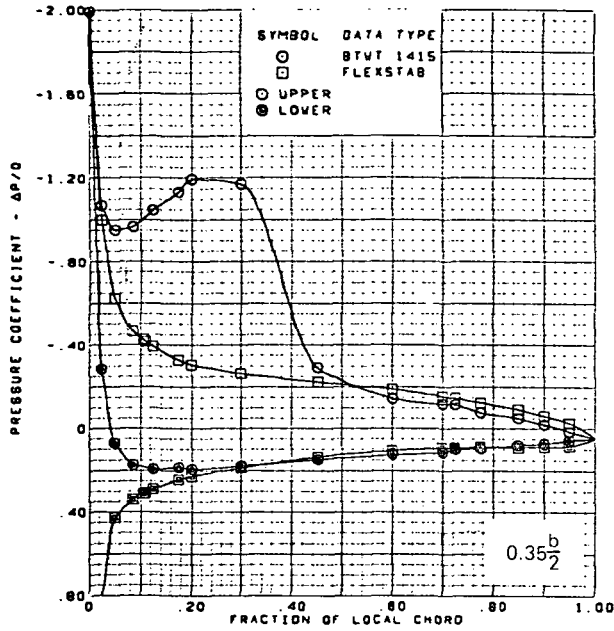
(c) (Concluded)

Figure 22.-(Continued)



(d) Surface Chordwise Pressure Distributions,  $\alpha = 15.9^\circ$

Figure 22.-(Continued)

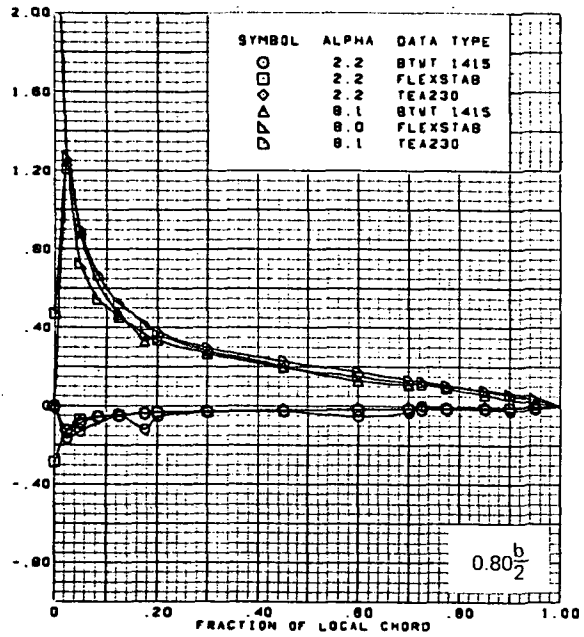
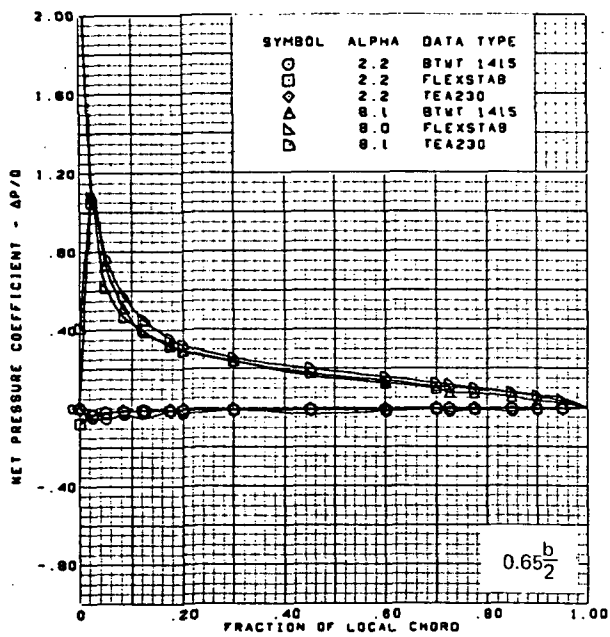
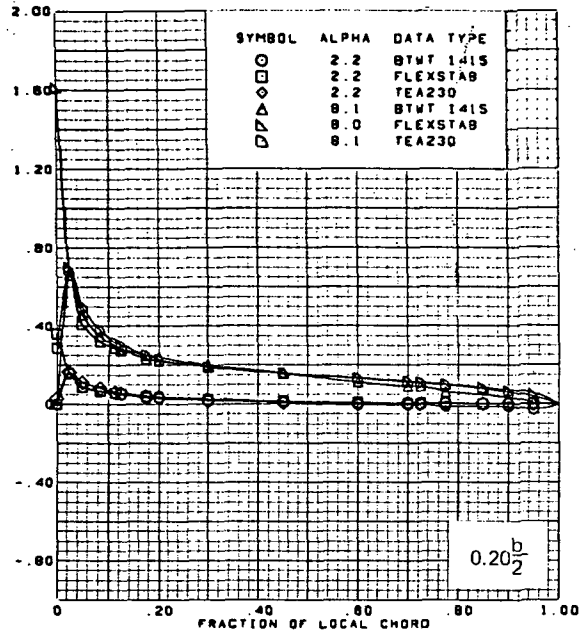
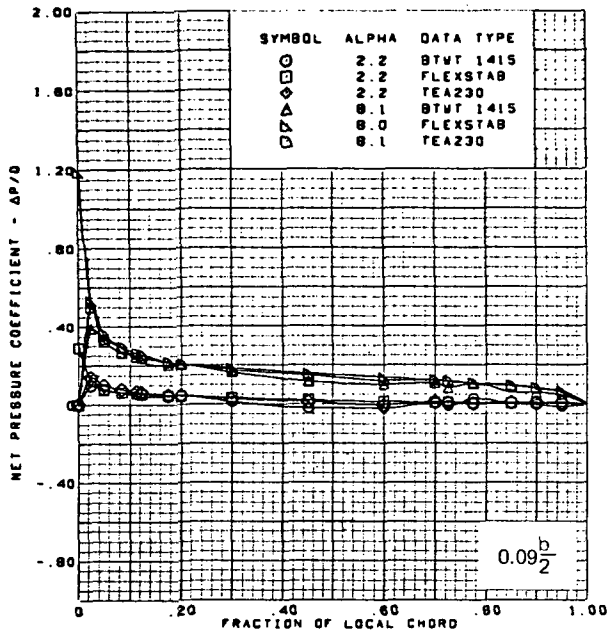


$M = 0.40$  (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(d) (Concluded)

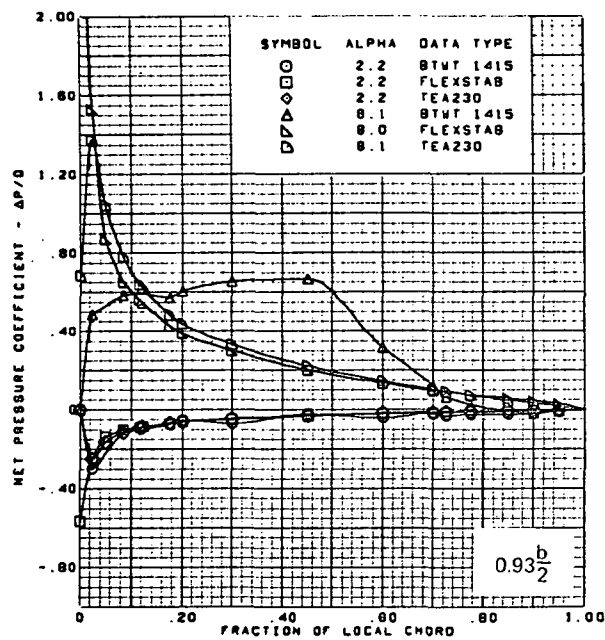
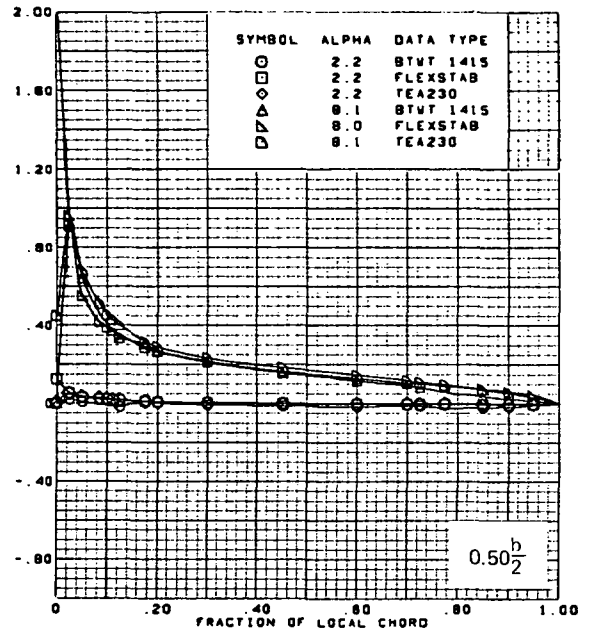
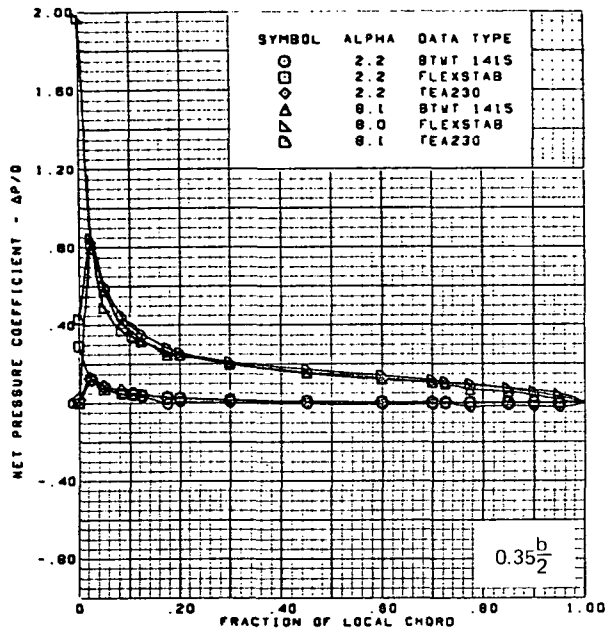
Figure 22.-(Continued)





(e) Net Chordwise Pressure Distributions,  $\alpha = 2.2^\circ, 8.1^\circ$

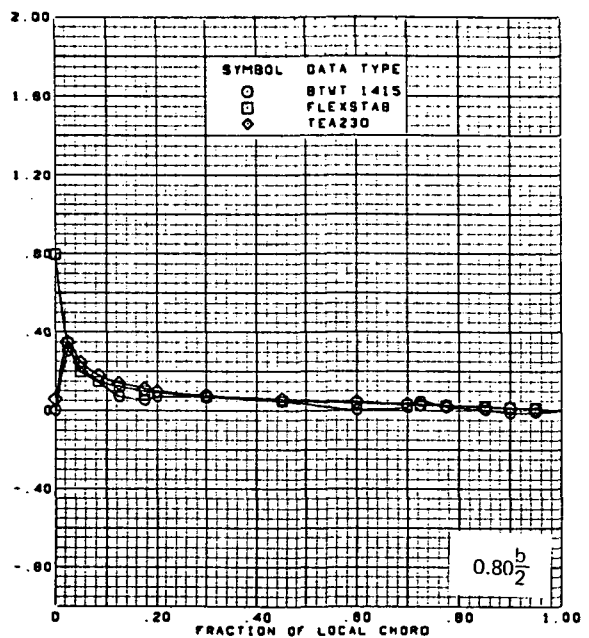
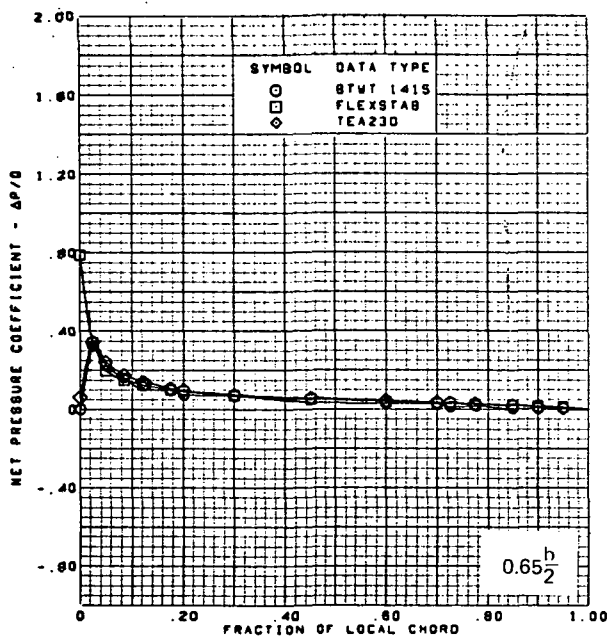
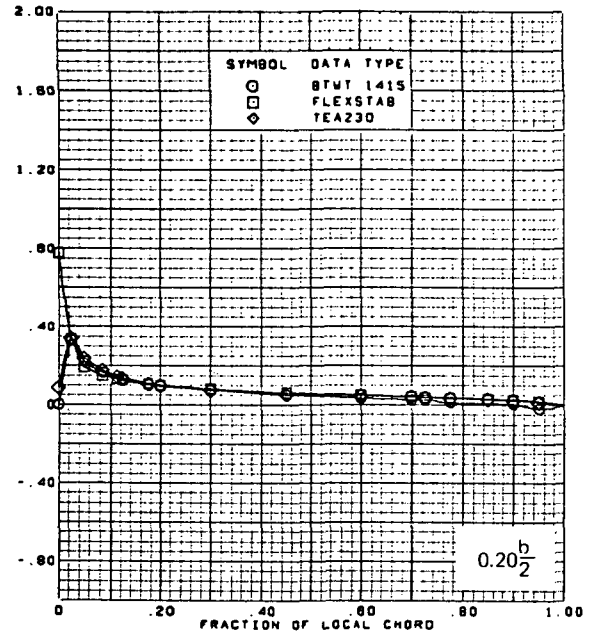
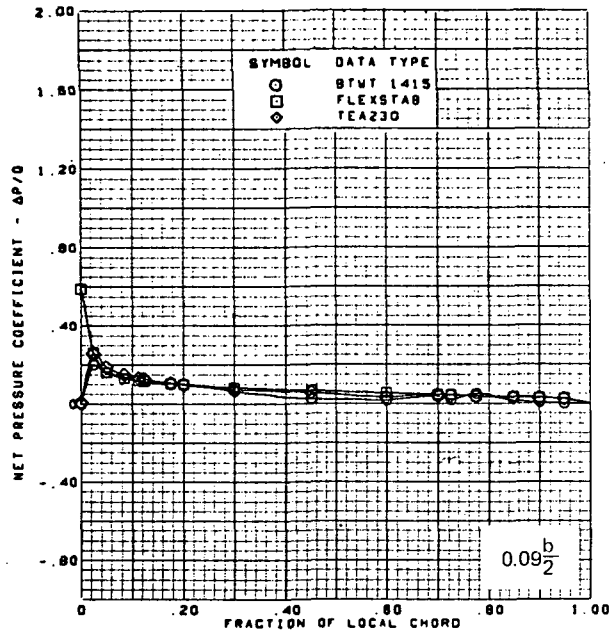
Figure 22.-(Continued)



M = 0.40 (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

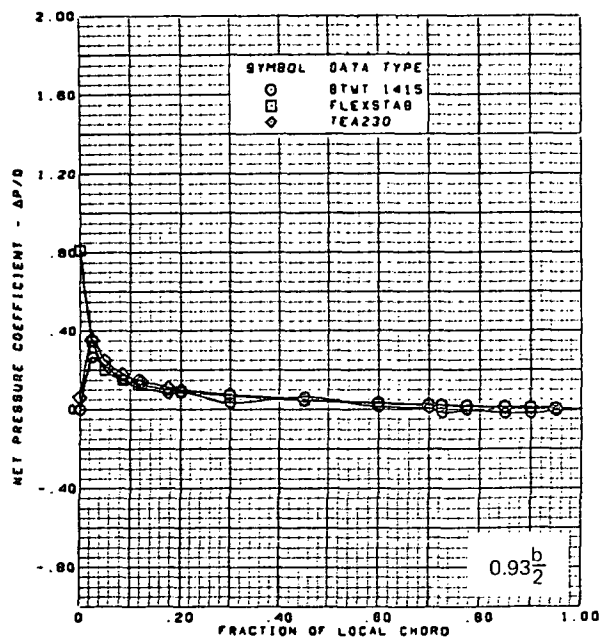
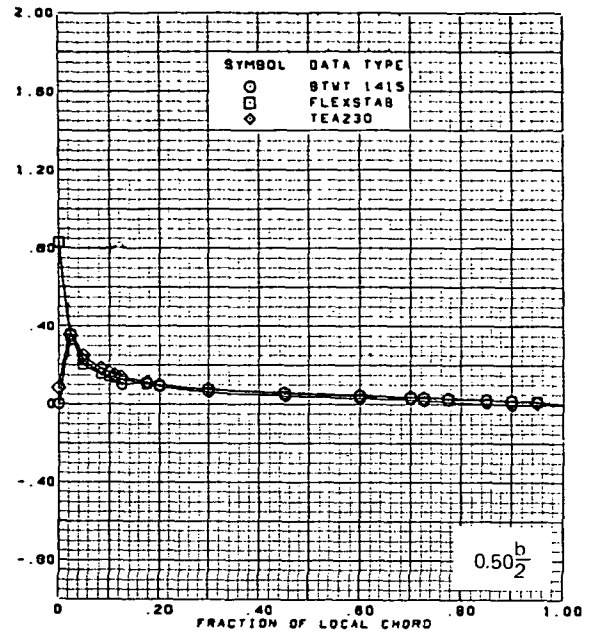
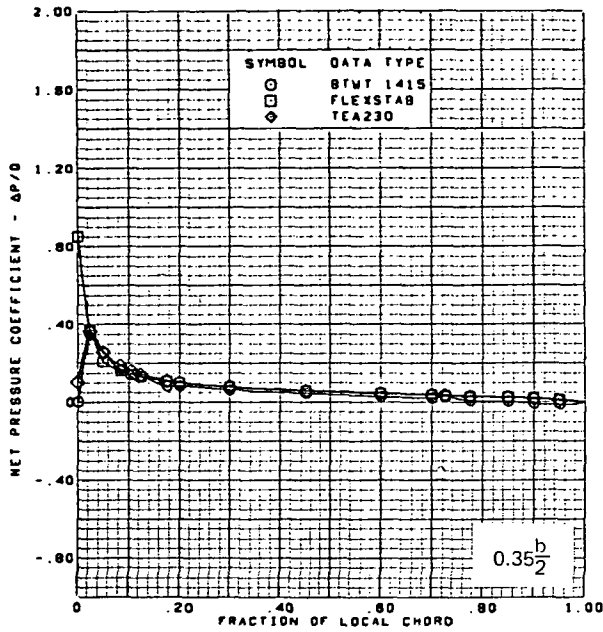
(e) (Concluded)

Figure 22.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha = 4.1^\circ$

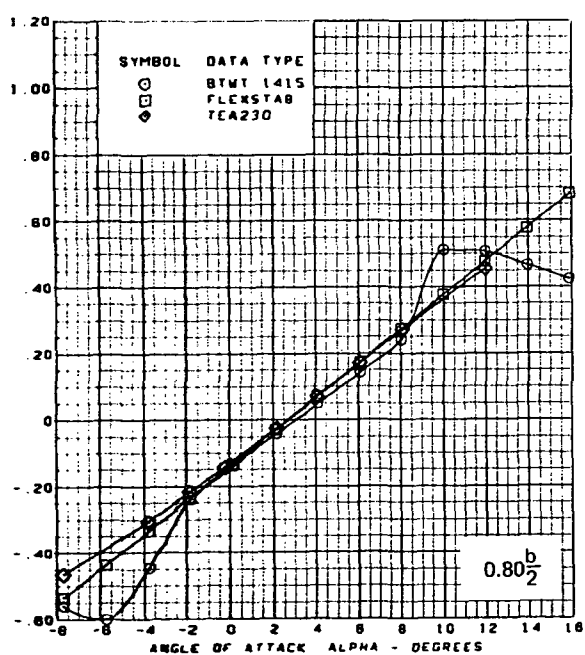
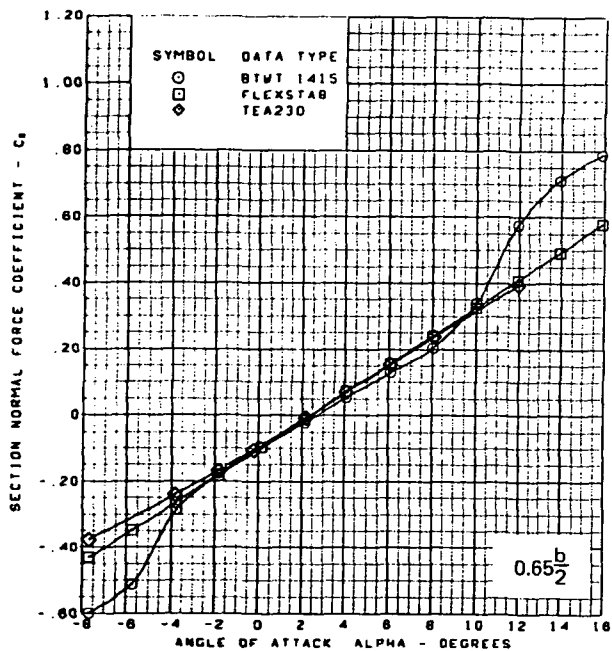
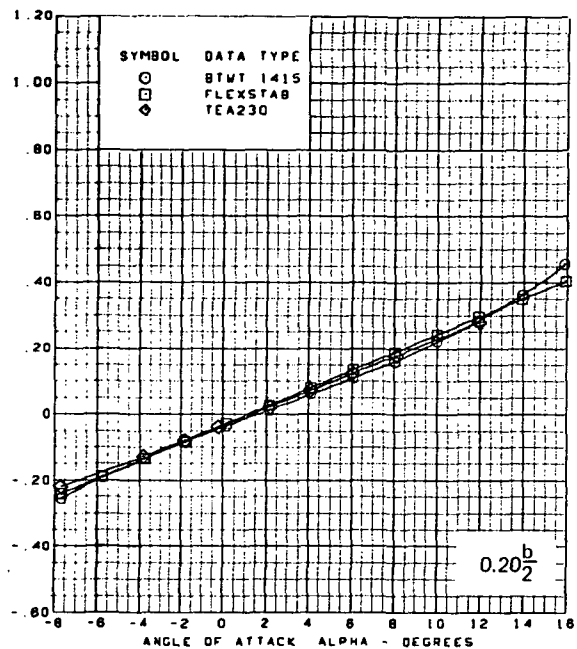
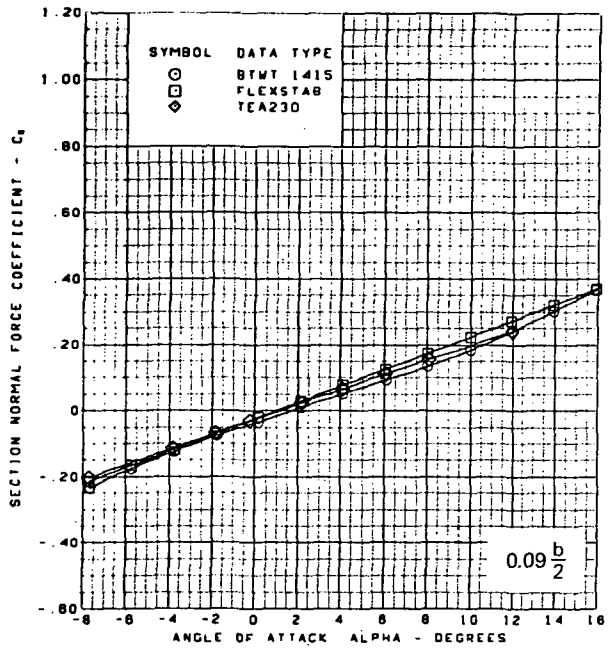
Figure 22.-(Continued)



M = 0.40 (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

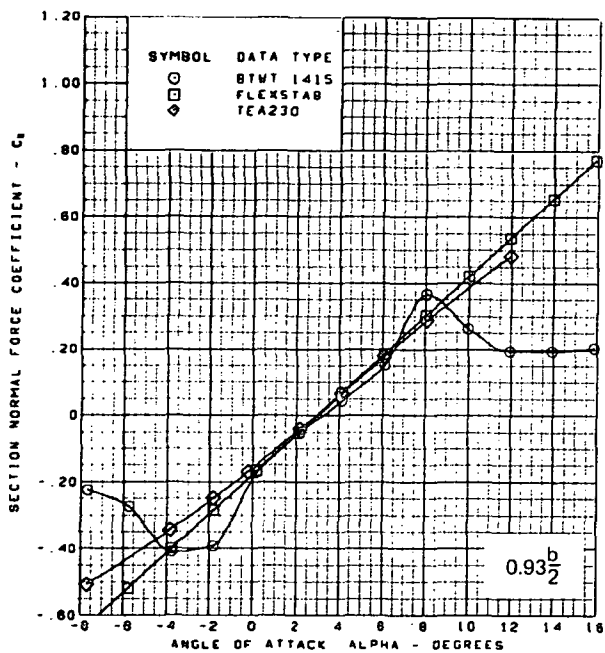
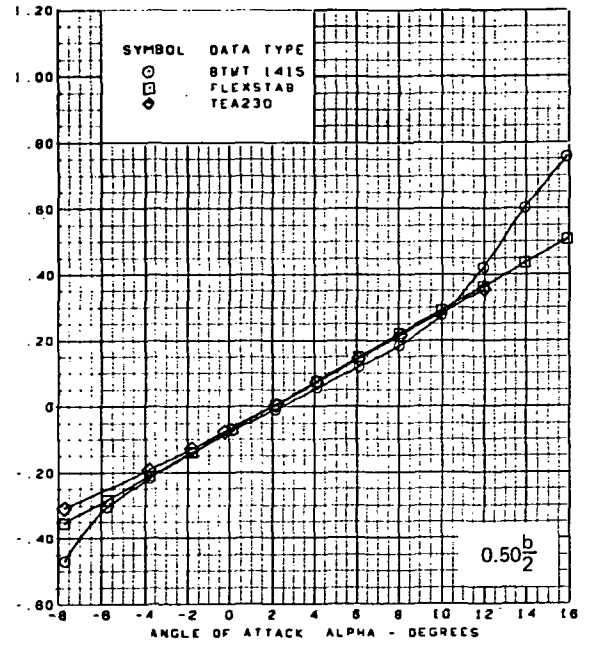
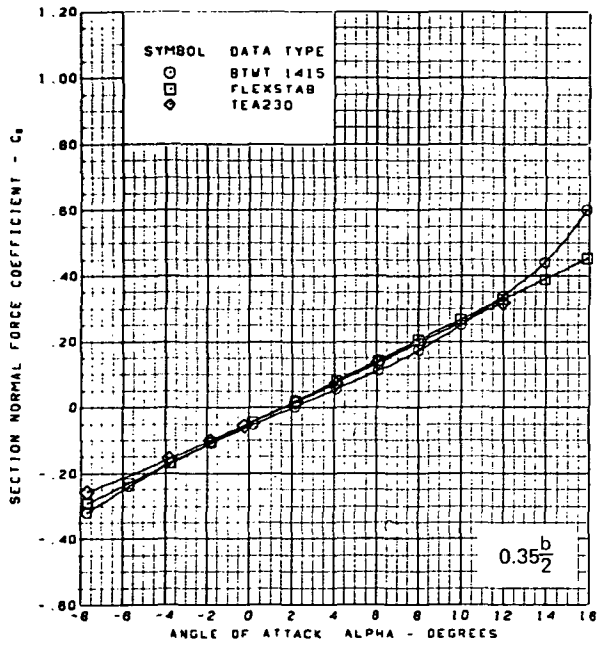
( f ) (Concluded)

Figure 2'2.--(Continued)



(g) Section Aerodynamic Coefficients - Normal Force

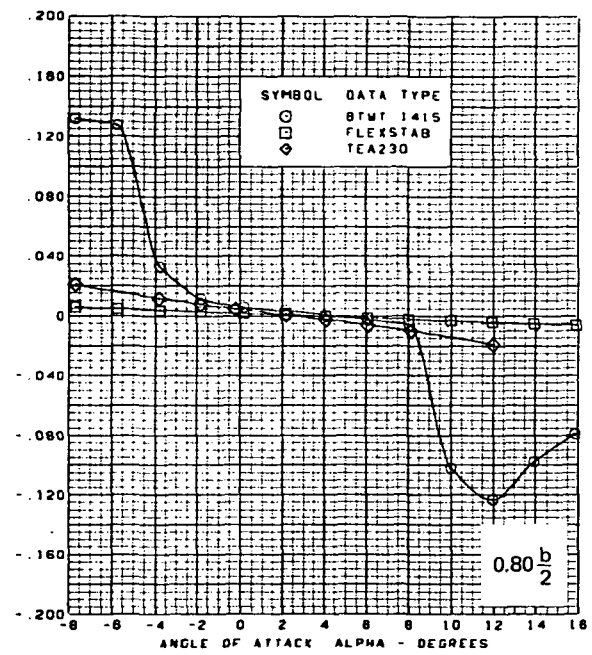
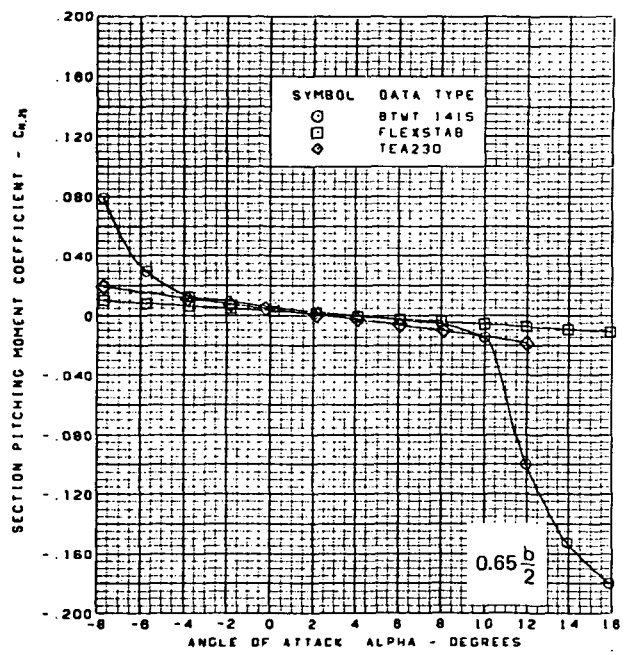
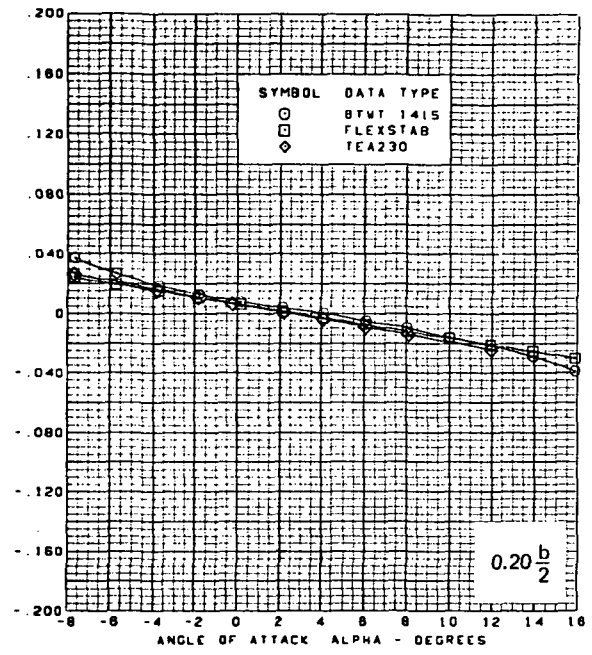
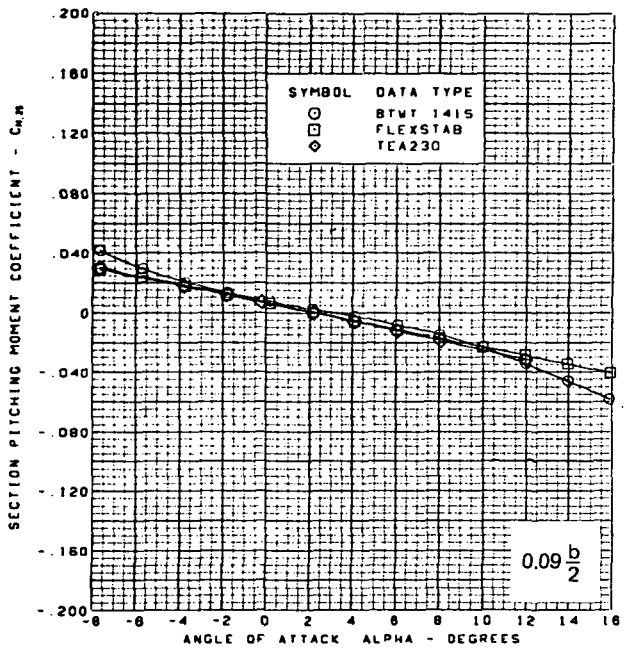
Figure 22.--(Continued)



$M = 0.40$  (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

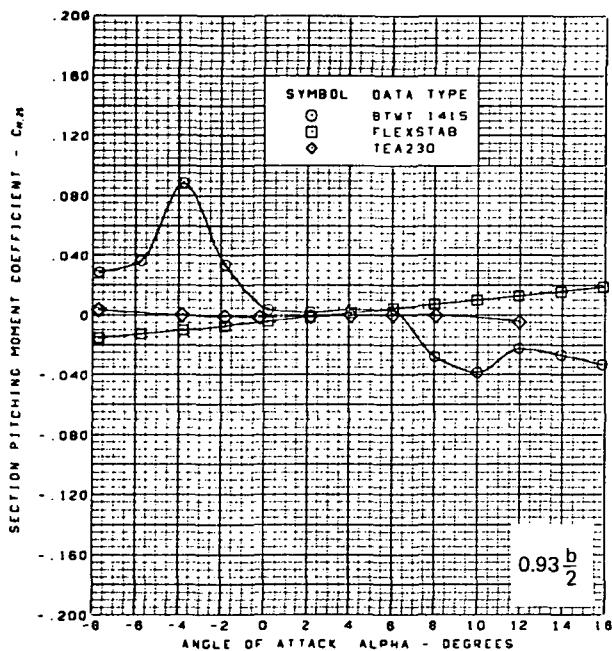
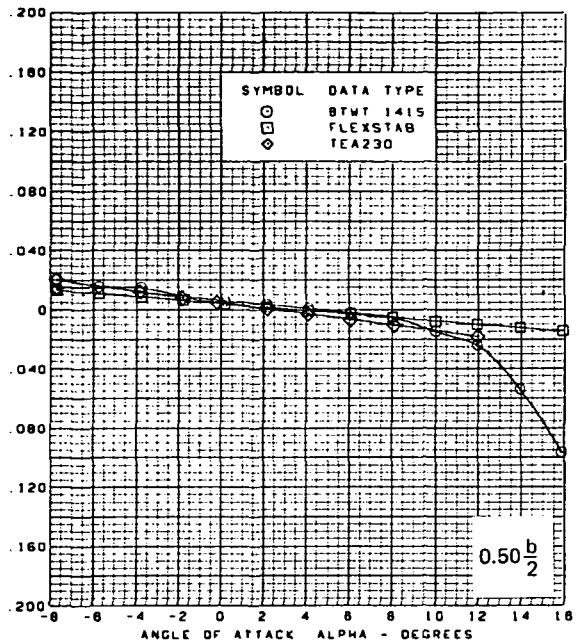
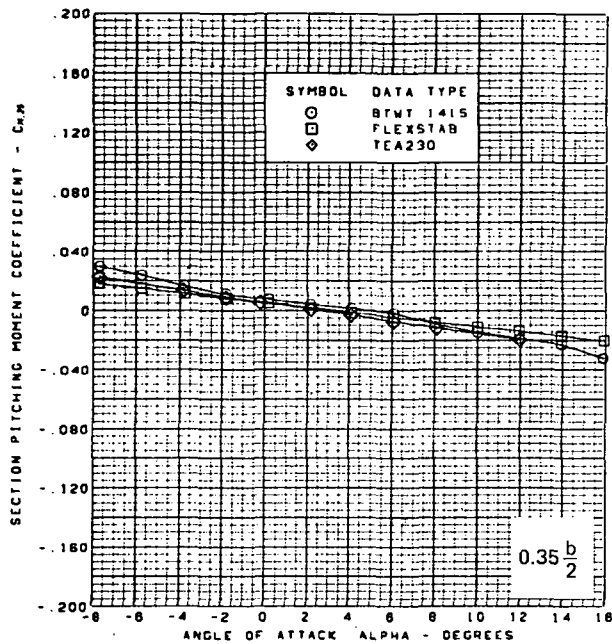
(g) (Concluded)

Figure 22.--(Continued)



(h) Section Aerodynamic Coefficients - Pitching Moment

Figure 22.-(Continued)

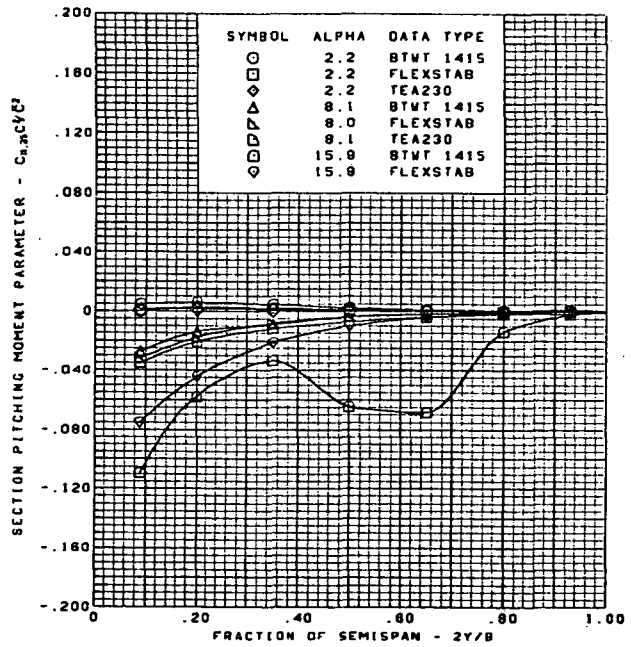
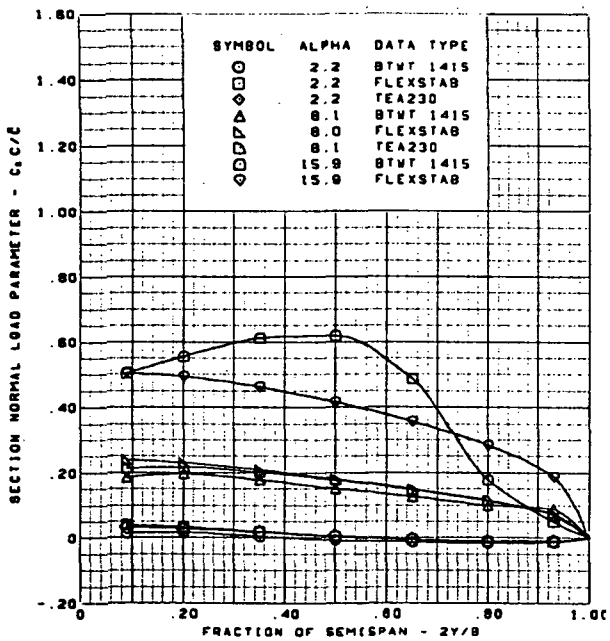
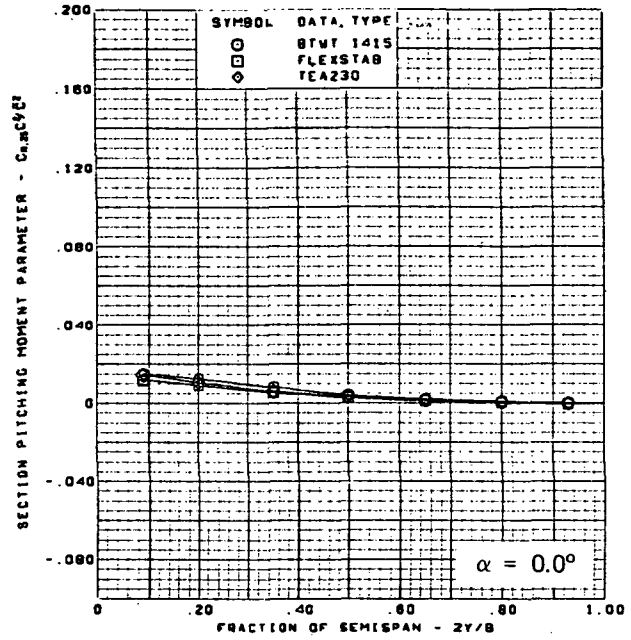
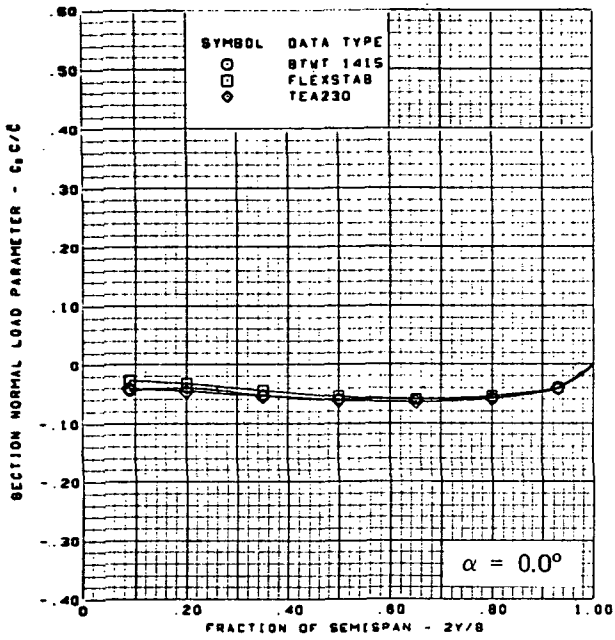


M = 0.40 (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(h) (Concluded)

Figure 22.--(Continued)

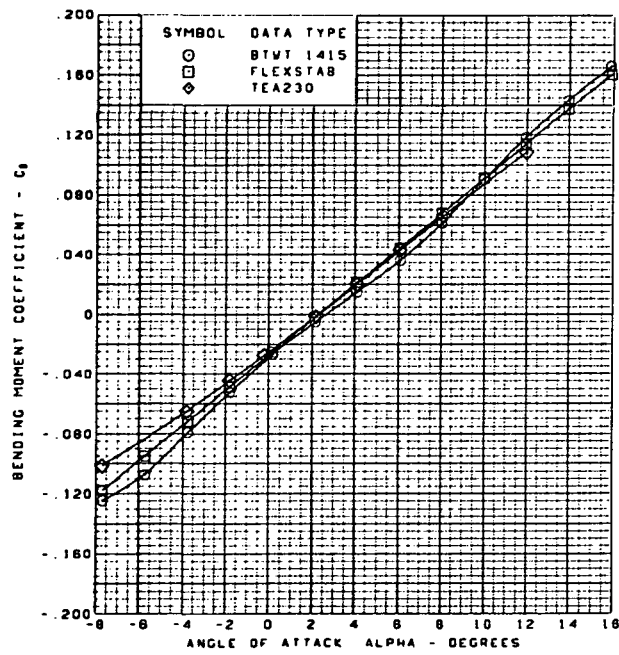
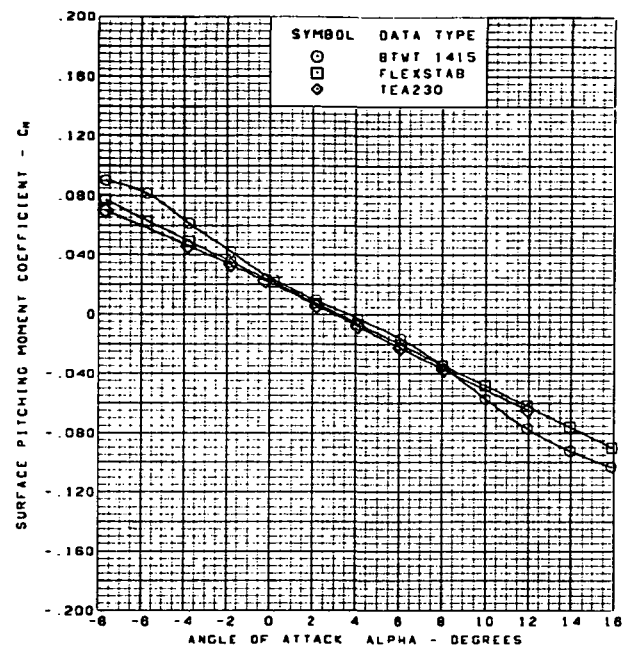
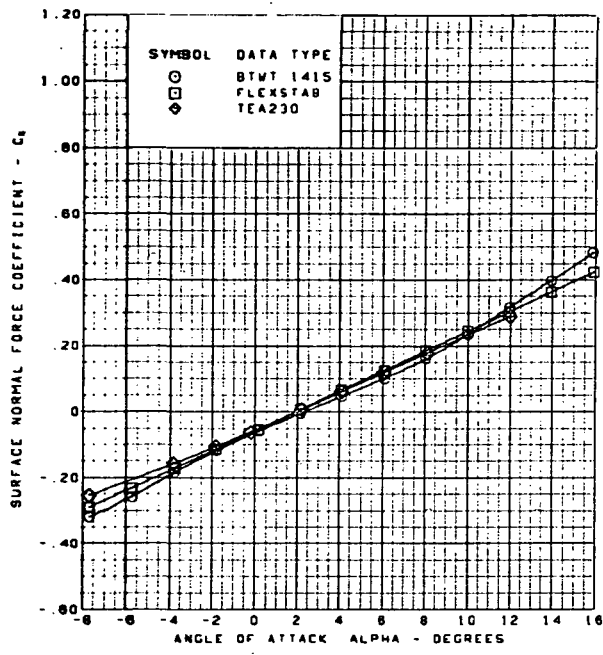




$M = 0.40$  (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(1) Spanload Distributions

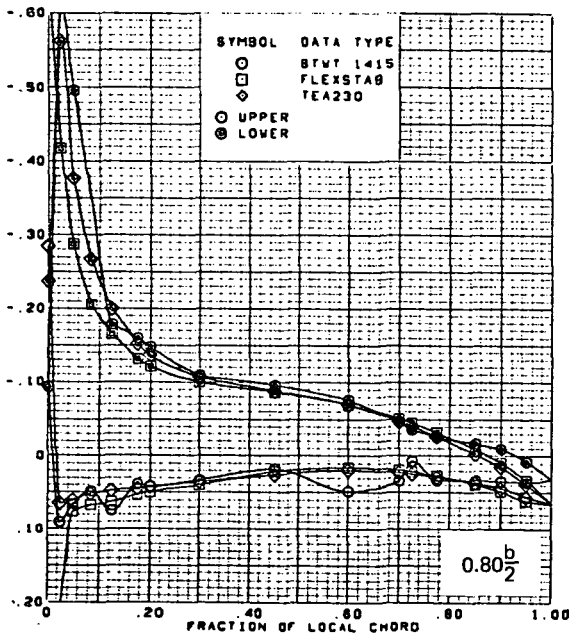
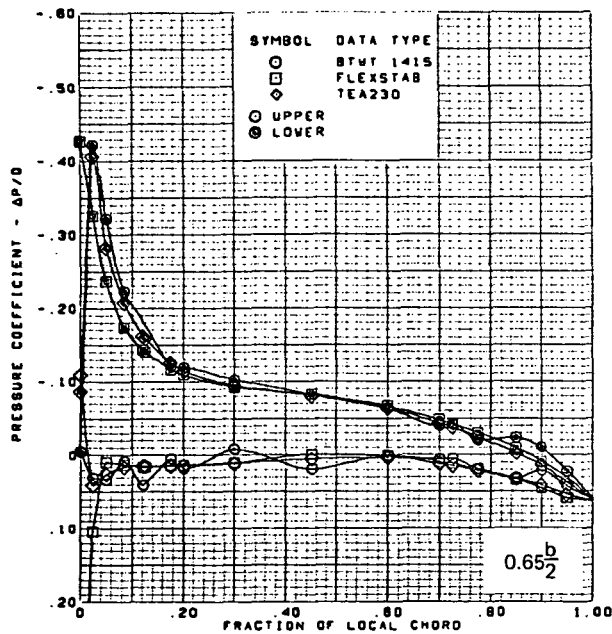
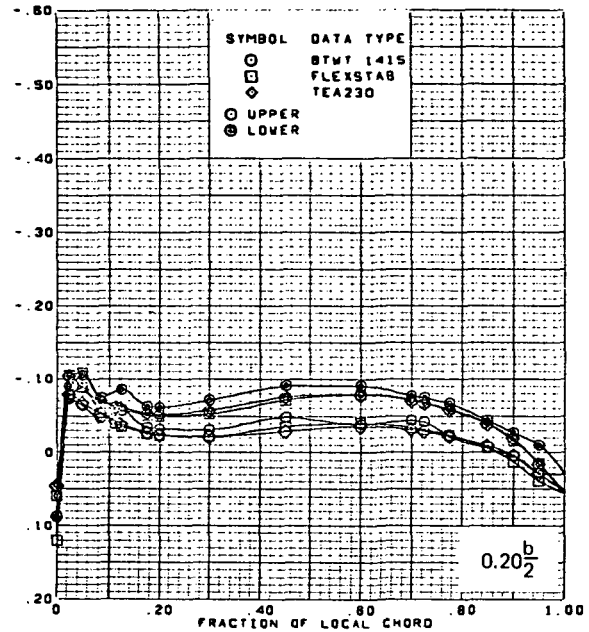
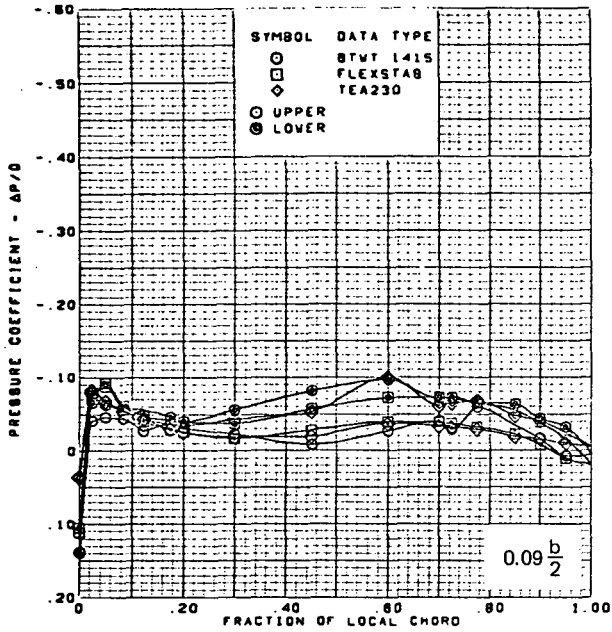
Figure 22.-(Continued)



M = 0.40 (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

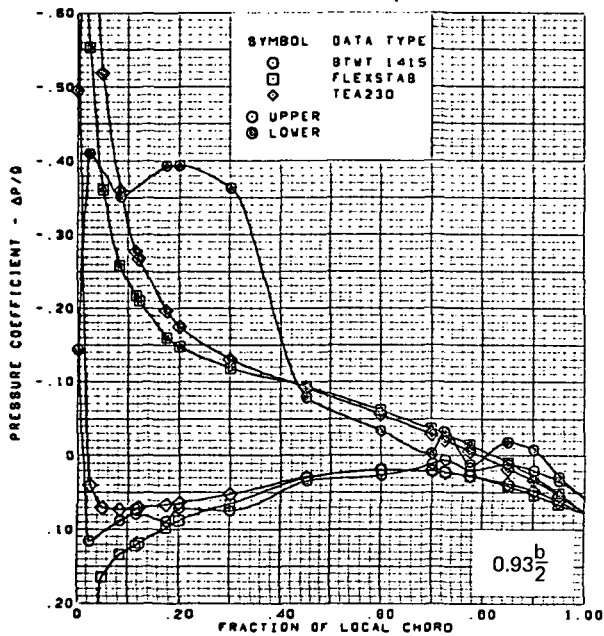
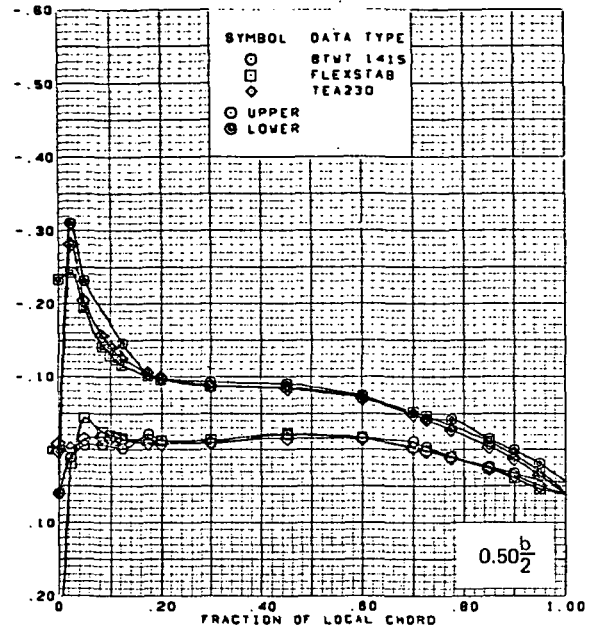
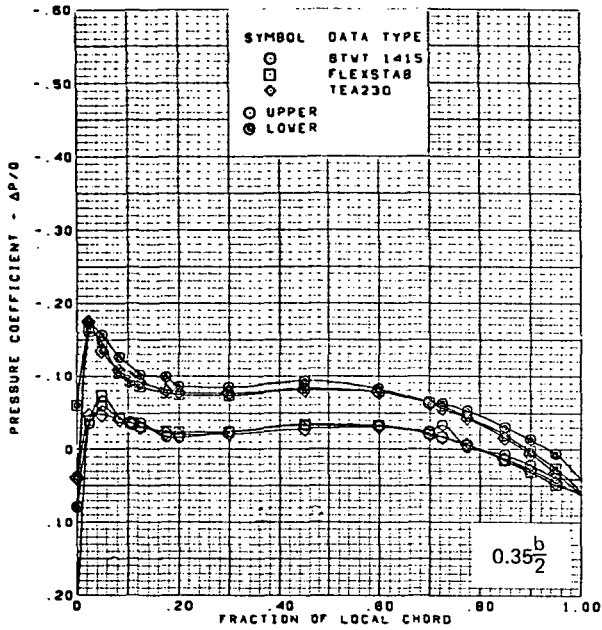
(j) Wing Aerodynamic Coefficients

Figure 22.-(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.1^\circ$

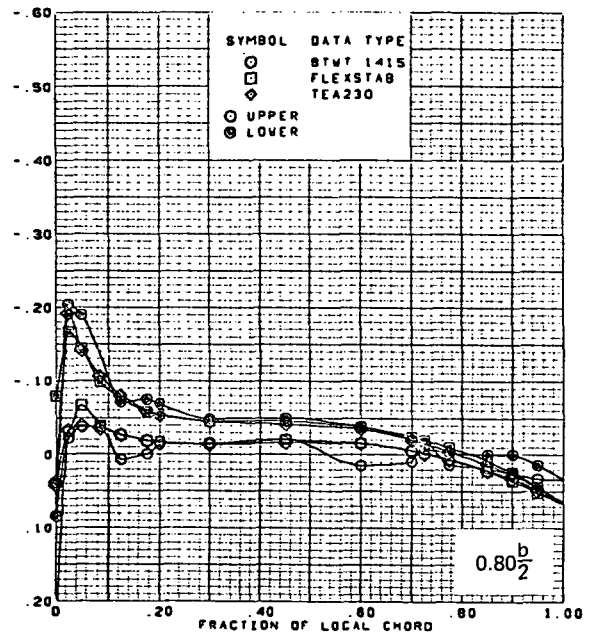
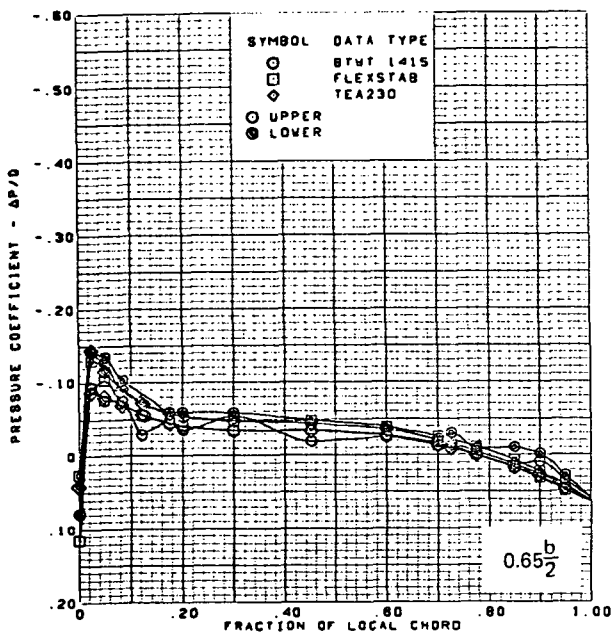
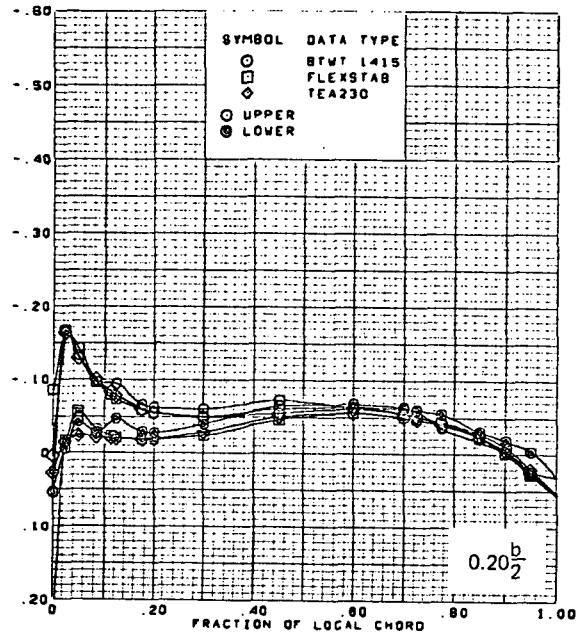
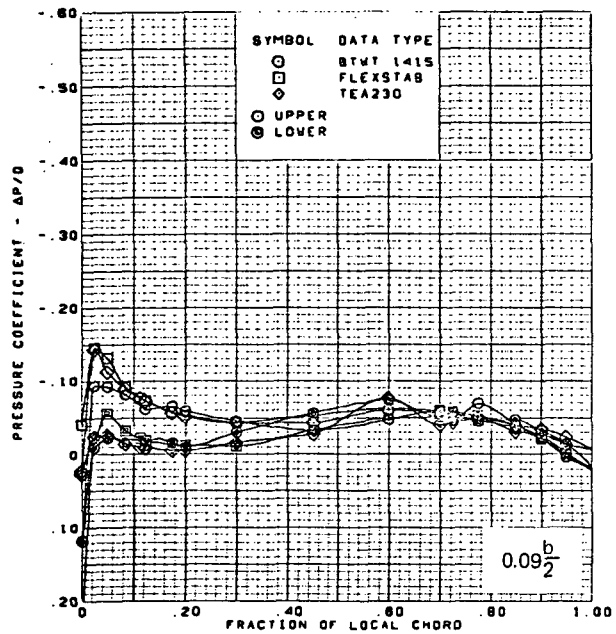
Figure 23.-Wing Theory-to-Experiment Comparison; Twisted Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



M = 0.85 (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

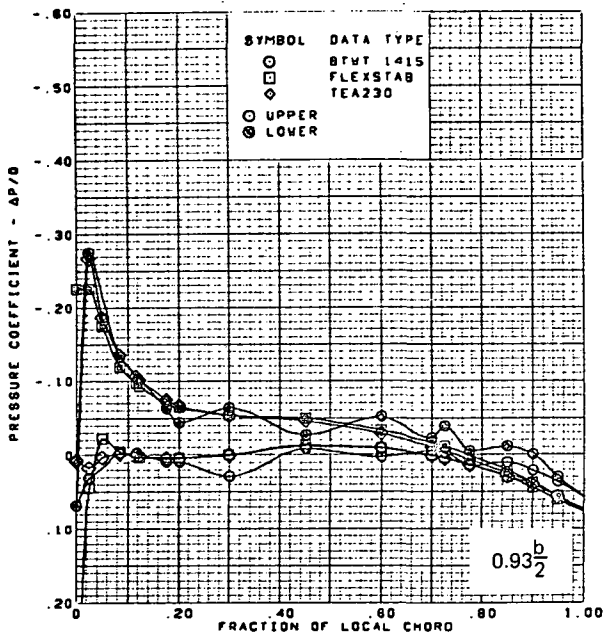
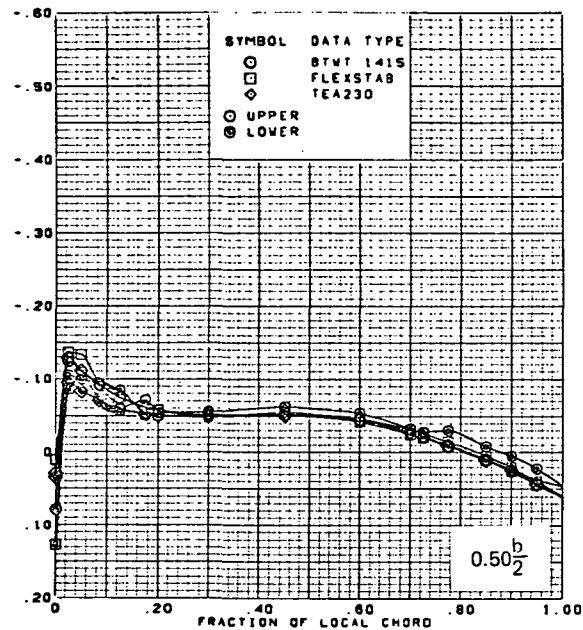
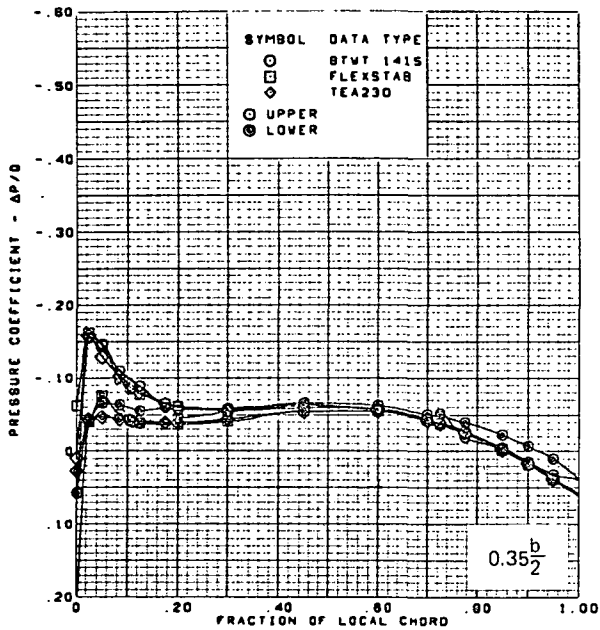
(a) (Concluded)

Figure 23.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 2.1^\circ$

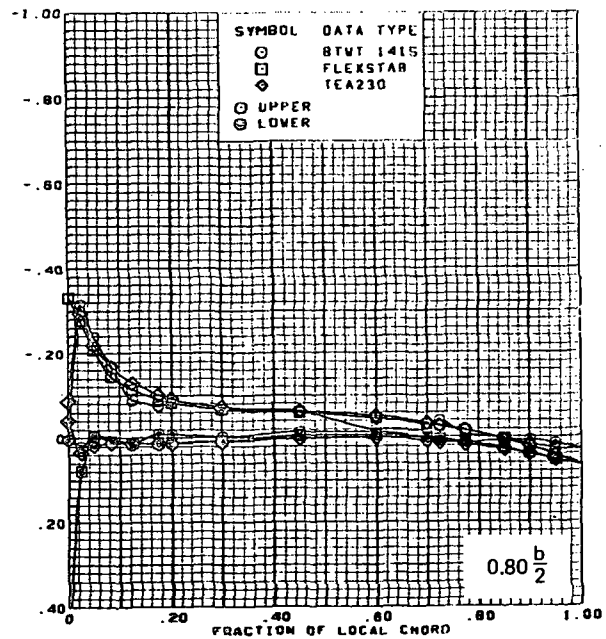
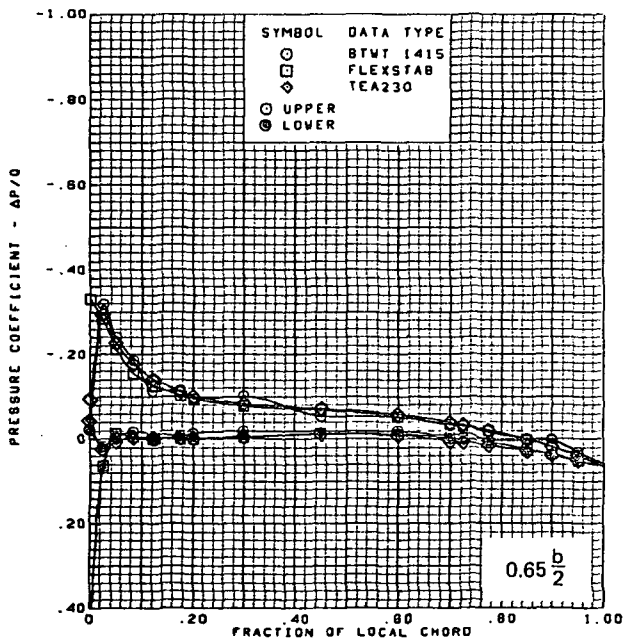
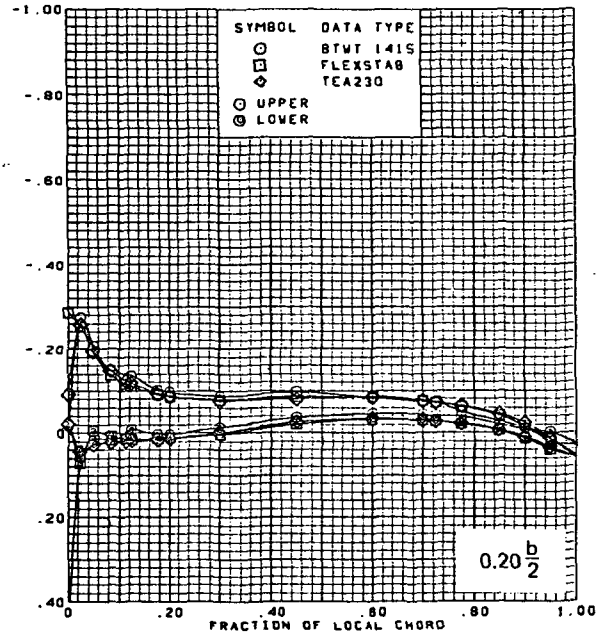
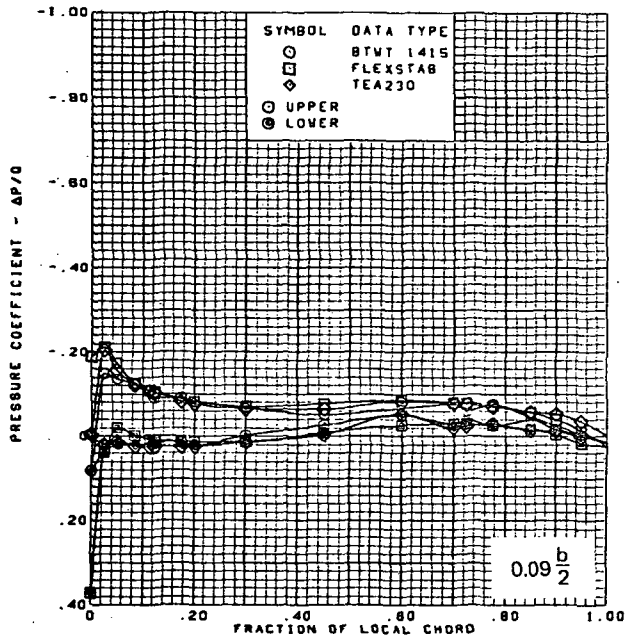
Figure 23.-(Continued)



$M = 0.85$  (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

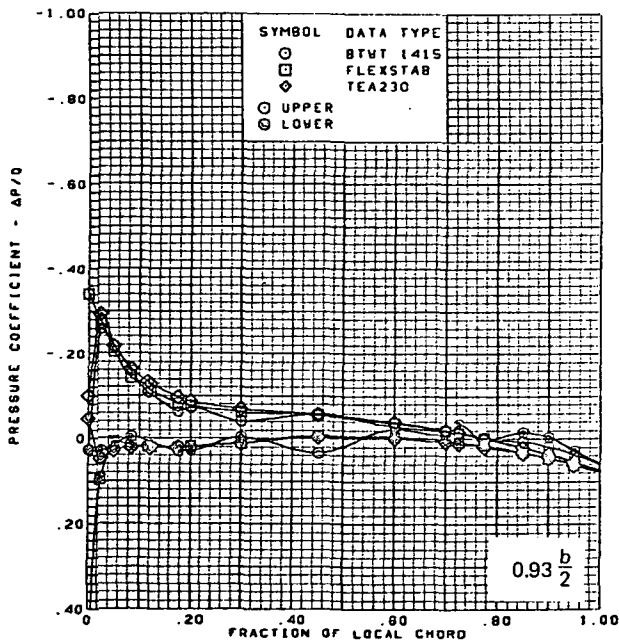
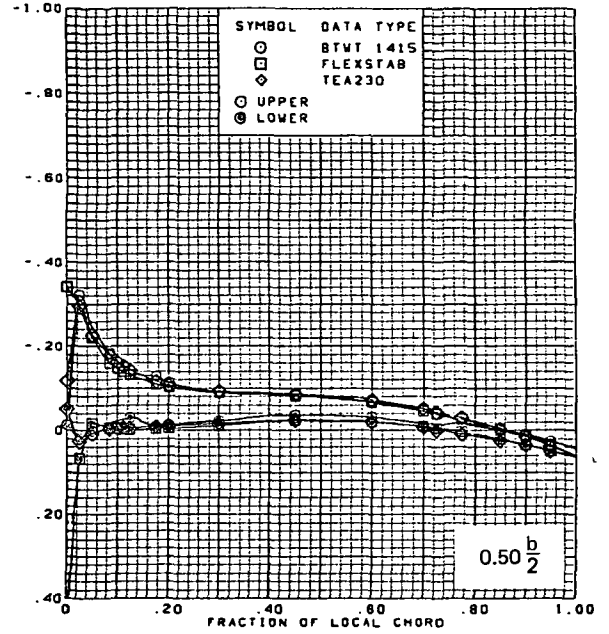
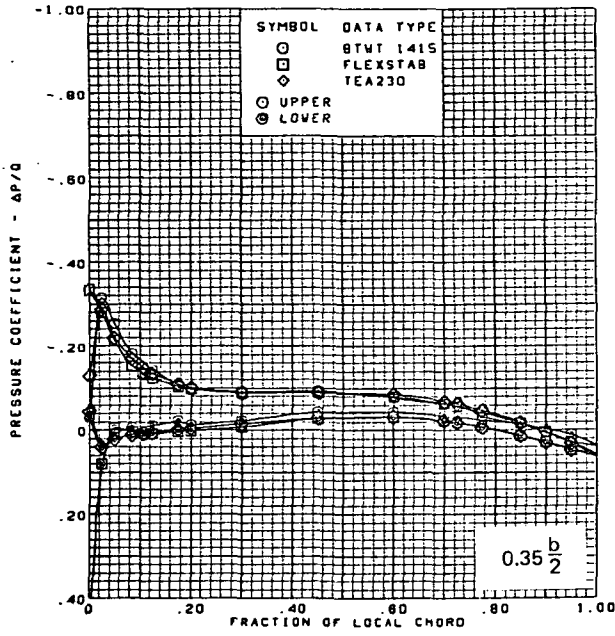
(b) (Concluded)

Figure 23.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $|\alpha| = 4.0^\circ$

Figure 23.-(Continued)

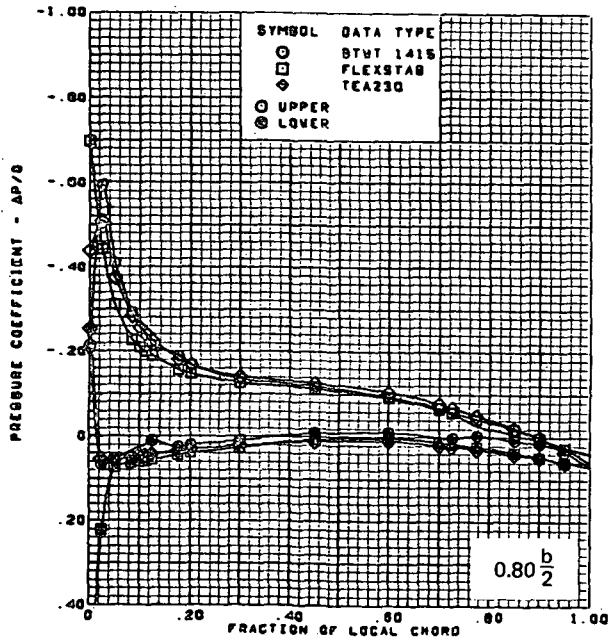
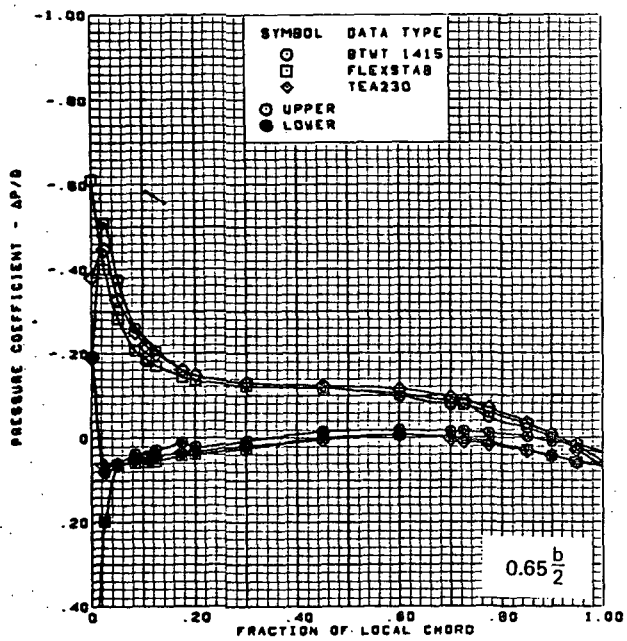
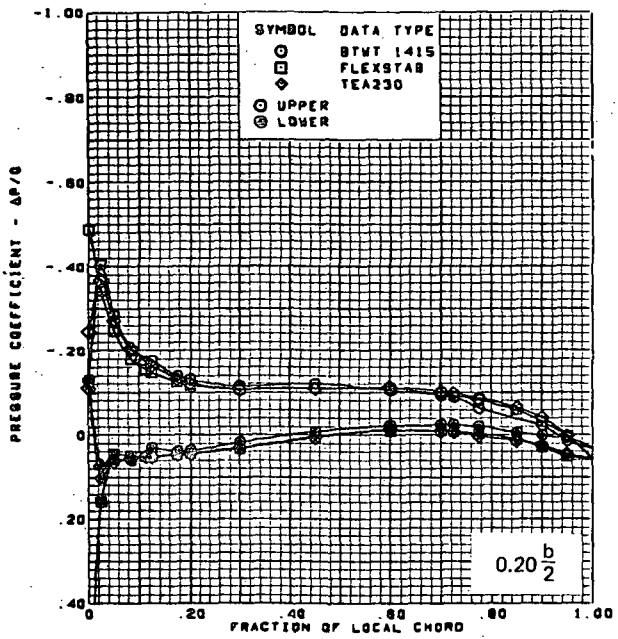
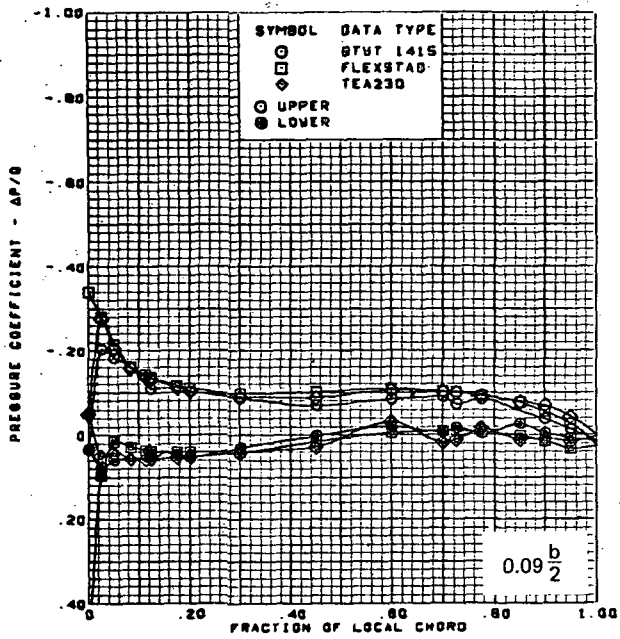


$M = 0.85$  (run 449)  
 $\alpha = 4.0^\circ$   
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(c) (Concluded)

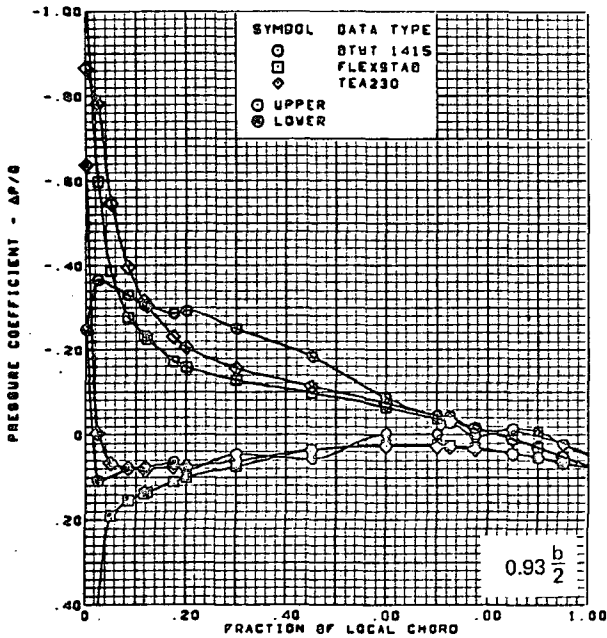
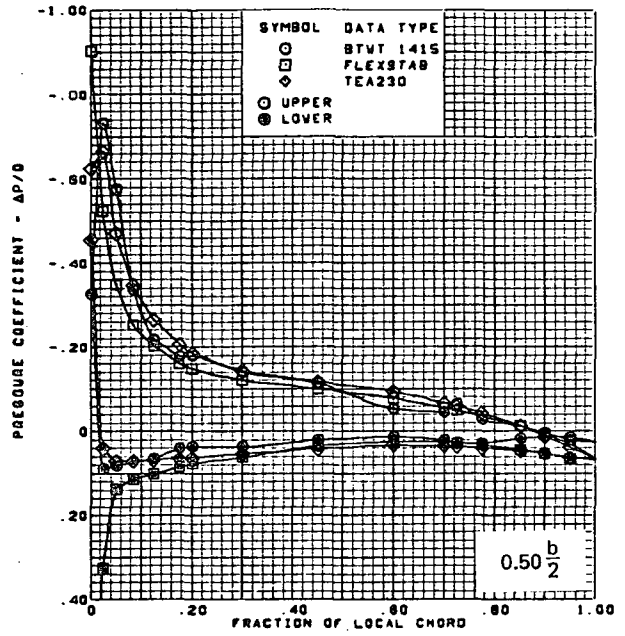
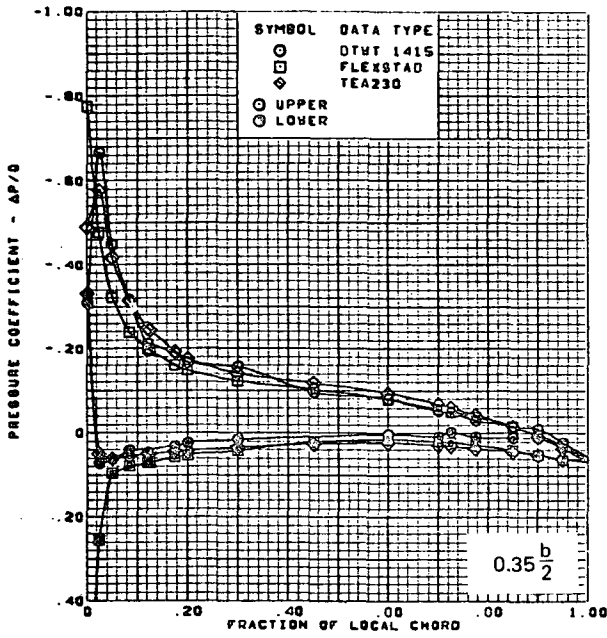
Figure 23.-(Continued)





(d) Surface Chordwise Pressure Distributions,  $\alpha = 6.0^\circ$

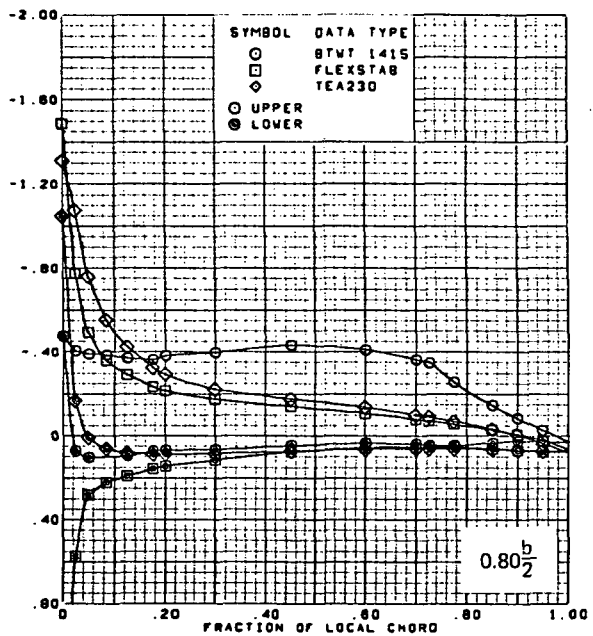
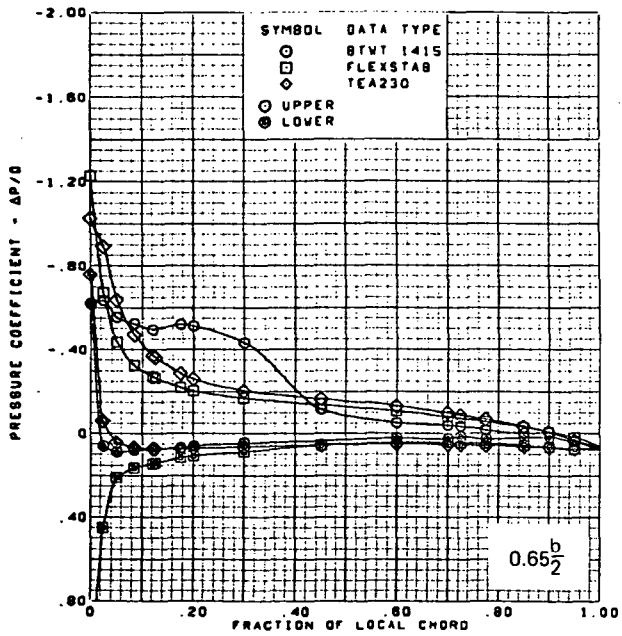
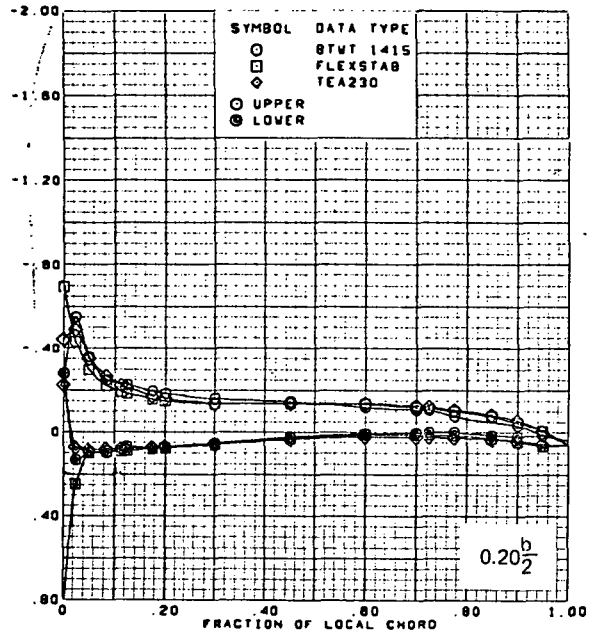
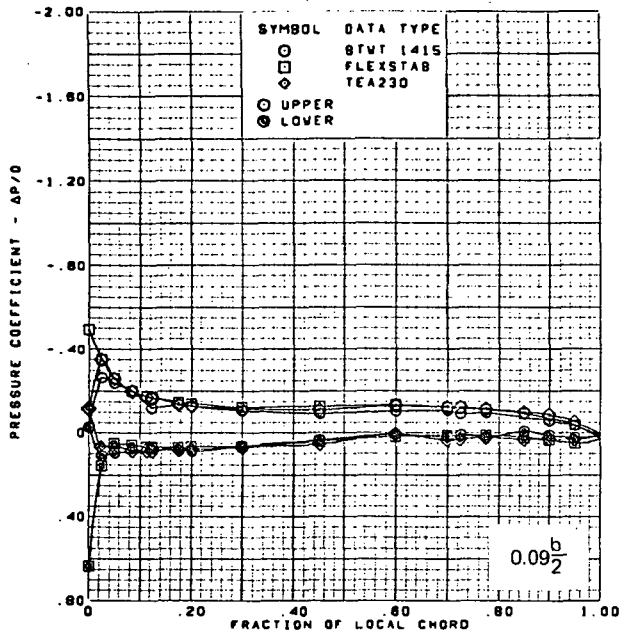
Figure 23.-(Continued)



$M = 0.85$  (run 449)  
 $\alpha = 6.0^\circ$   
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

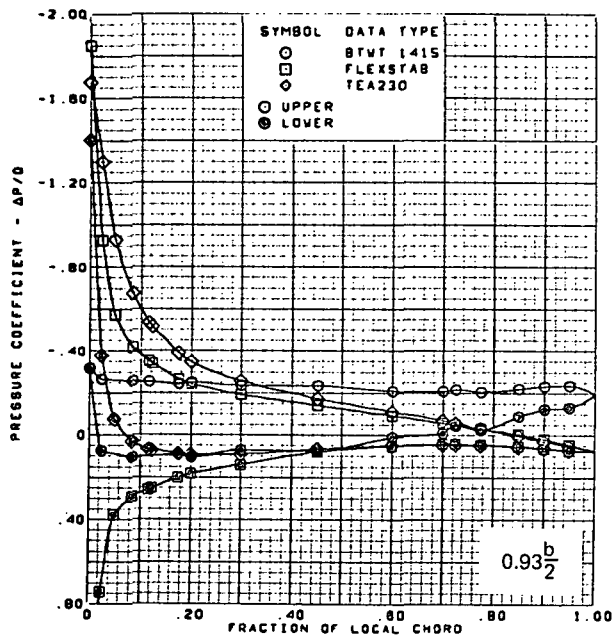
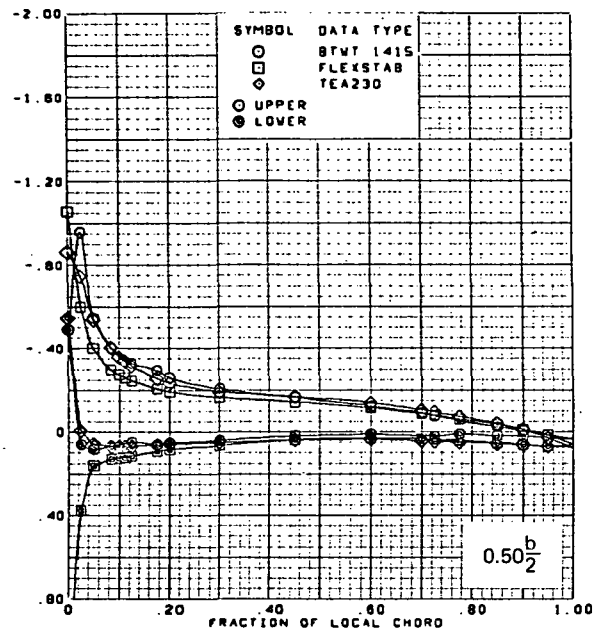
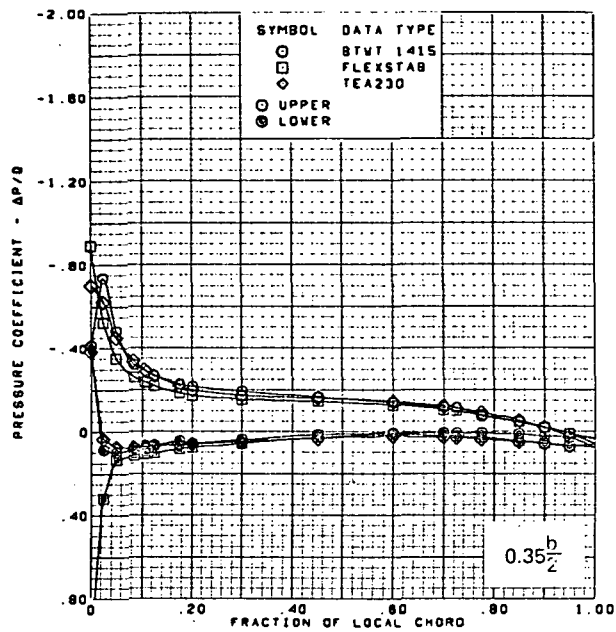
(d) (Concluded)

Figure 23.-(Continued)



(e) Surface Chordwise Pressure Distributions,  $\alpha = 8.0^\circ$

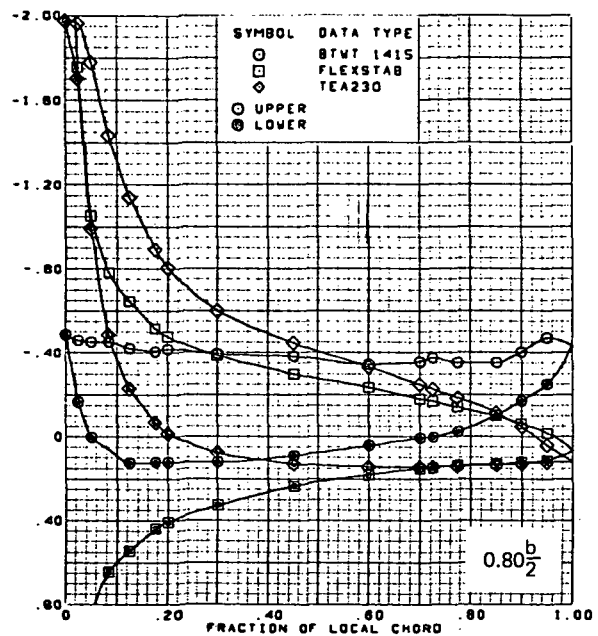
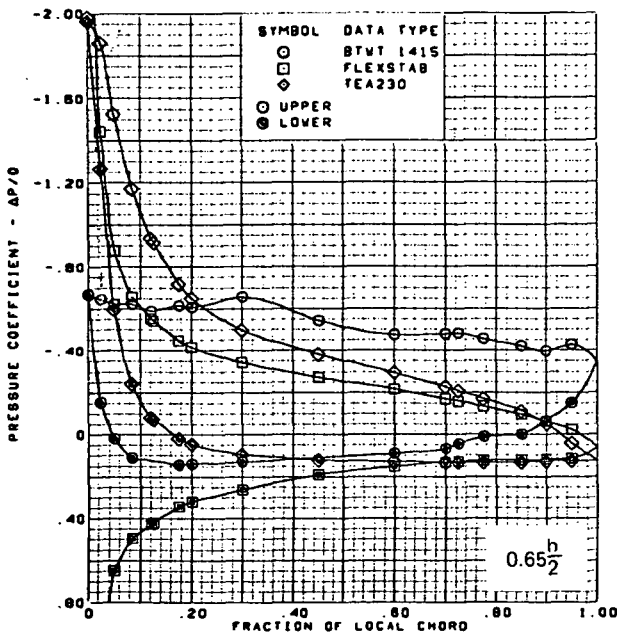
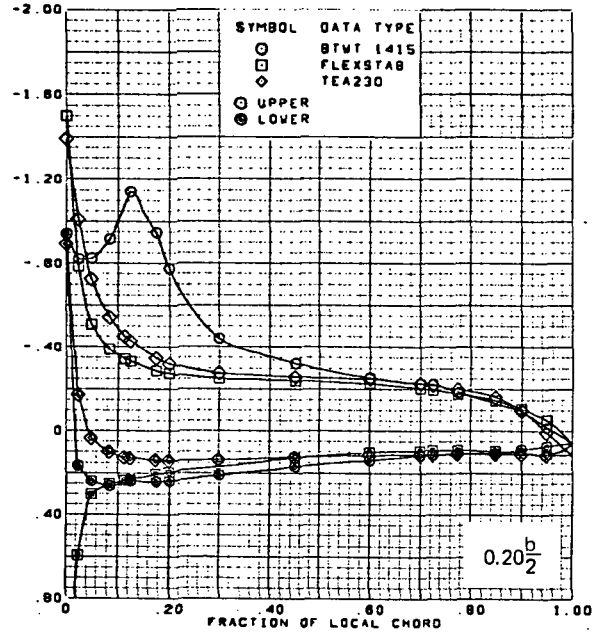
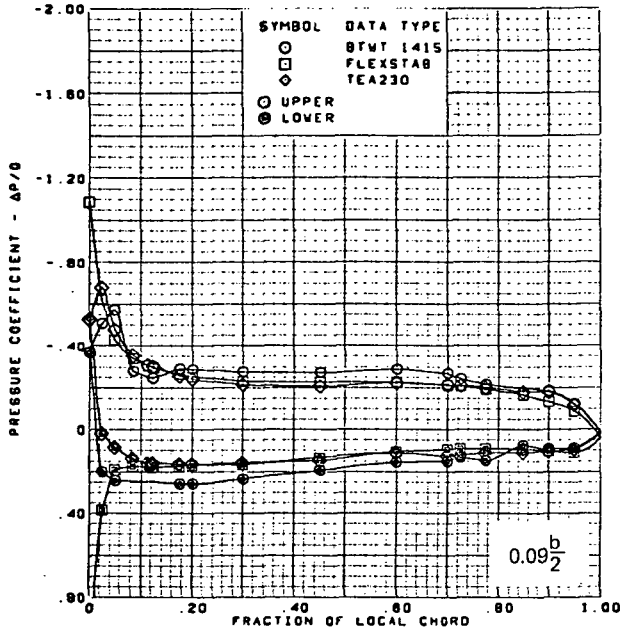
Figure 23.-(Continued)



M = 0.85 (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

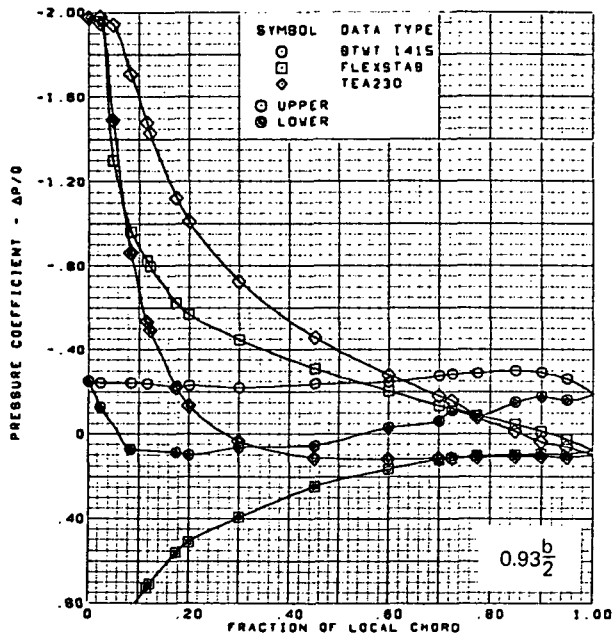
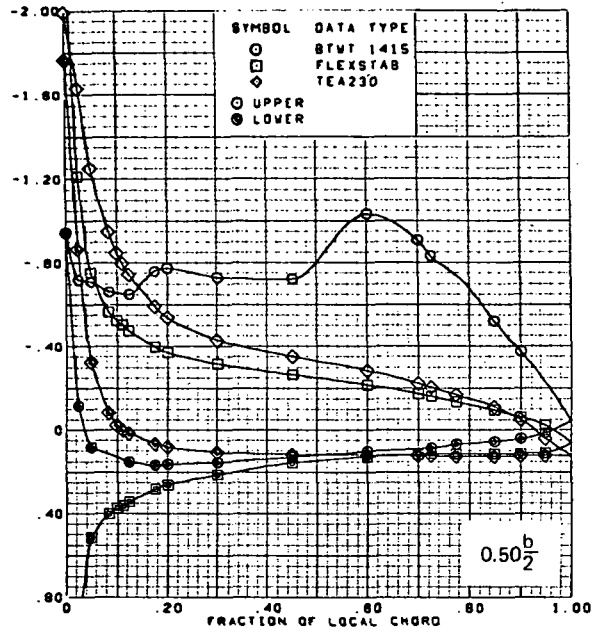
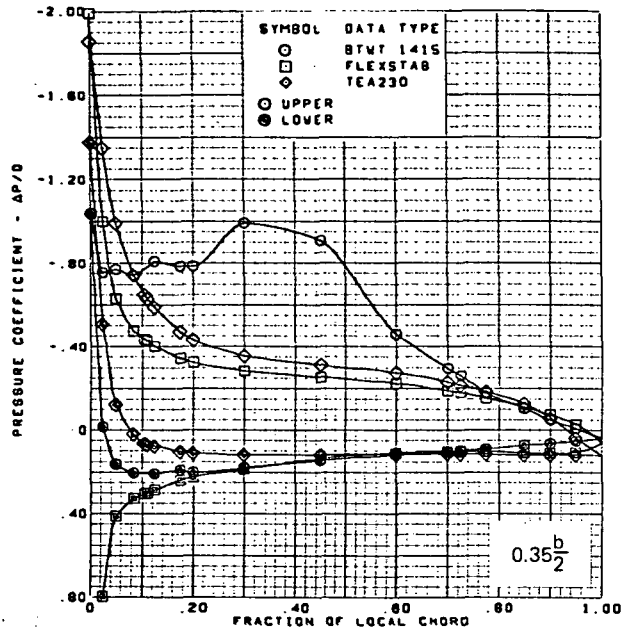
(e) (Concluded)

Figure 23.-(Continued)



(f) Surface Chordwise Pressure Distributions,  $\alpha = 15.8^\circ$

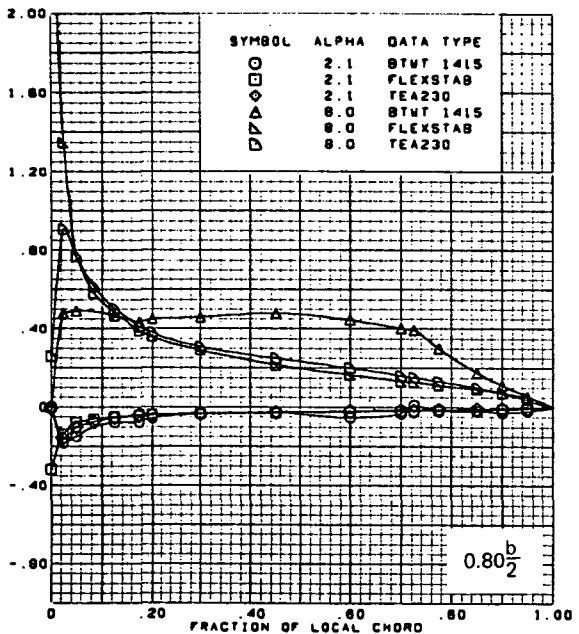
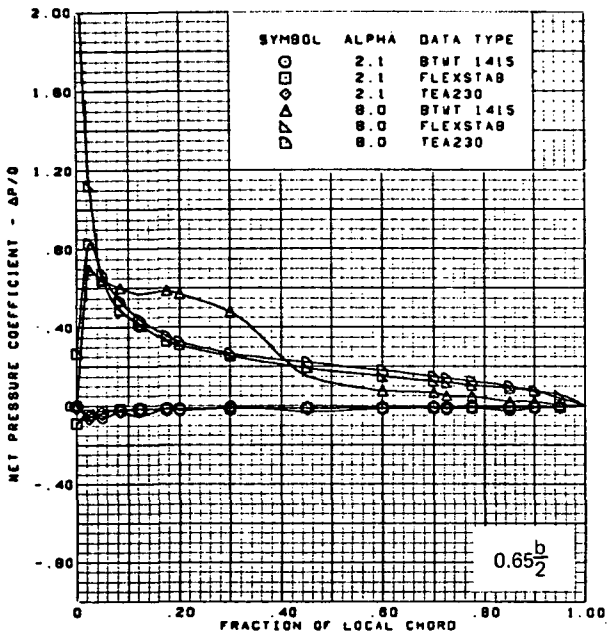
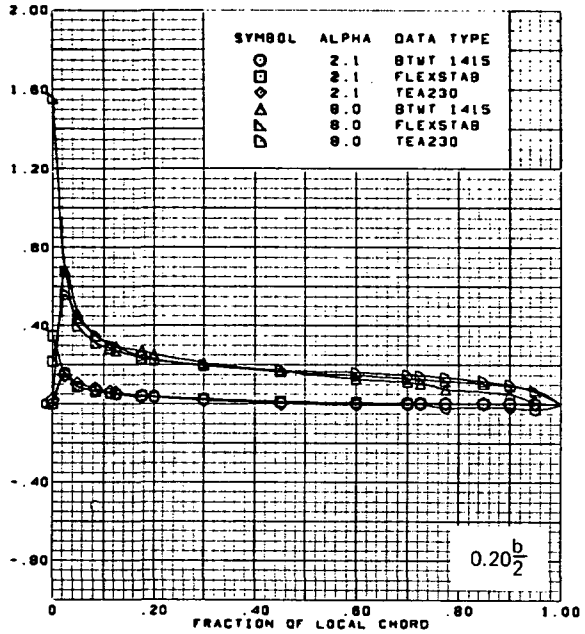
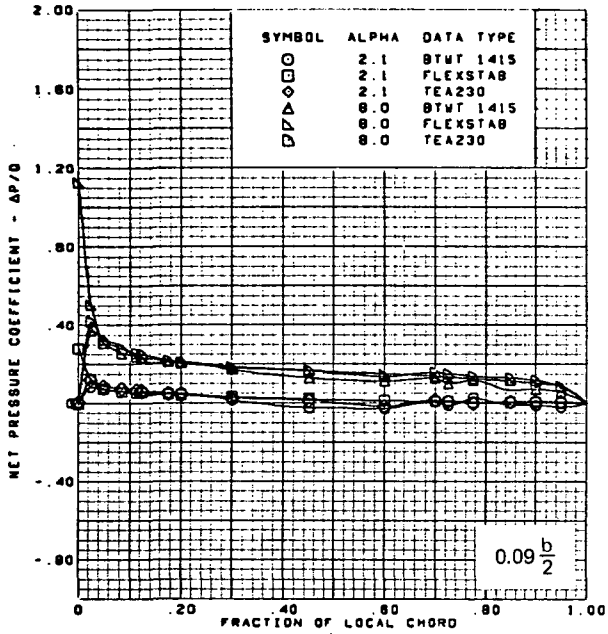
Figure 23.-(Continued)



M = 0.85 (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

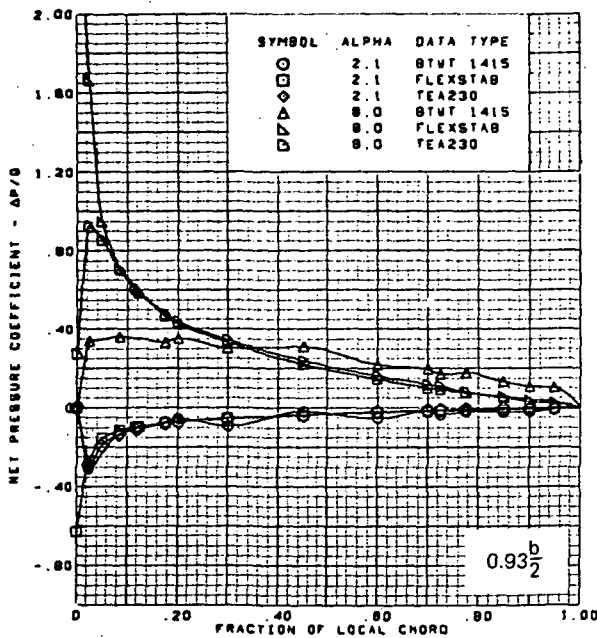
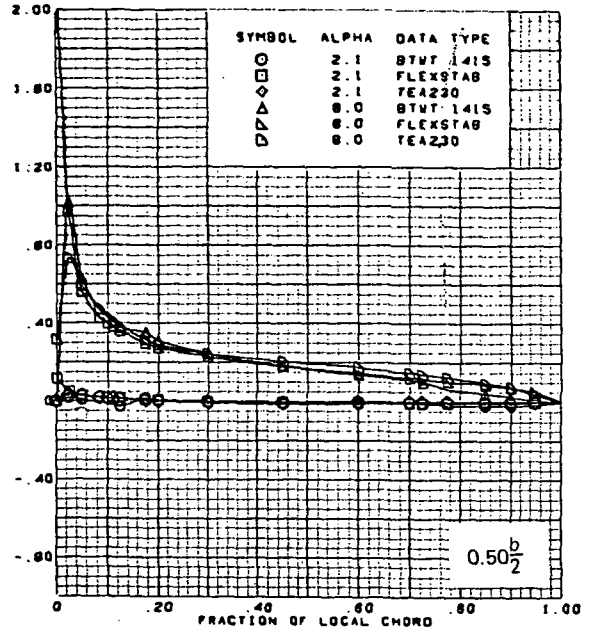
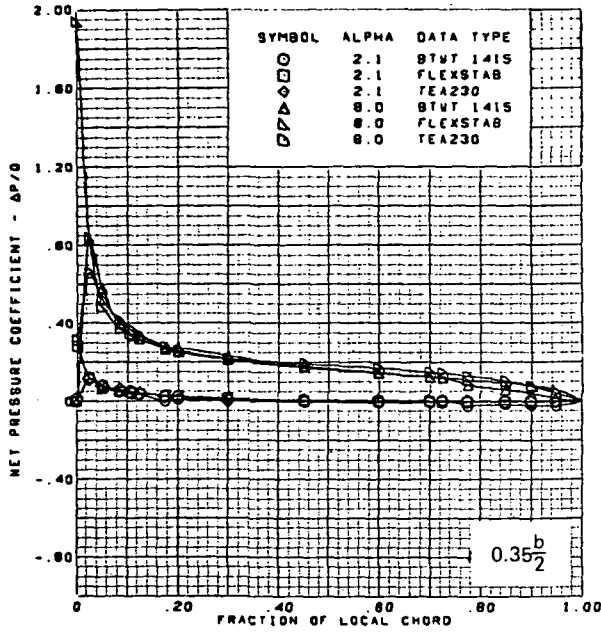
(f) (Concluded)

Figure 23.-(Continued)



(g) Net Chordwise Pressure Distributions,  $\alpha = 2.1^\circ, 8.0^\circ$

Figure 23.-(Continued)

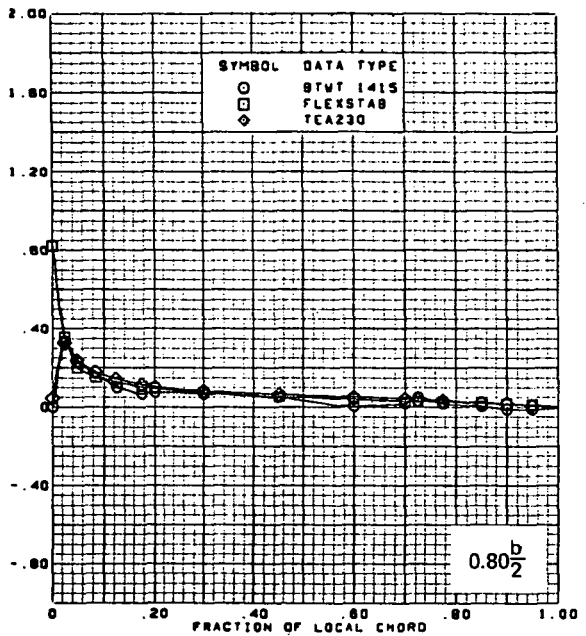
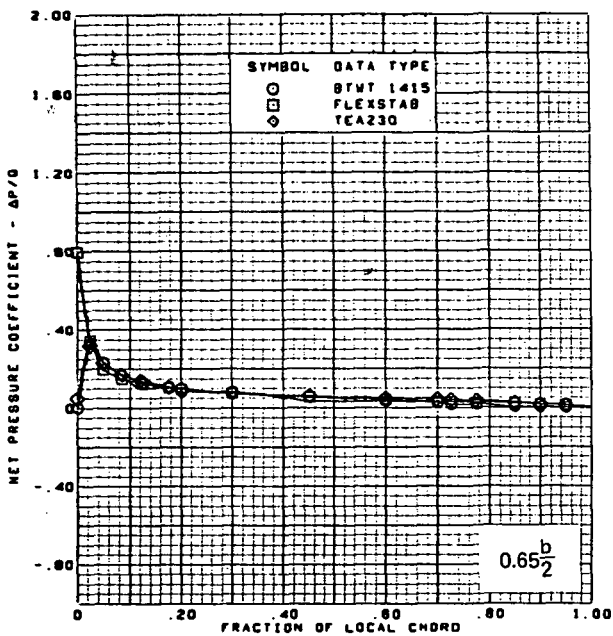
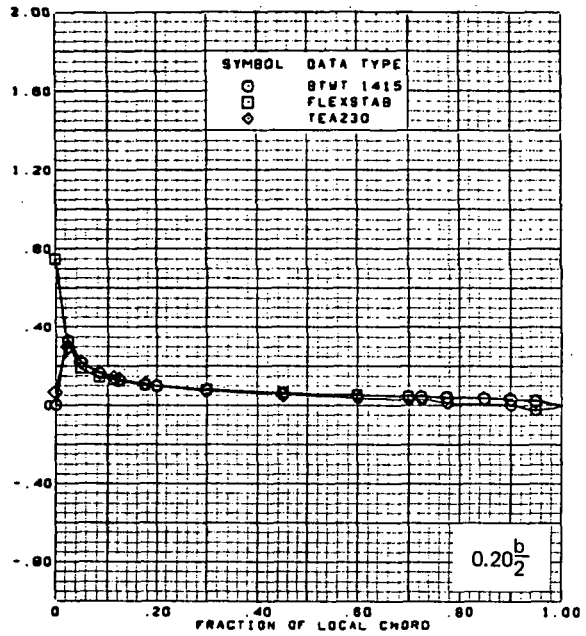
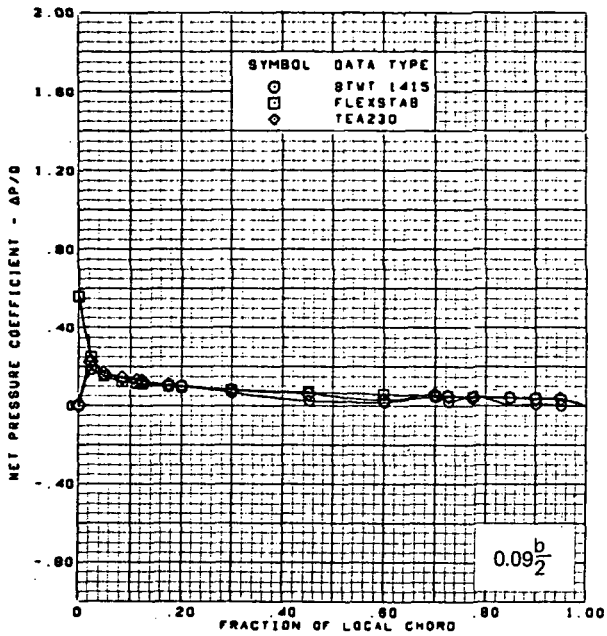


M = 0.85 (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(g) (Concluded)

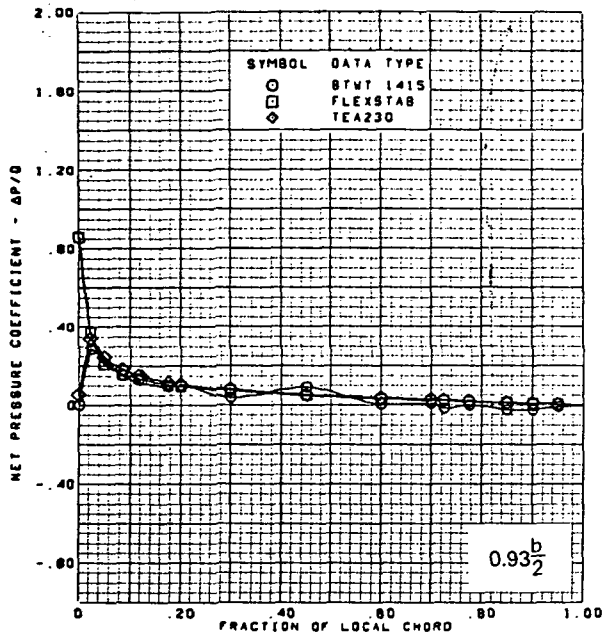
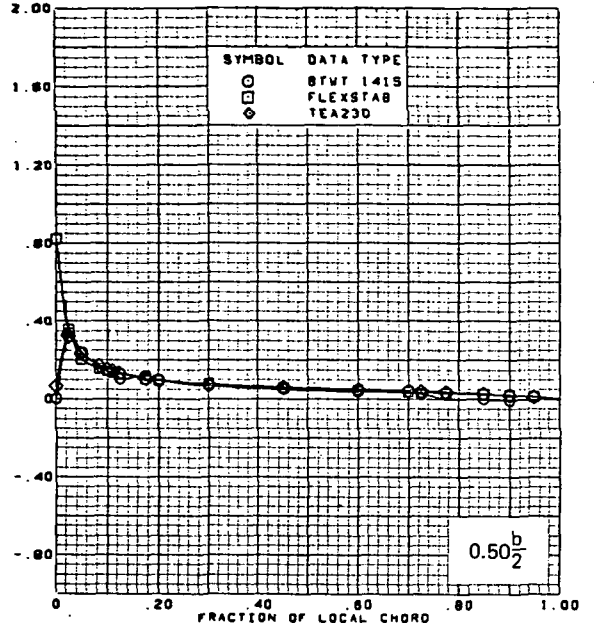
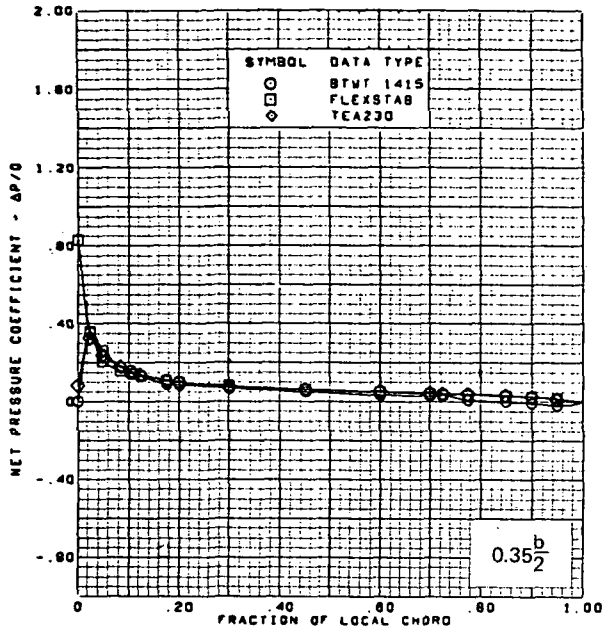
Figure 23.-(Continued)





(h) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

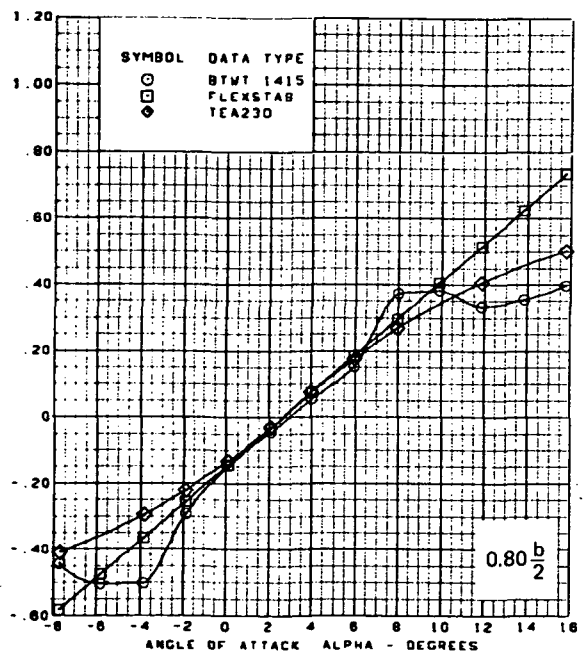
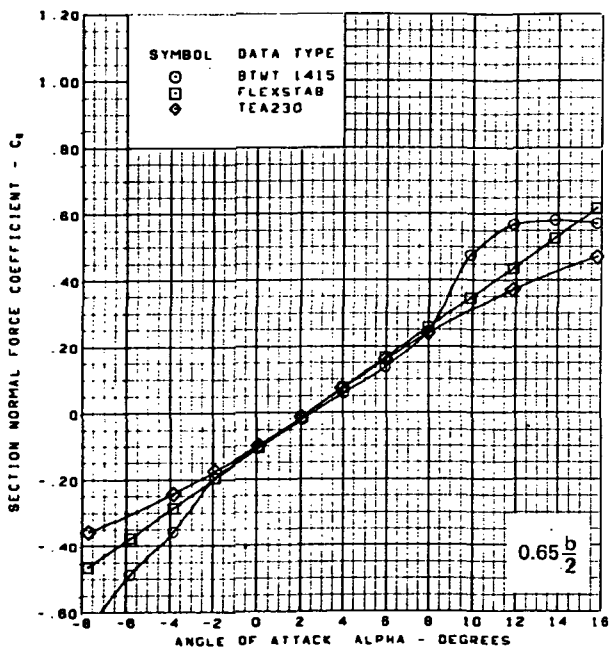
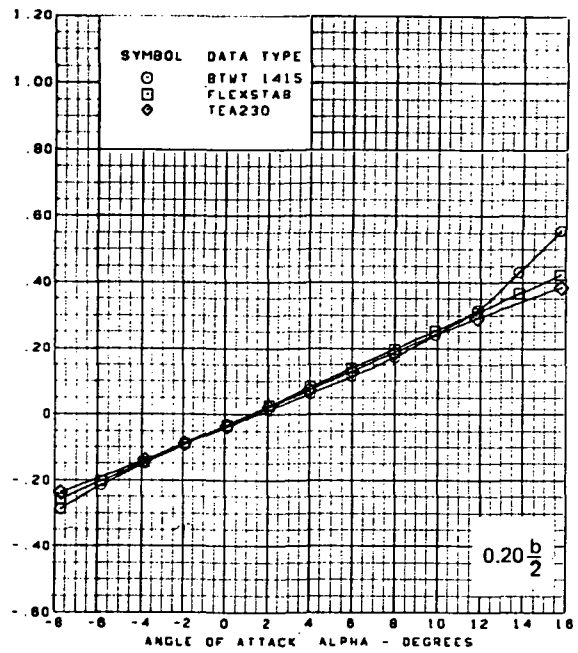
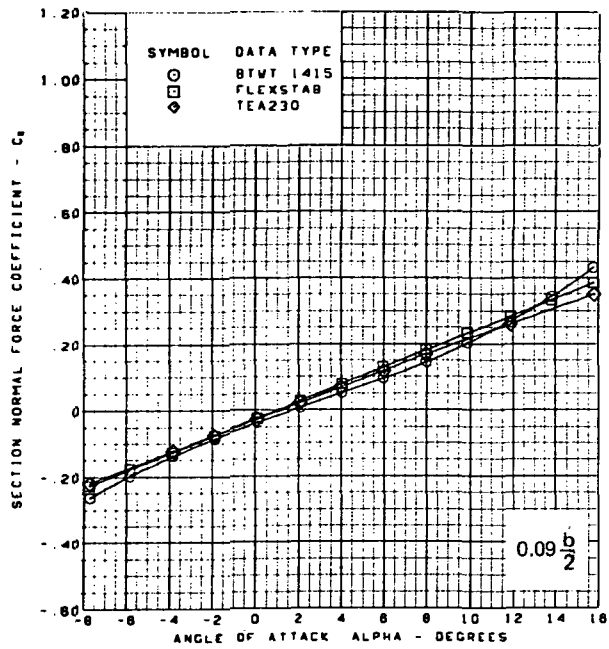
Figure 23.-(Continued)



$M = 0.85$  (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

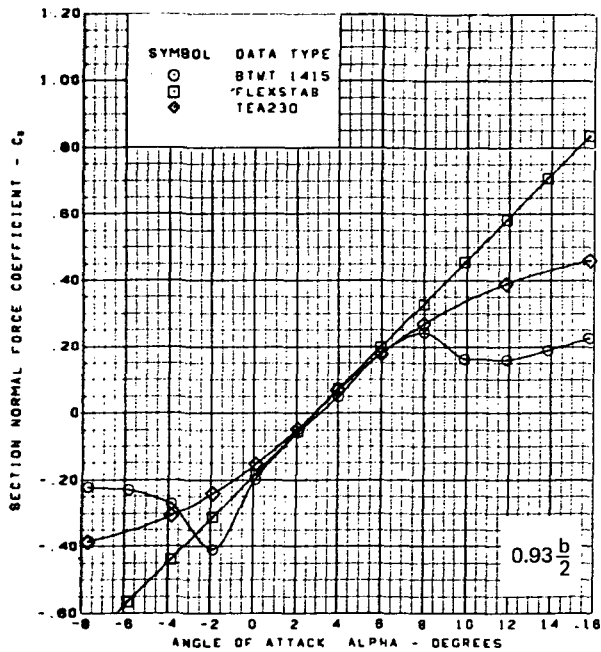
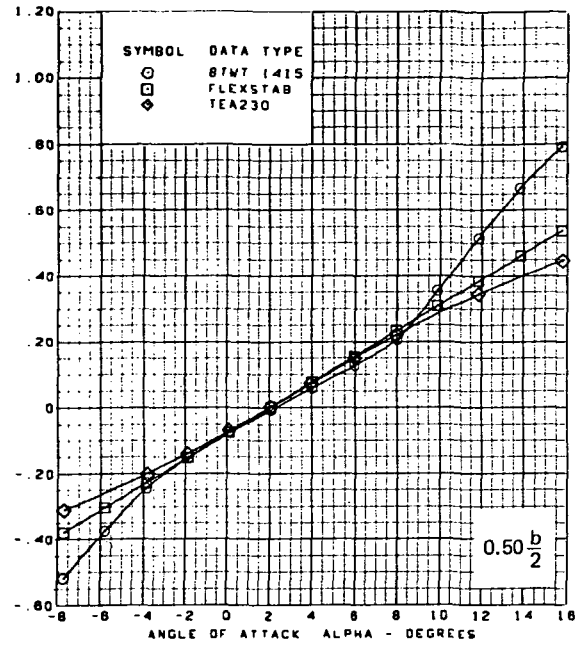
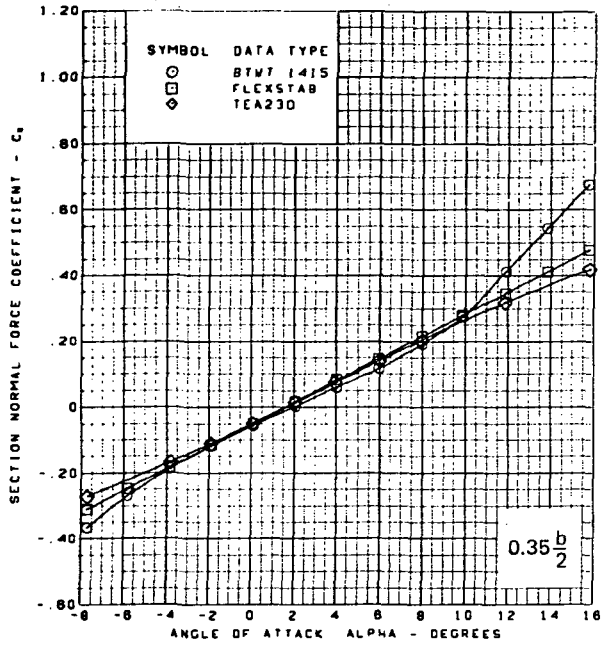
(h) (Concluded)

Figure 23.-(Continued)



(i) Section Aerodynamic Coefficients - Normal Force

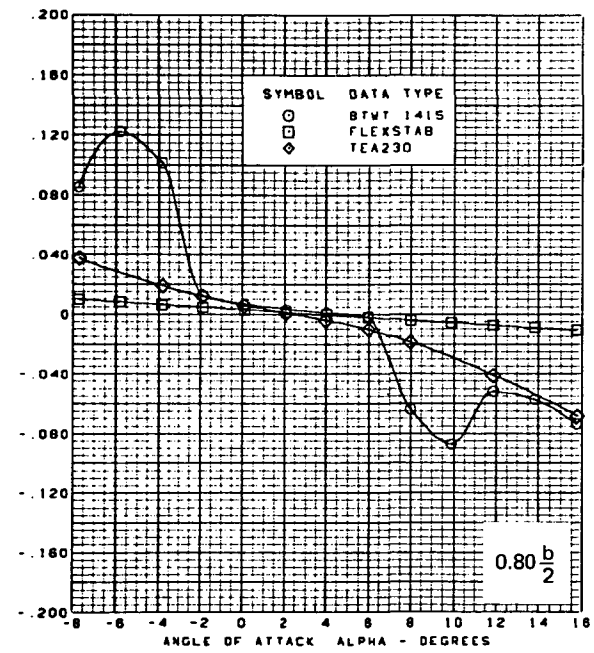
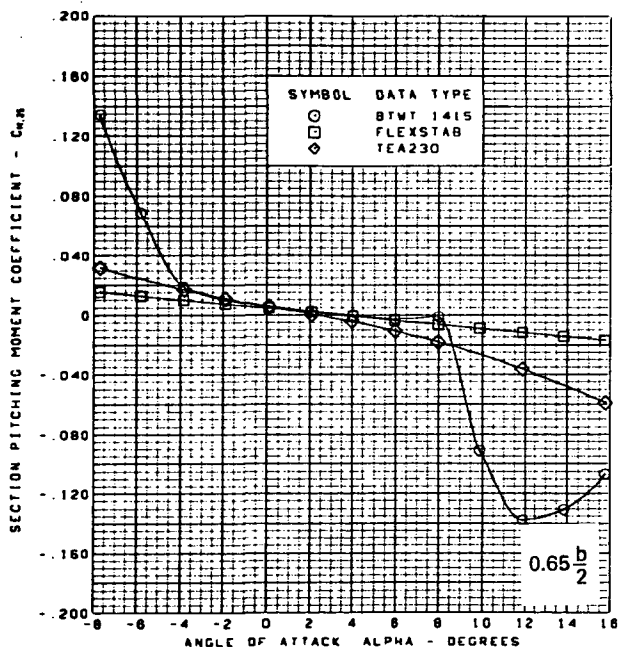
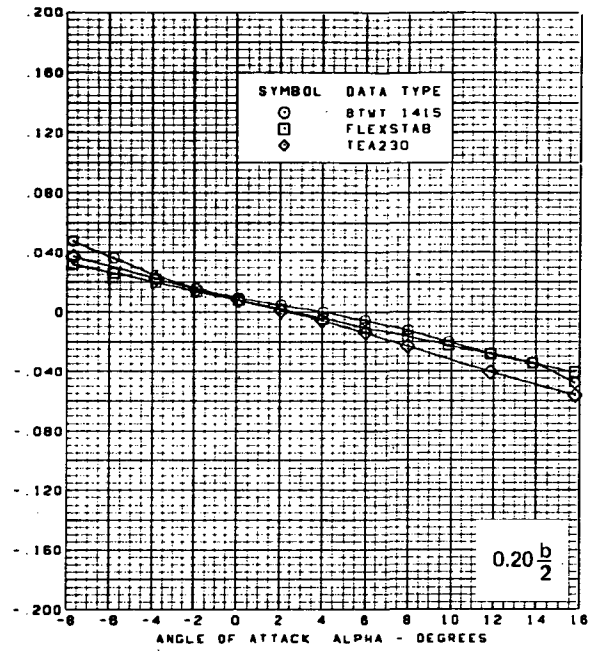
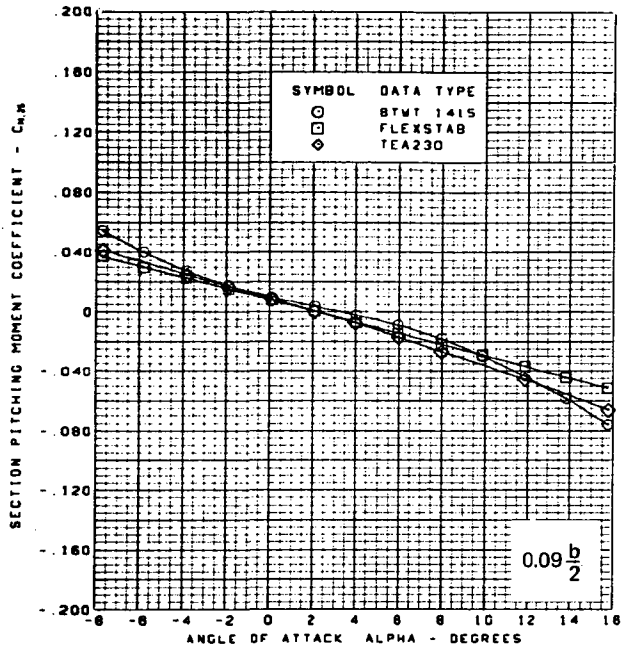
Figure 23.-(Continued)



M = 0.85 (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

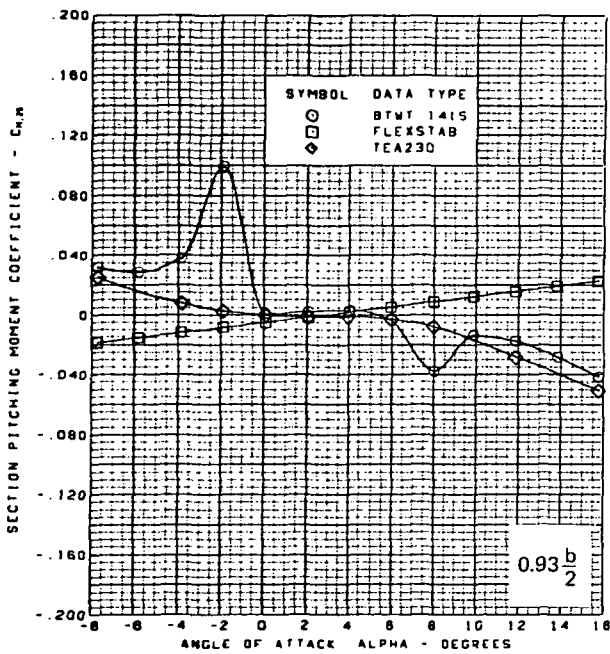
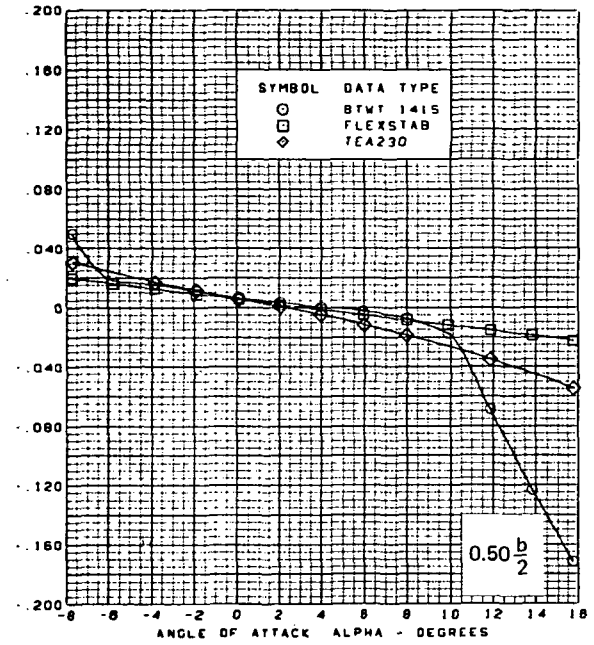
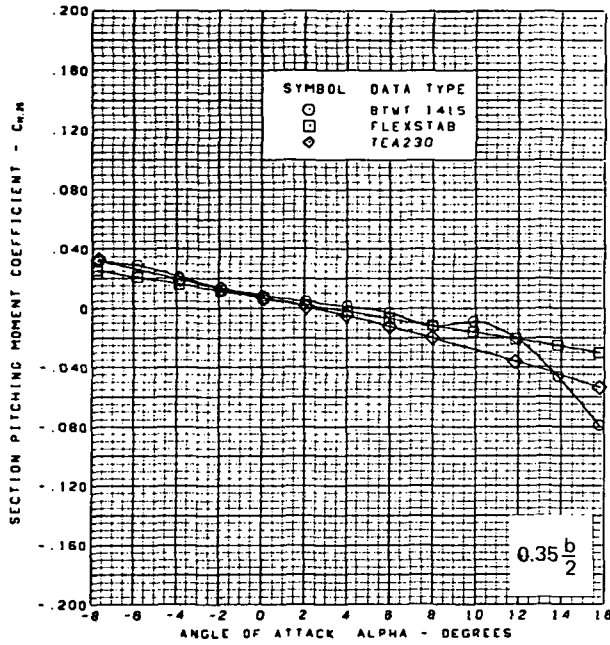
(i) (Concluded)

Figure 23.--(Continued)



(j) Section Aerodynamic Coefficients - Pitching Moment

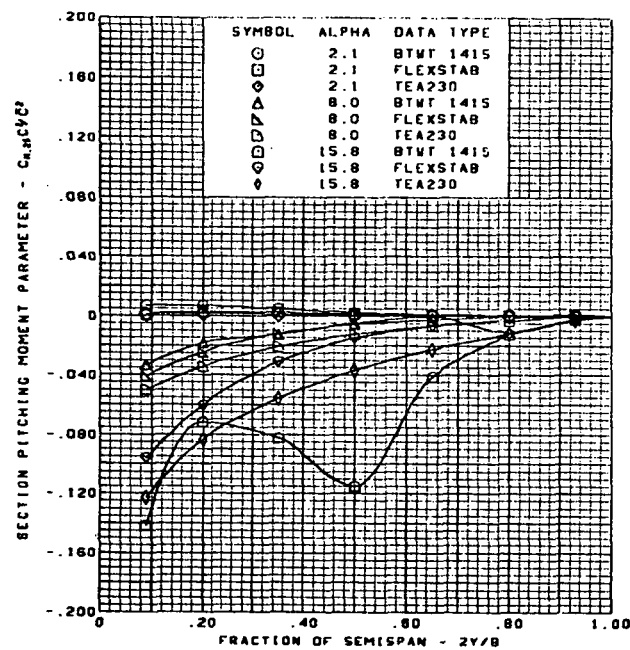
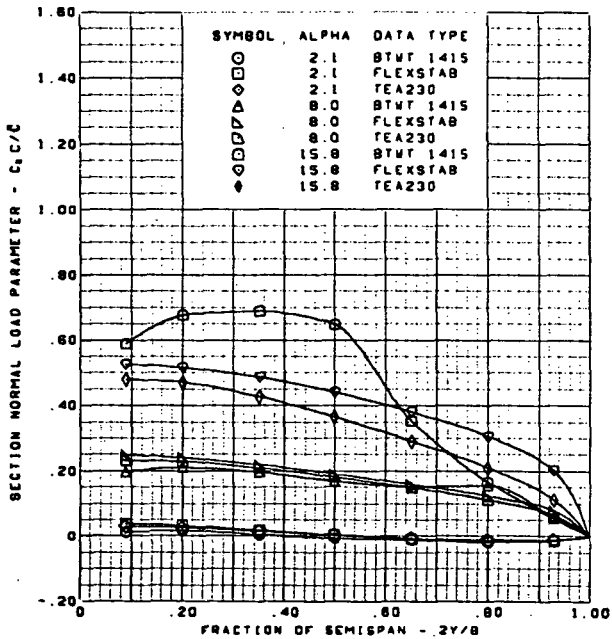
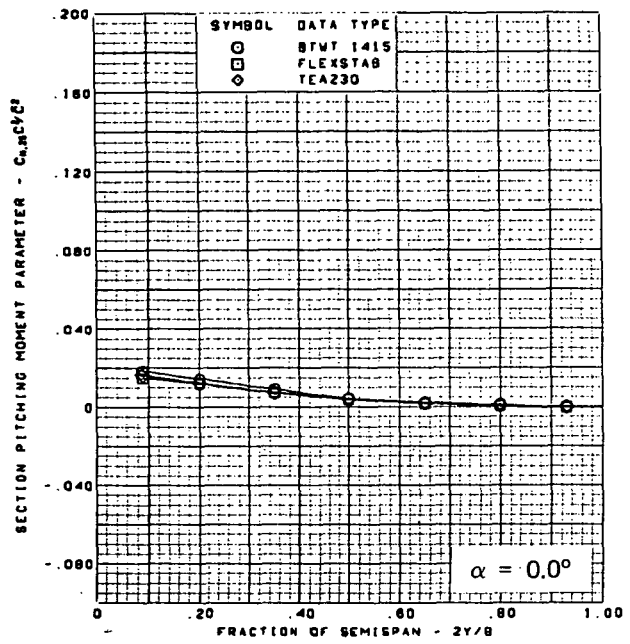
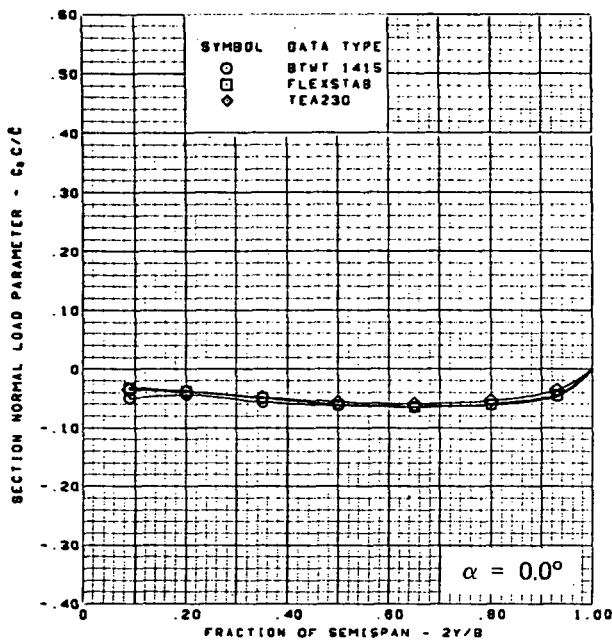
Figure 23.-(Continued)



M = 0.85 (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(j) (Concluded)

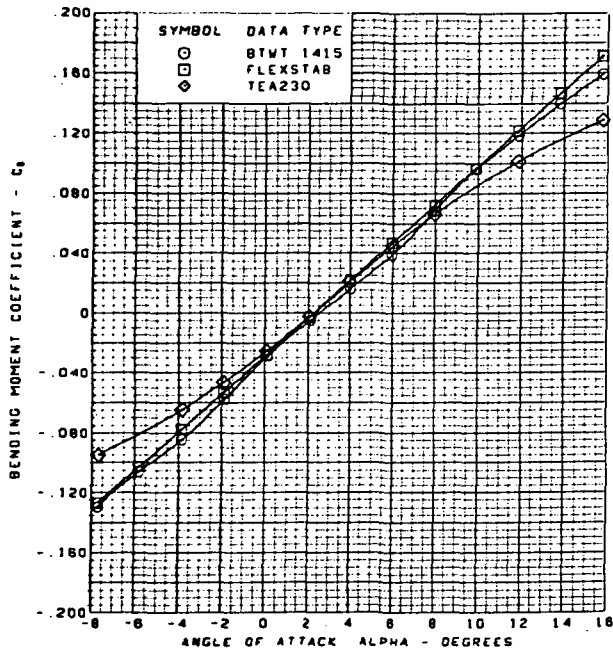
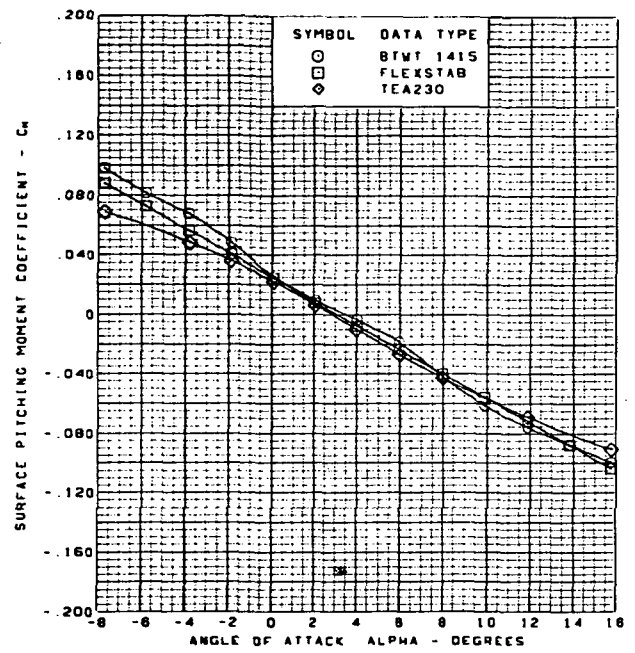
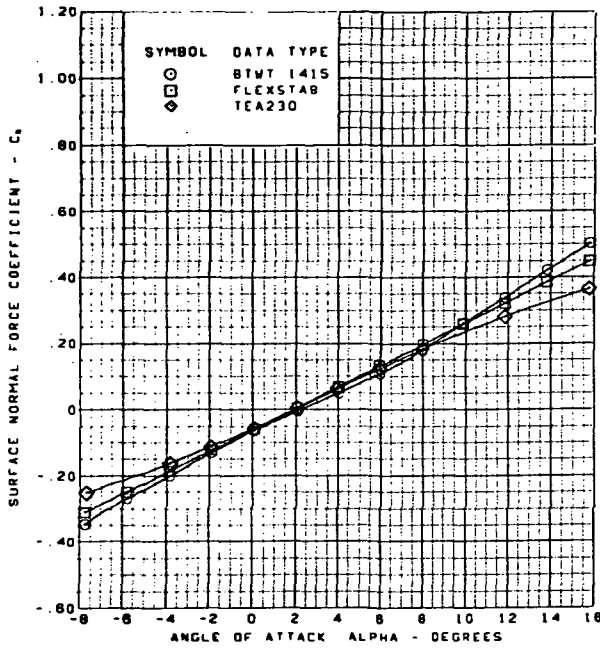
Figure 23.--(Continued)



$M = 0.85$  (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(k) Spanload Distributions

Figure 23.-(Continued)

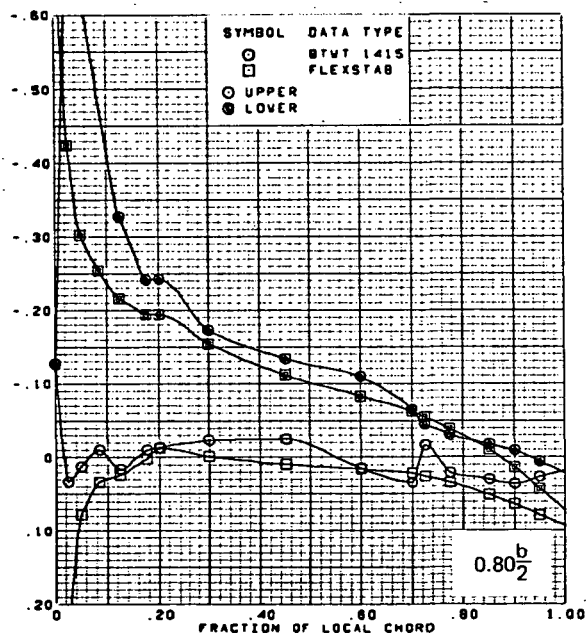
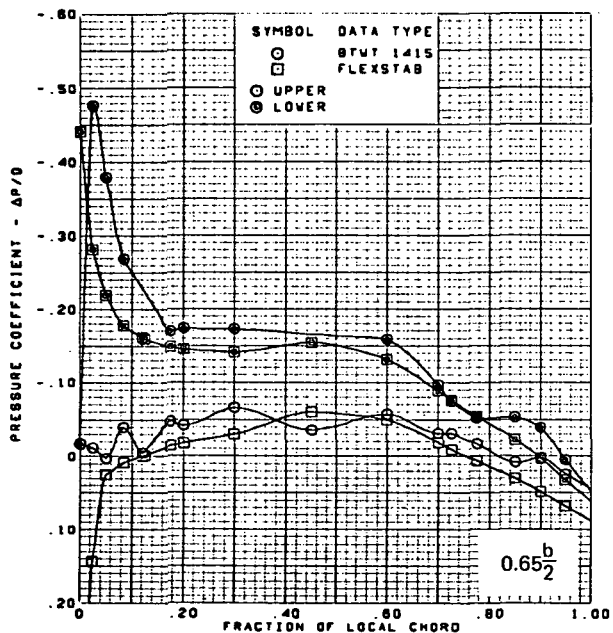
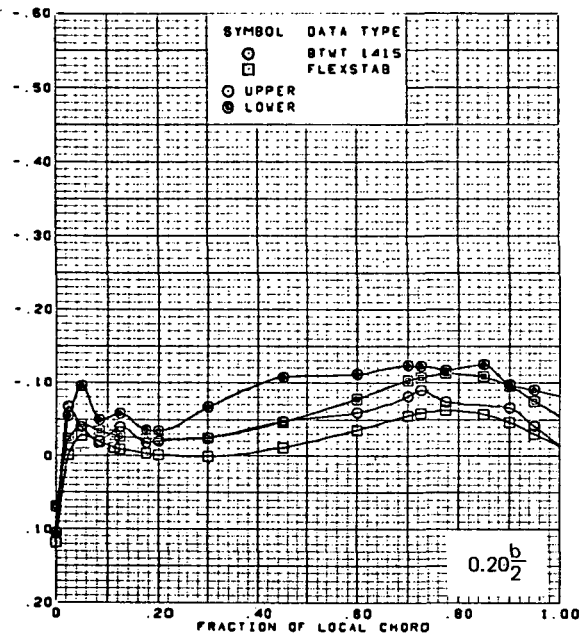
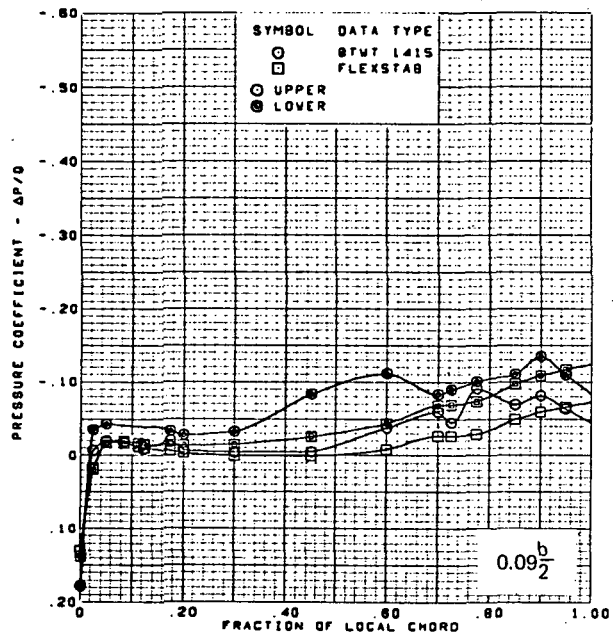


$M = 0.85$  (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(I) Wing Aerodynamic Coefficients

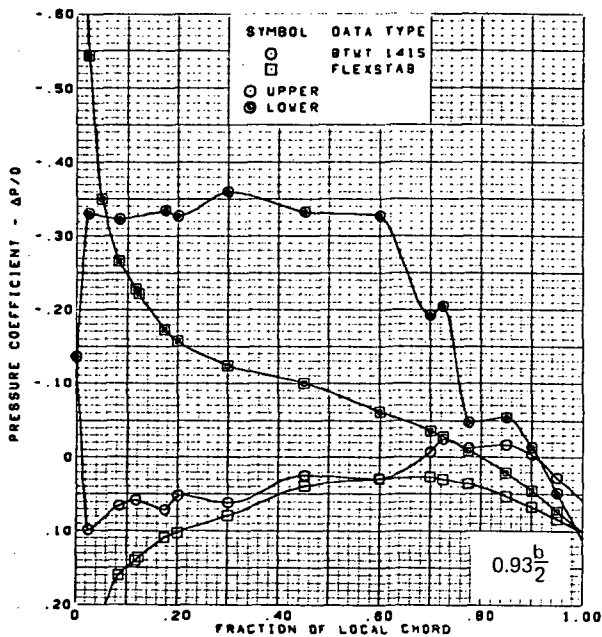
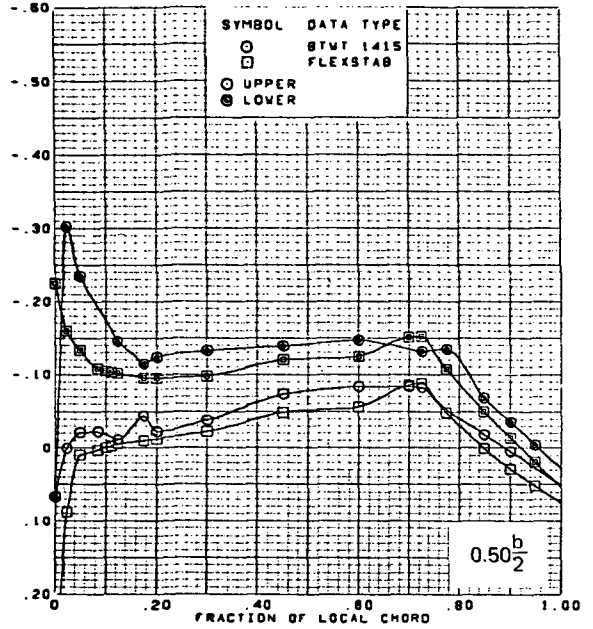
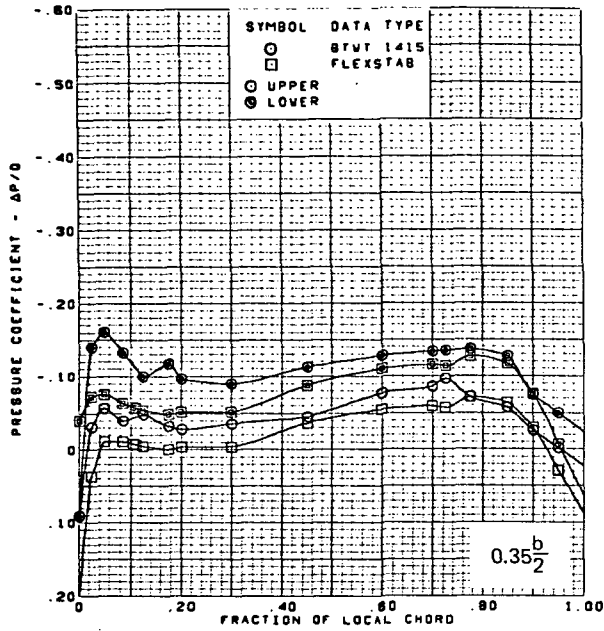
Figure 23--(Concluded)





(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.1^\circ$

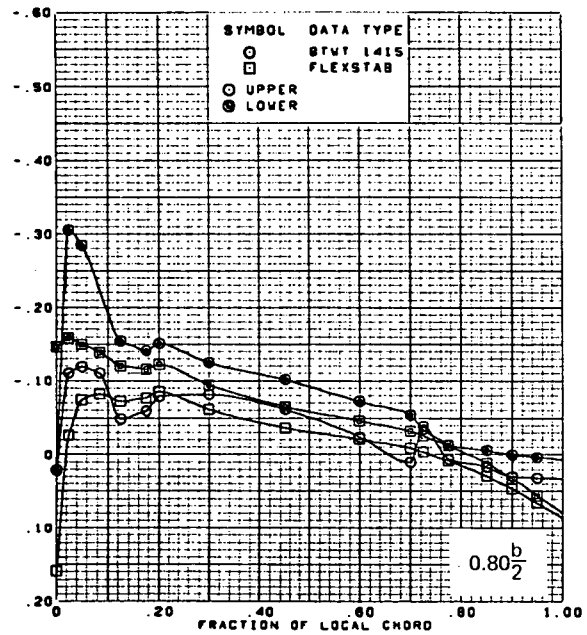
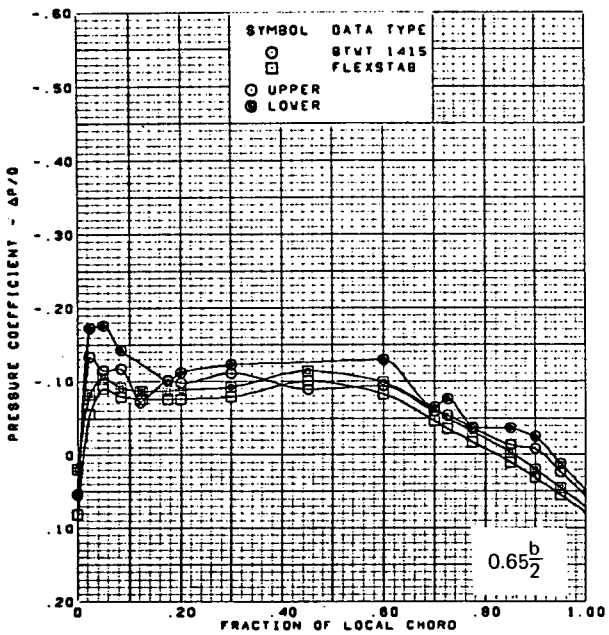
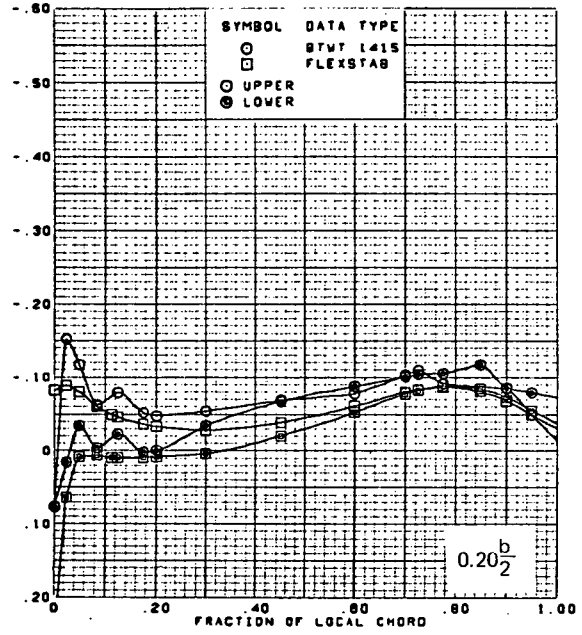
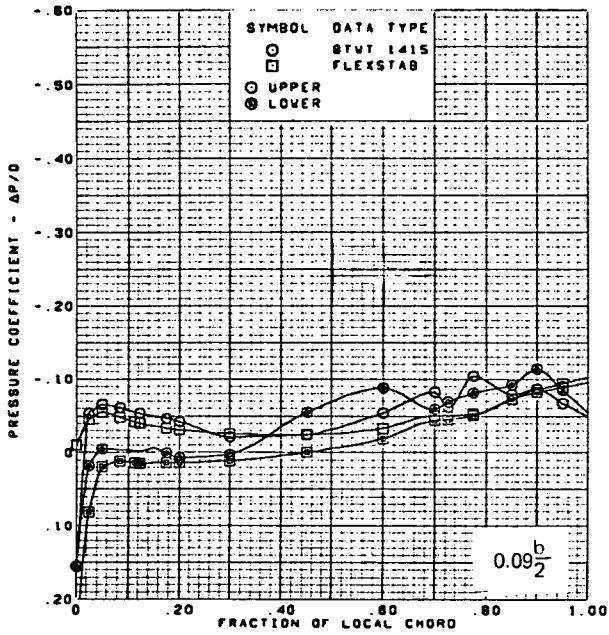
Figure 24.-Wing Theory-to-Experiment Comparison; Twisted Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



M = 1.05 (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

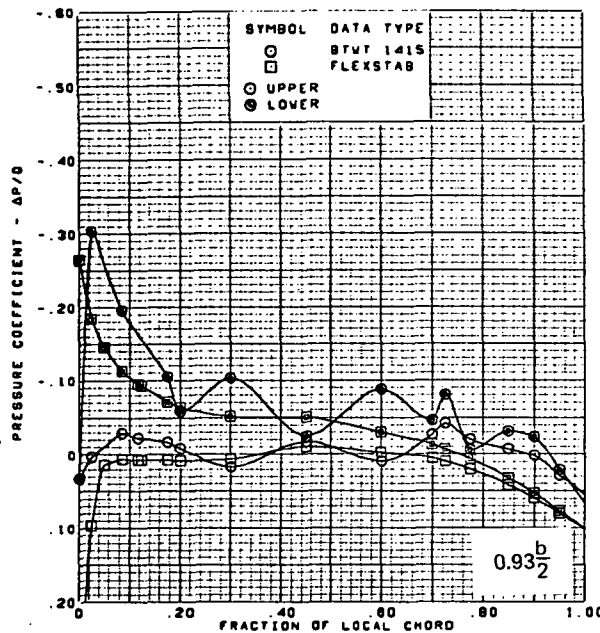
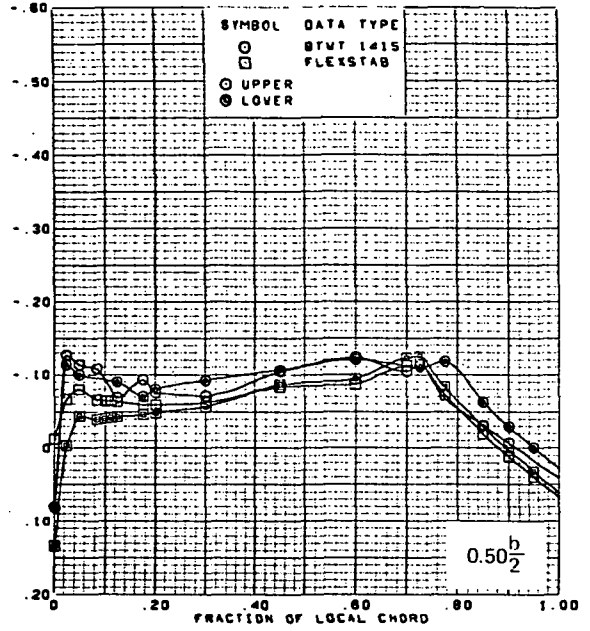
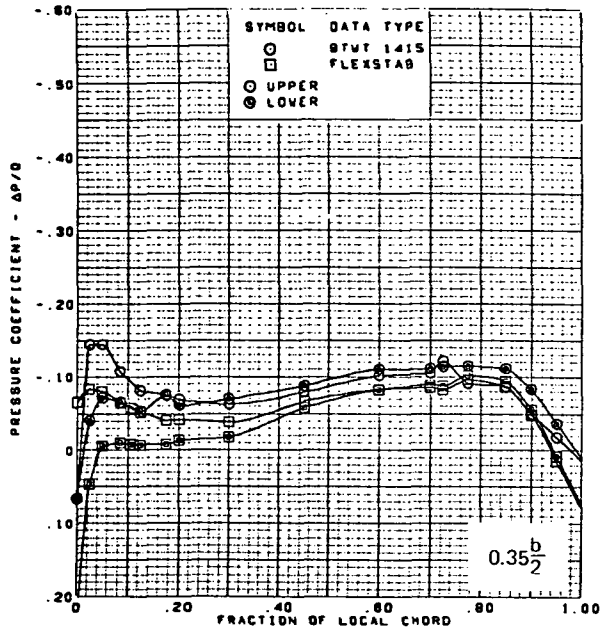
(a) (Concluded)

Figure 24.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 2.0^\circ$

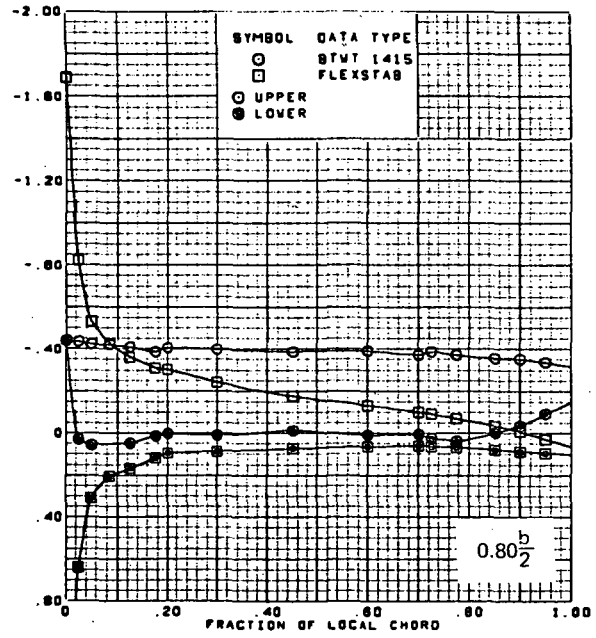
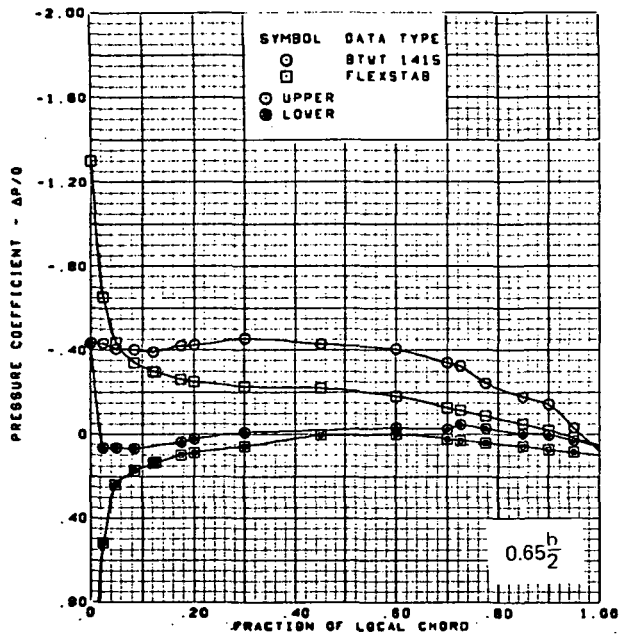
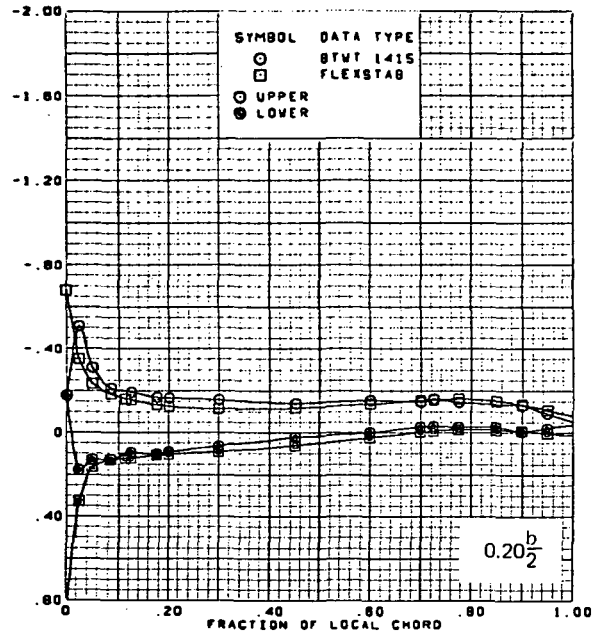
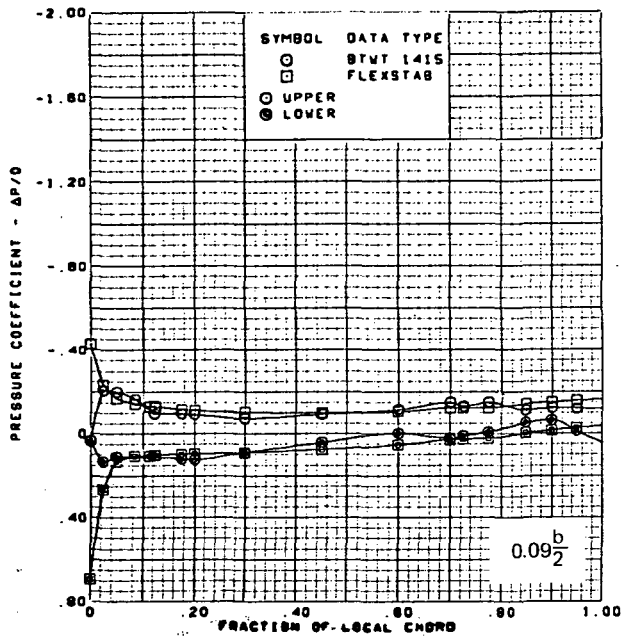
Figure 24.-(Continued)



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

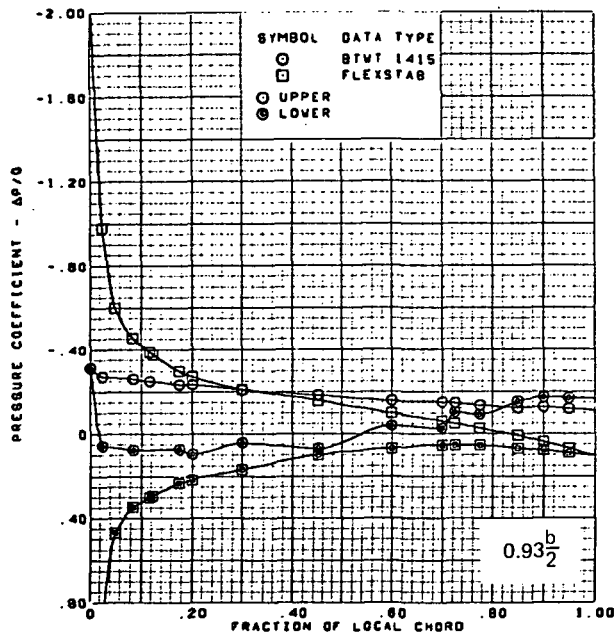
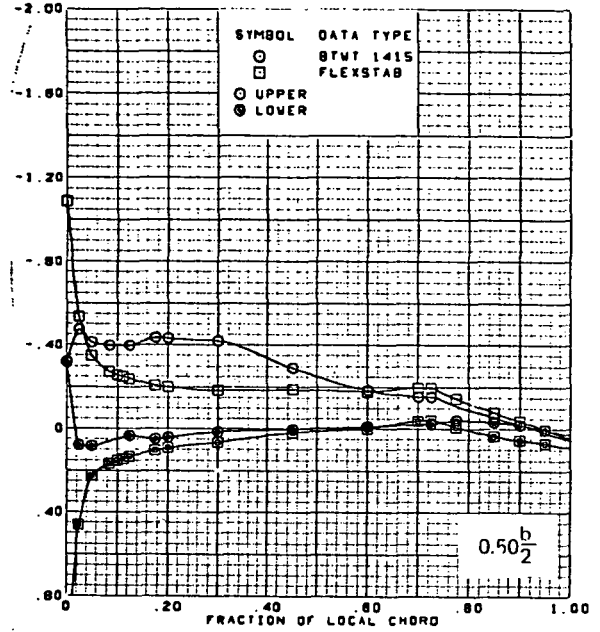
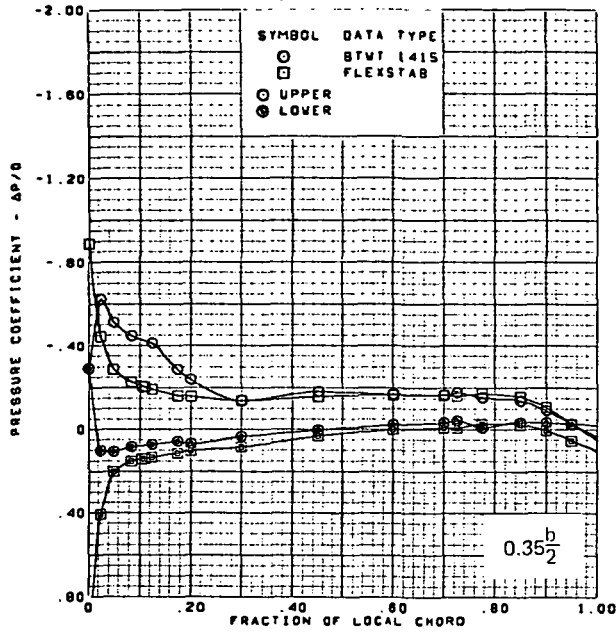
(b) (Concluded)

Figure 24.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha = 8.0^\circ$

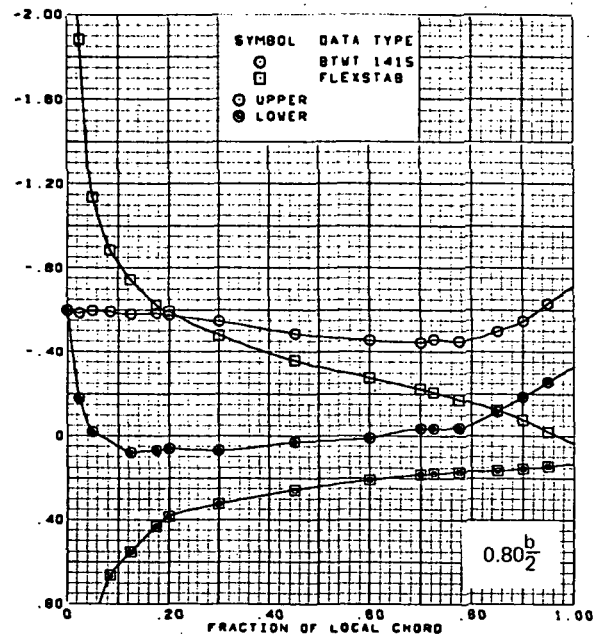
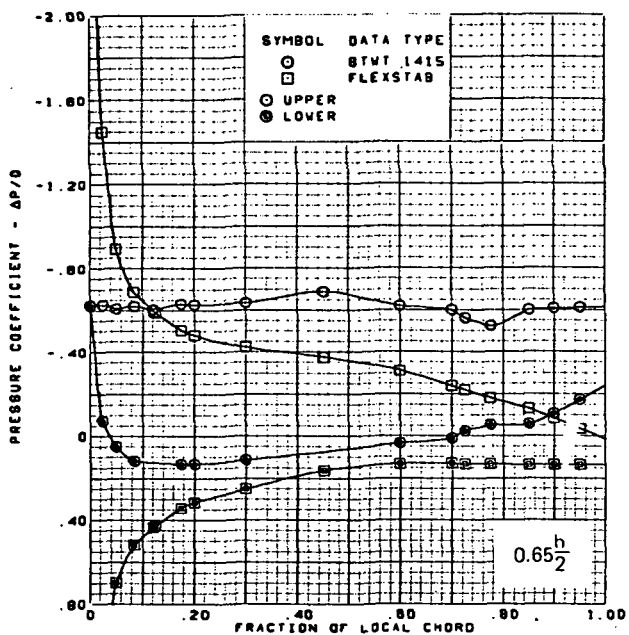
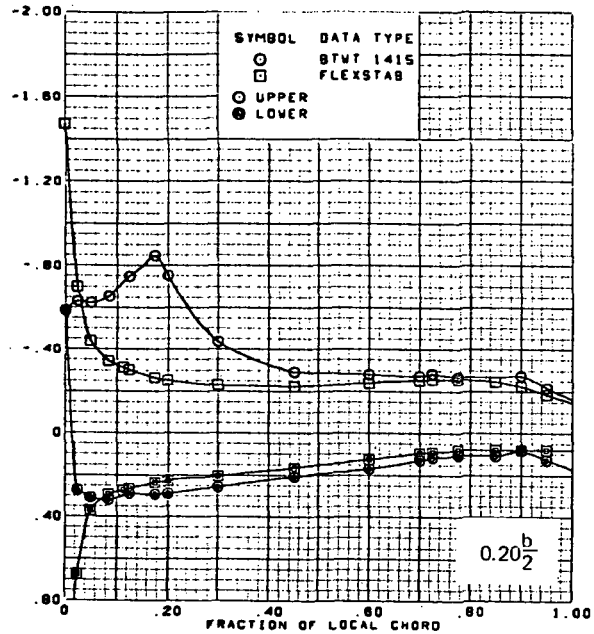
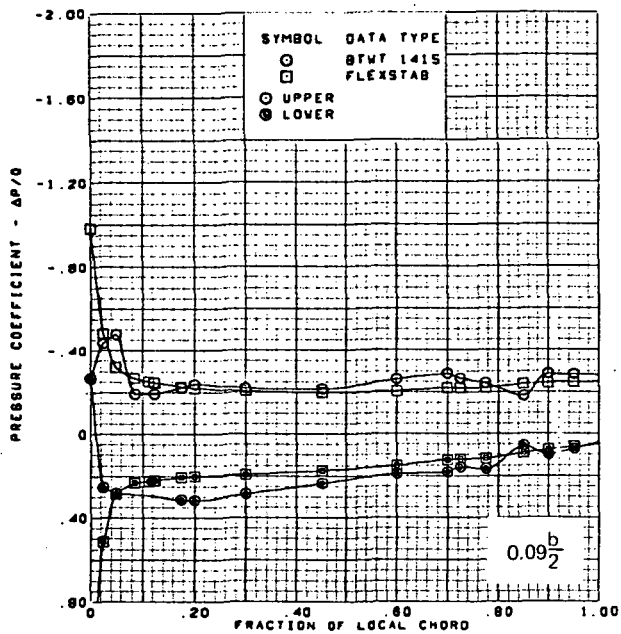
Figure 24.-(Continued)



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

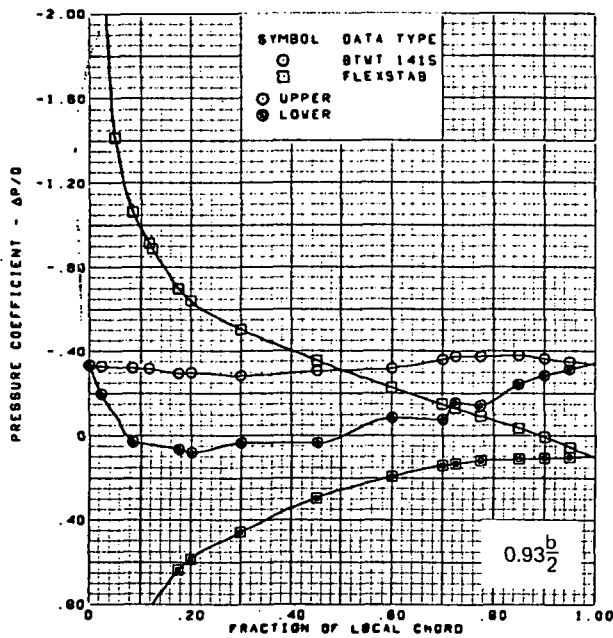
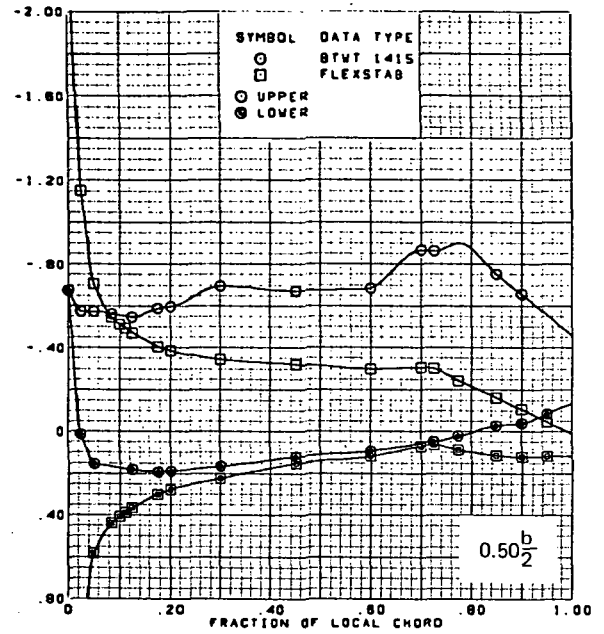
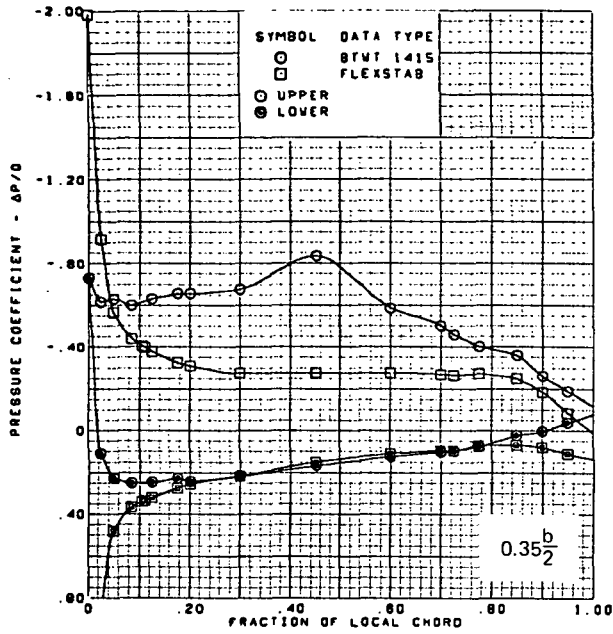
(c) (Concluded)

Figure 24.-(Continued)



(d) Surface Chordwise Pressure Distributions,  $\alpha = 15.8^\circ$

Figure 24.-(Continued)

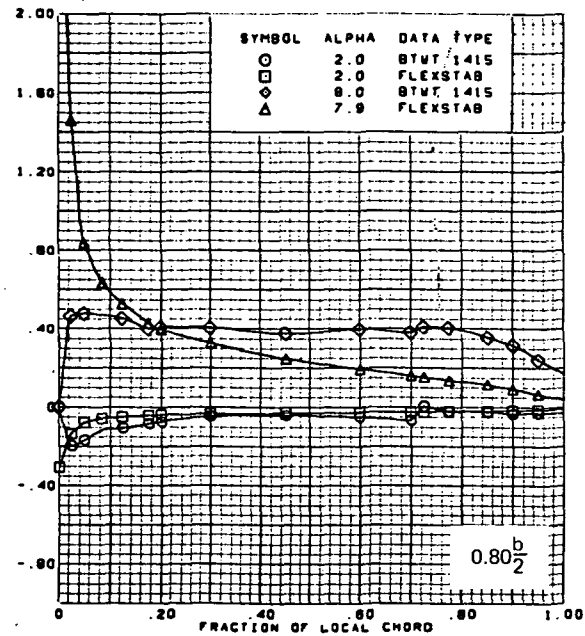
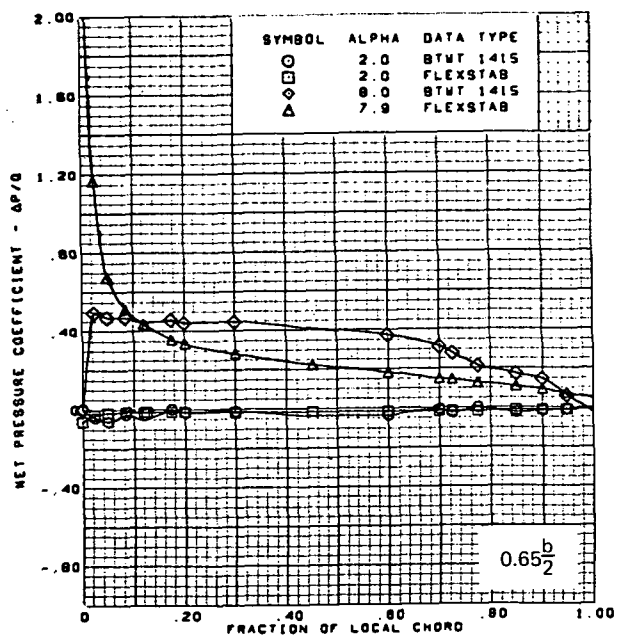
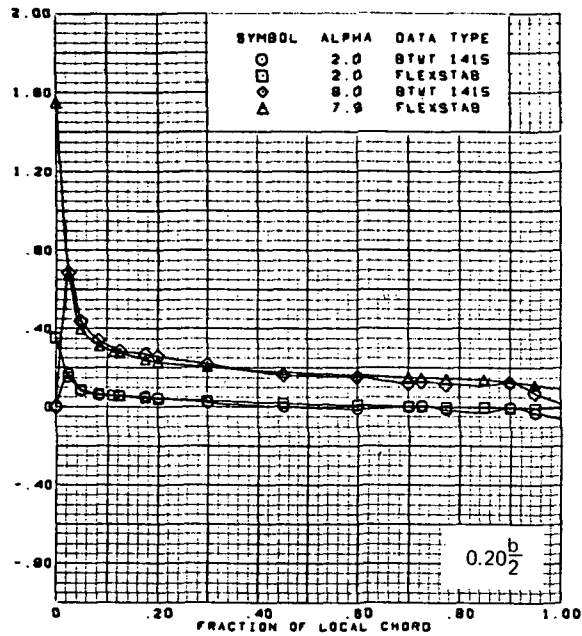
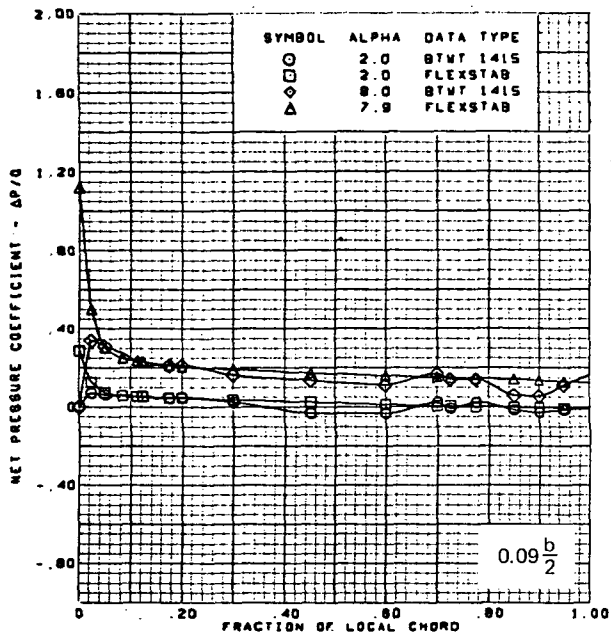


M = 1.05 (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 0.0°

(d) (Concluded)

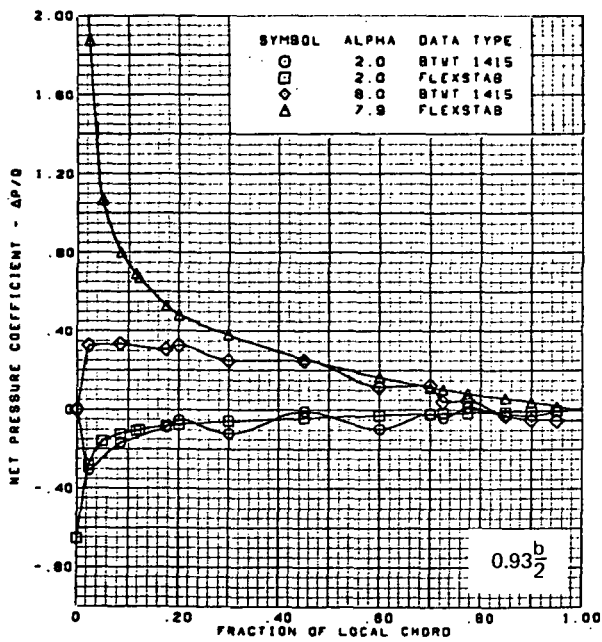
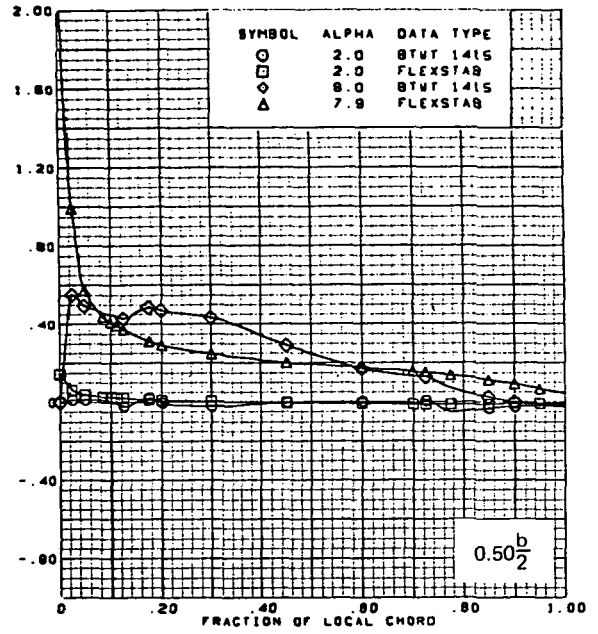
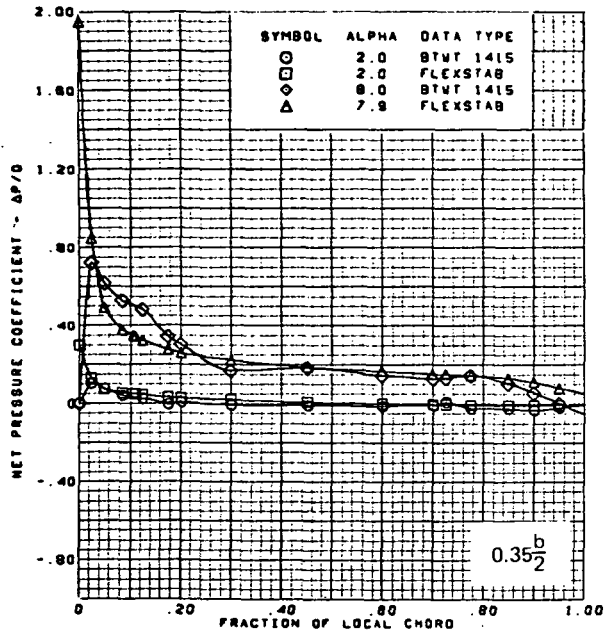
Figure 24.-(Continued)





(e) Net Chordwise Pressure Distributions,  $\alpha = 2.0^\circ, 8.0^\circ$

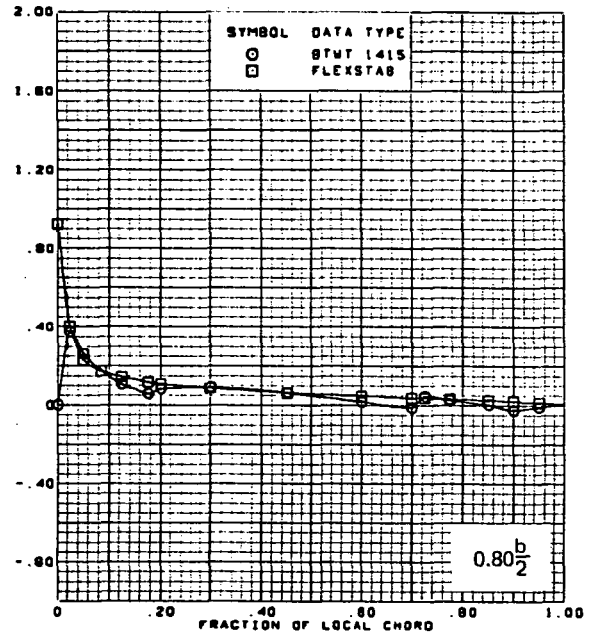
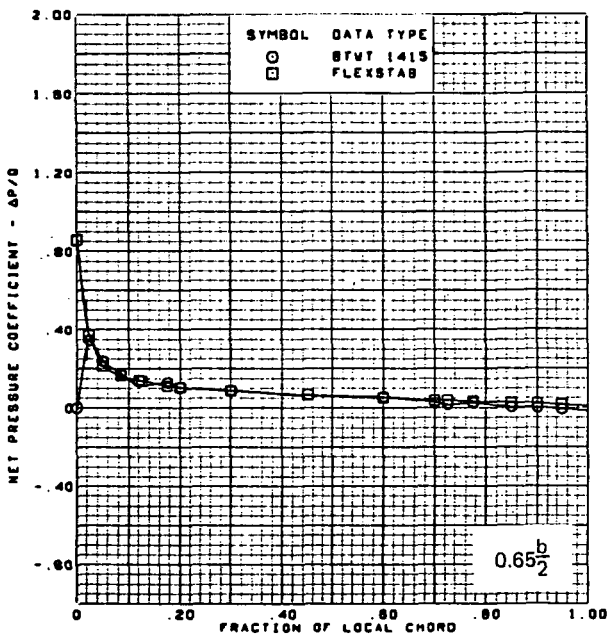
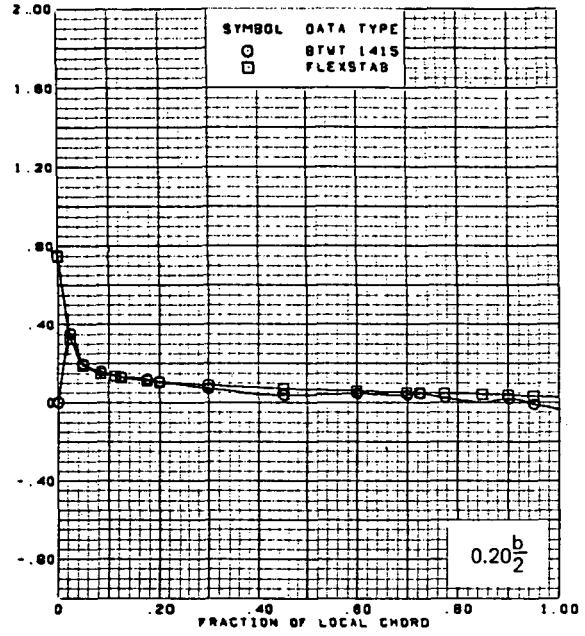
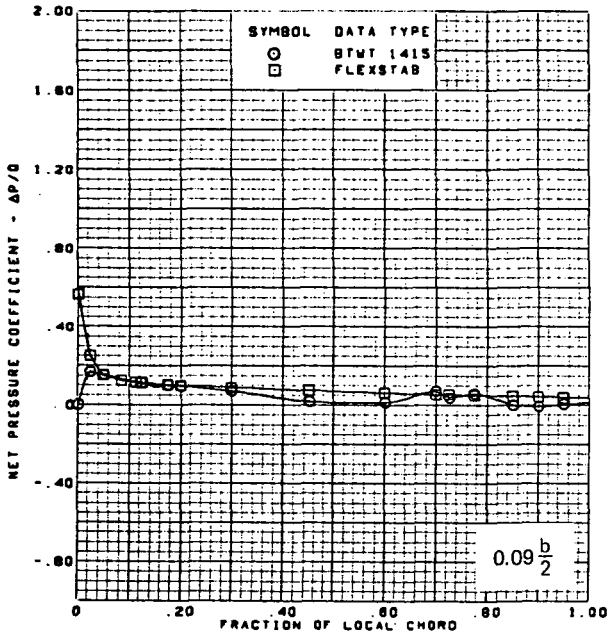
Figure 24.-(Continued)



M = 1.05 (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

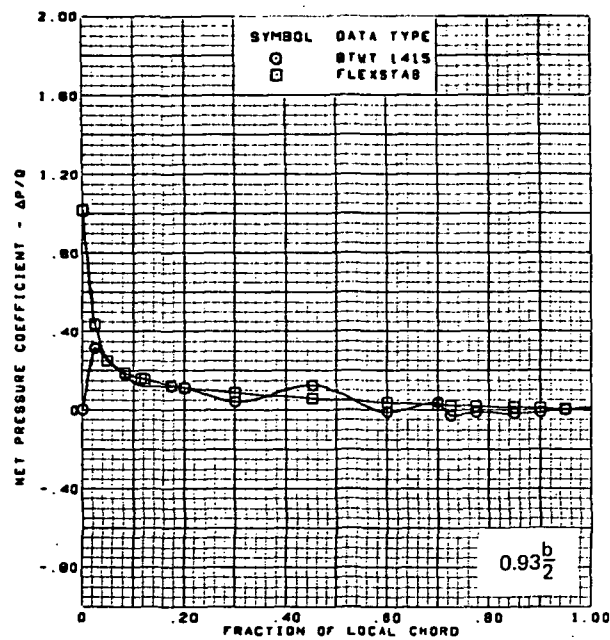
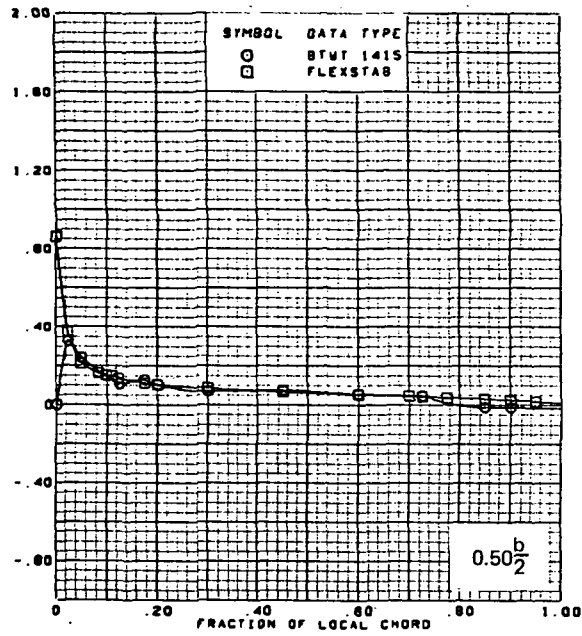
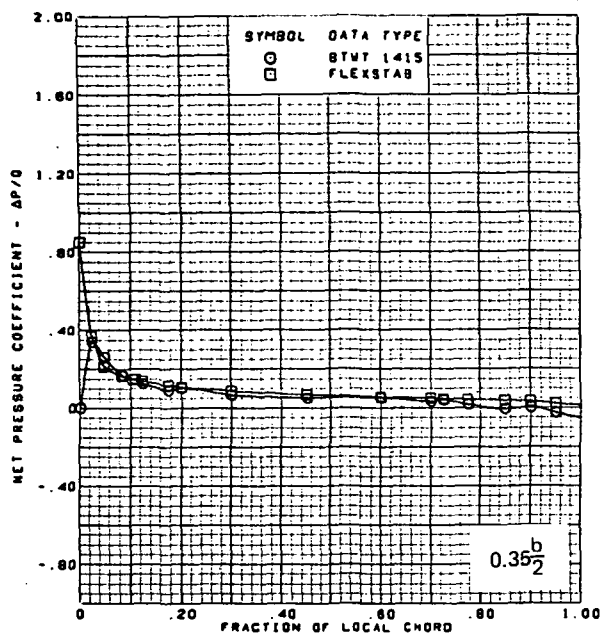
(e) (Concluded)

Figure 24.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

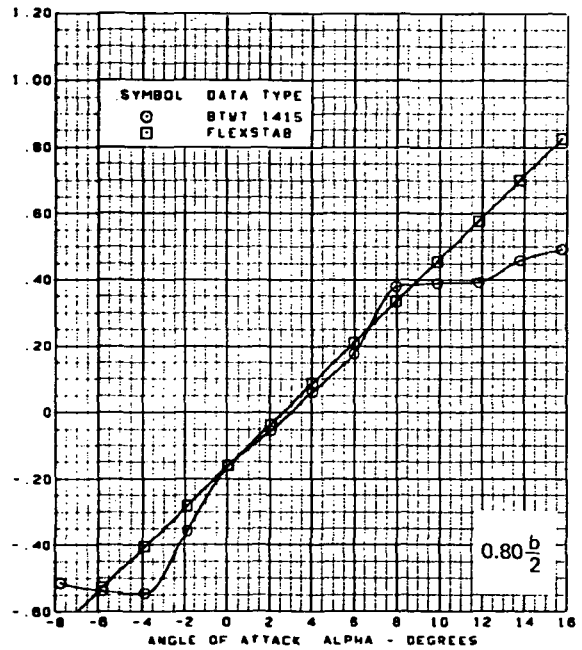
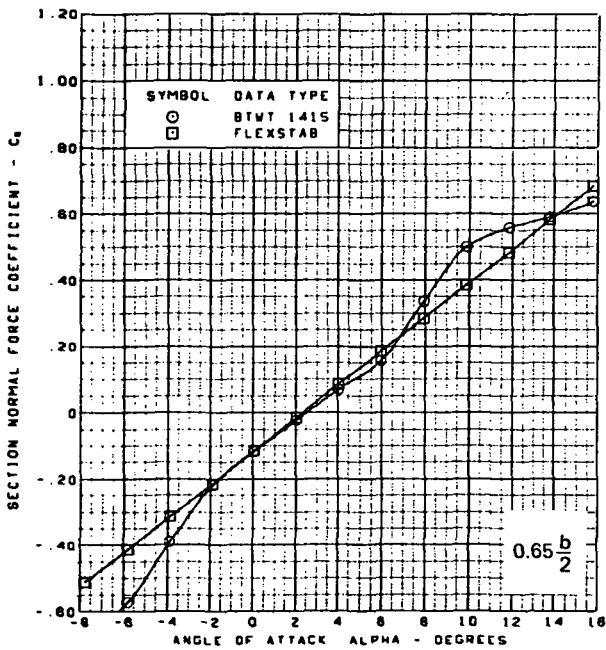
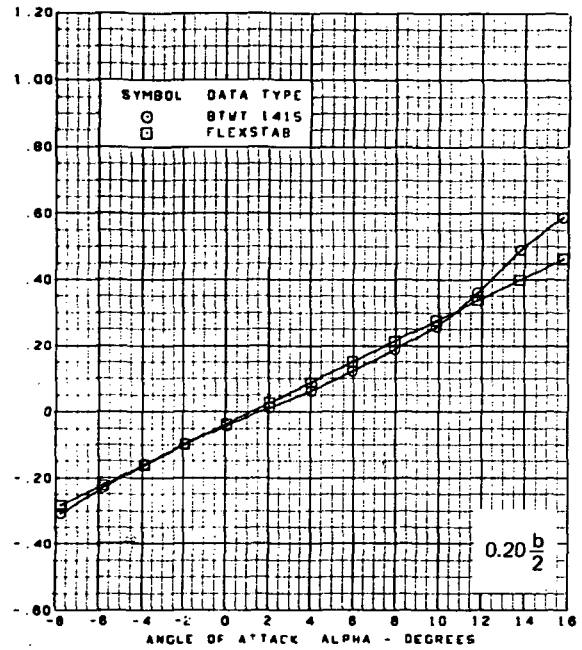
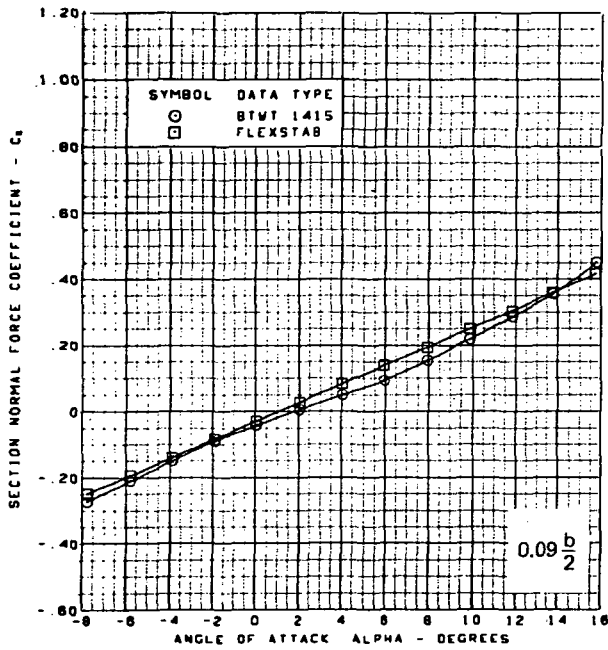
Figure 24.-(Continued)



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

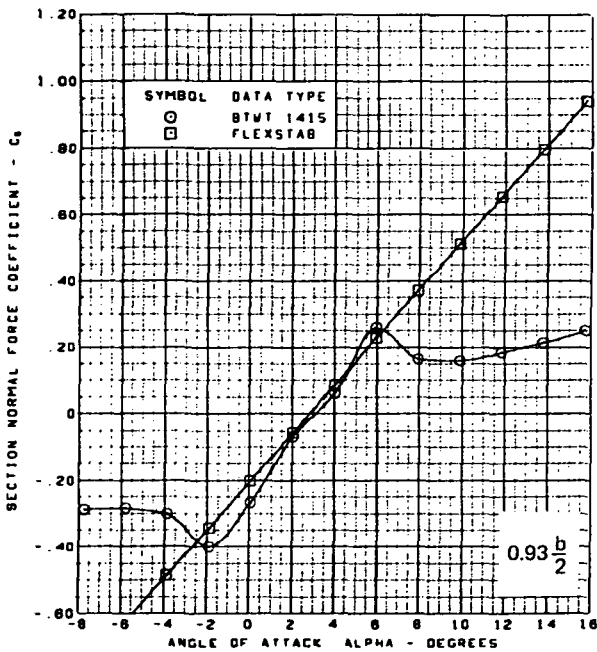
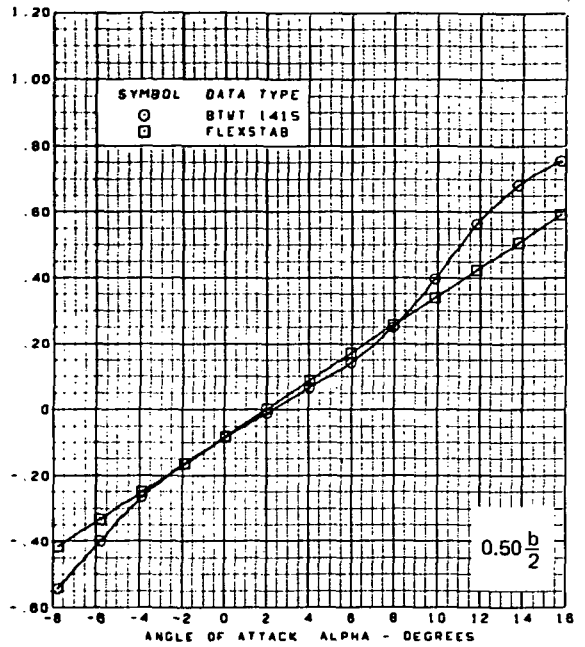
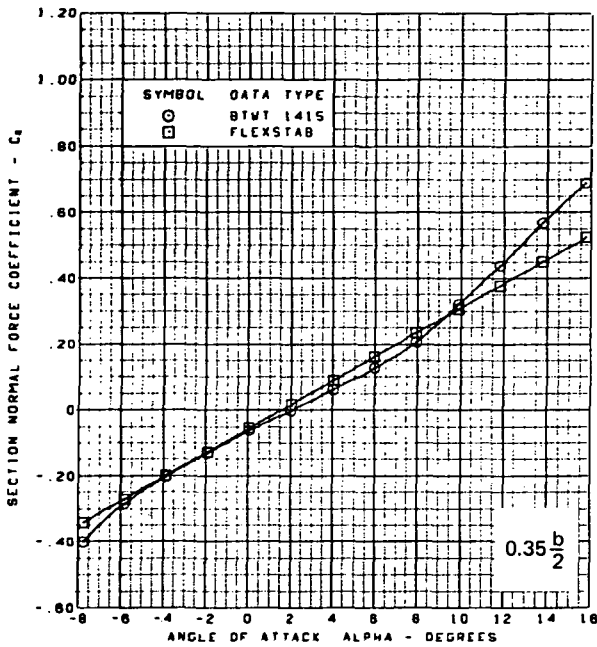
(f) (Concluded)

Figure 24.-(Continued)



(g) Section Aerodynamic Coefficients - Normal Force

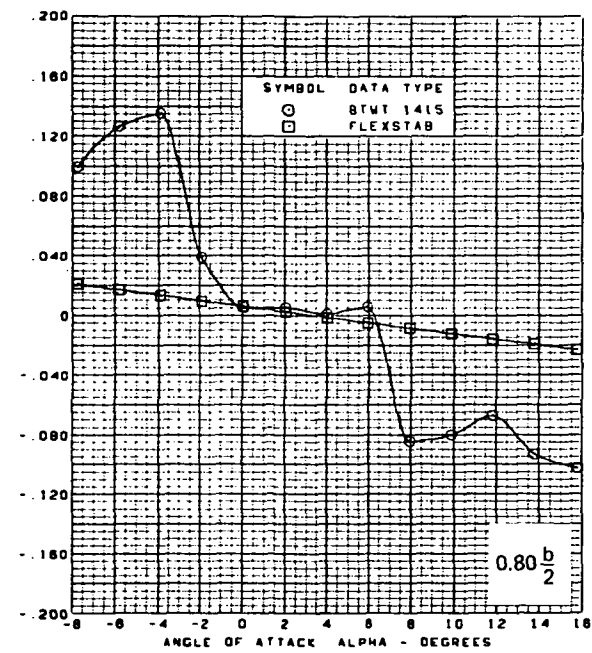
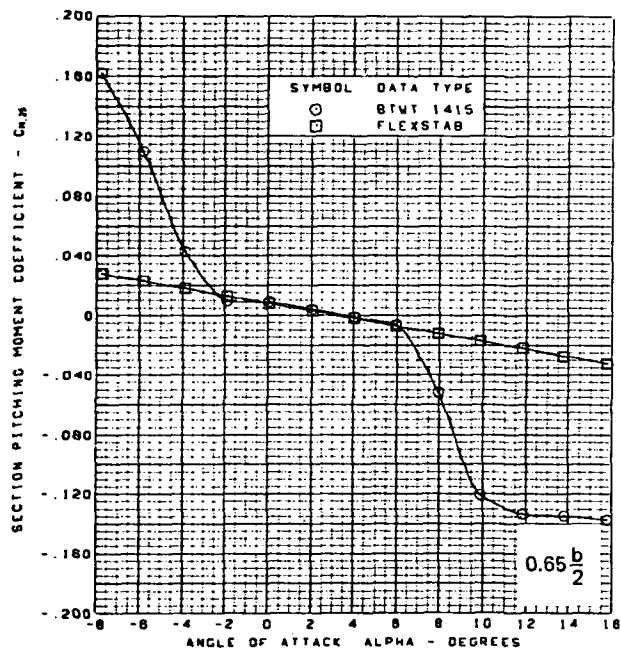
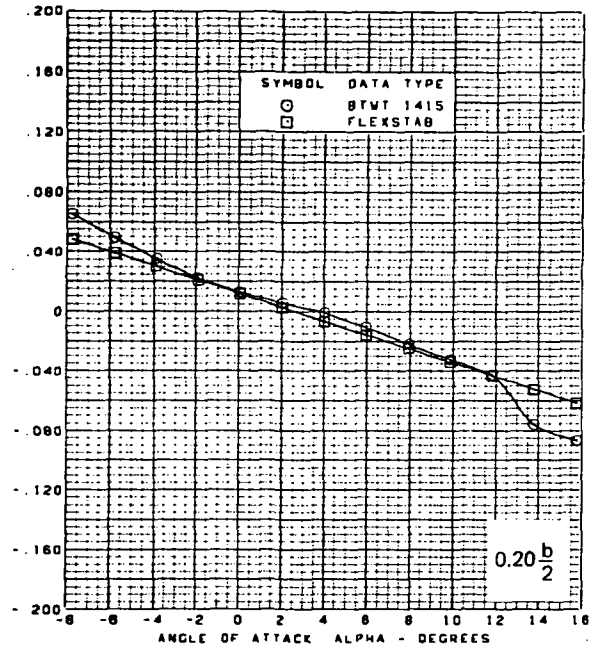
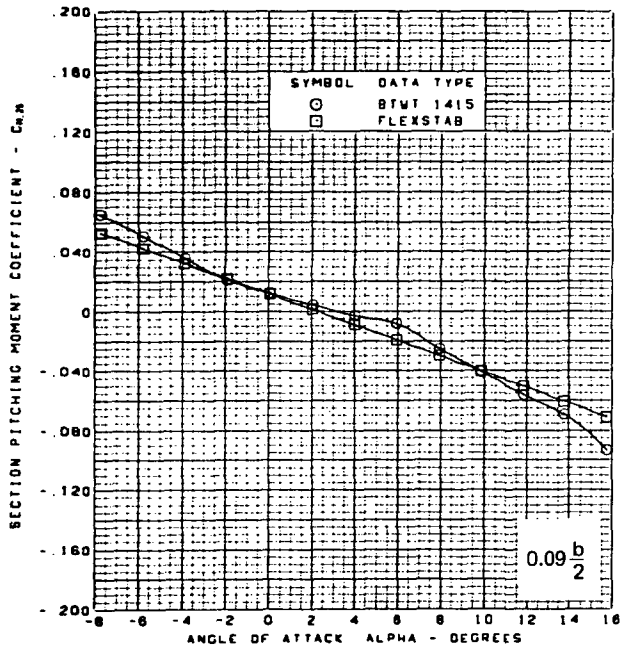
Figure 24.-(Continued)



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

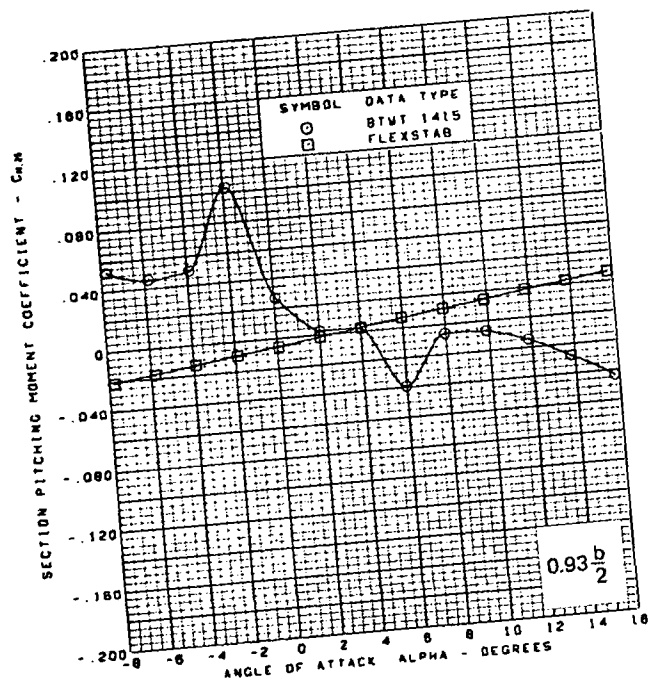
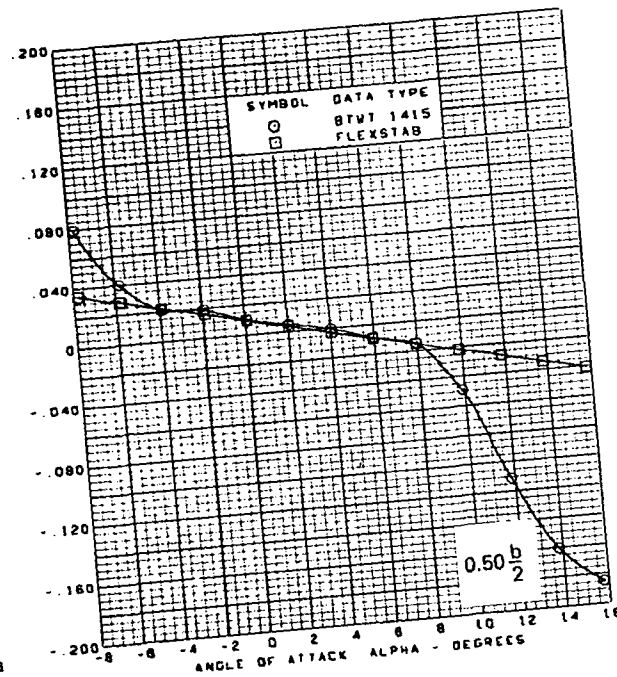
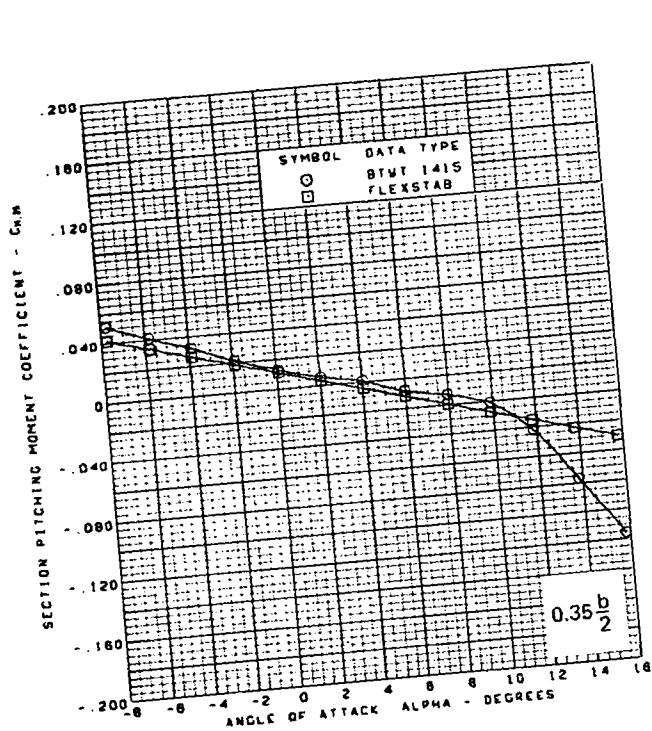
(g) (Concluded)

Figure 24.-(Continued)



(h) Section Aerodynamic Coefficients - Pitching Moment

Figure 24.-(Continued)

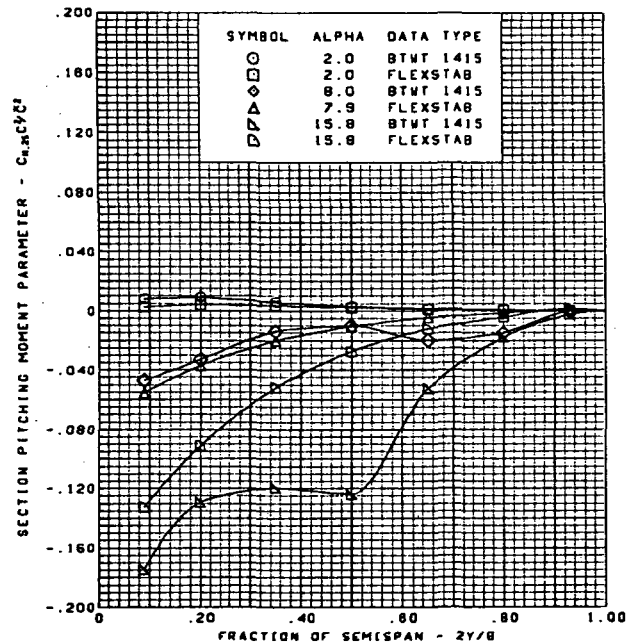
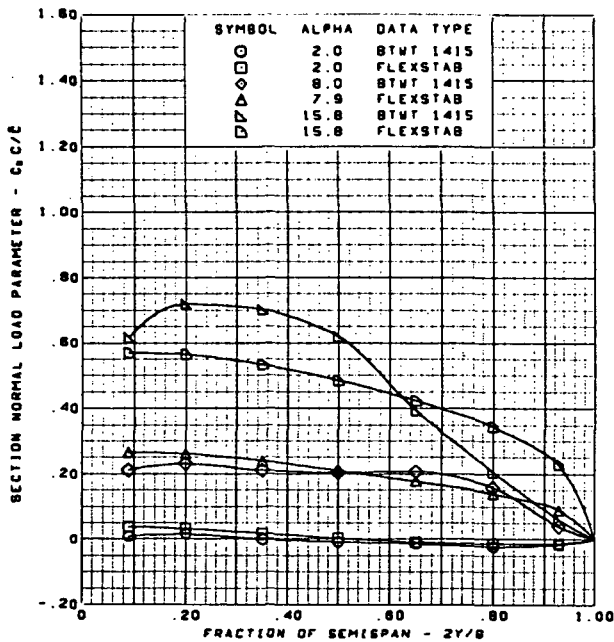
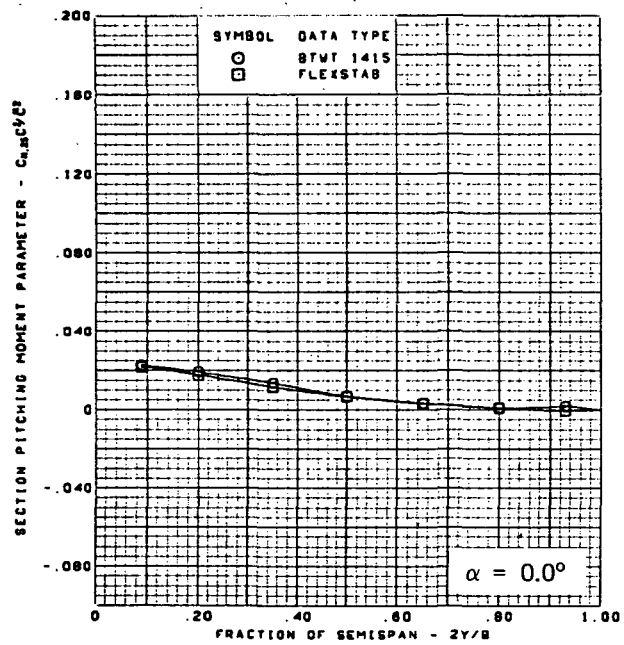
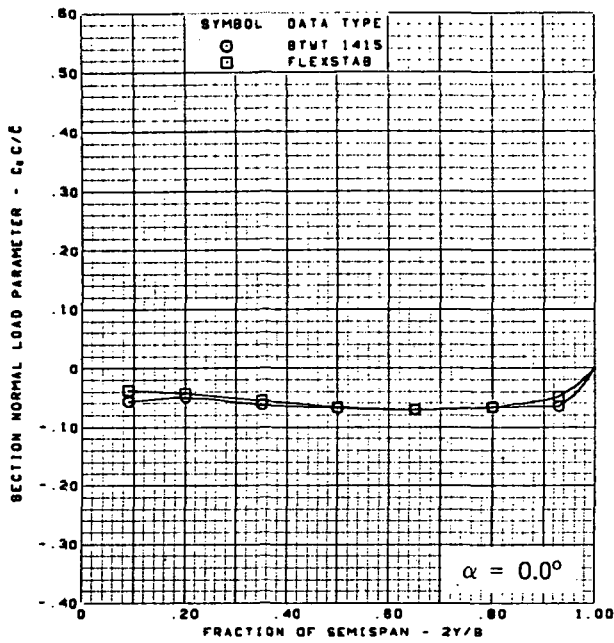


$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(h) (Concluded)

Figure 24.-(Continued)

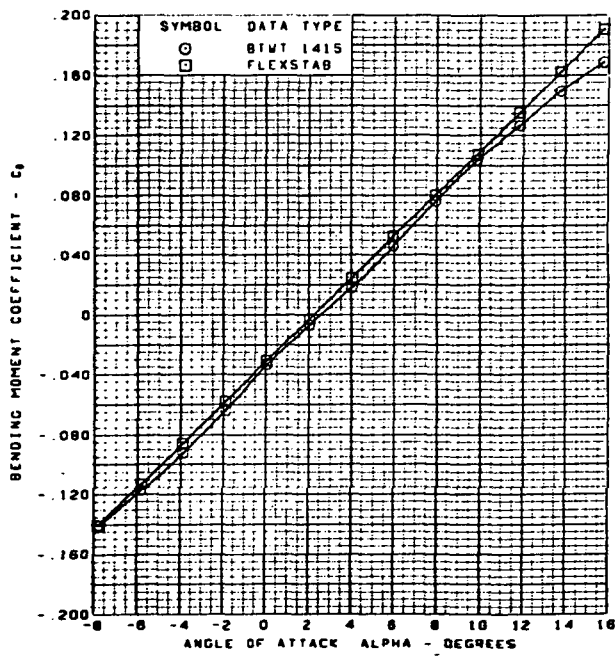
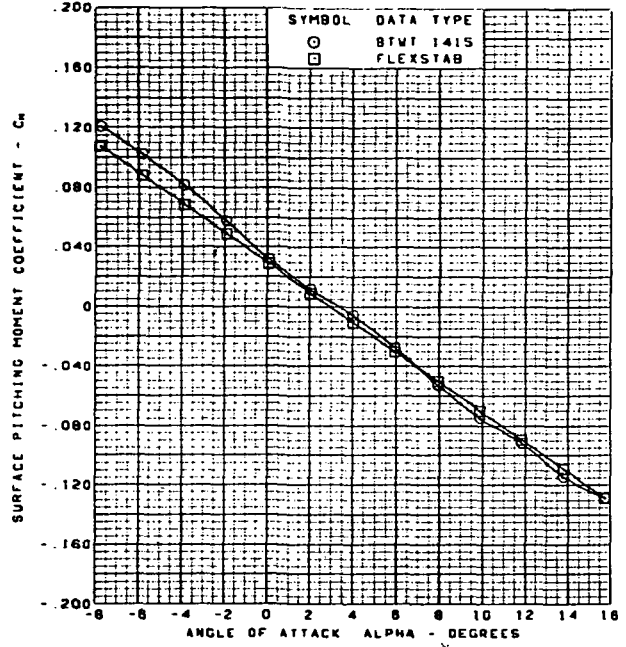
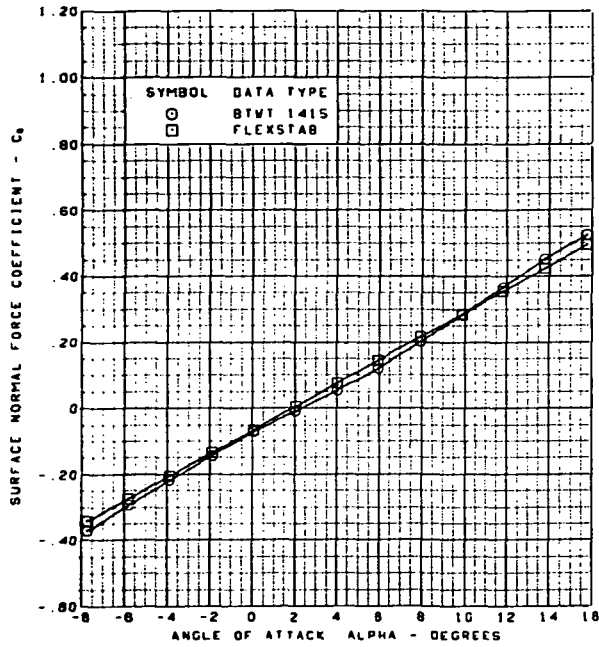




M = 1.05 (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(i) Spanload Distributions

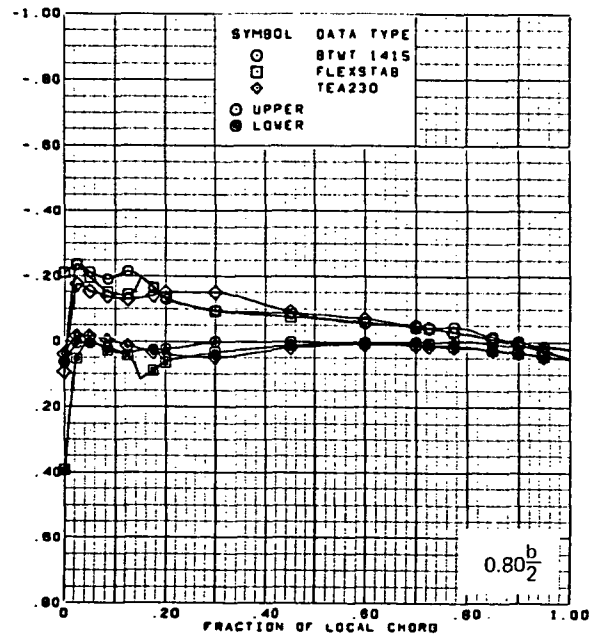
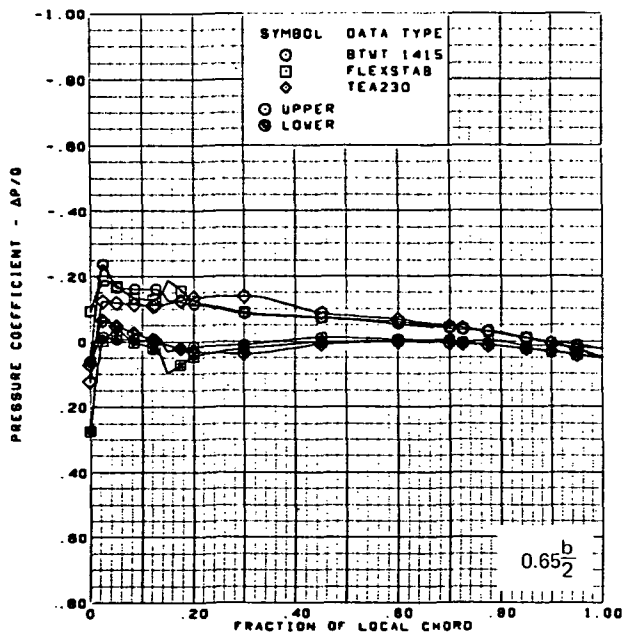
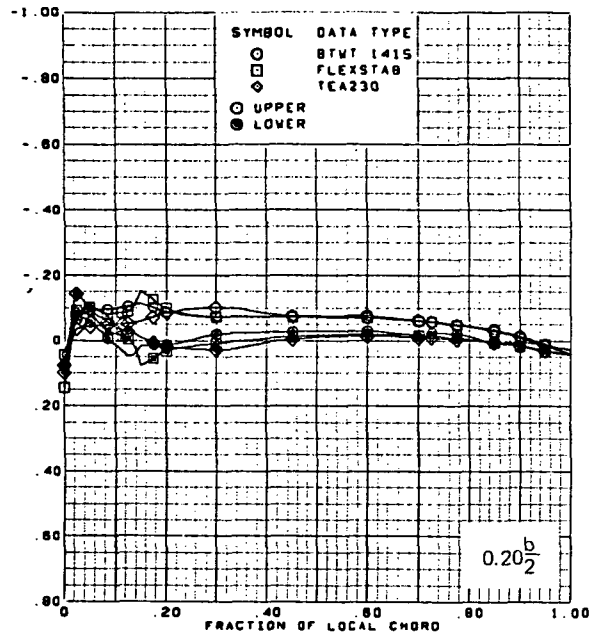
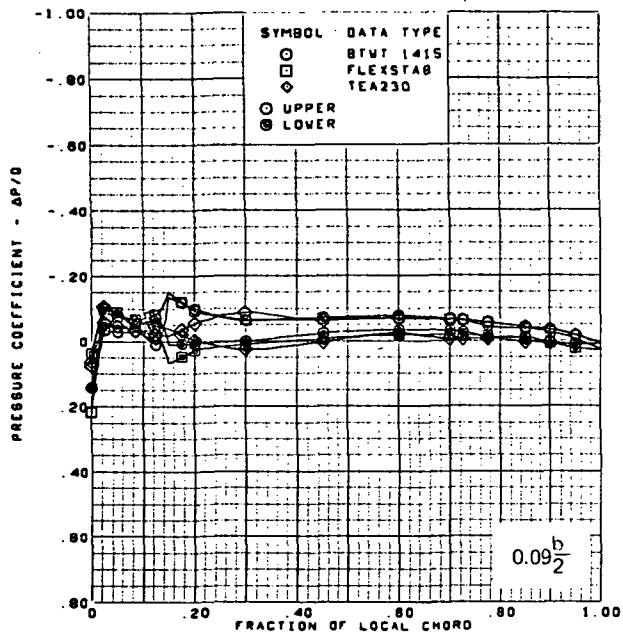
Figure 24.--(Continued)



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

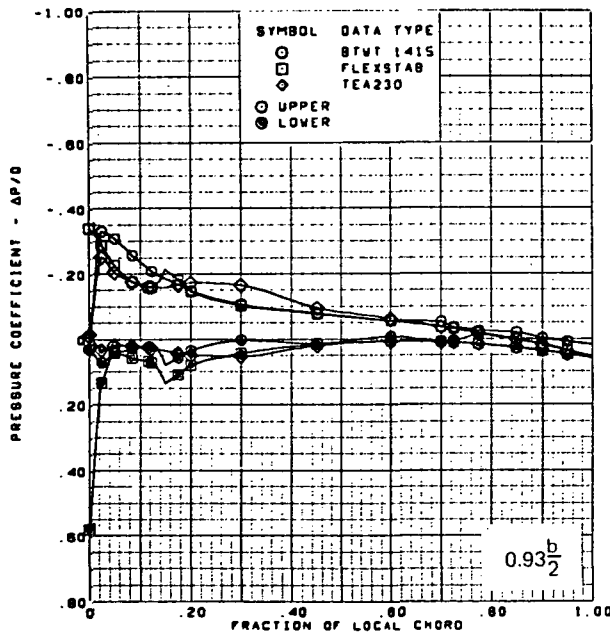
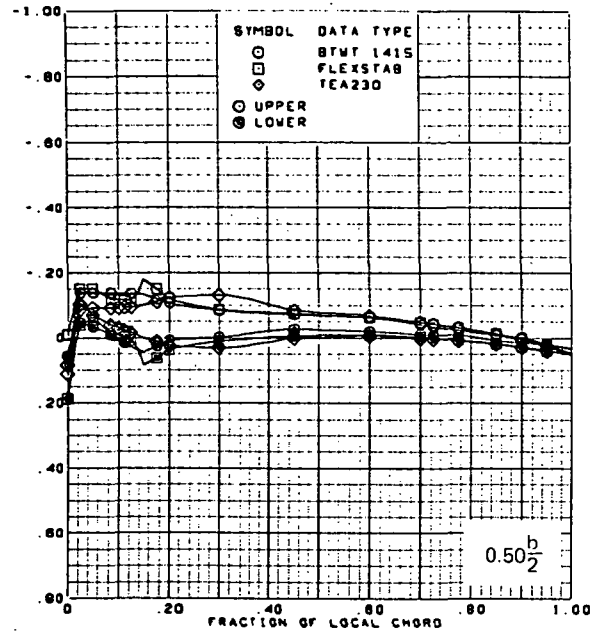
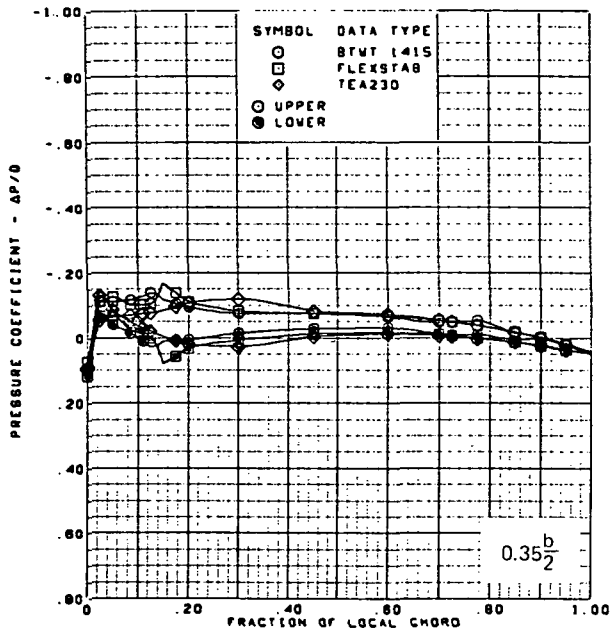
(j) Wing Aerodynamic Coefficients

Figure 24.-(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = 2.1^\circ$

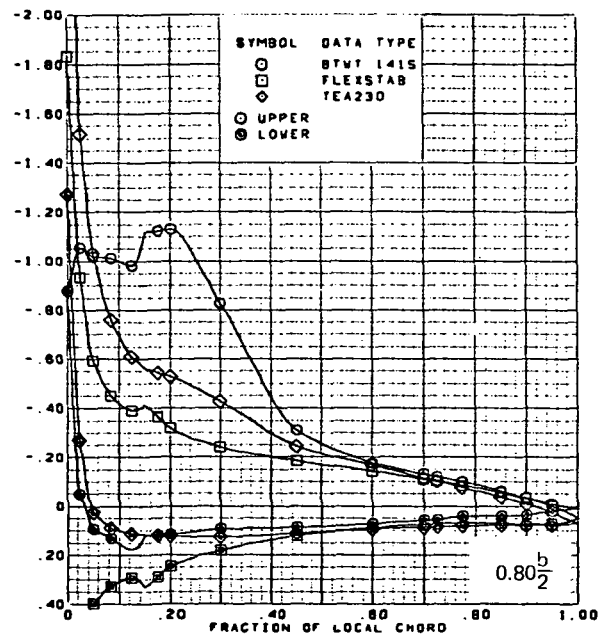
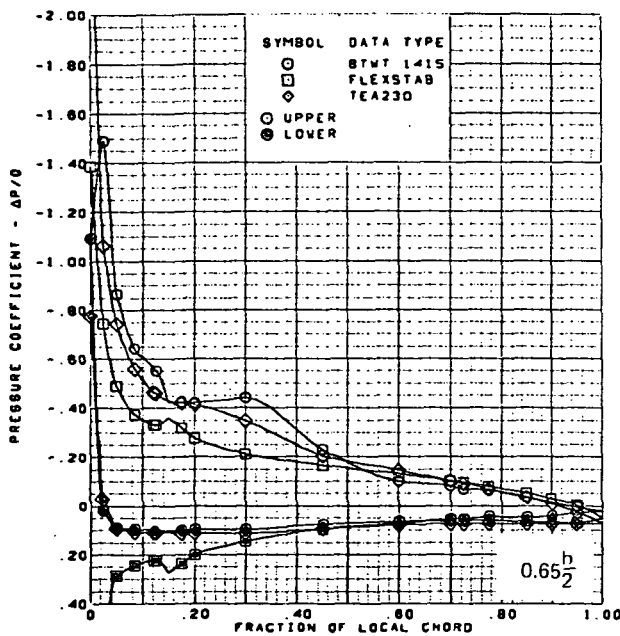
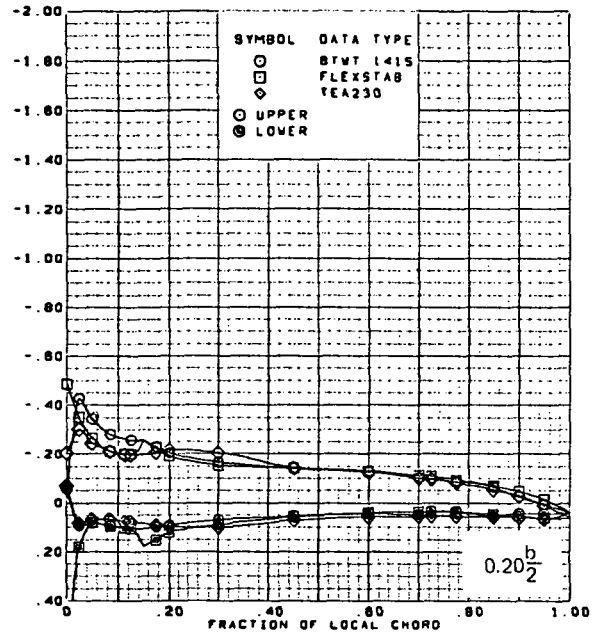
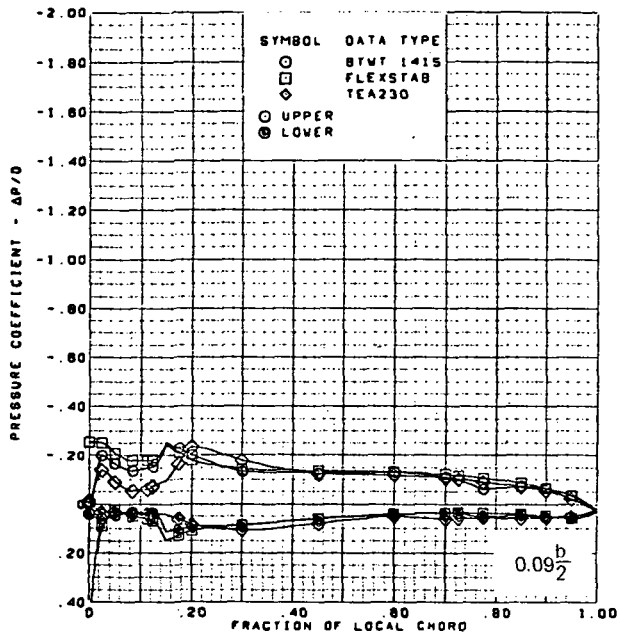
Figure 25.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $5.1^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



M = 0.40 (run 183)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

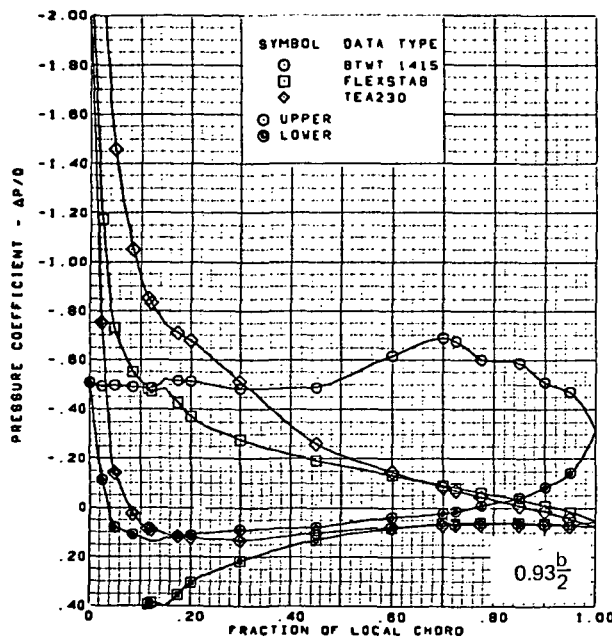
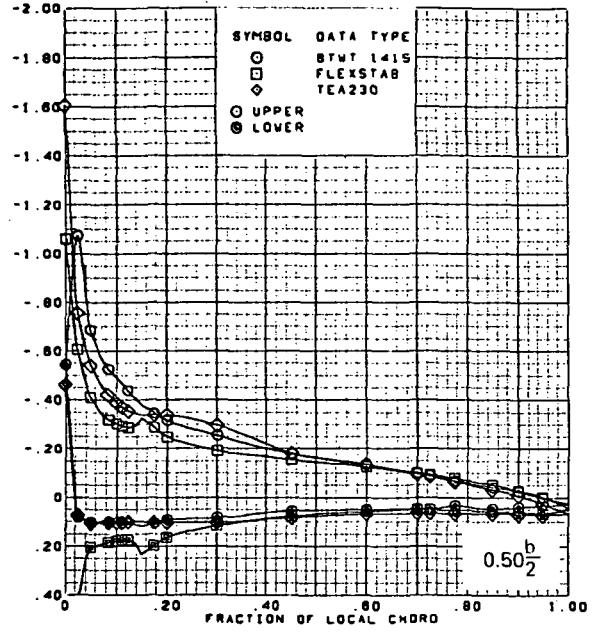
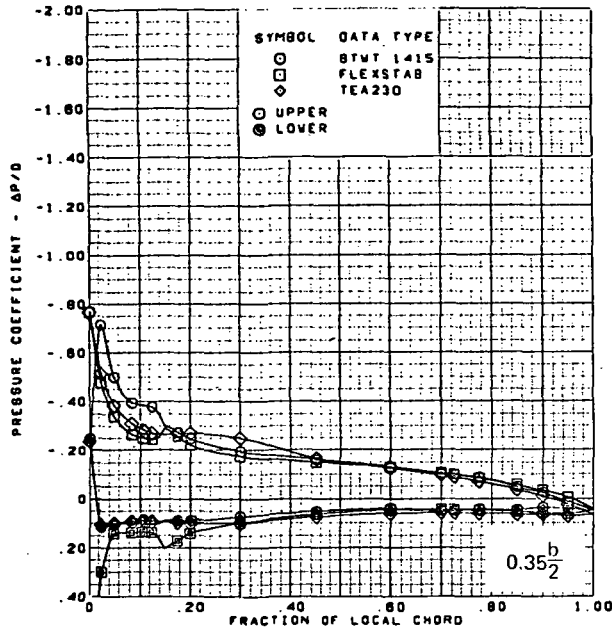
( a ) (Concluded)

Figure 25.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 8.0^\circ$

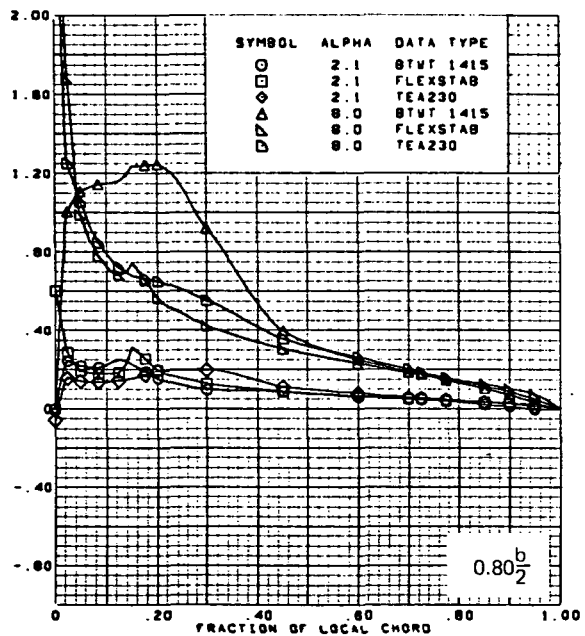
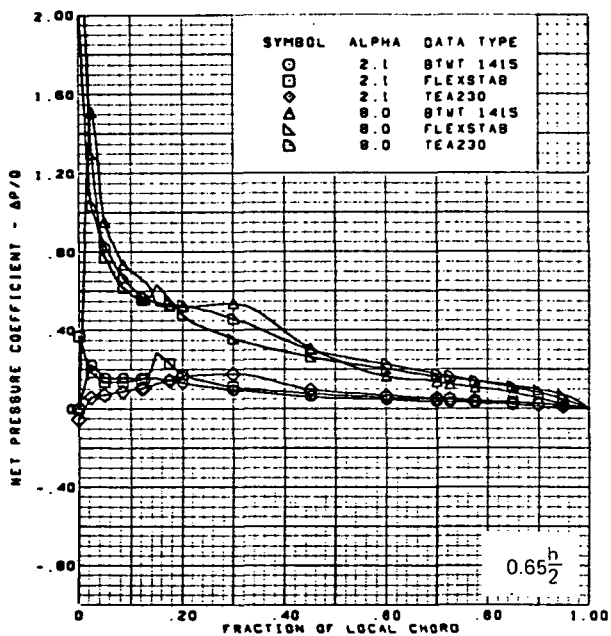
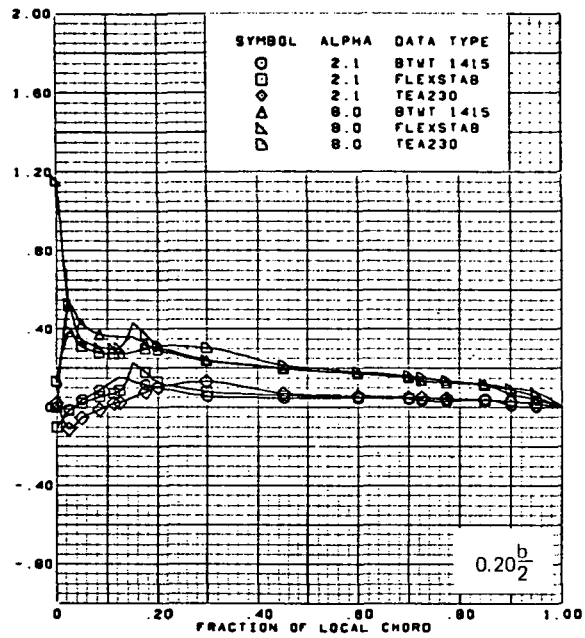
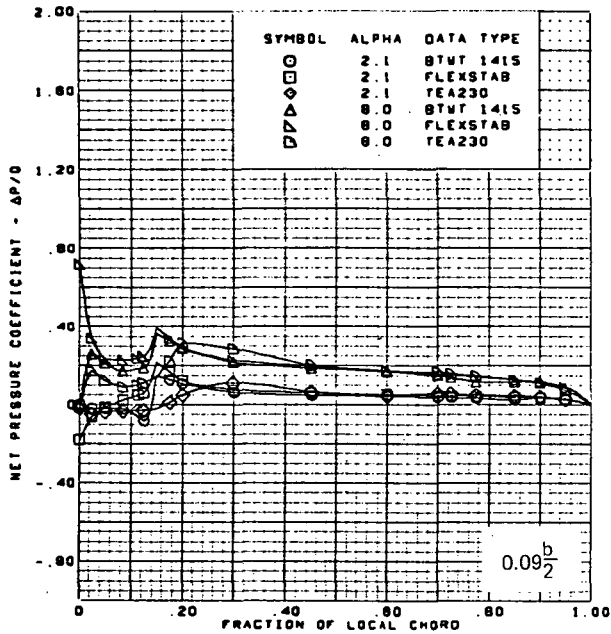
Figure 25.-(Continued)



M = 0.40 (run 183)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

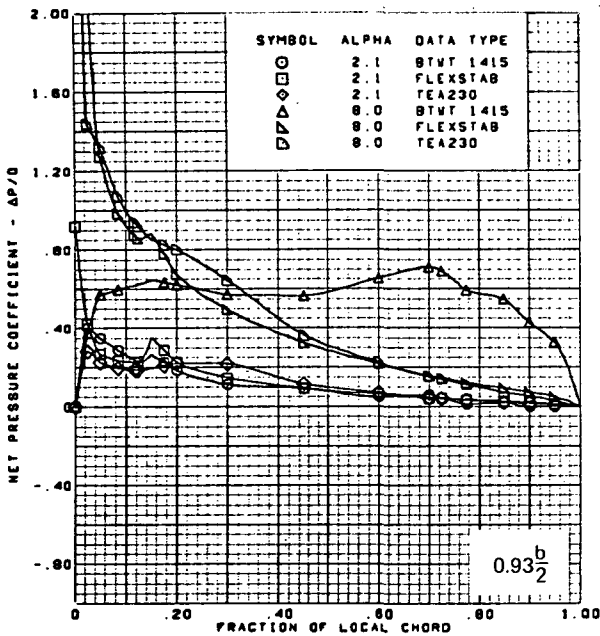
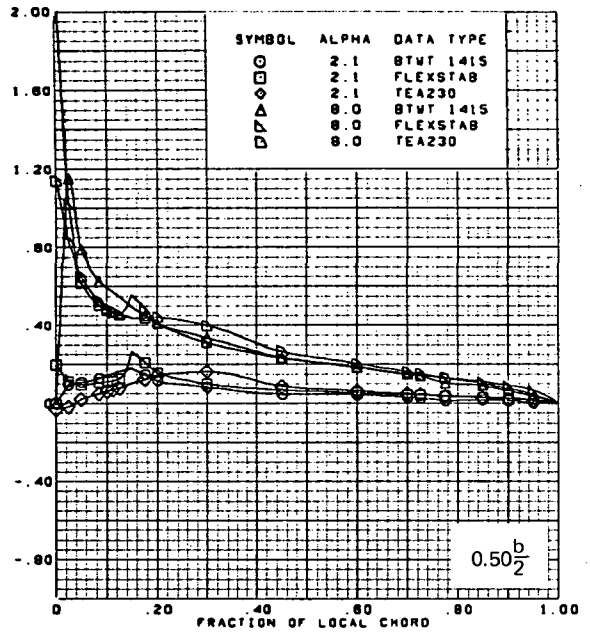
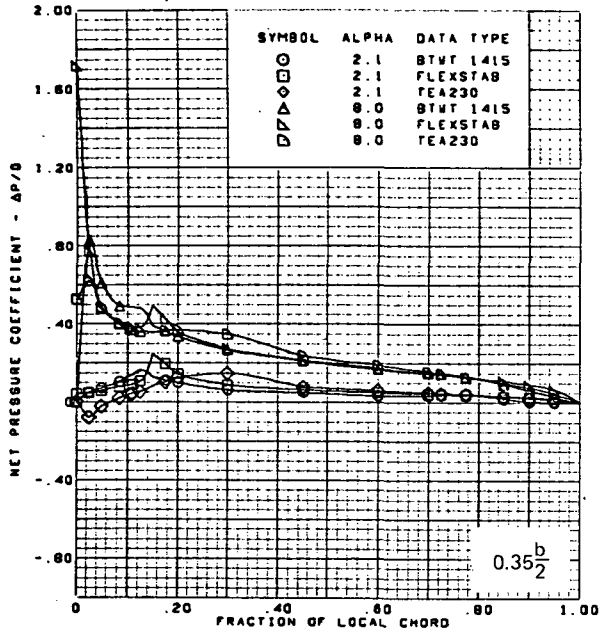
(b) (Concluded)

Figure 25.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = 2.1^\circ, 8.0^\circ$

Figure 25.-(Continued)

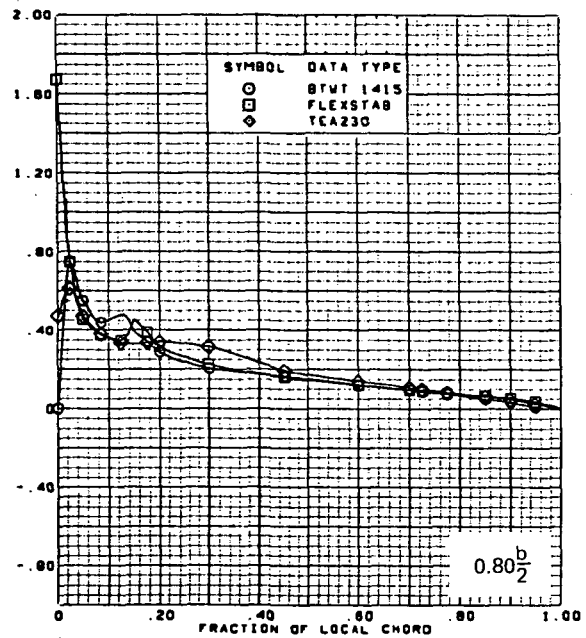
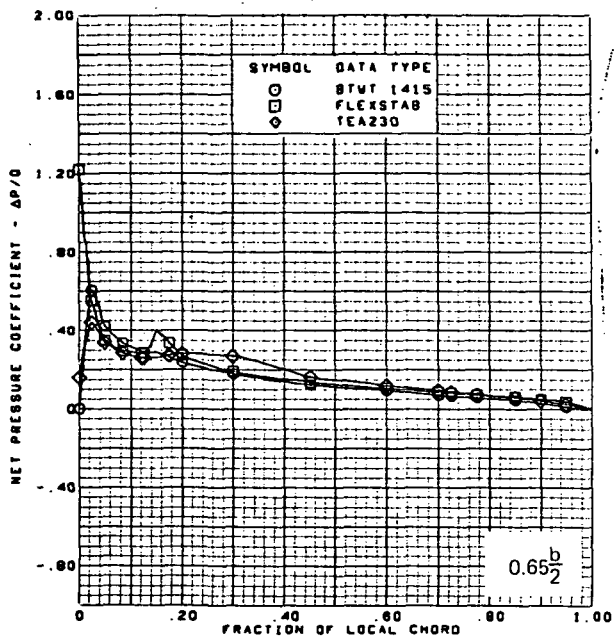
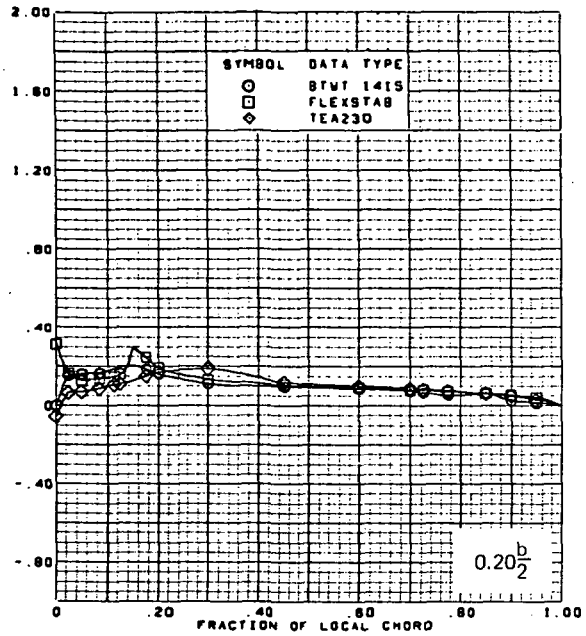
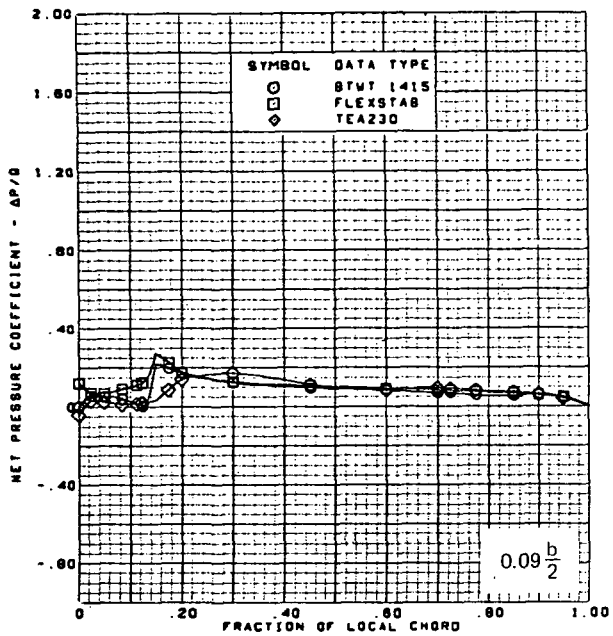


M = 0.40 (run 183)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

(c) (Concluded)

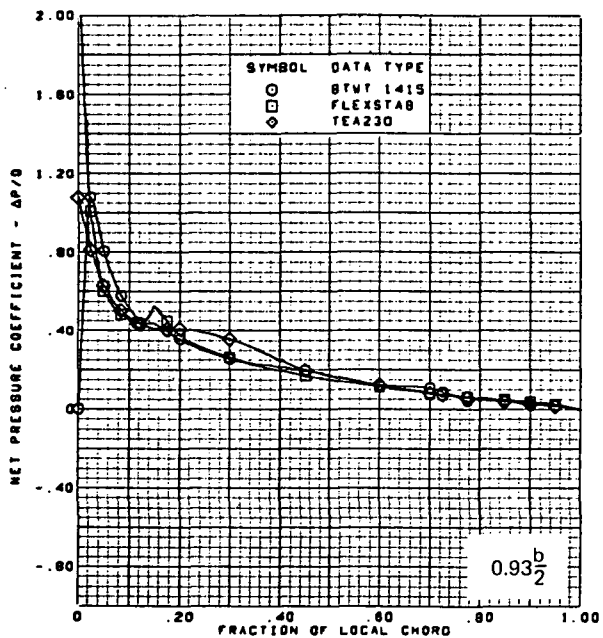
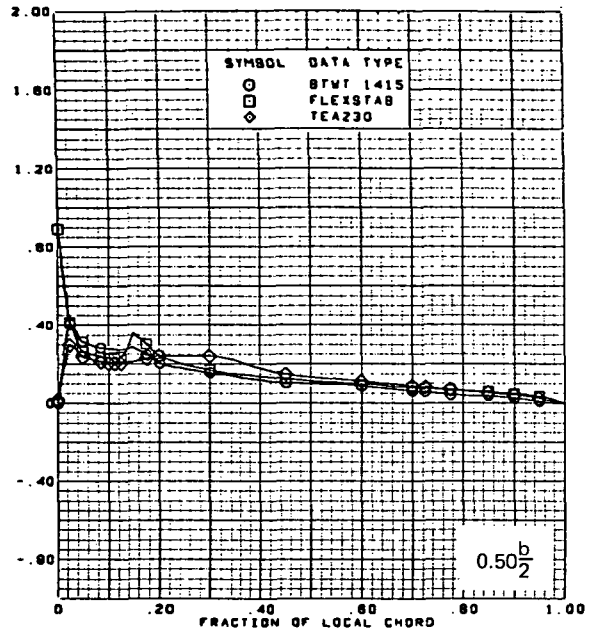
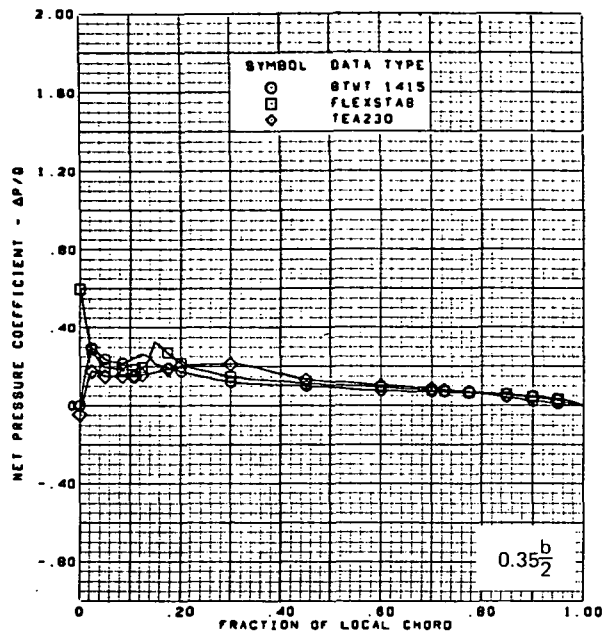
Figure 25.-(Continued)





(d) Net Chordwise Pressure Distributions,  $\alpha = 4.1^\circ$

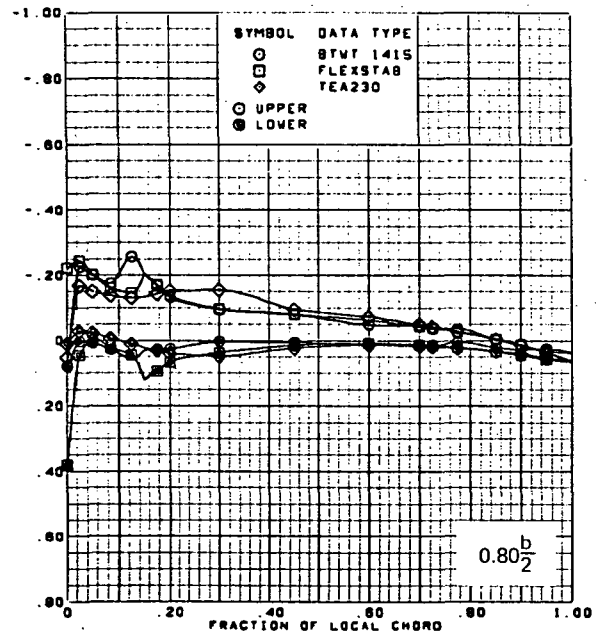
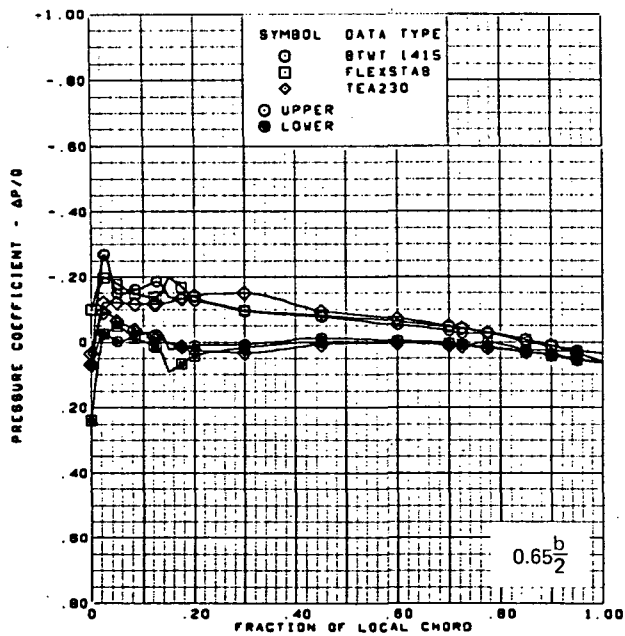
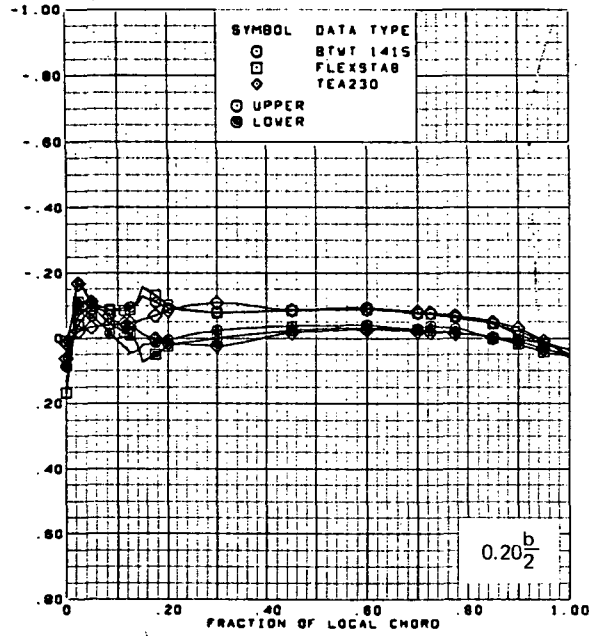
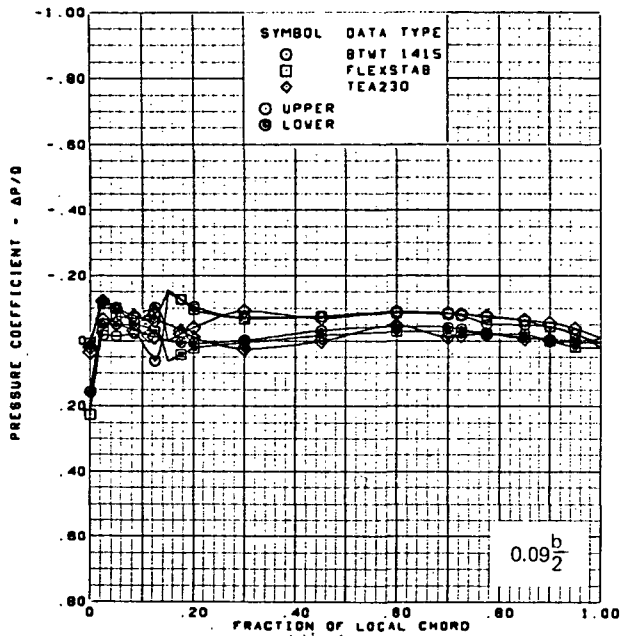
Figure 25.-(Continued)



M = 0.40 (run 183)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

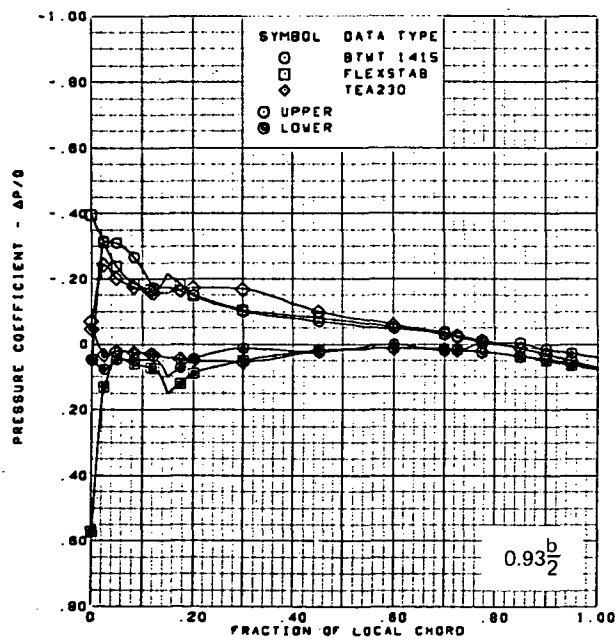
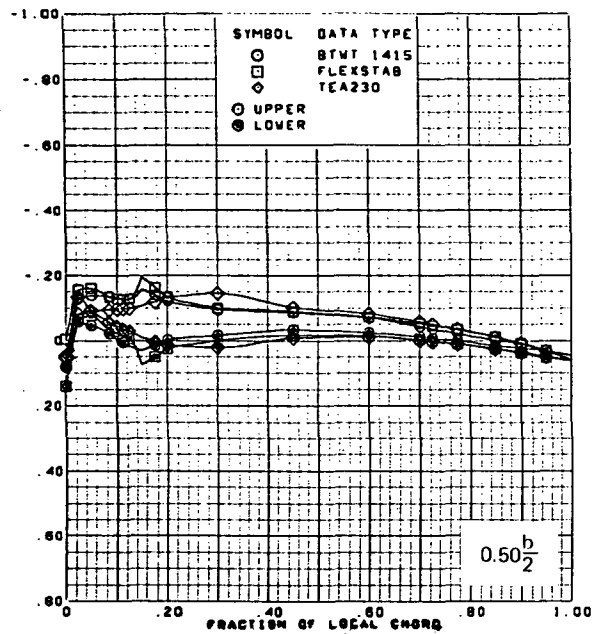
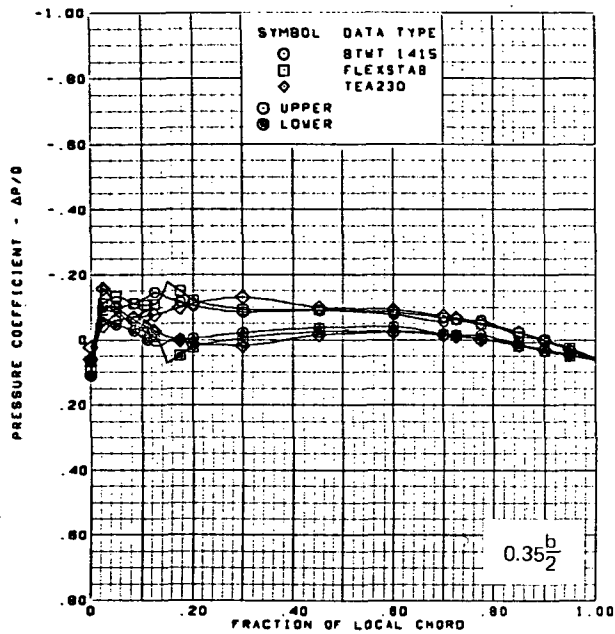
(d) (Concluded)

Figure 25.-(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = 2.0^\circ$

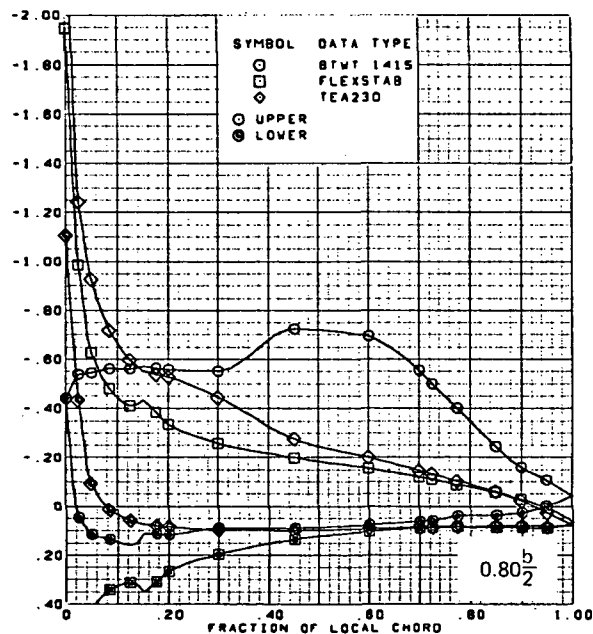
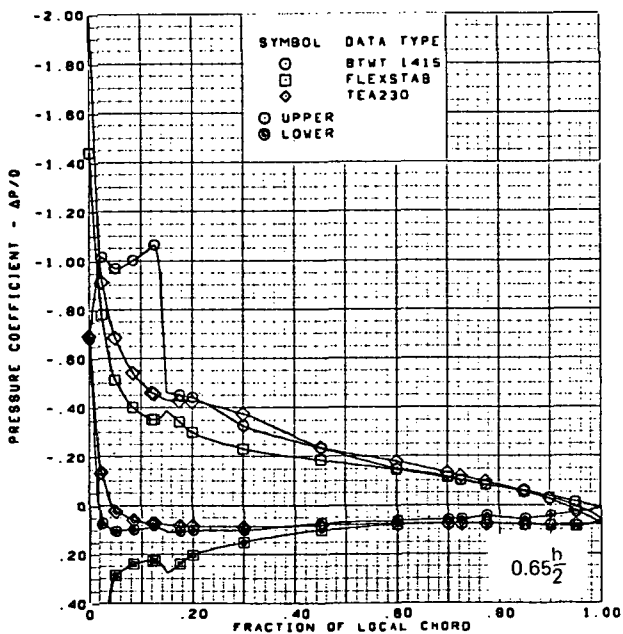
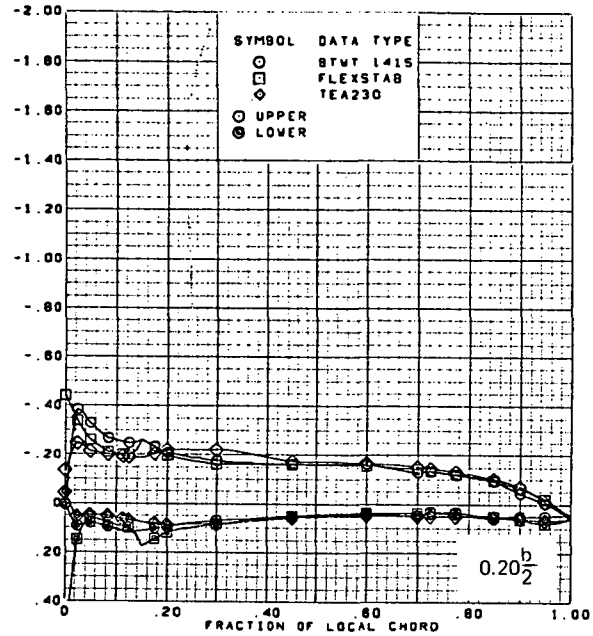
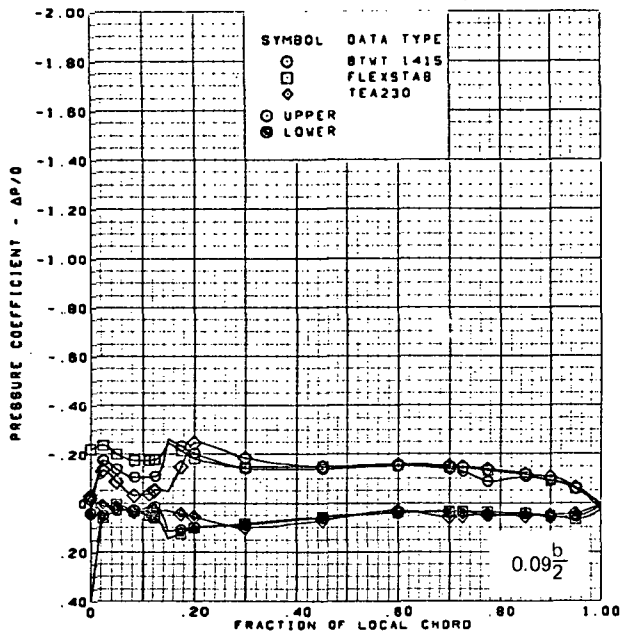
Figure 26.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $5.1^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



M = 0.85 (run 182)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

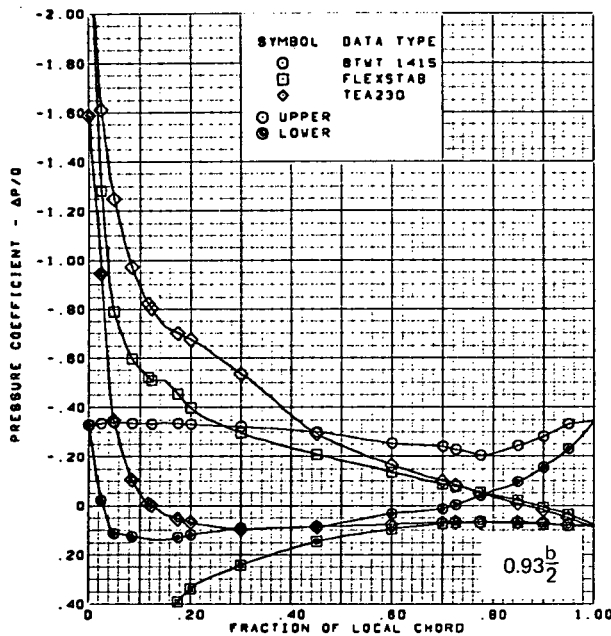
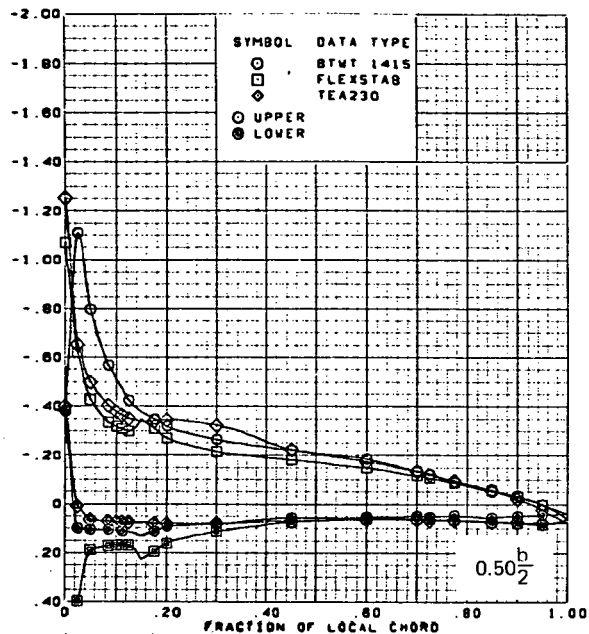
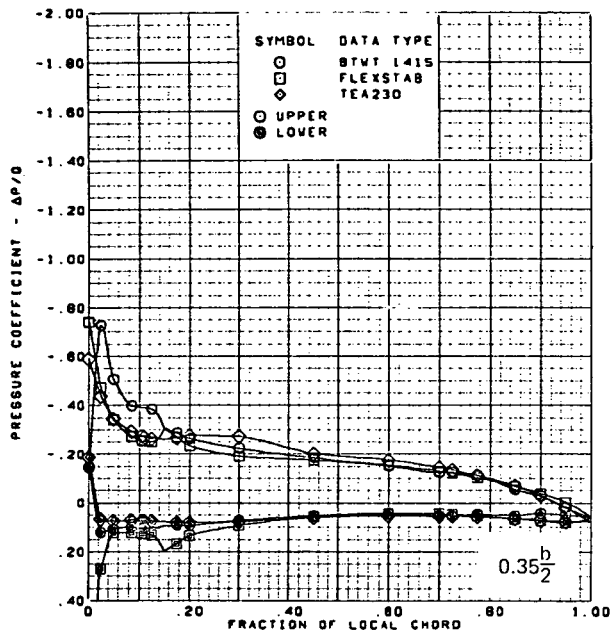
( a ) (Concluded)

Figure 26.--(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

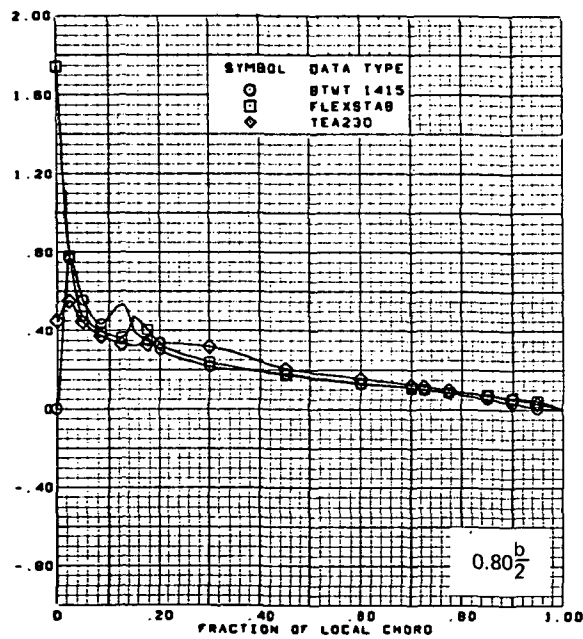
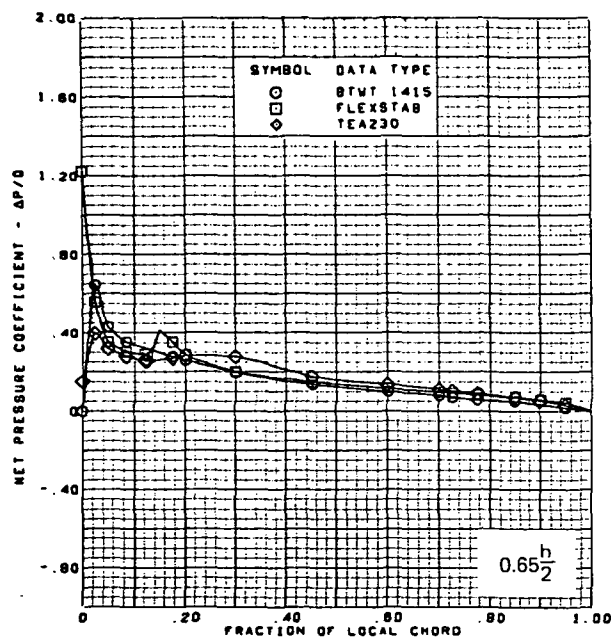
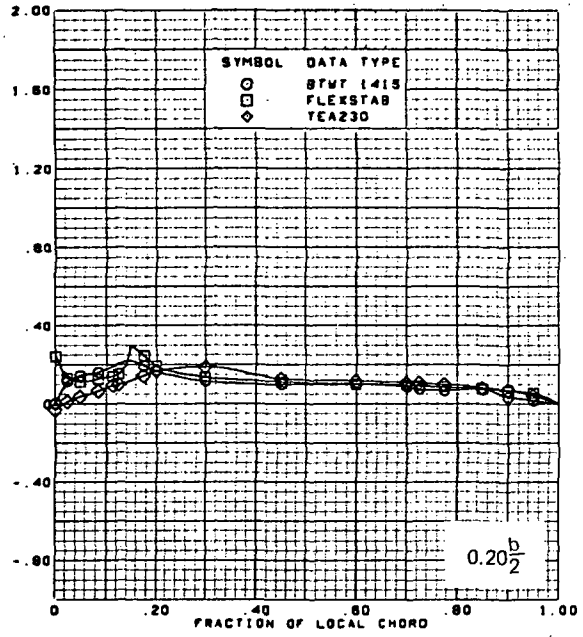
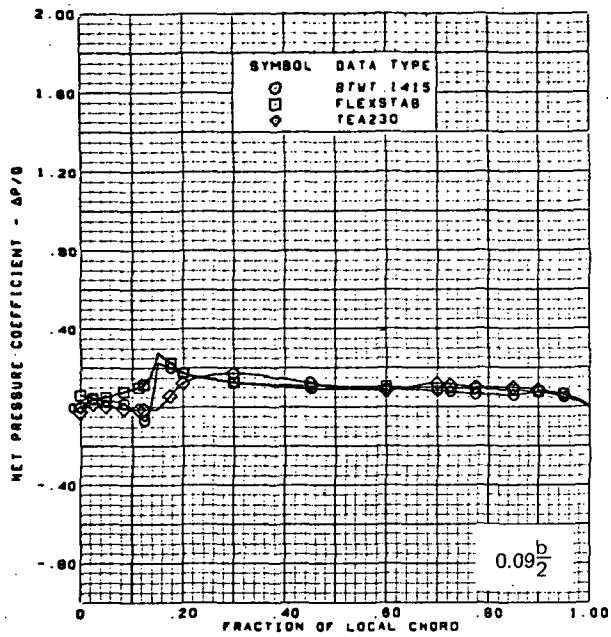
Figure 26.-(Continued)



M = 0.85 (run 182)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

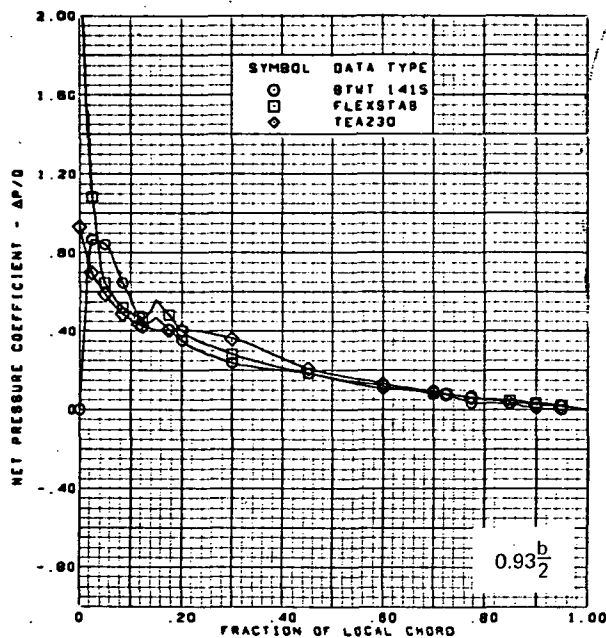
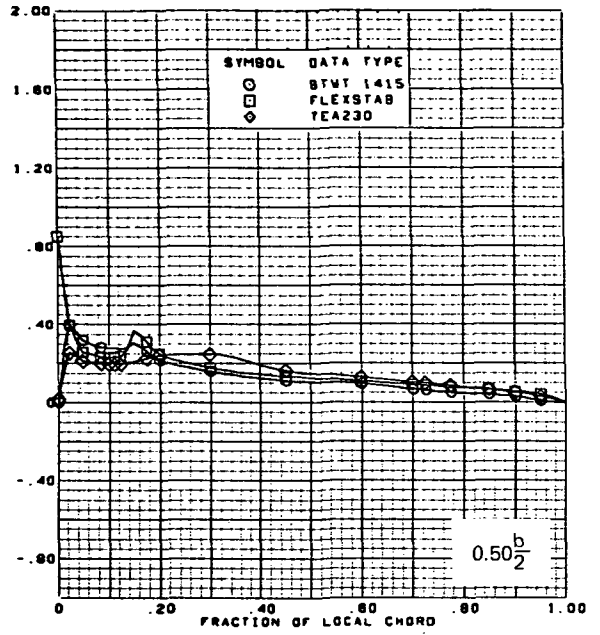
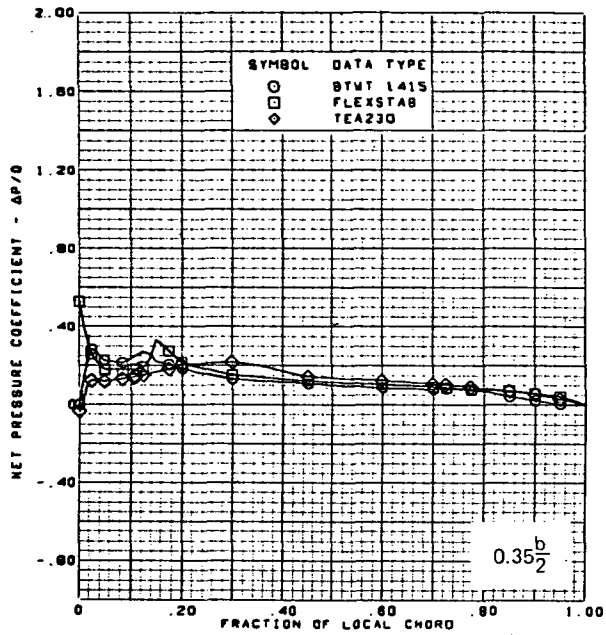
( b ) (Concluded)

Figure 26.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

Figure 26.-(Continued)

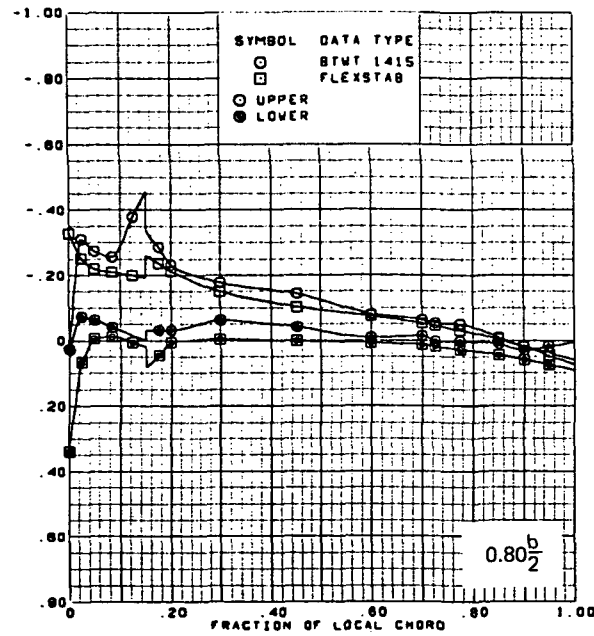
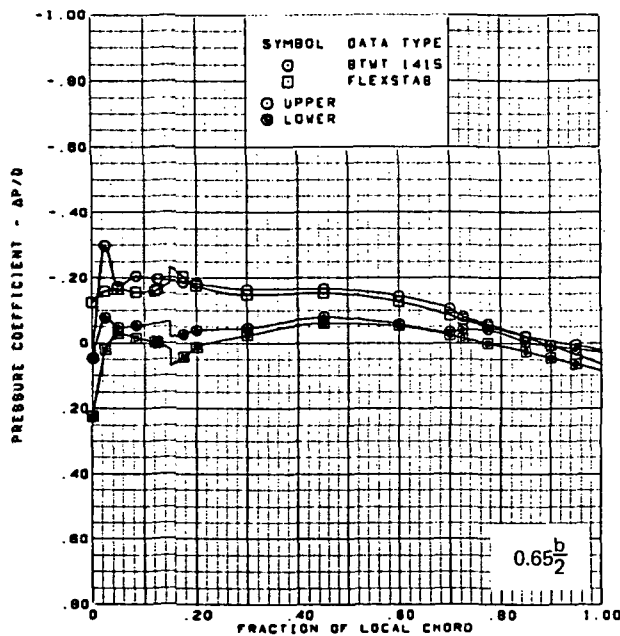
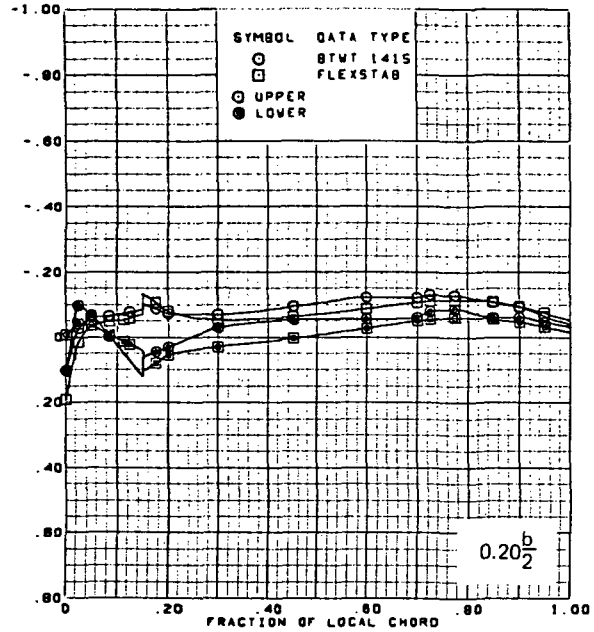
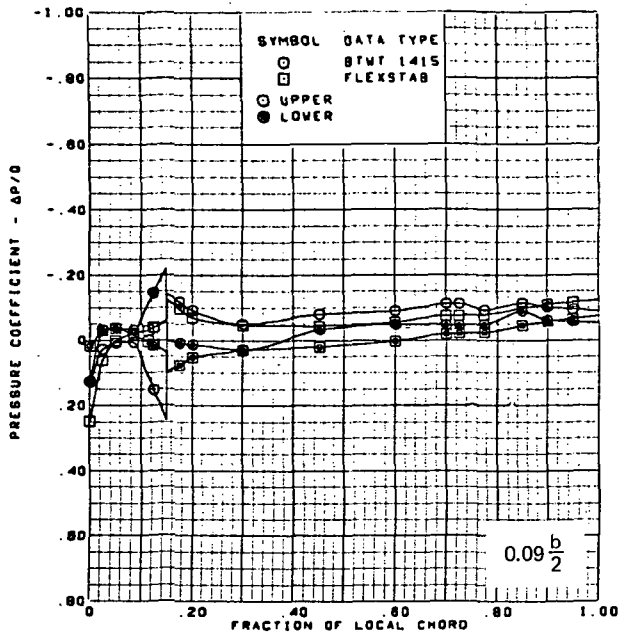


M = 0.85 (run 182)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

(c) (Concluded)

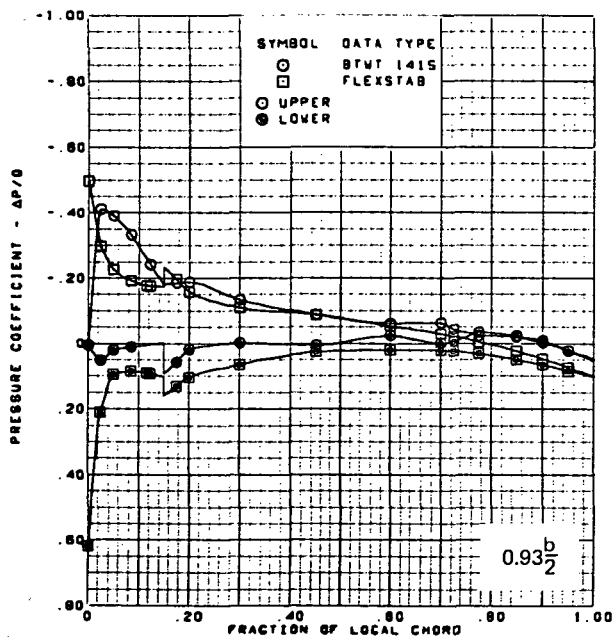
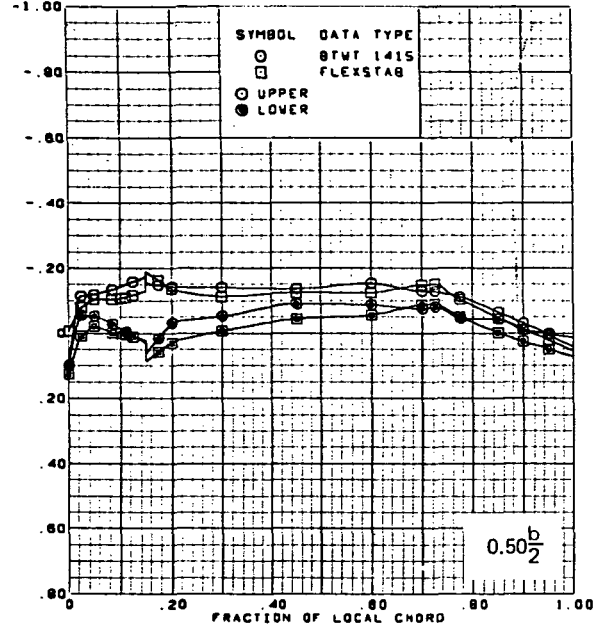
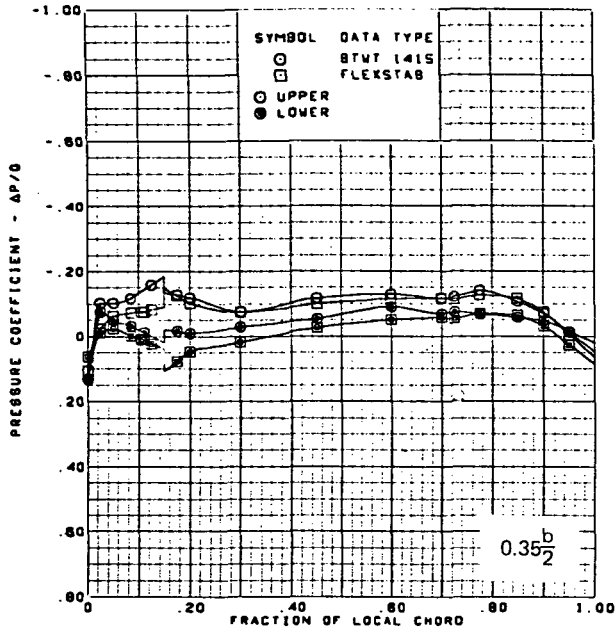
Figure 26.- (Concluded)





(a) Surface Chordwise Pressure Distributions,  $\alpha = 2.0^\circ$

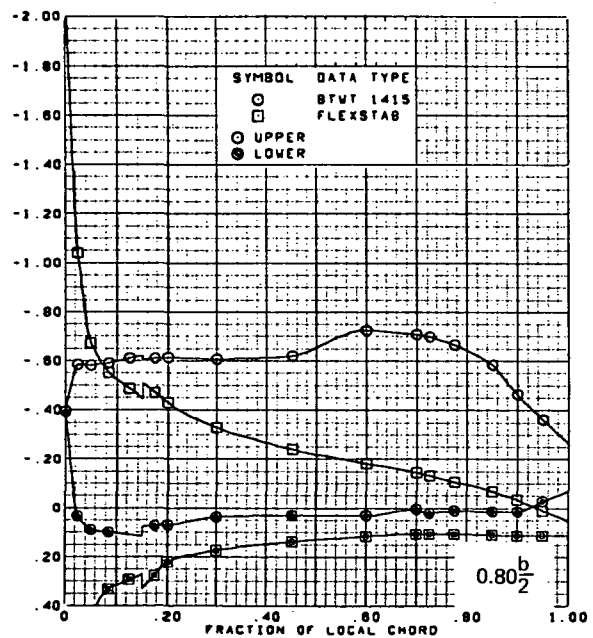
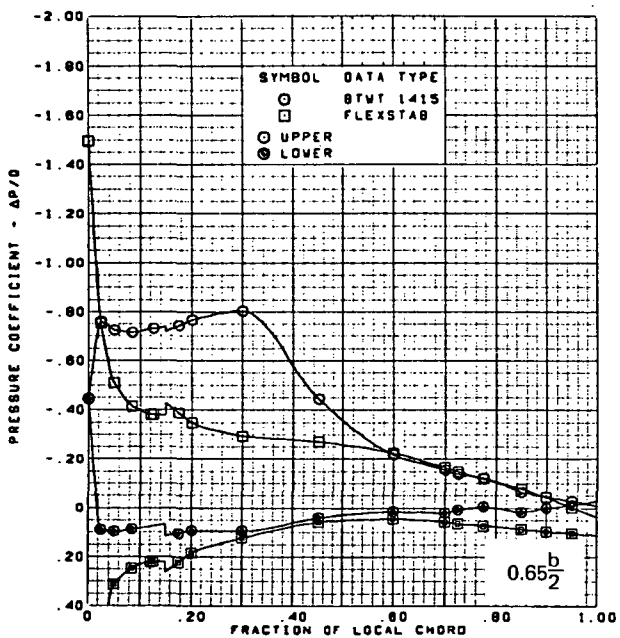
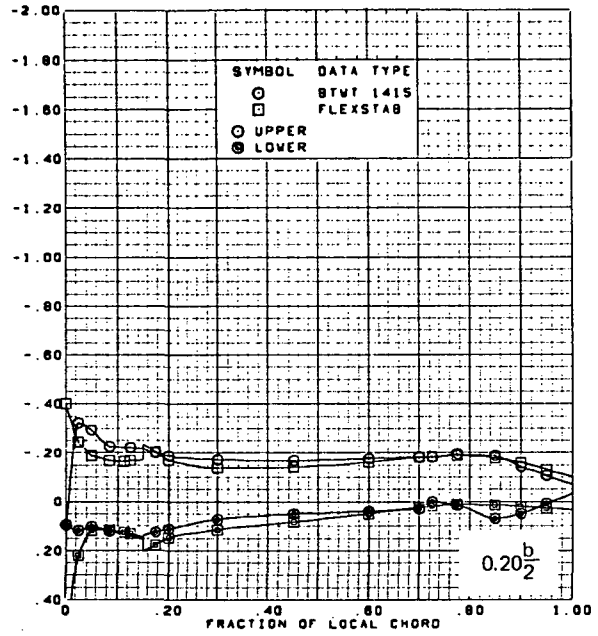
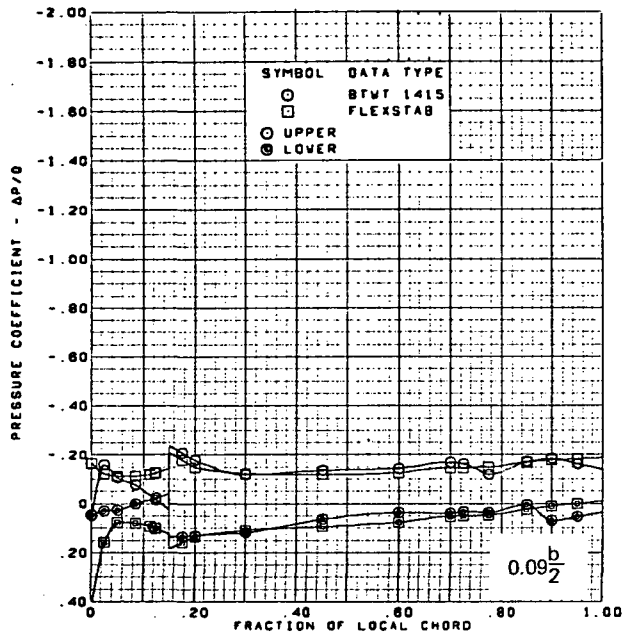
Figure 27.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $5.1^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



M = 1.05 (run 180)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 5.1°  
 T.E. deflection, full span = 0.0°

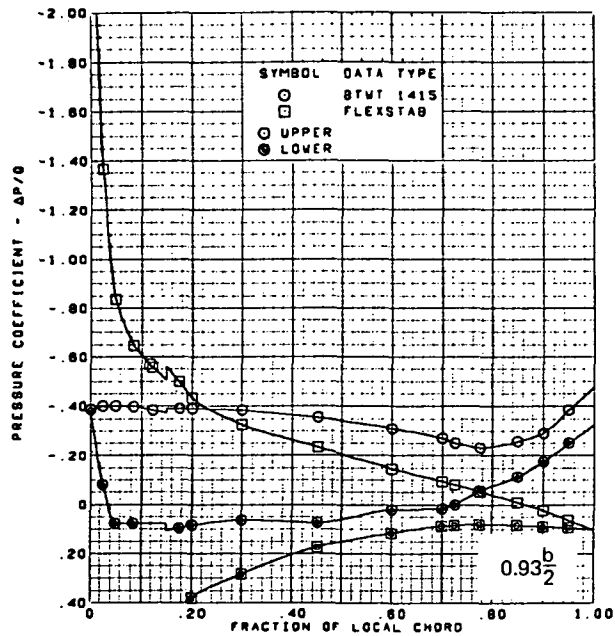
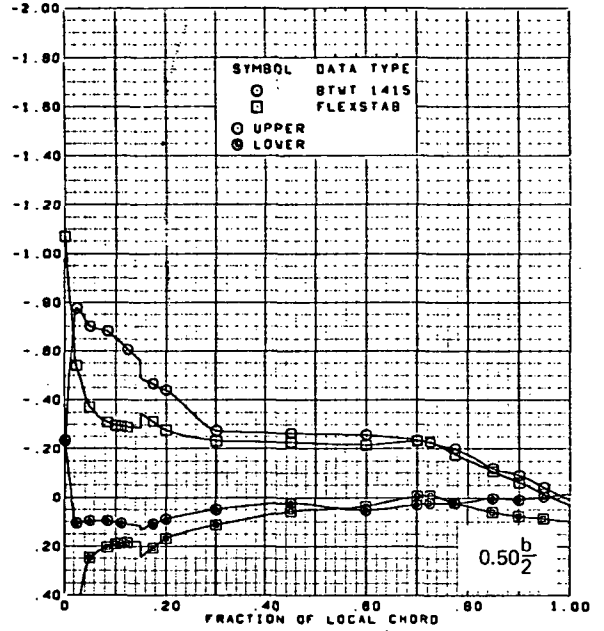
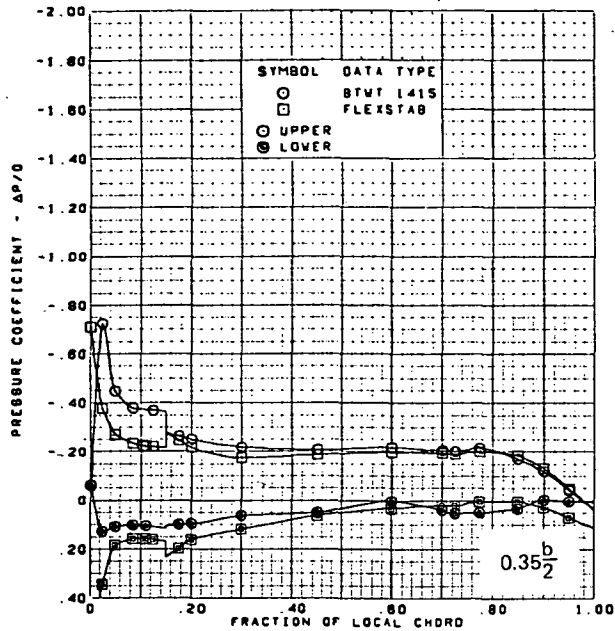
(a) (Concluded)

Figure 27.--(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

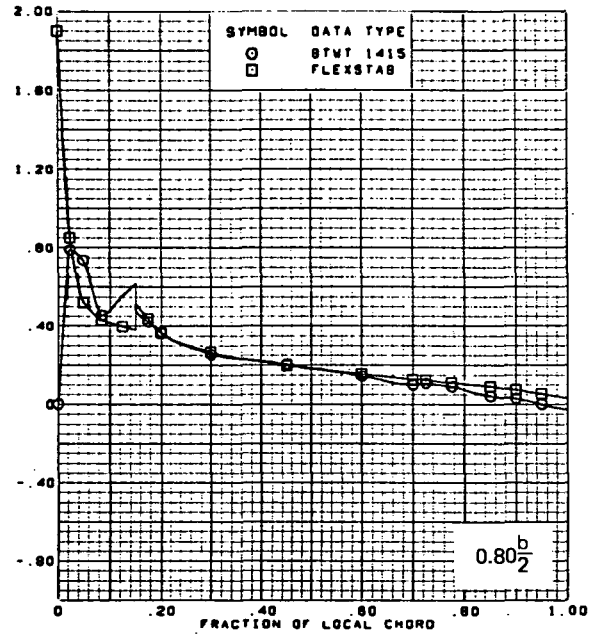
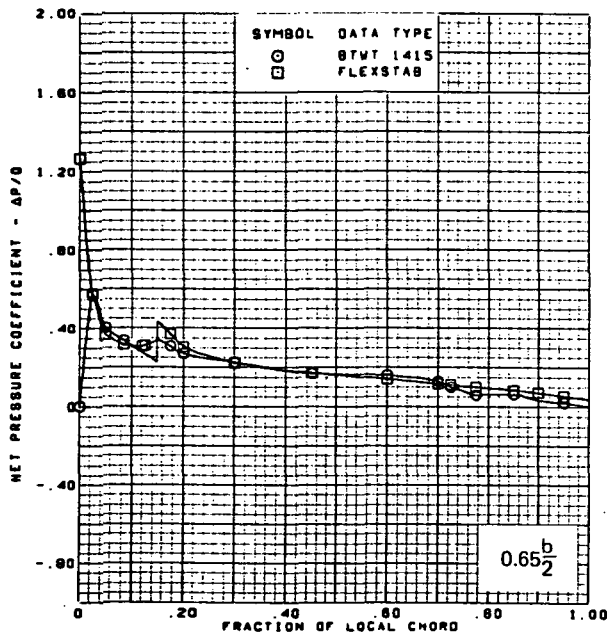
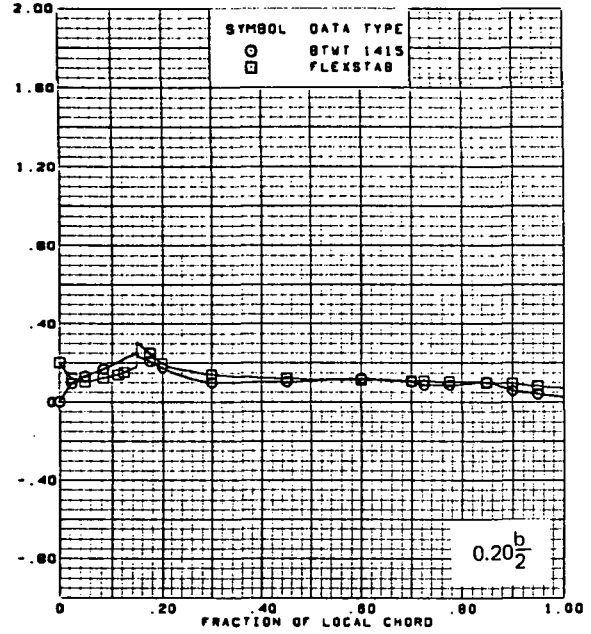
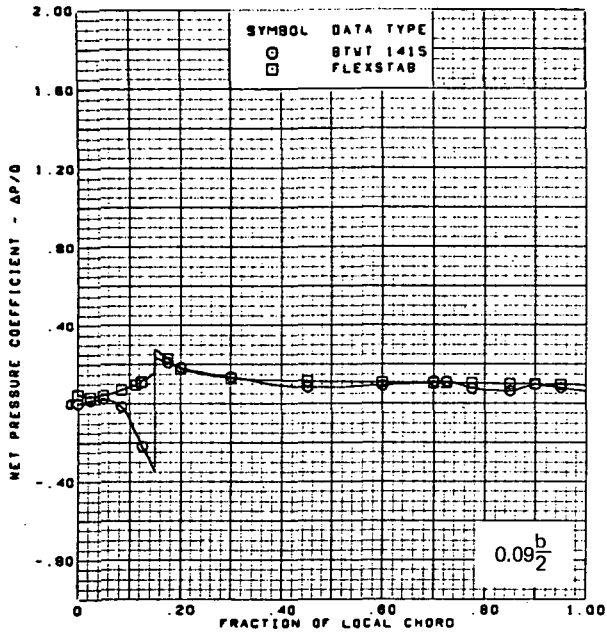
Figure 27.-(Continued)



M = 1.05 (run 180)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

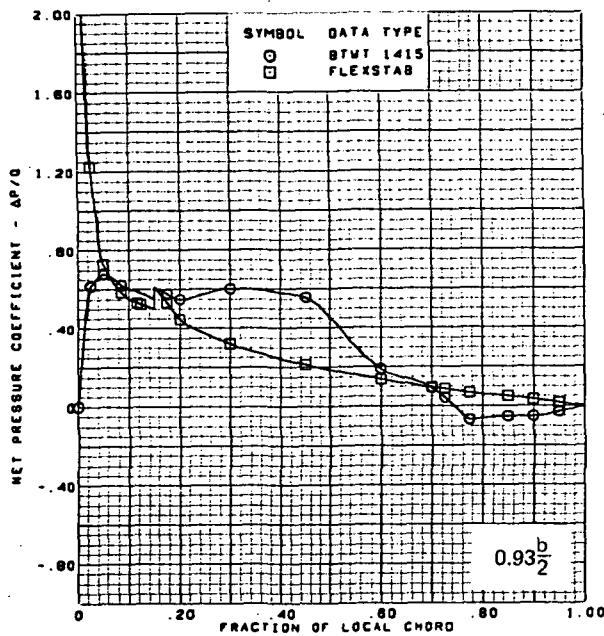
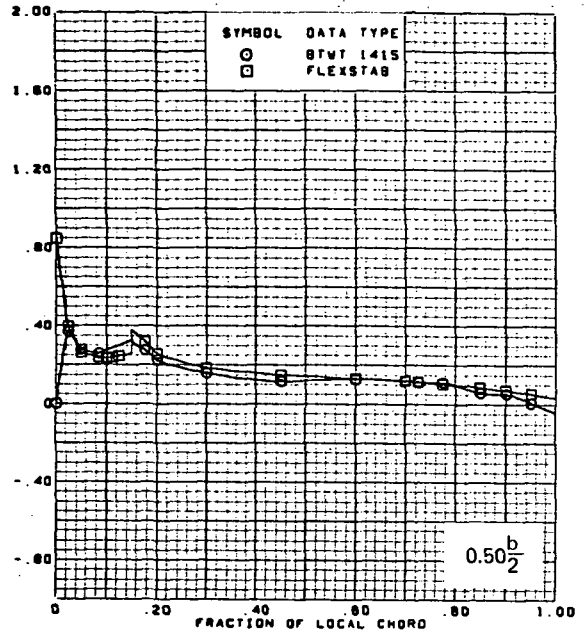
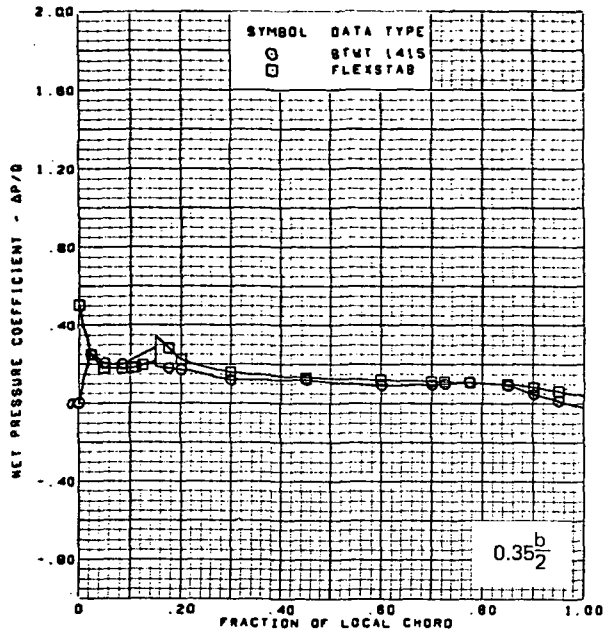
(b) (Concluded)

Figure 27.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

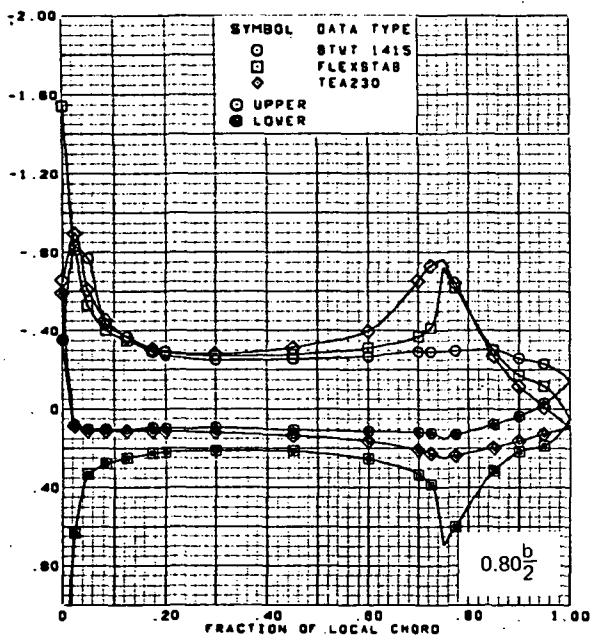
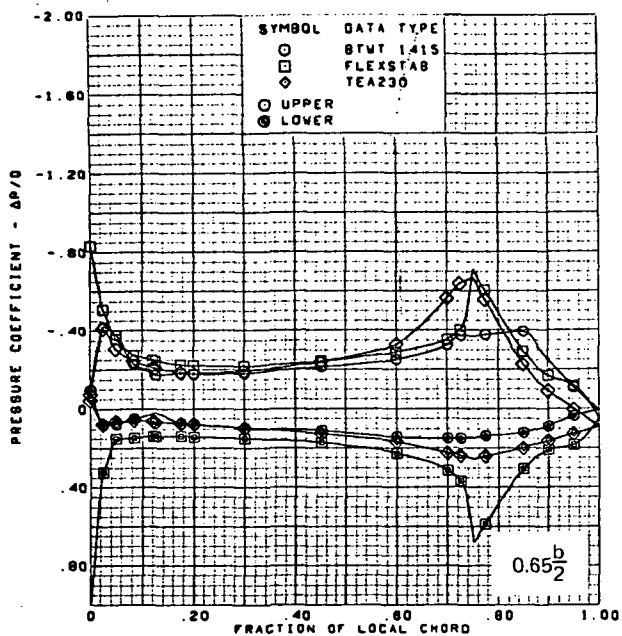
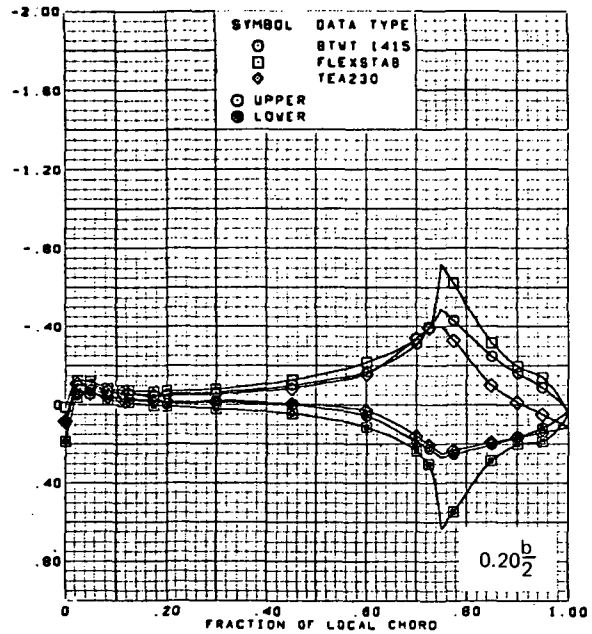
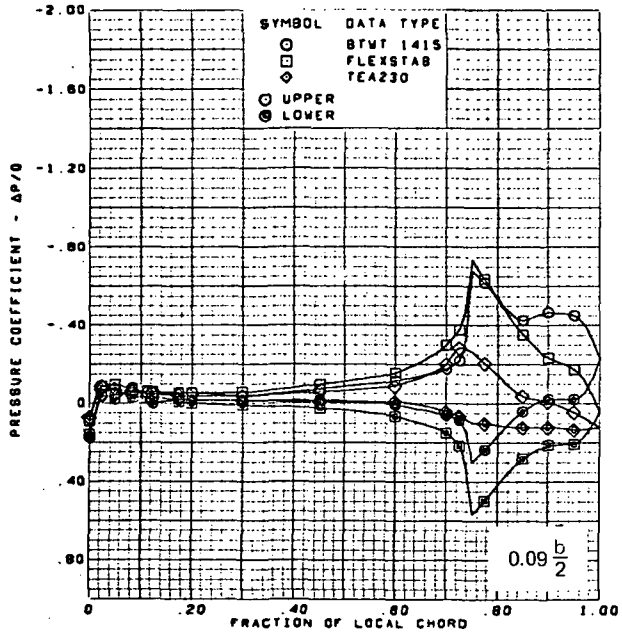
Figure 27.-(Continued)



M = 1.05 (run 180)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

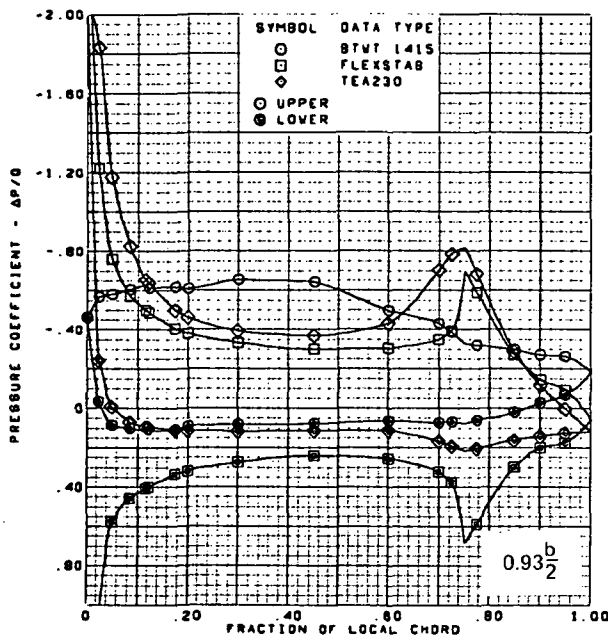
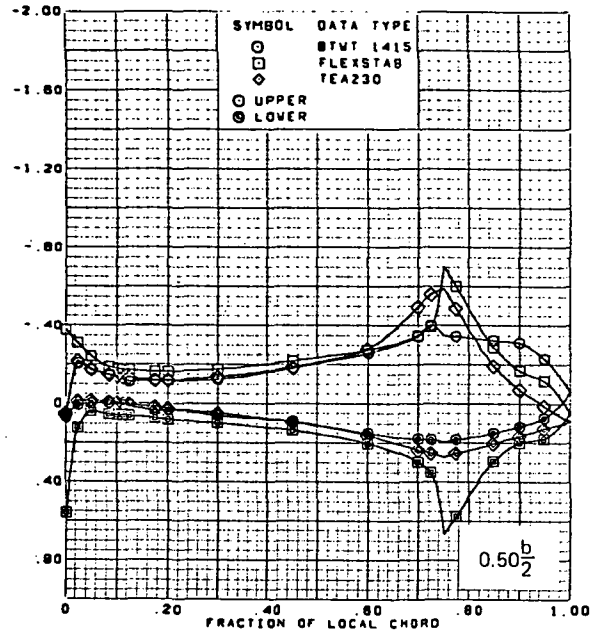
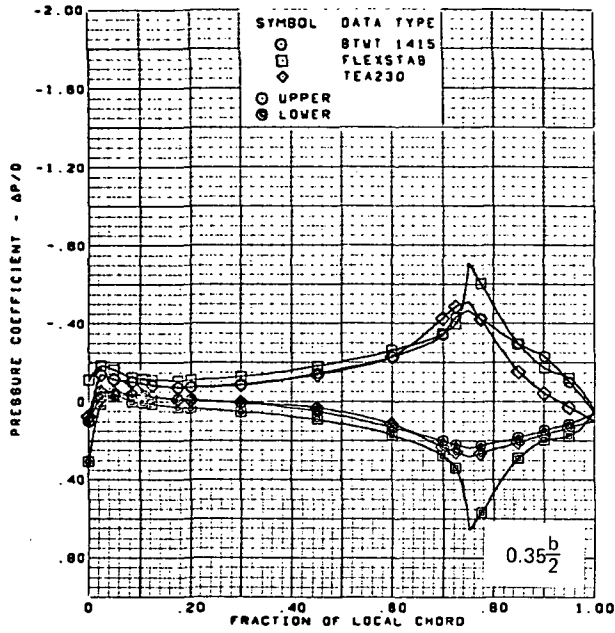
(c) (Concluded)

Figure 27.- (Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.1^\circ$

Figure 28.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $17.7^\circ$ ;  $M = 0.40$

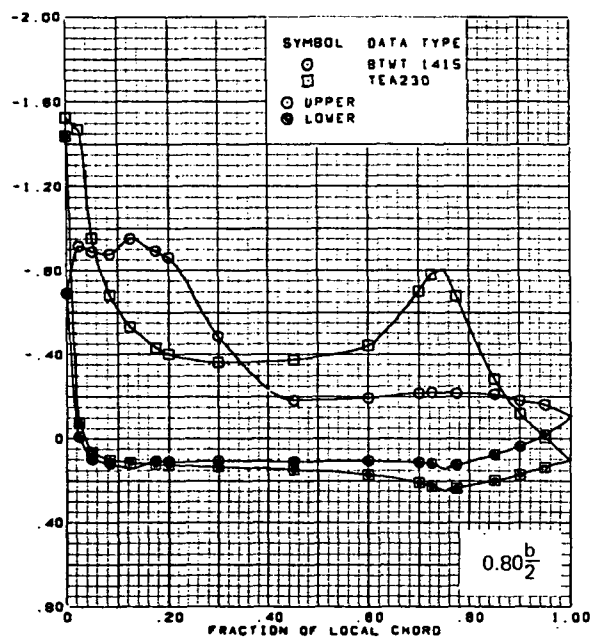
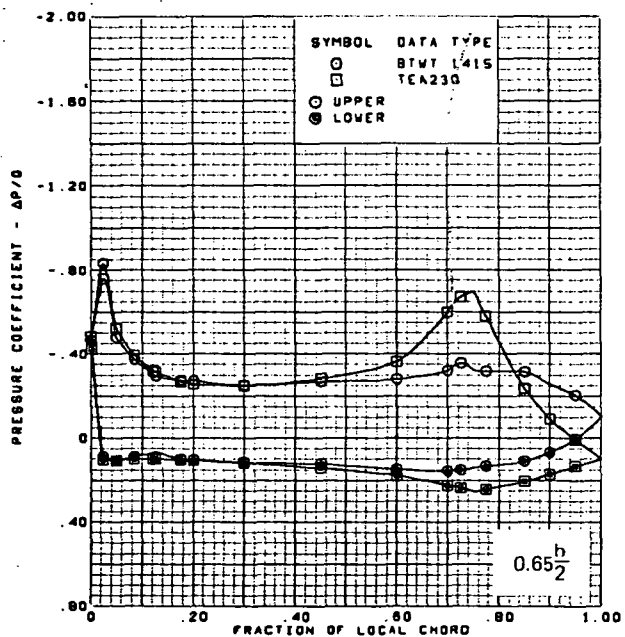
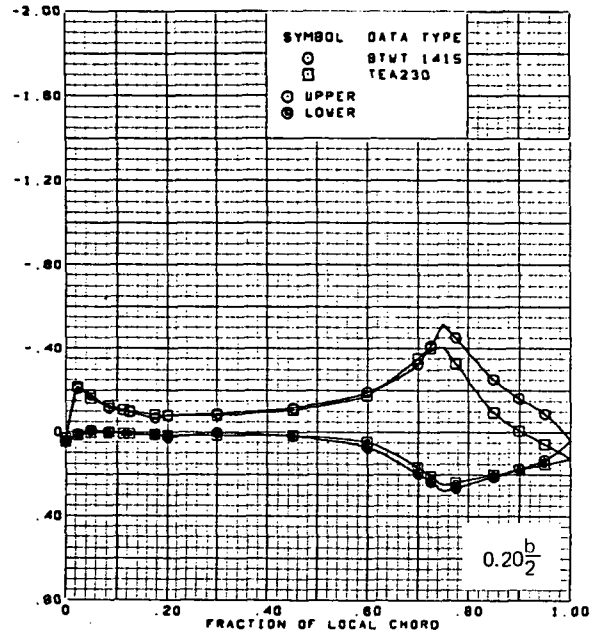
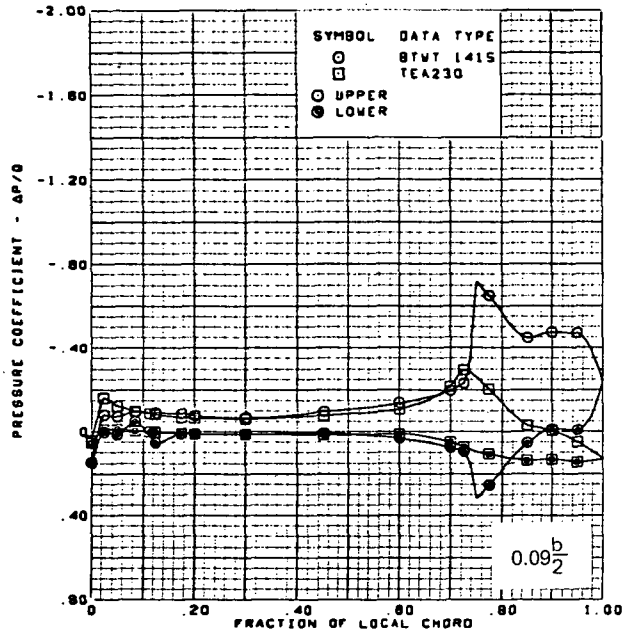


M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

(a) (Concluded)

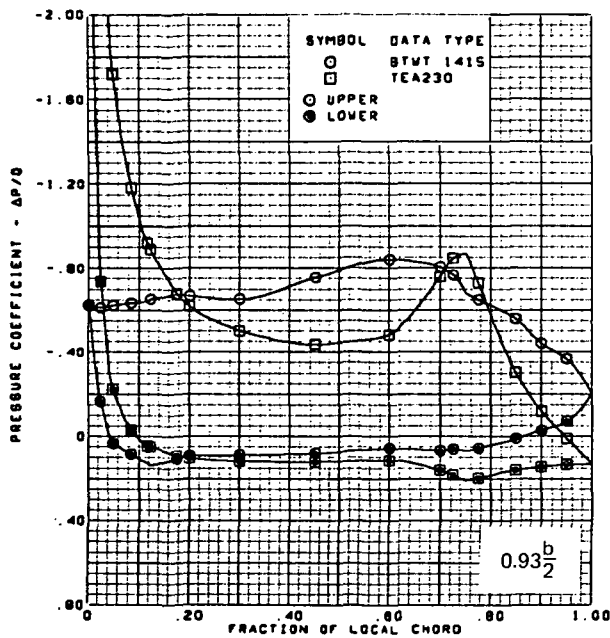
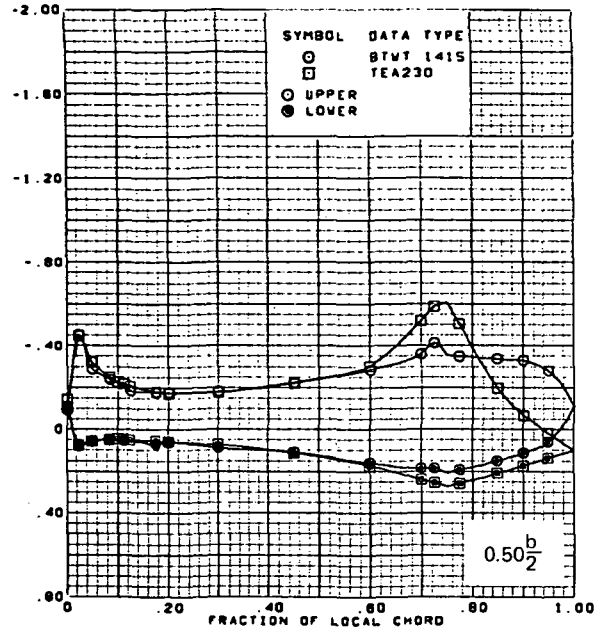
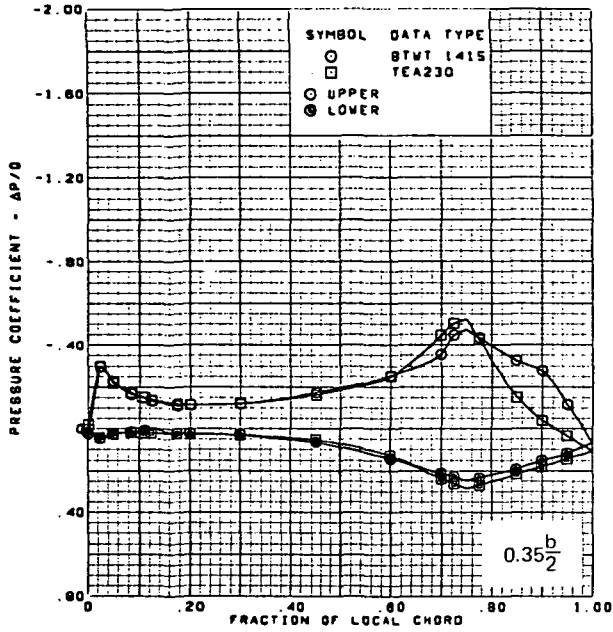
Figure 28.-(Continued)





(b) Surface Chordwise Pressure Distributions,  $\alpha = 2.0^\circ$

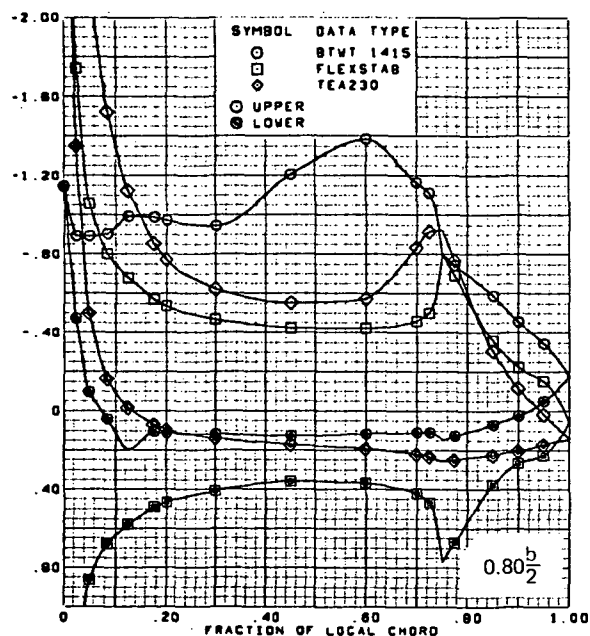
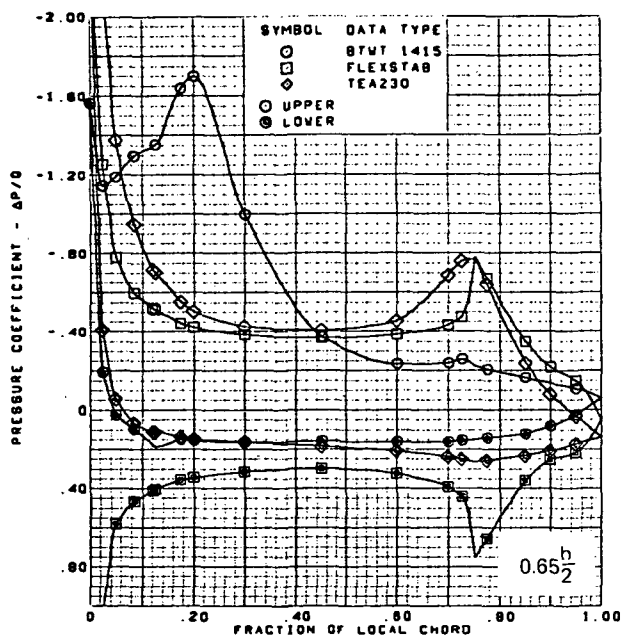
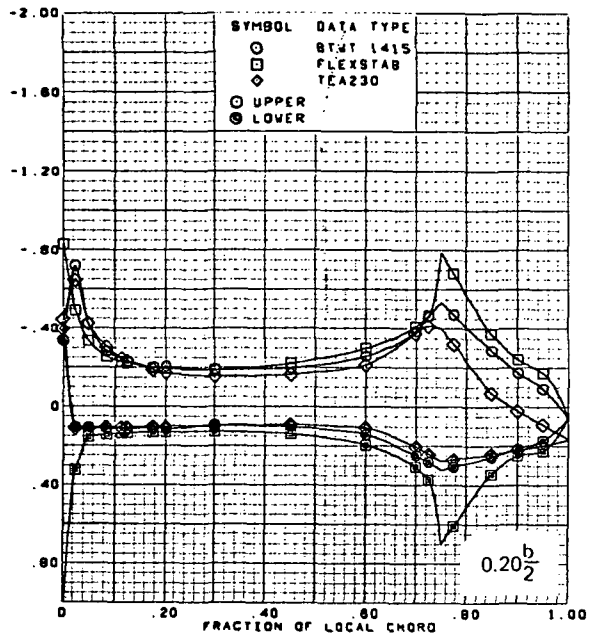
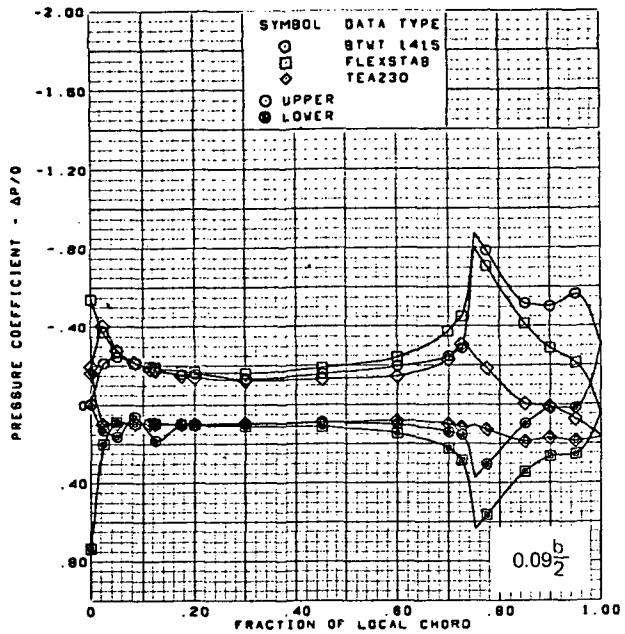
Figure 28.-(Continued)



M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

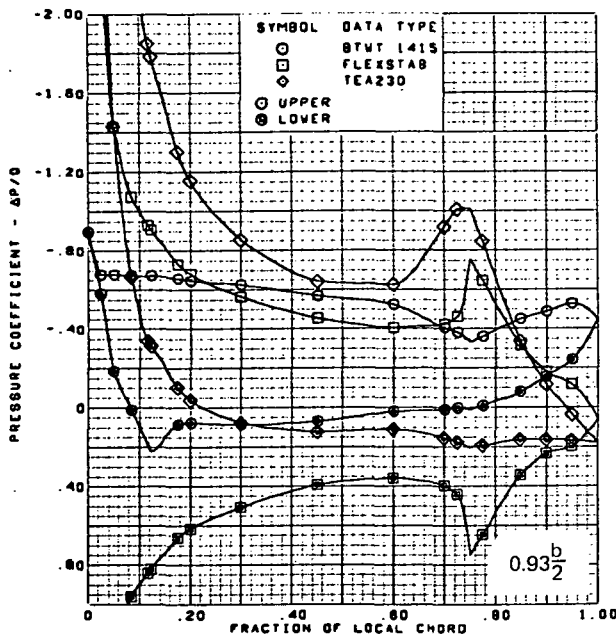
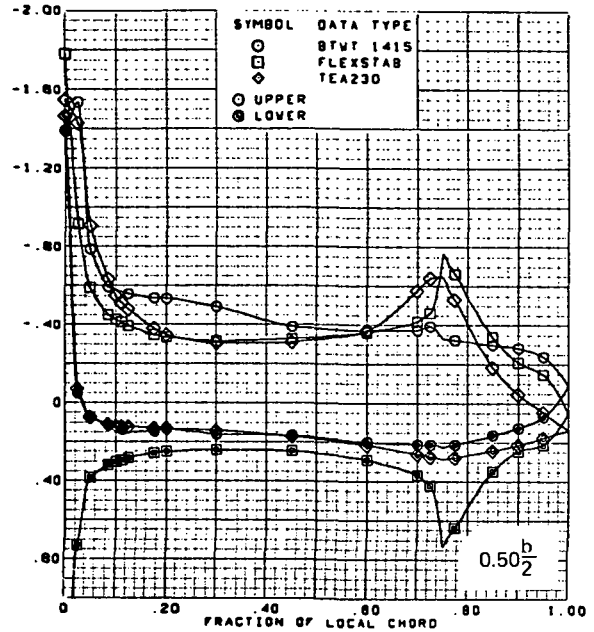
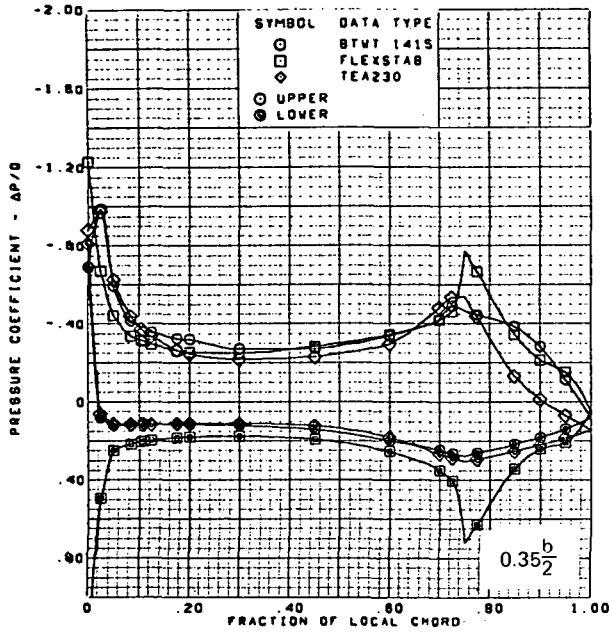
( b ) (Concluded)

Figure 28.-(Continued)



(c) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

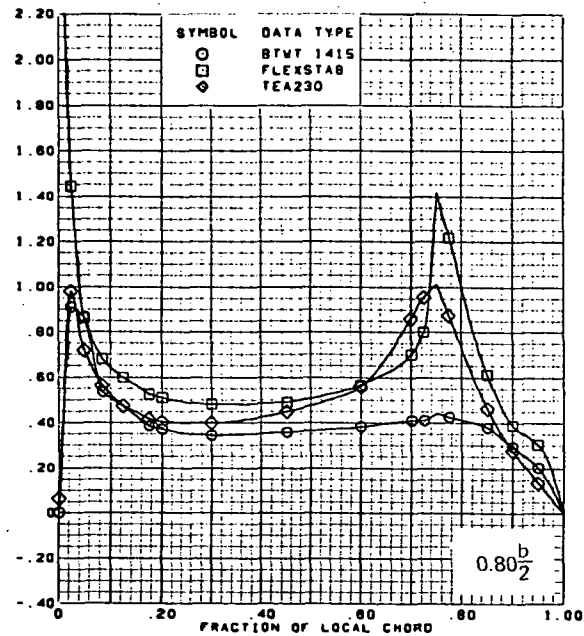
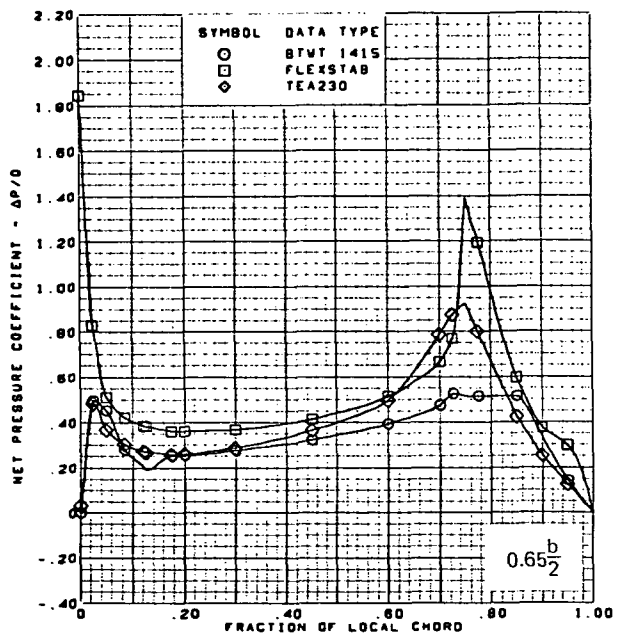
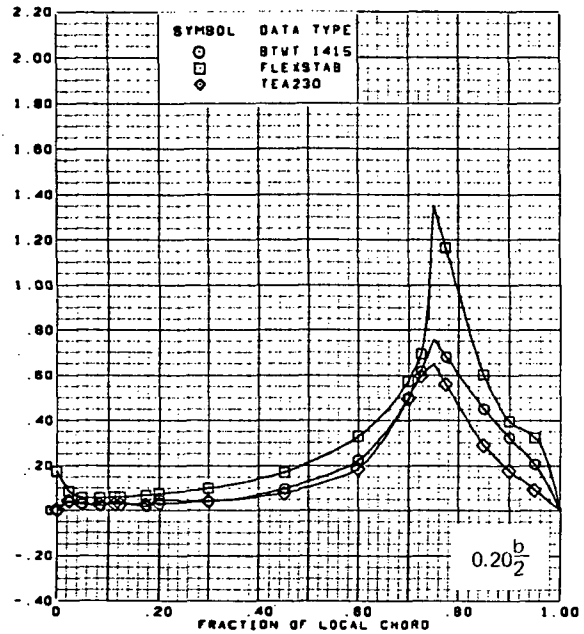
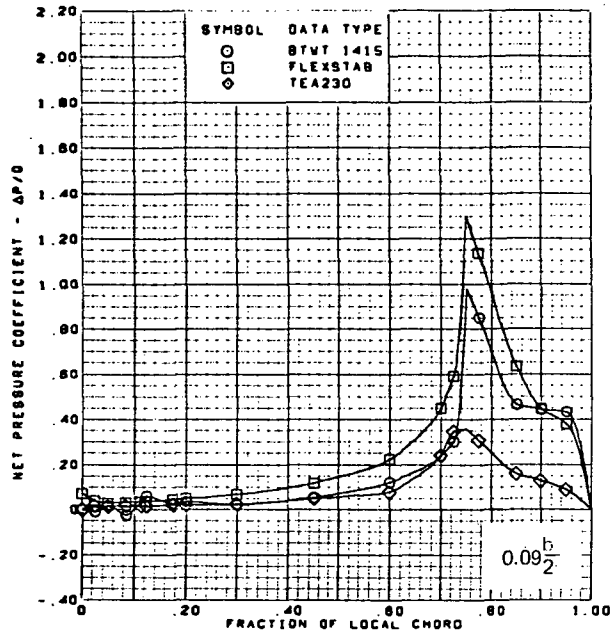
Figure 28.-(Continued)



M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

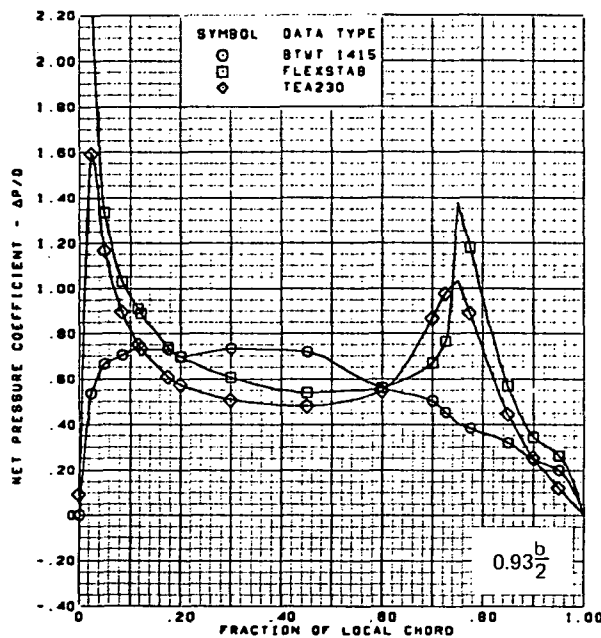
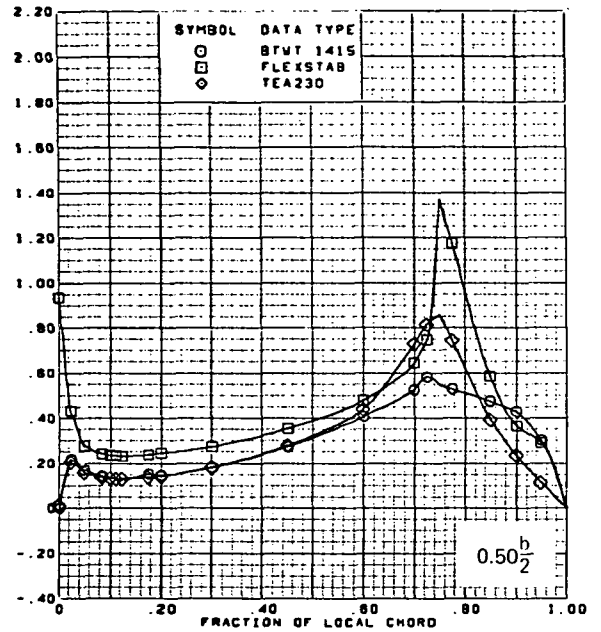
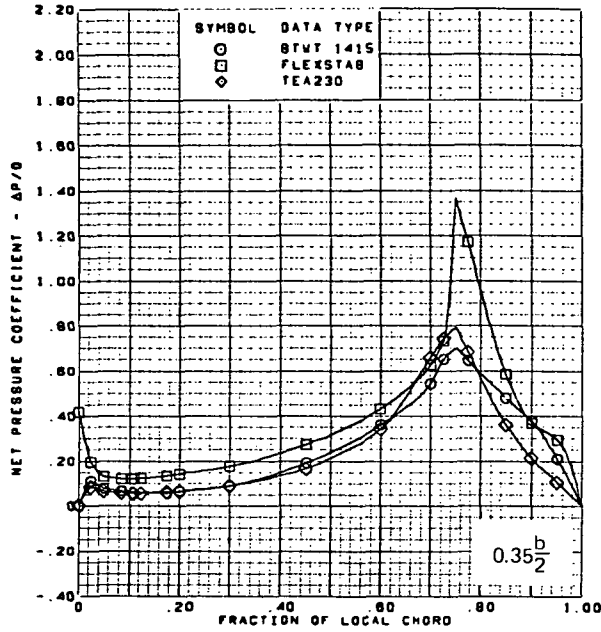
(c) (Concluded)

Figure 26.-(Continued)



(d) Net Chordwise Pressure Distributions,  $\alpha = 0.1^\circ$

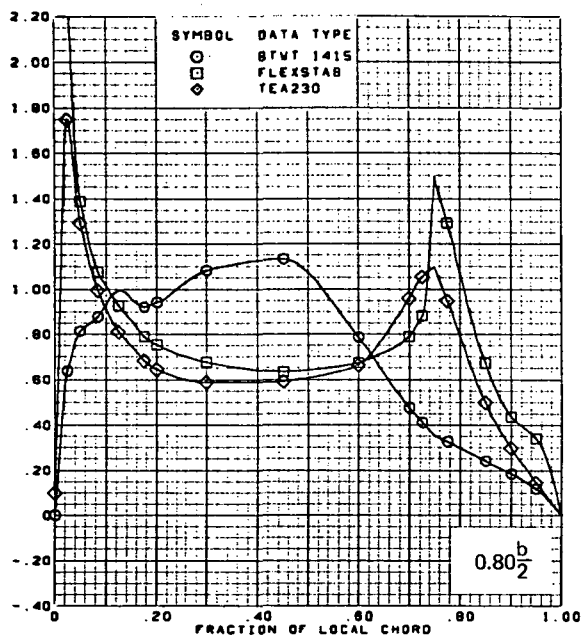
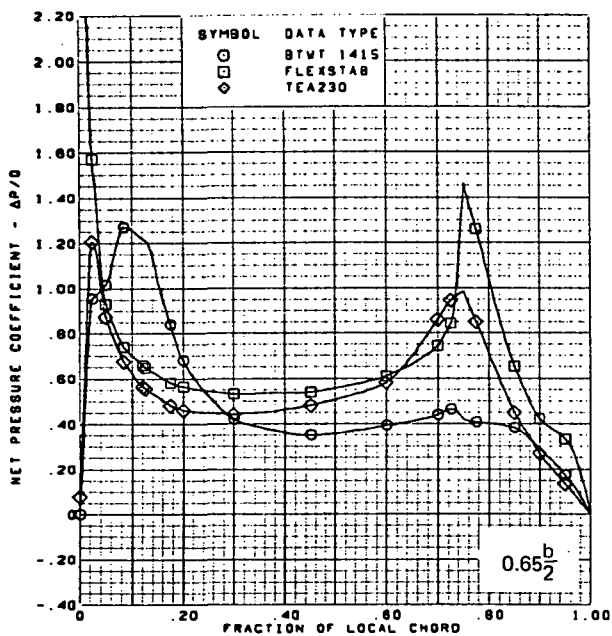
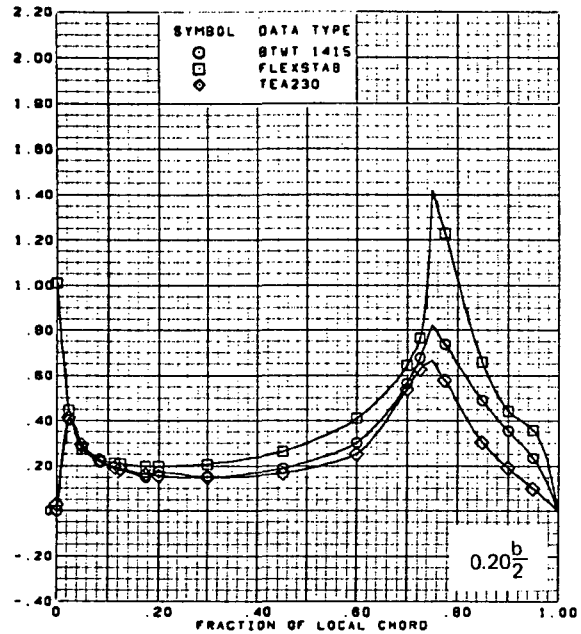
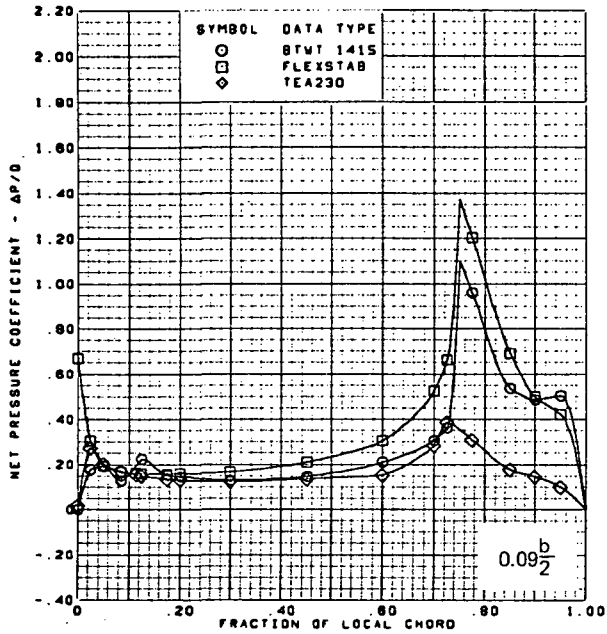
Figure 28.-(Continued)



M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

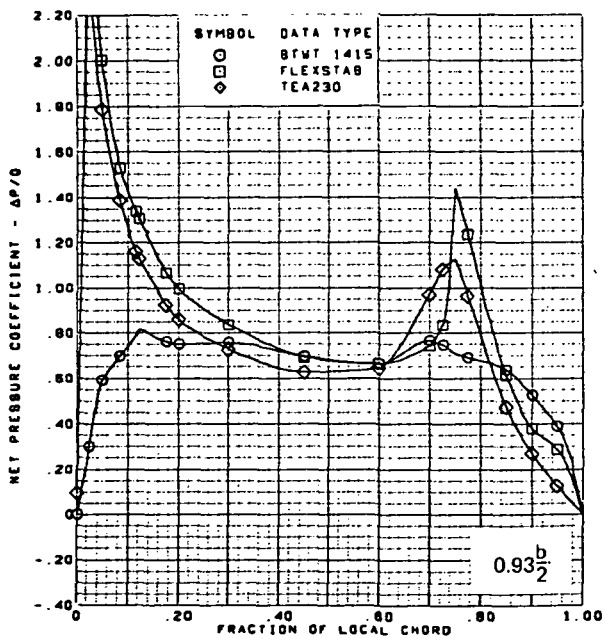
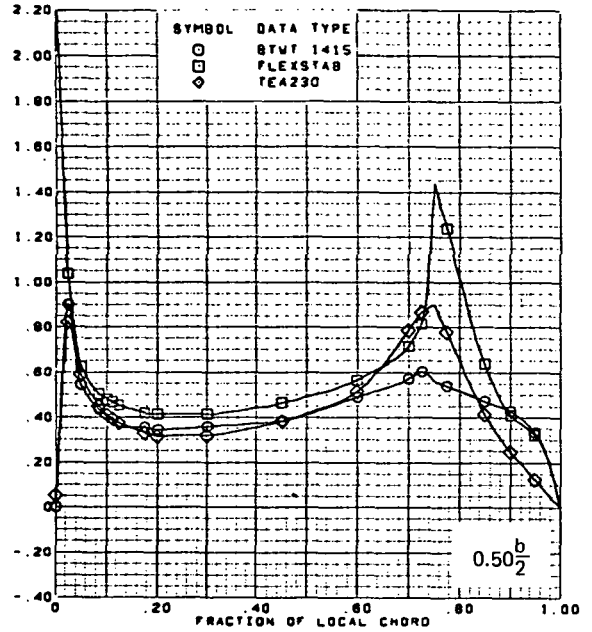
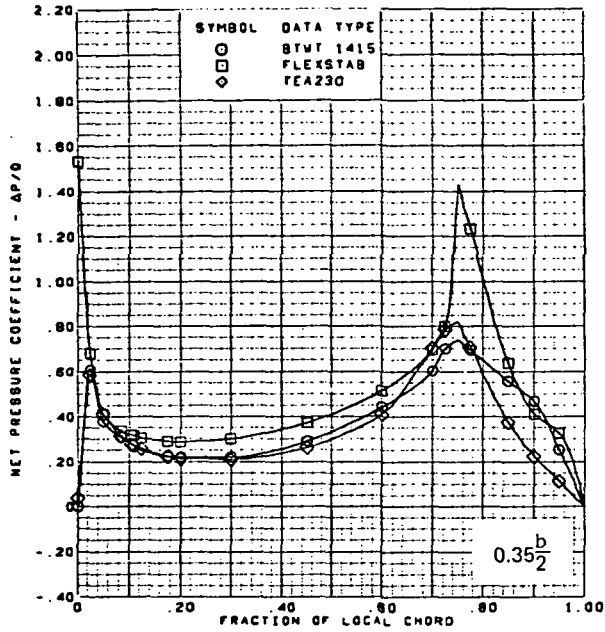
(d) (Concluded)

Figure 28.-(Continued)



(e) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

Figure 28.-(Continued)

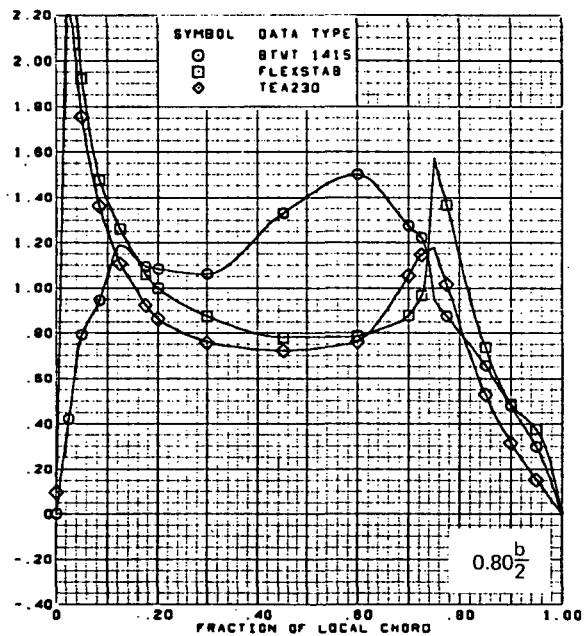
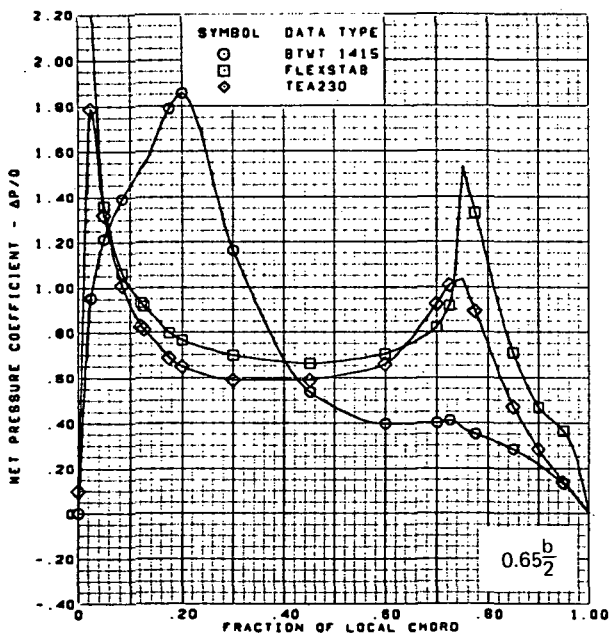
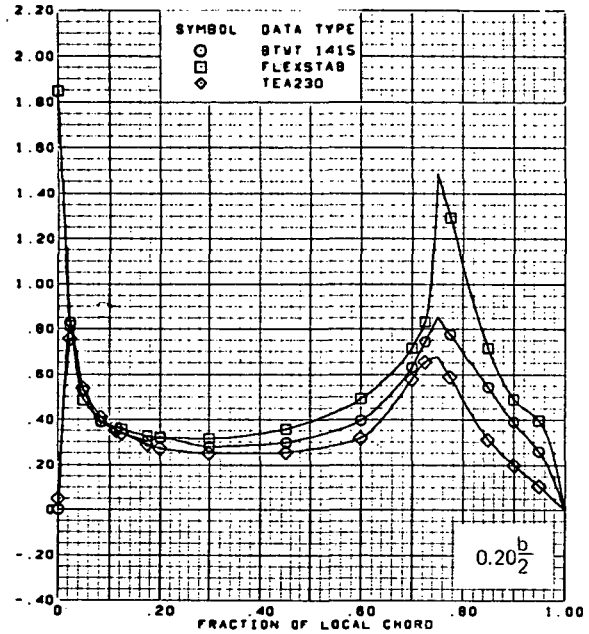
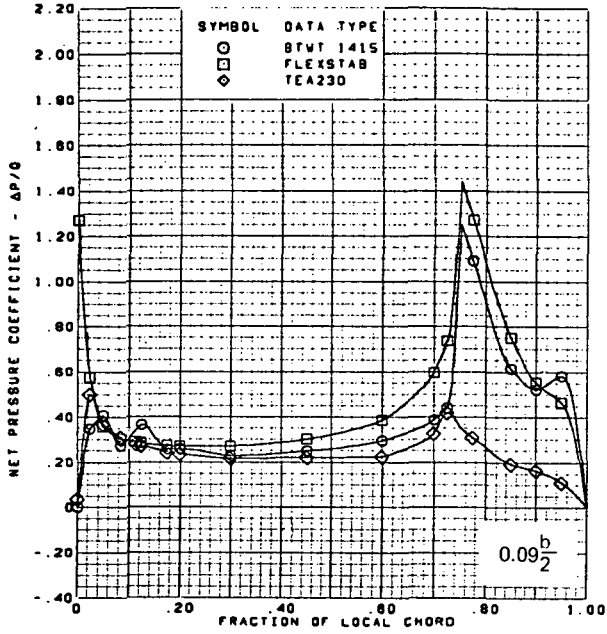


M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

(e) (Concluded)

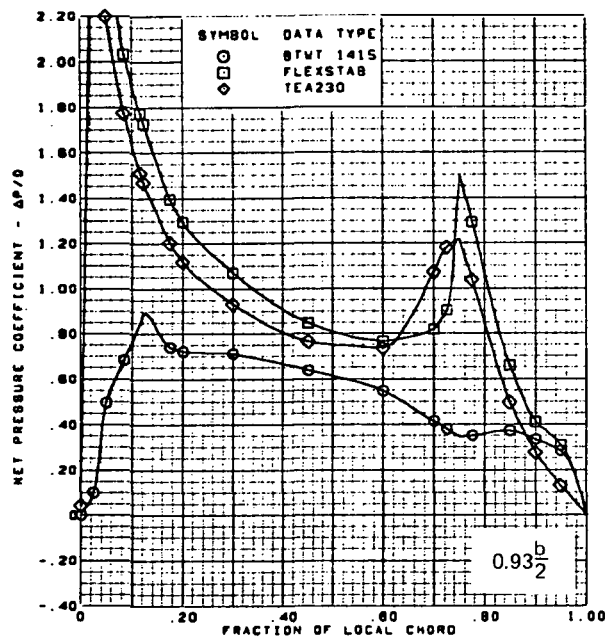
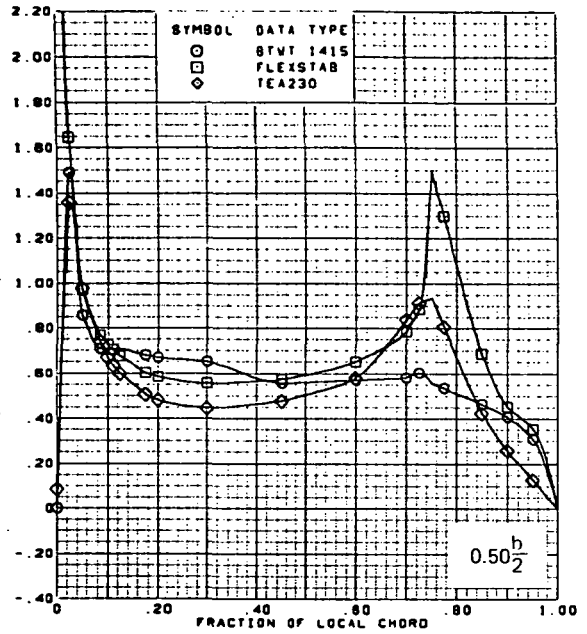
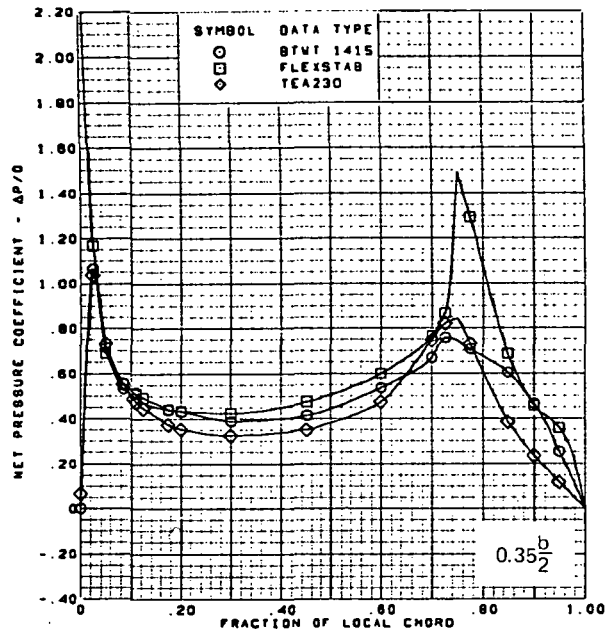
Figure 28.-(Continued)





(f) Net Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

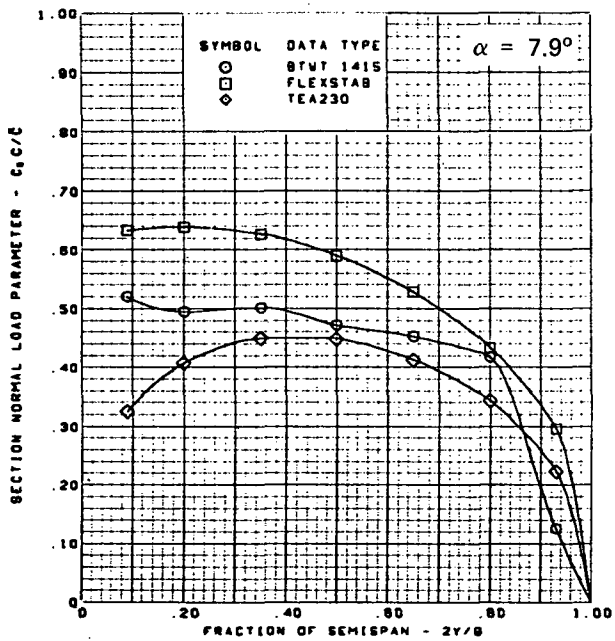
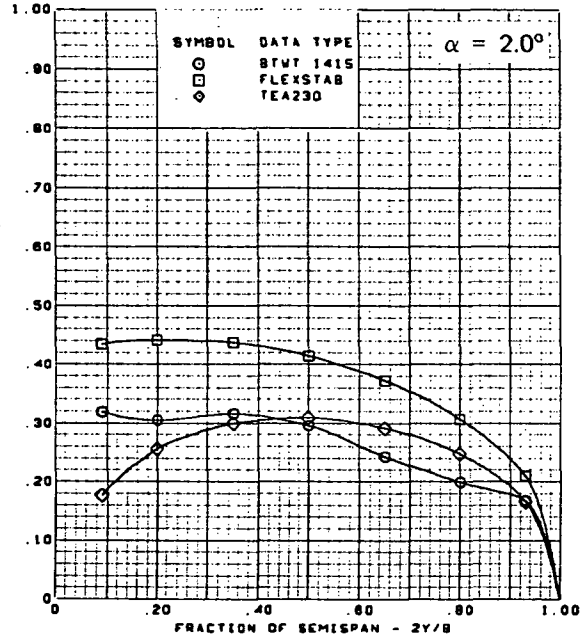
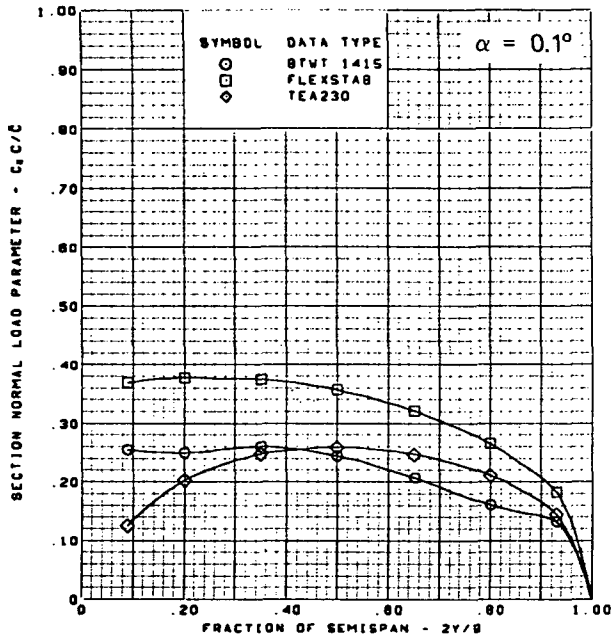
Figure 28.-(Continued).



M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

( f ) (Concluded)

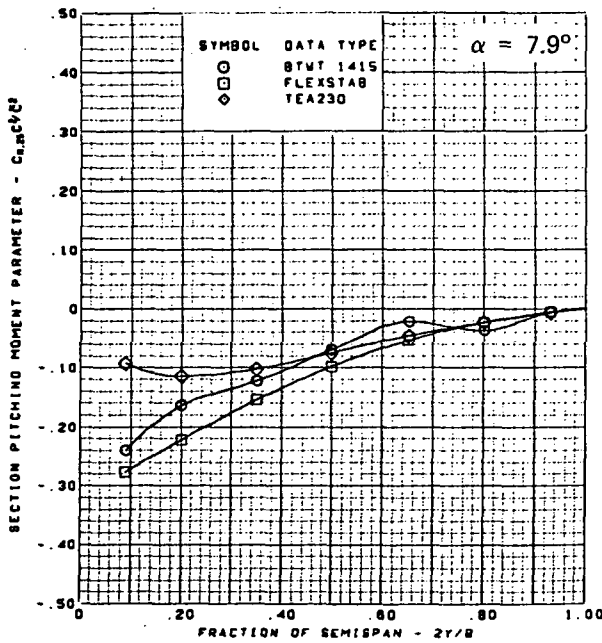
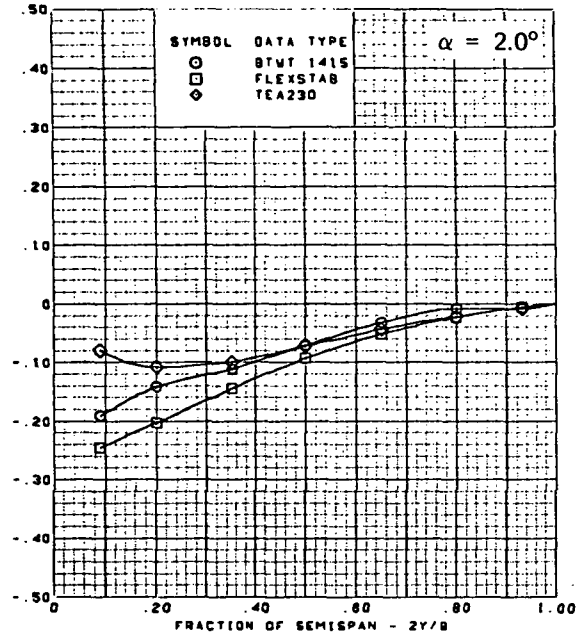
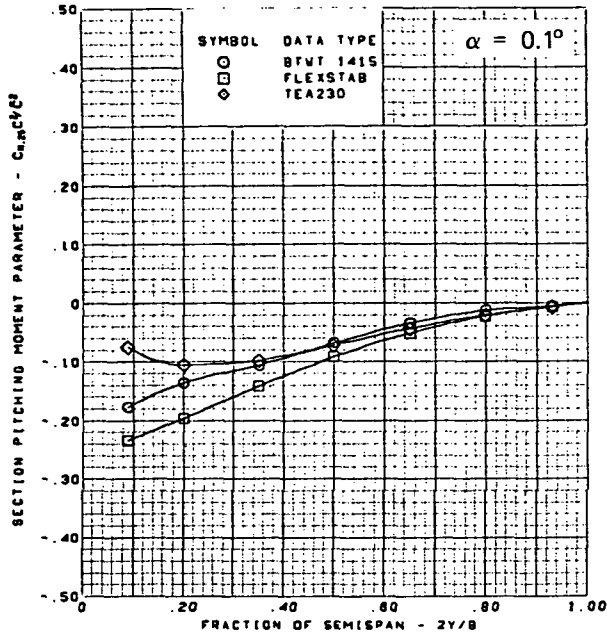
Figure 28.-(Continued)



M = 0.40 (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

(g) Spanload Distributions—Normal Force

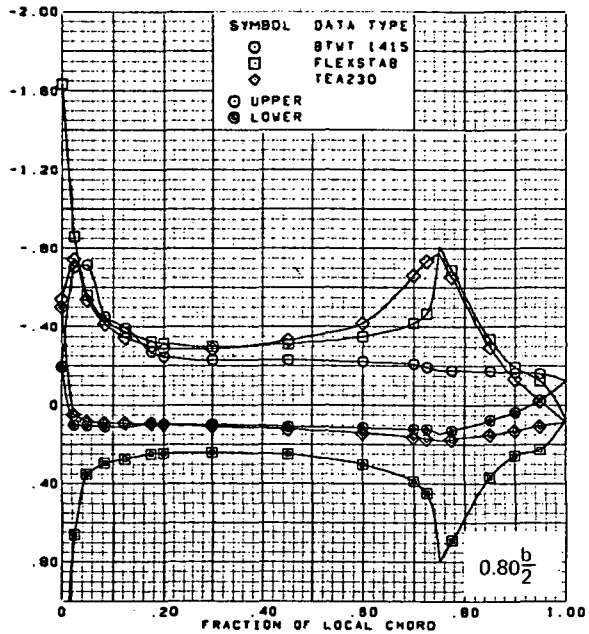
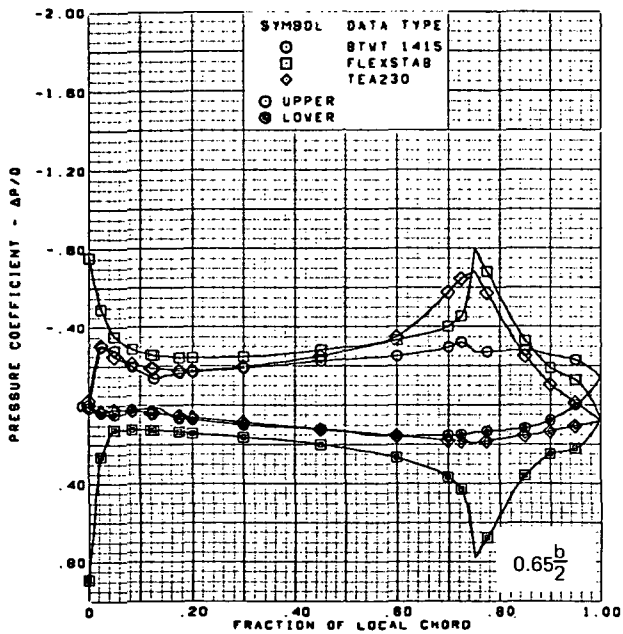
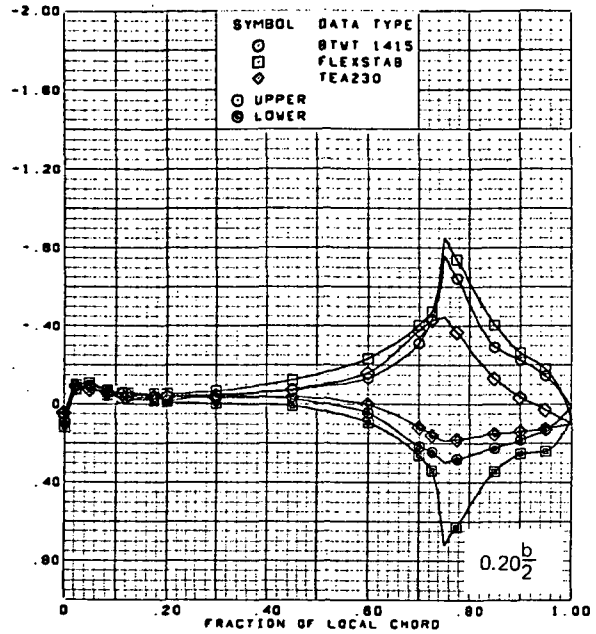
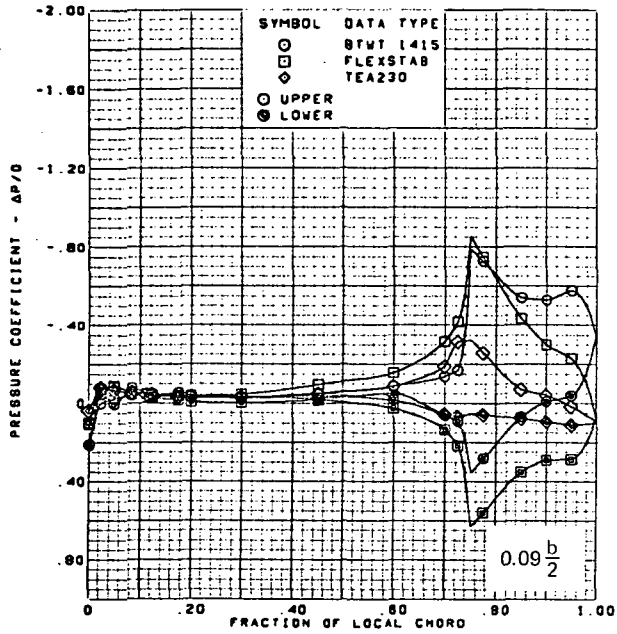
Figure 28.—(Continued)



$M = 0.40$  (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

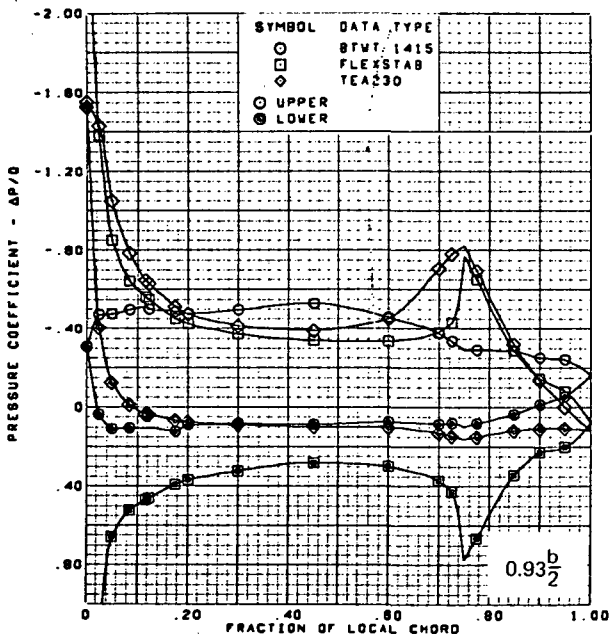
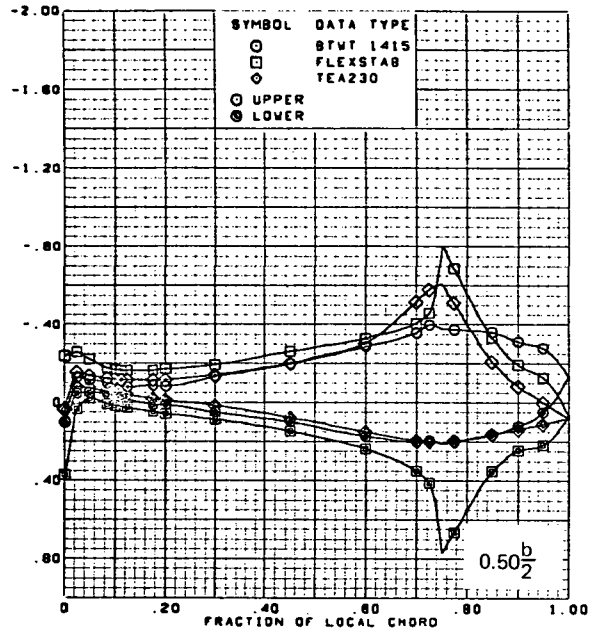
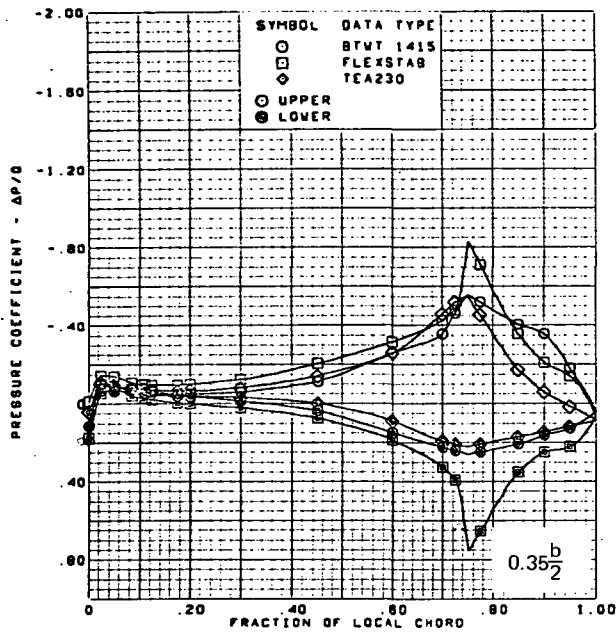
(h) Spanload Distributions—Pitching Moment

Figure 28.—(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = -0.1^\circ$

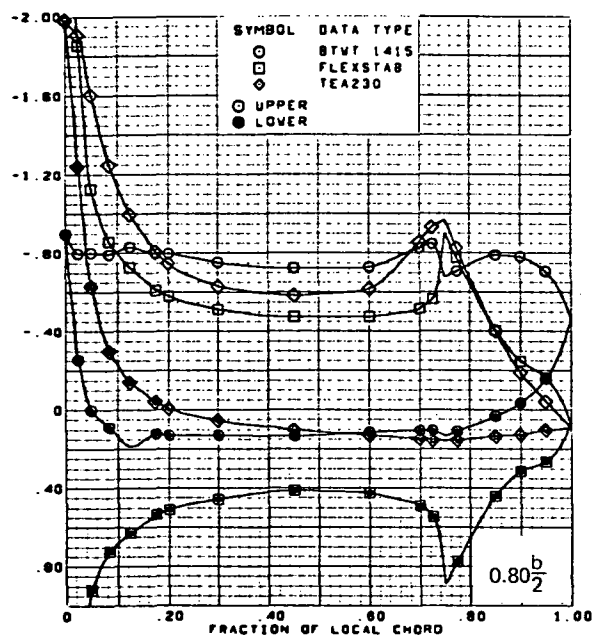
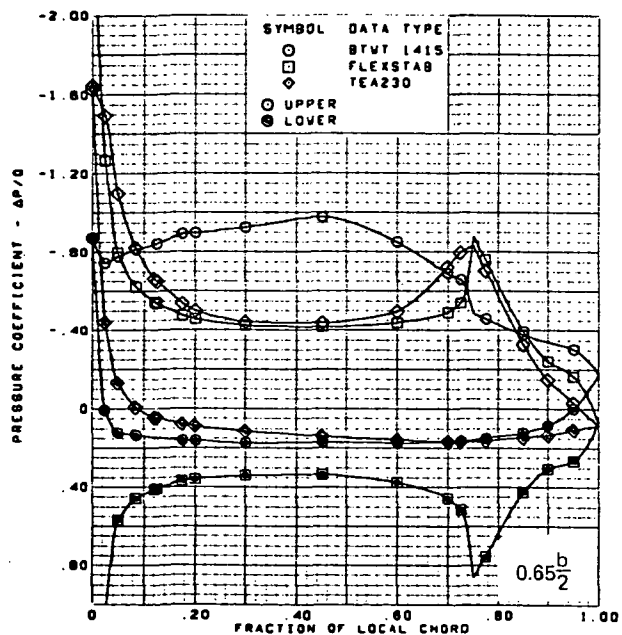
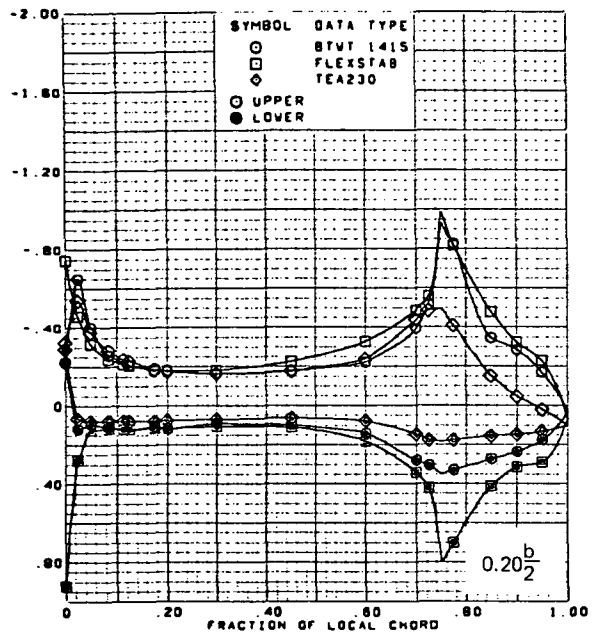
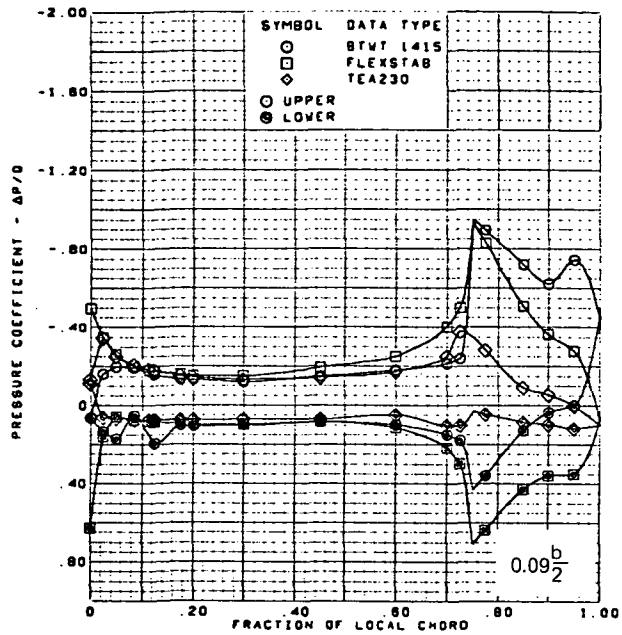
Figure 29.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $17.7^\circ$ ;  $M = 0.85$



M = 0.85 (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

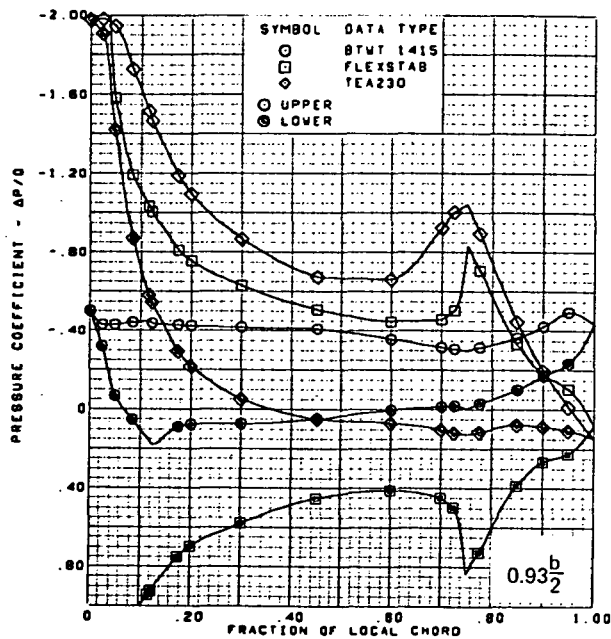
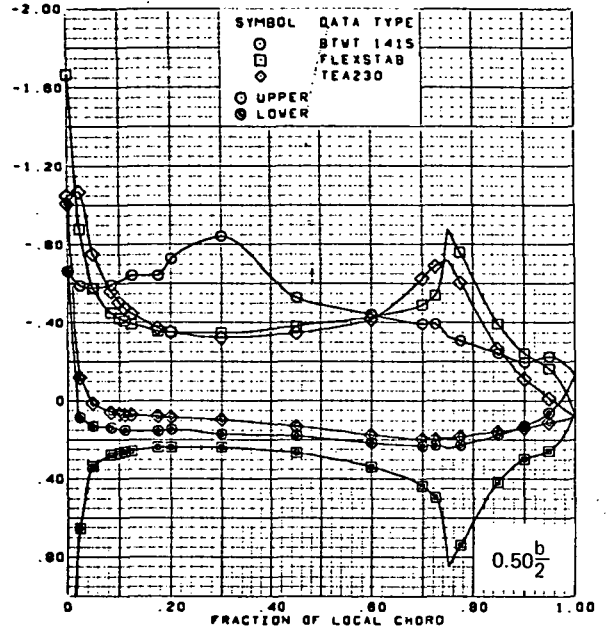
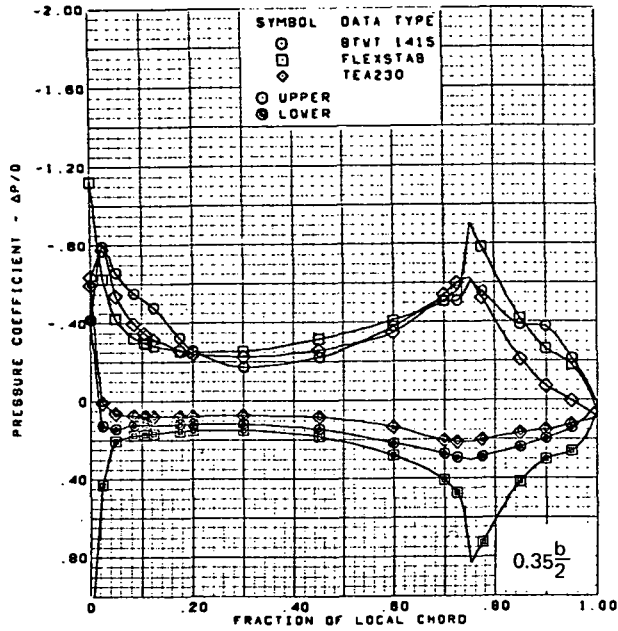
(a) (Concluded)

Figure 29.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.8^\circ$

Figure 29.-(Continued)

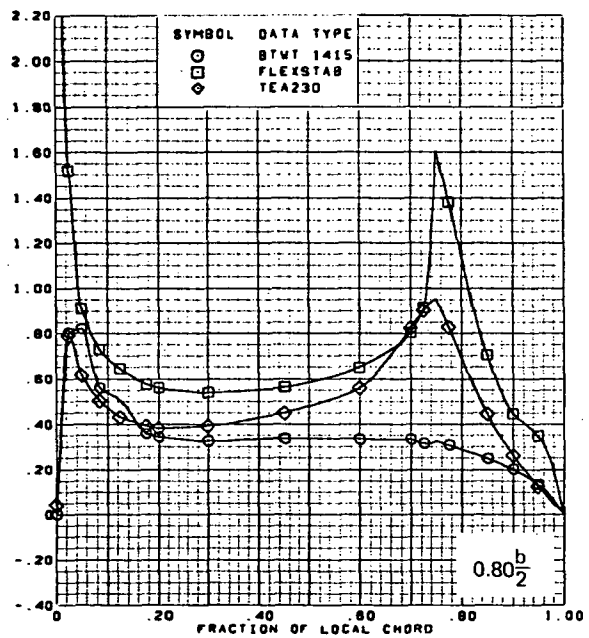
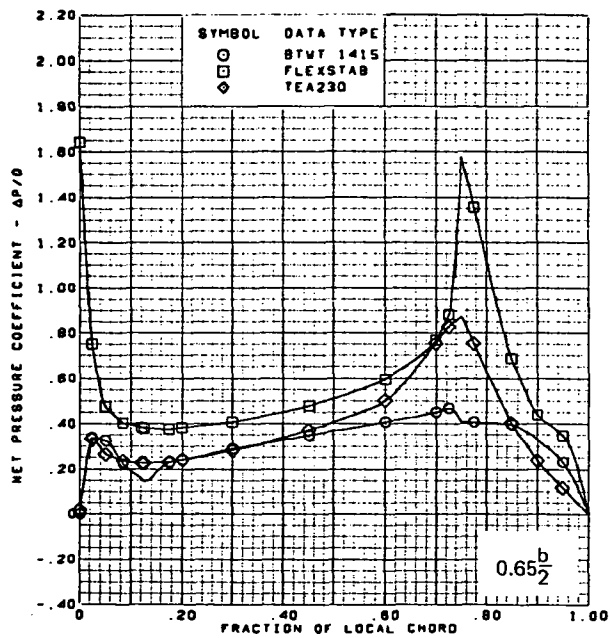
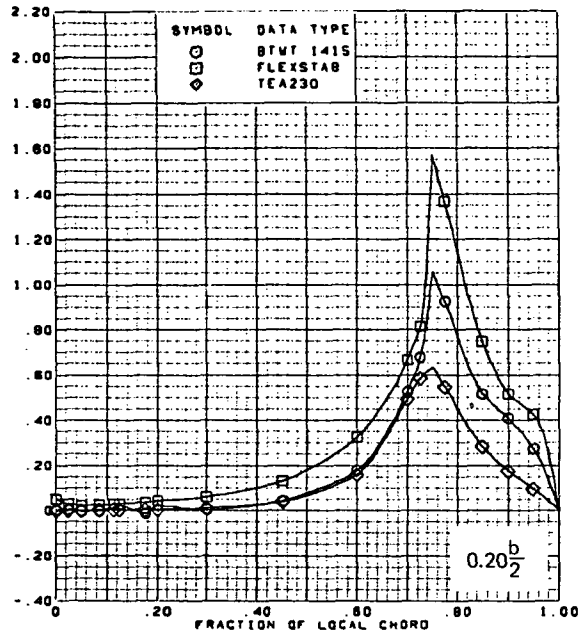
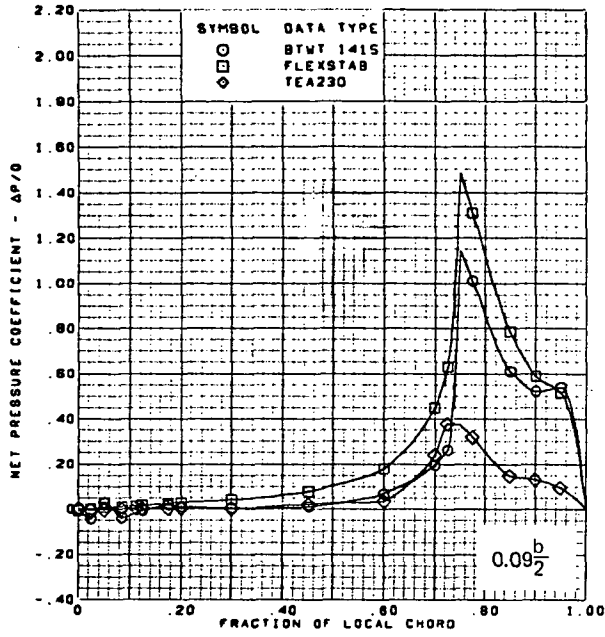


M = 0.85 (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

( b ) ( Concluded )

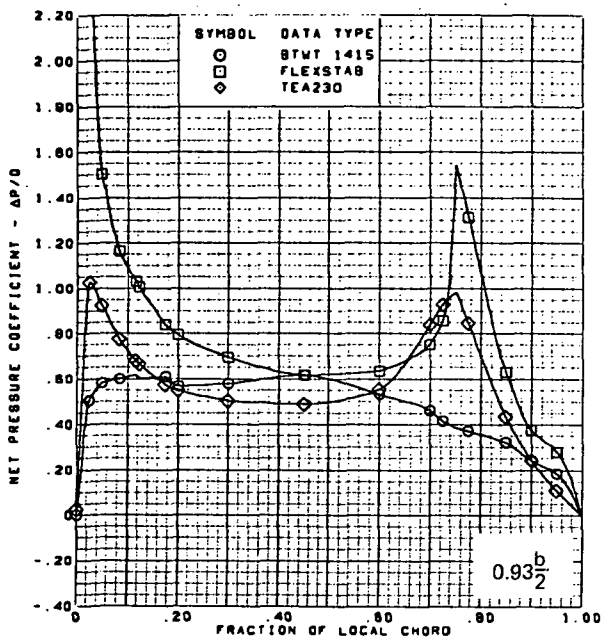
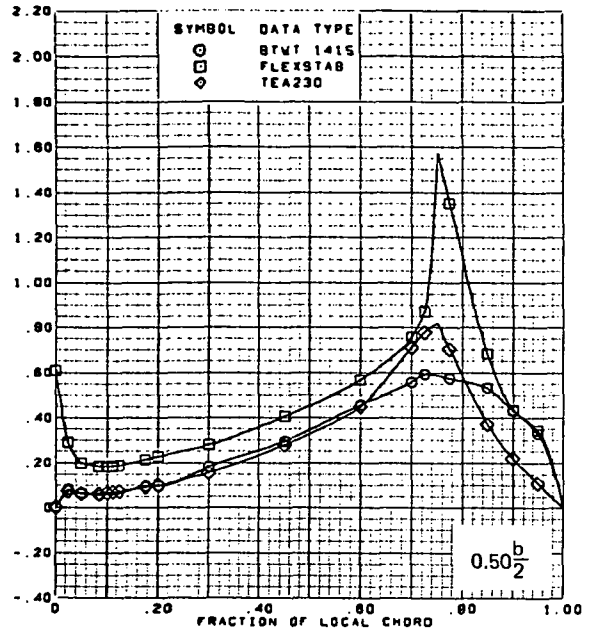
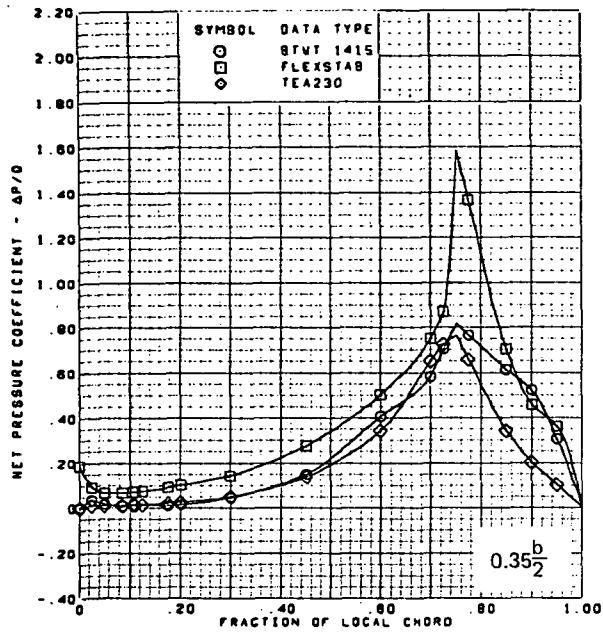
Figure 29.-(Continued)





(c) Net Chordwise Pressure Distributions,  $\alpha = -0.1^\circ$

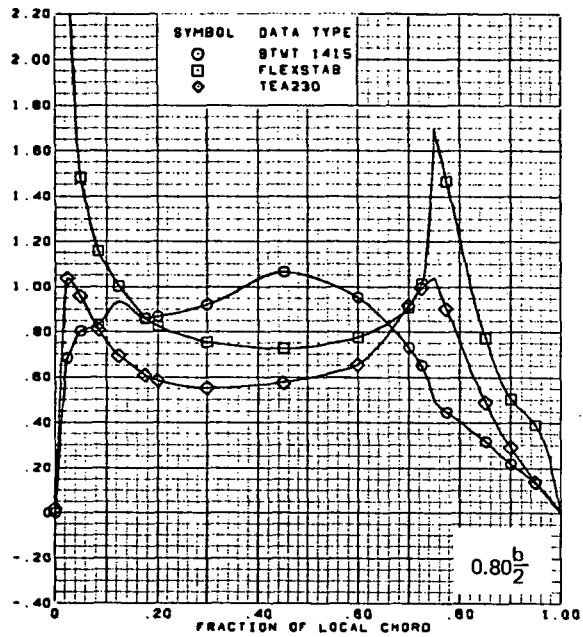
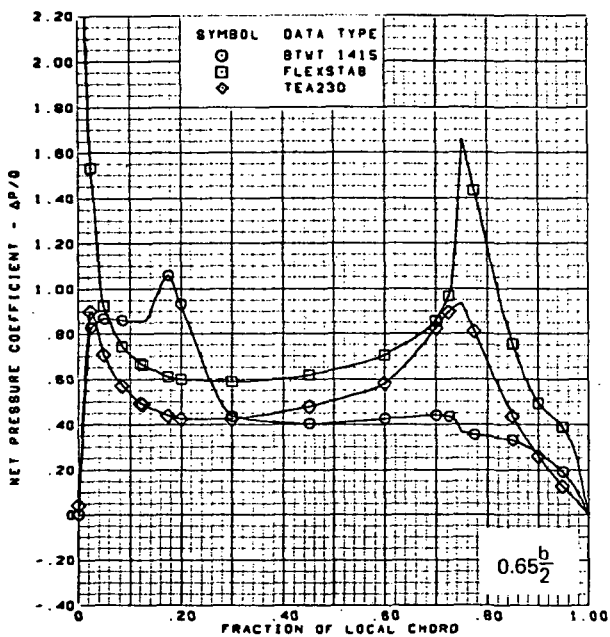
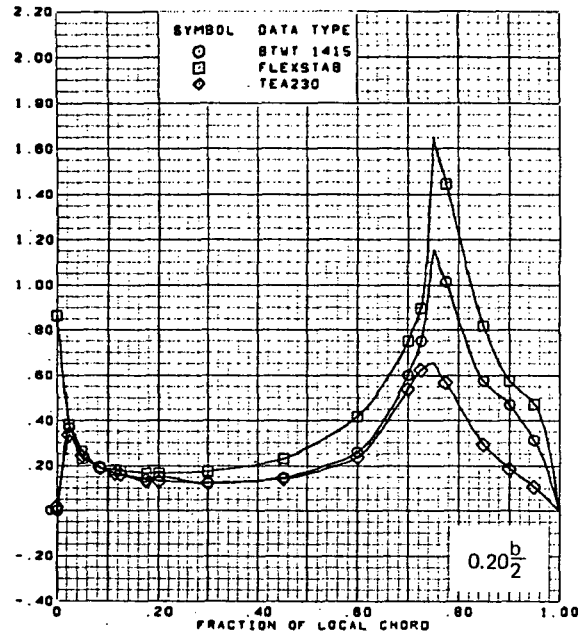
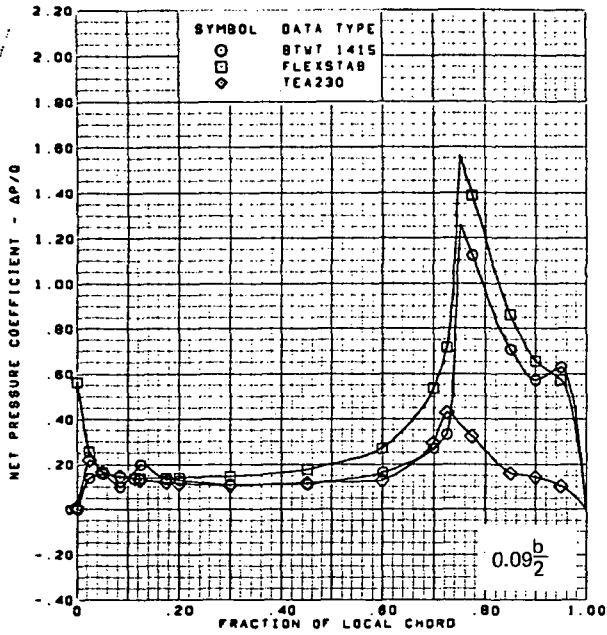
Figure 29.-(Continued)



M = 0.85 (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

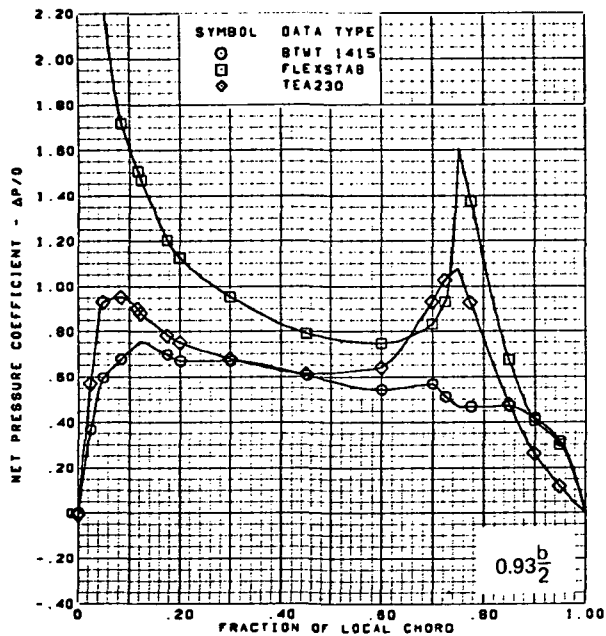
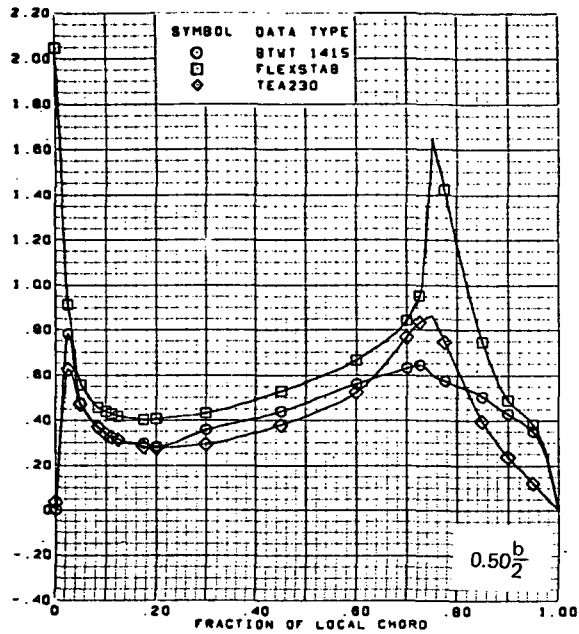
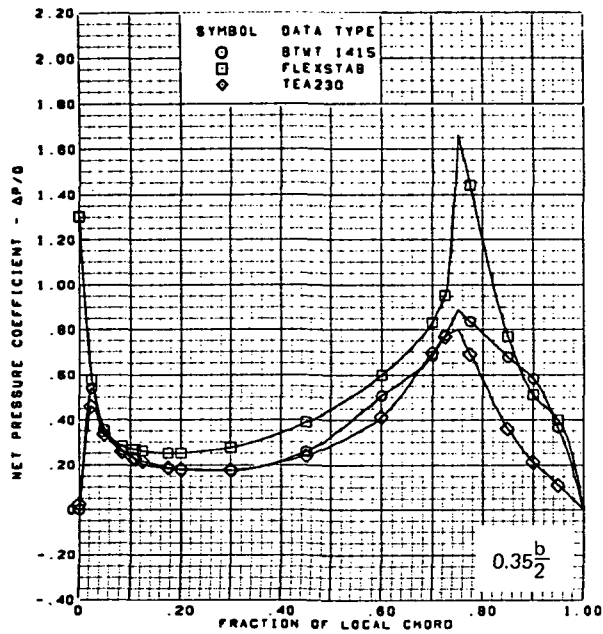
(c) (Concluded)

Figure 29.-(Continued)



(d) Net Chordwise Pressure Distributions,  $\alpha = 3.9^\circ$

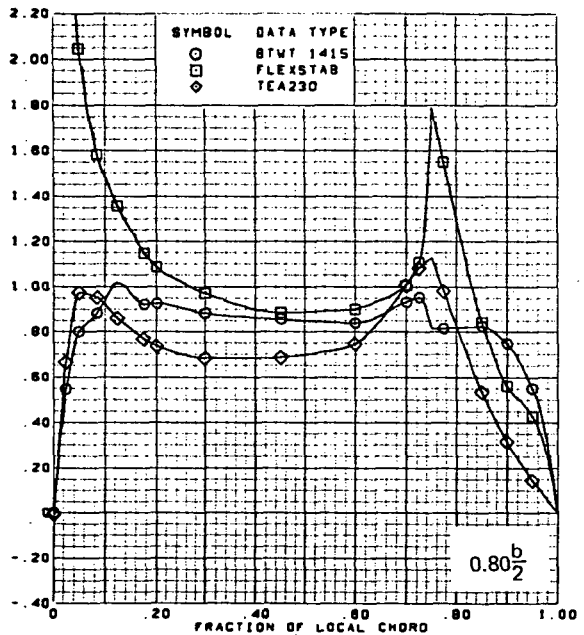
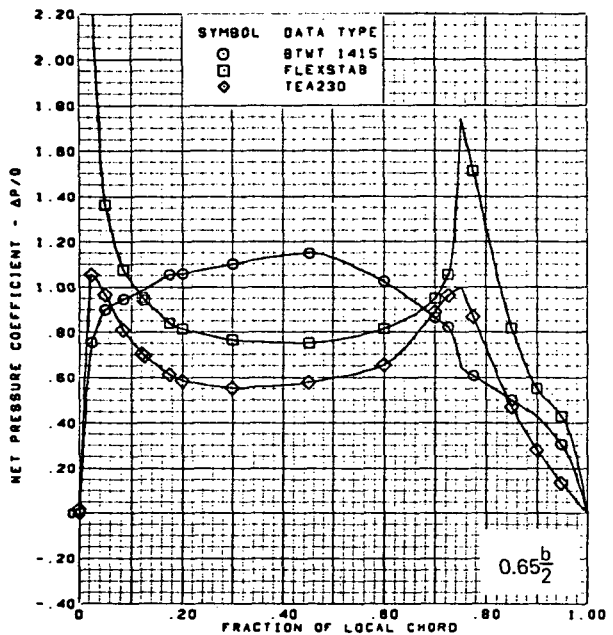
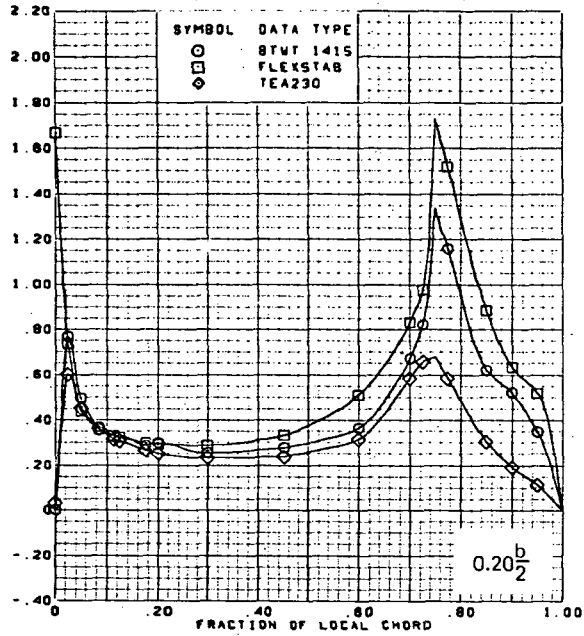
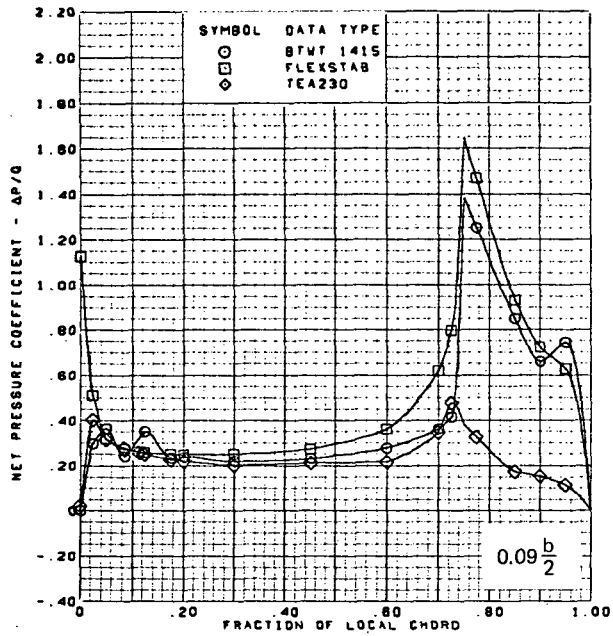
Figure 29.-(Continued)



M = 0.85 (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

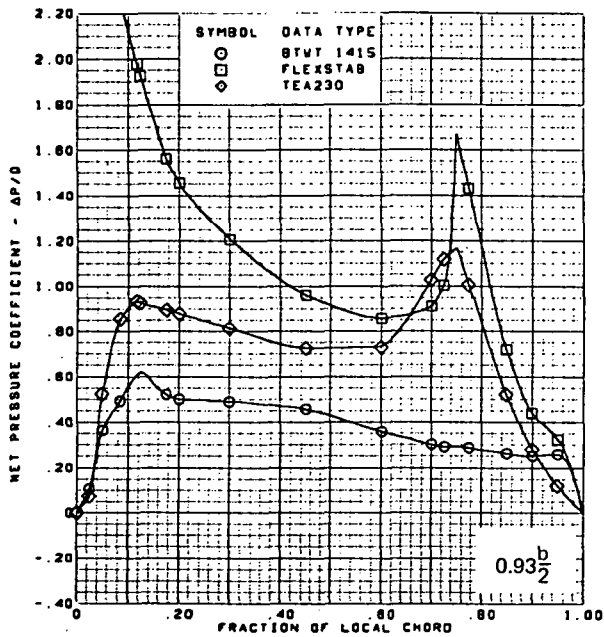
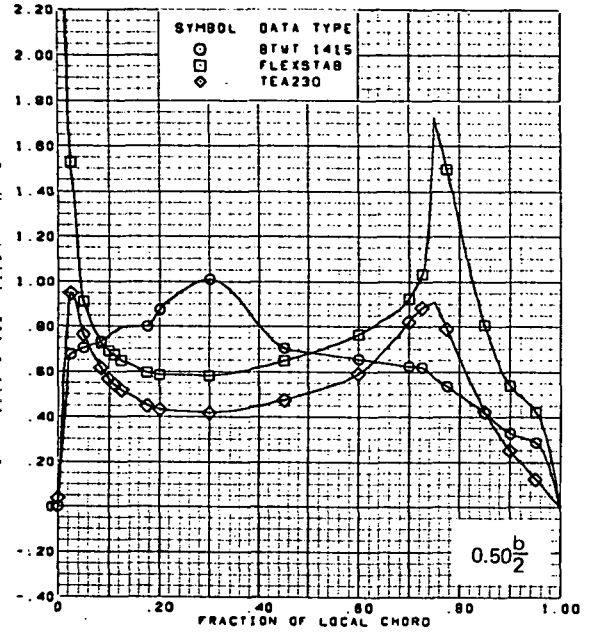
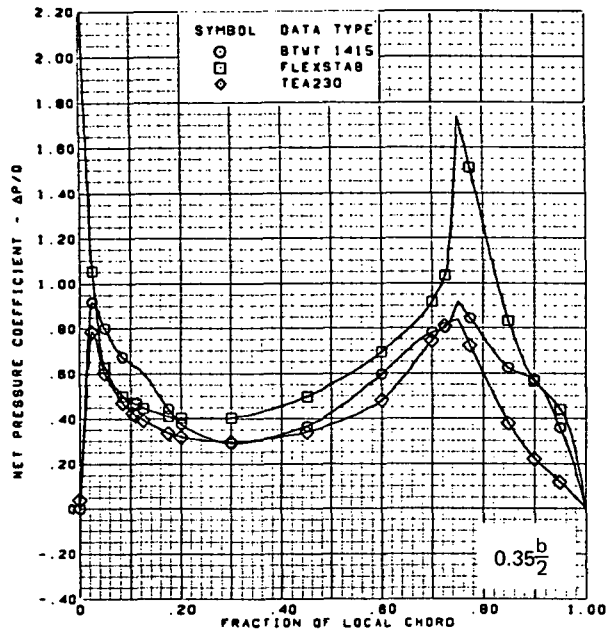
(d) (Concluded)

Figure 29.-(Continued)



(e) Net Chordwise Pressure Distributions,  $\alpha = 7.8^\circ$

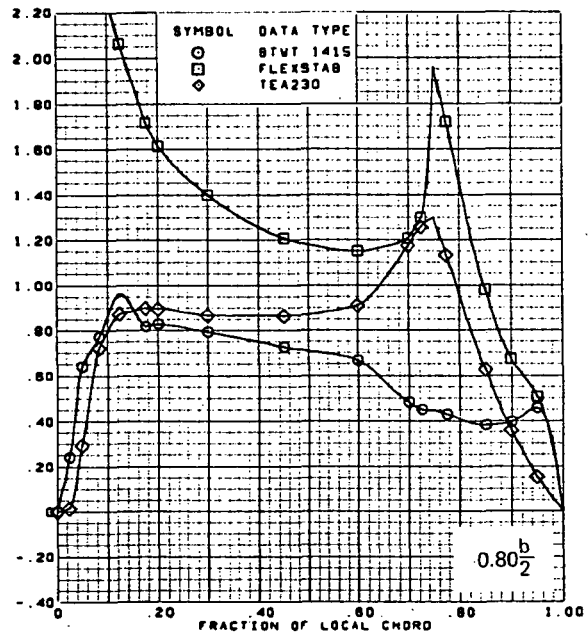
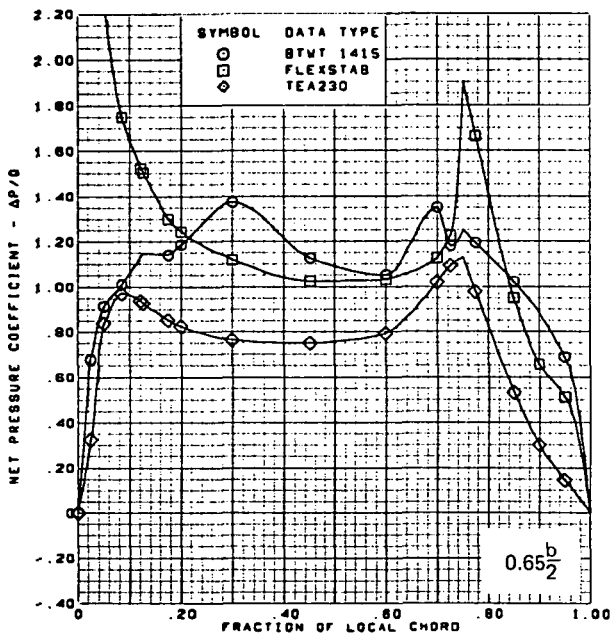
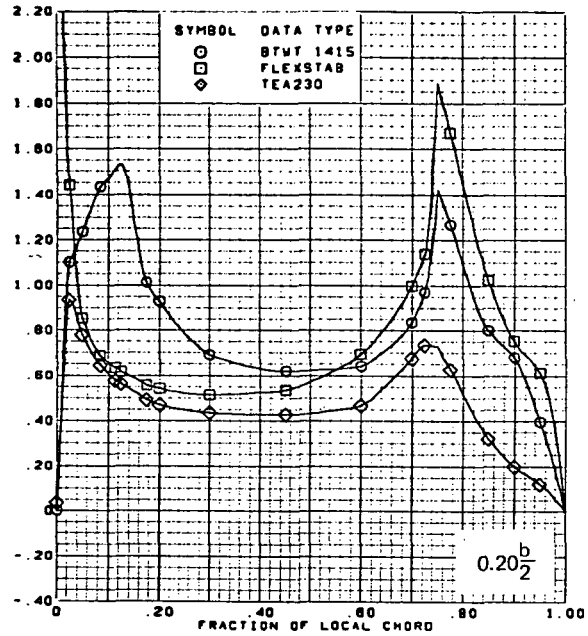
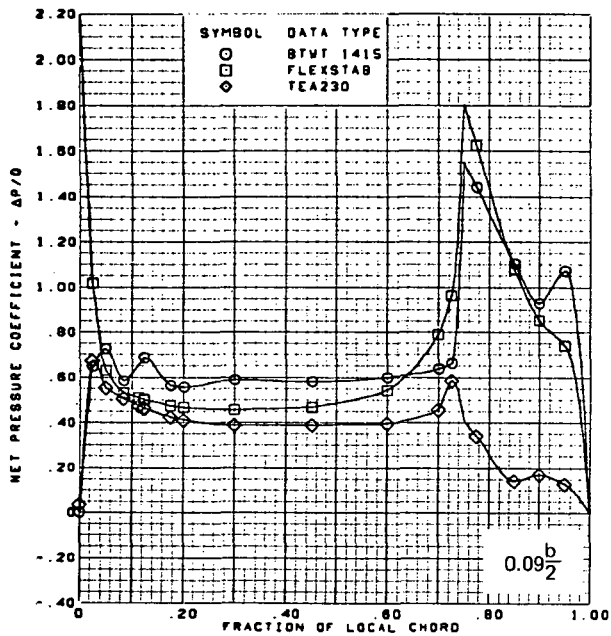
Figure 29.-(Continued)



M = 0.85 (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

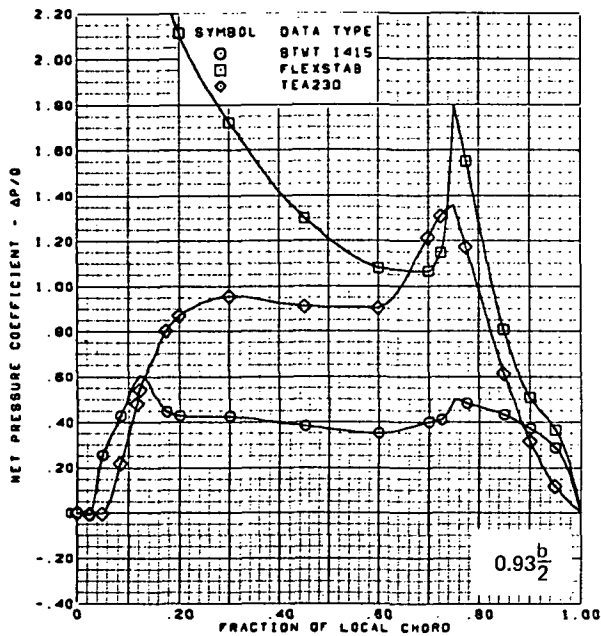
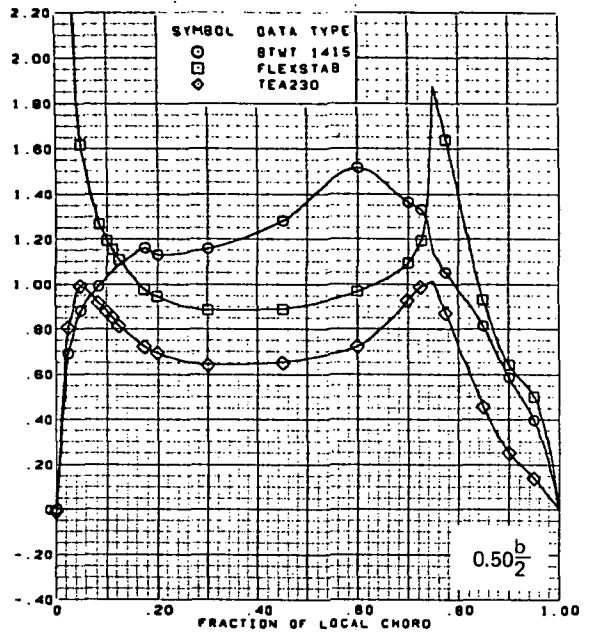
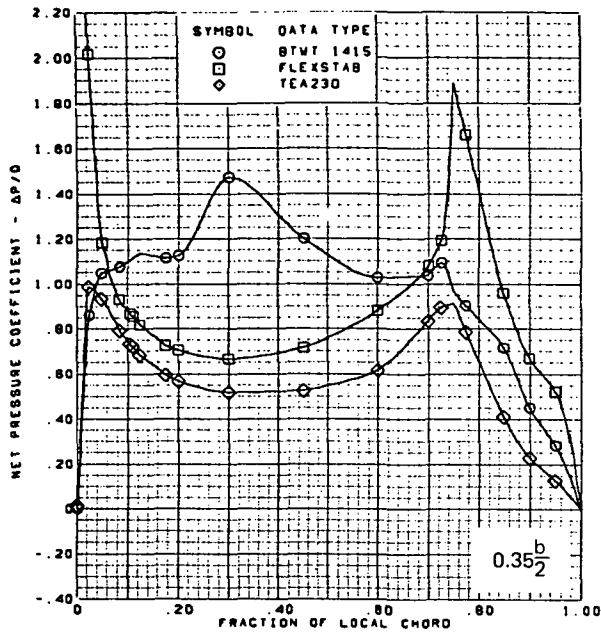
(e) (Concluded)

Figure 29.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha = 15.7^\circ$

Figure 29.-(Continued)

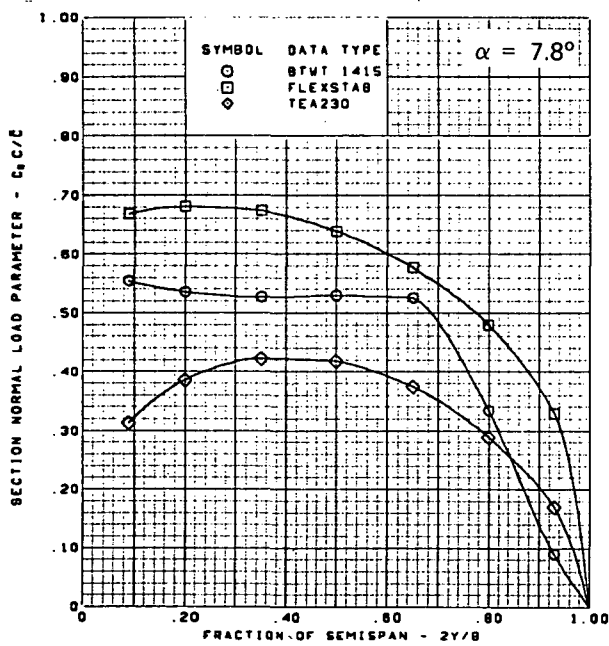
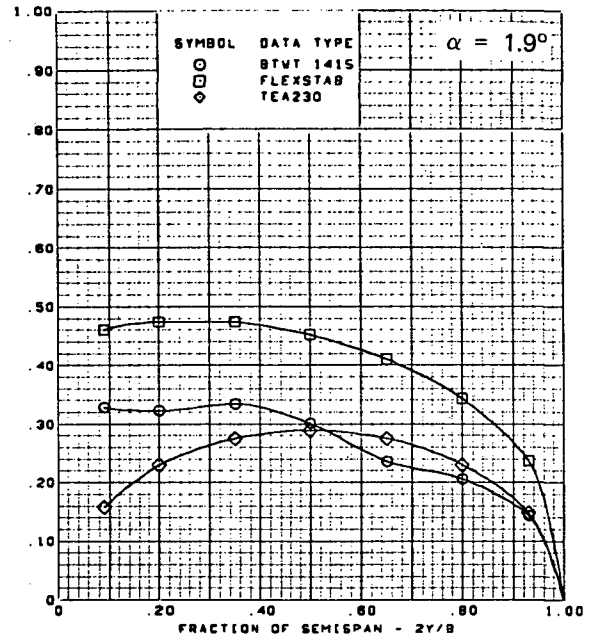
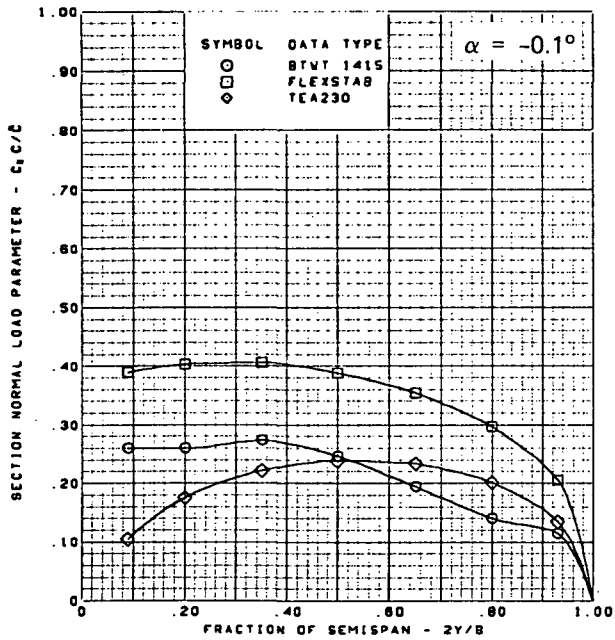


M = 0.85 (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

( f ) (Concluded)

Figure 29.--(Continued)

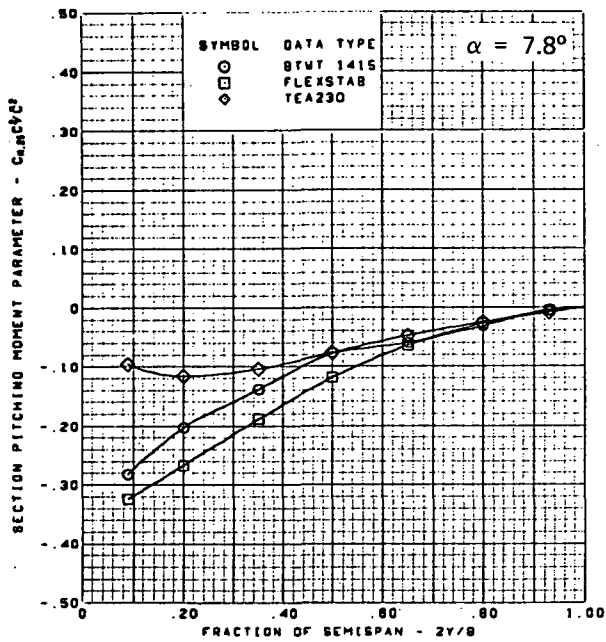
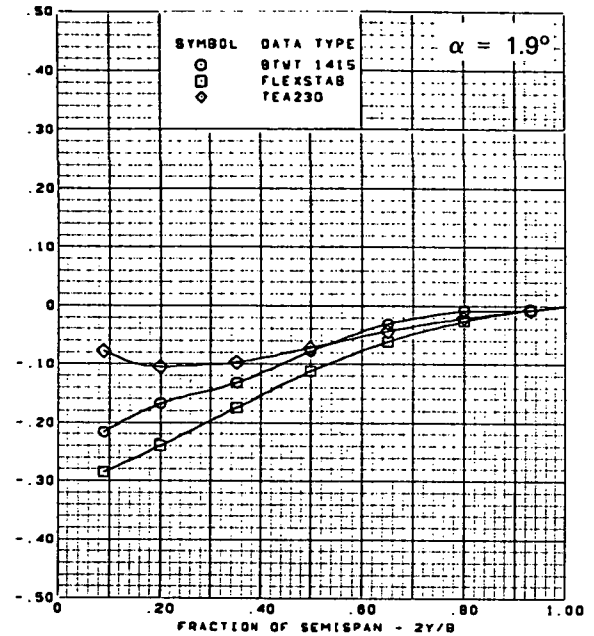
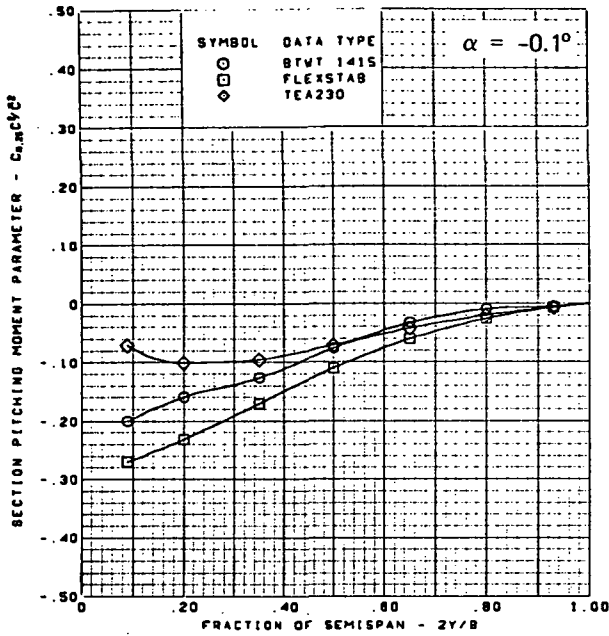




$M = 0.85$  (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

(i) Spanload Distributions—Normal Force

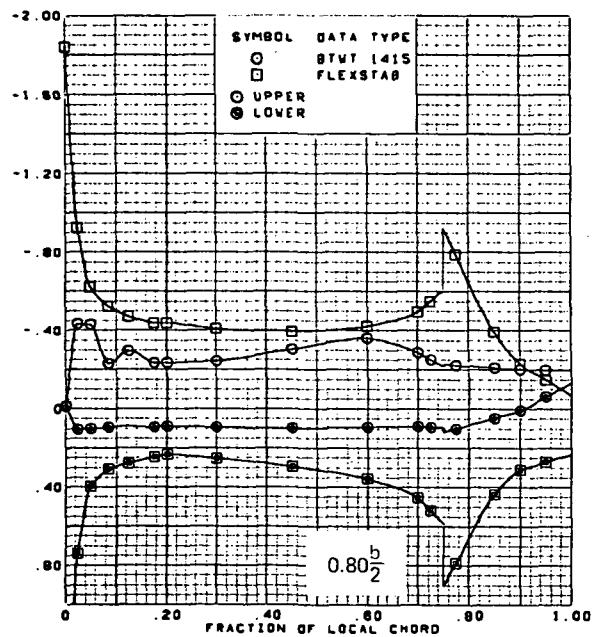
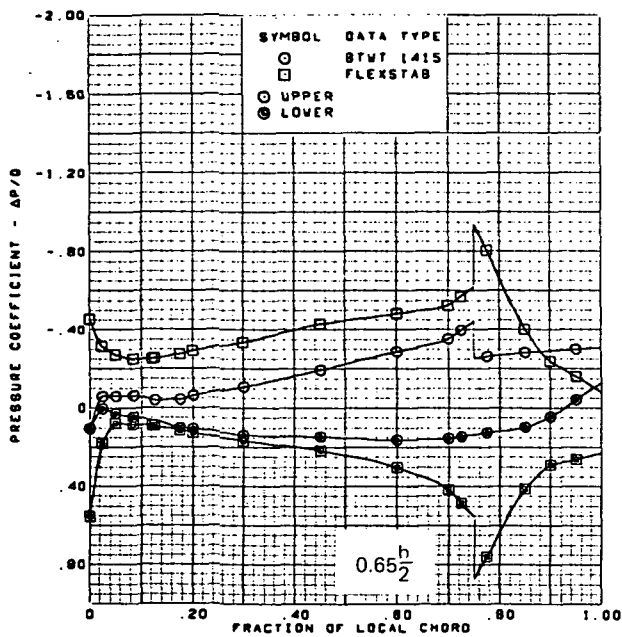
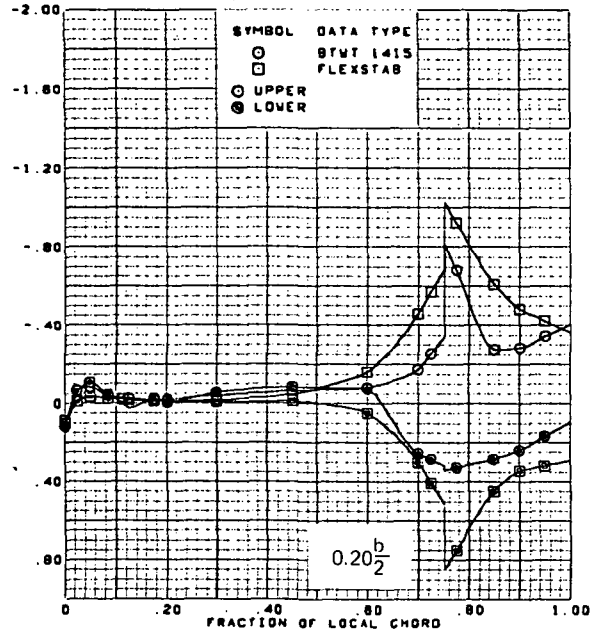
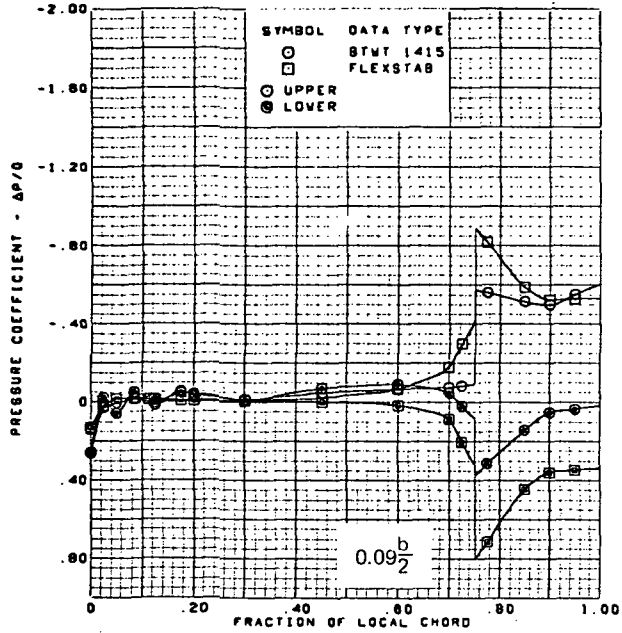
Figure 29.—(Continued)



$M = 0.85$  (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

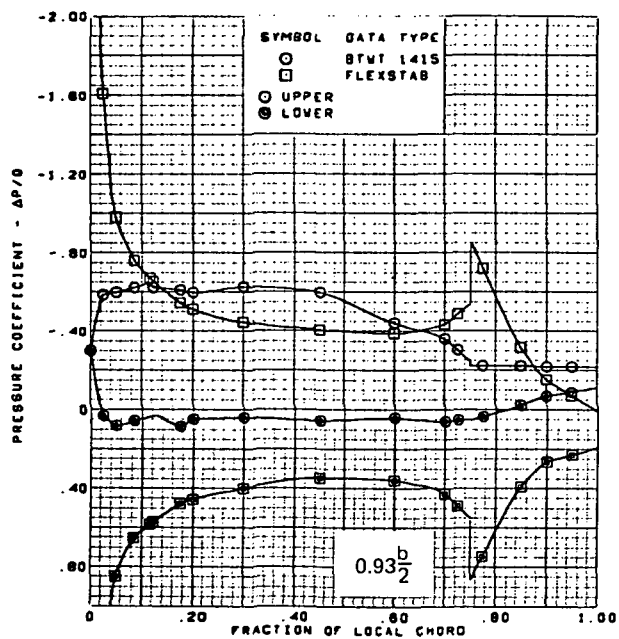
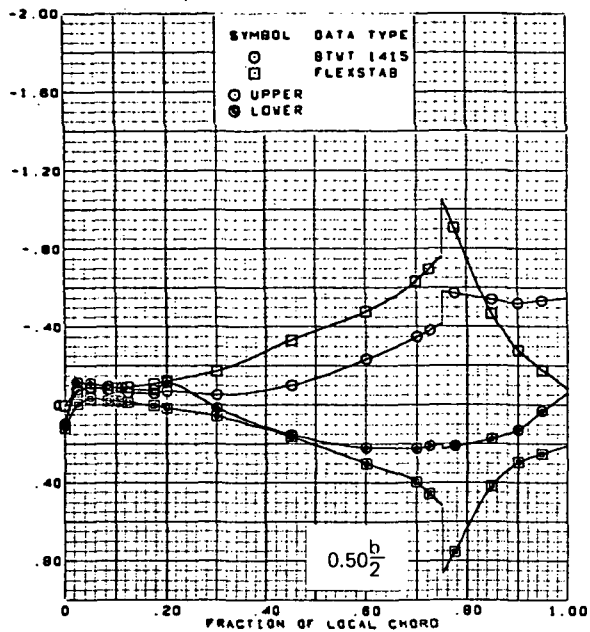
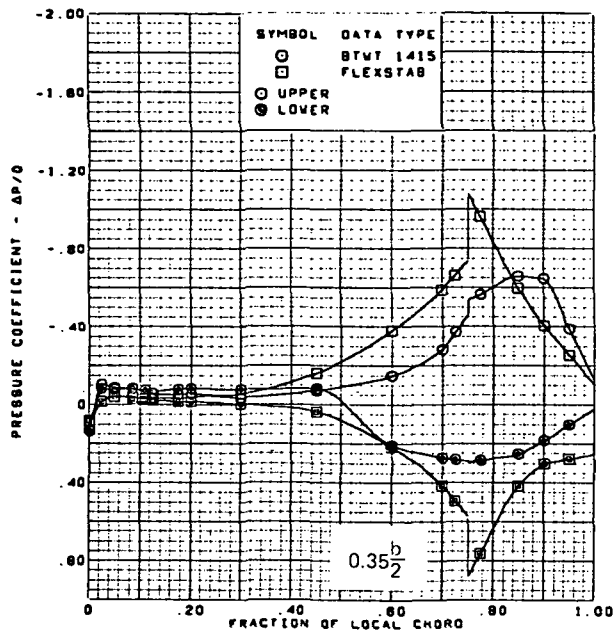
(h) Spanload Distributions—Pitching Moment

Figure 29.— (Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = -0.1^\circ$

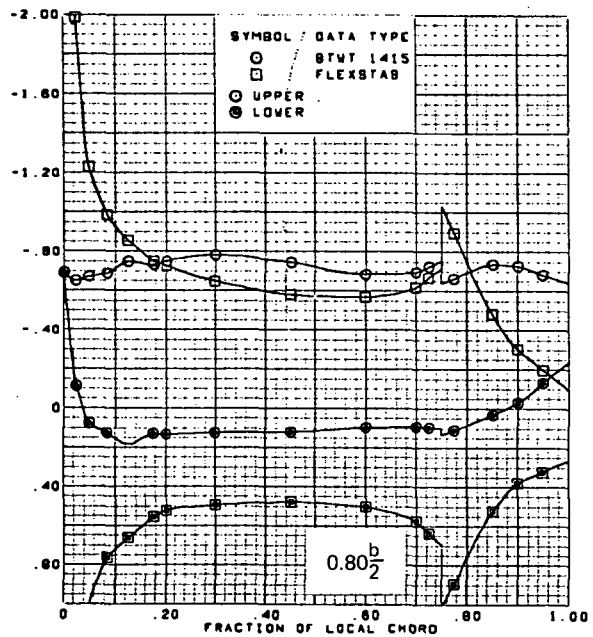
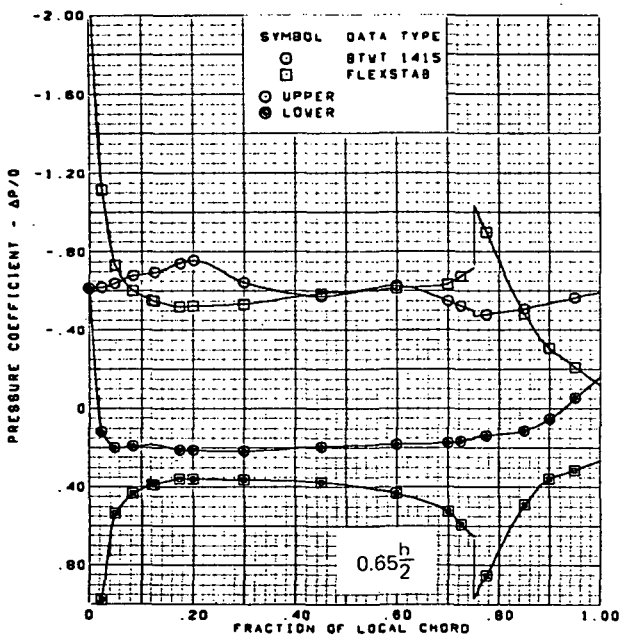
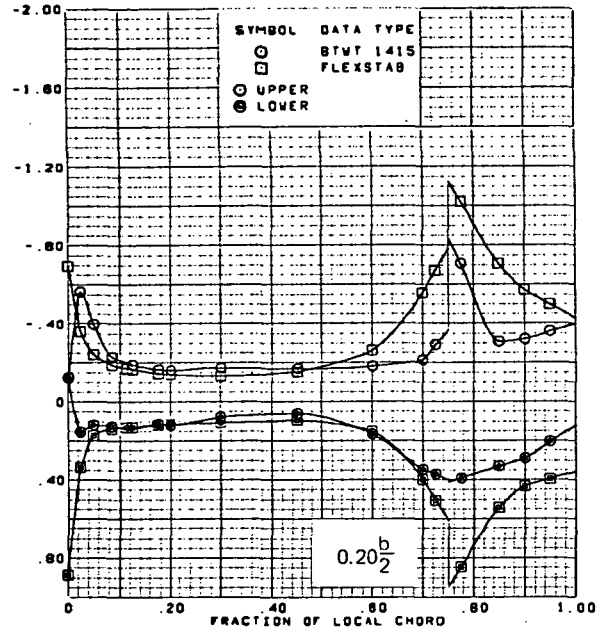
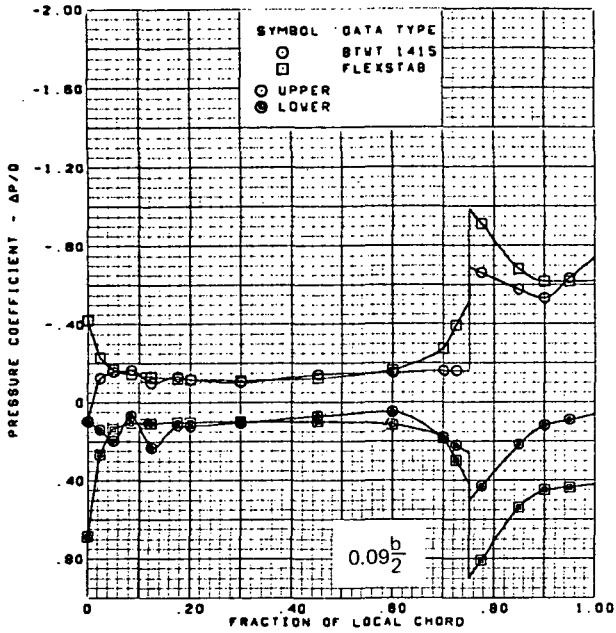
Figure 30.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $17.7^\circ$ ;  $M = 1.05$



$M = 1.05$  (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

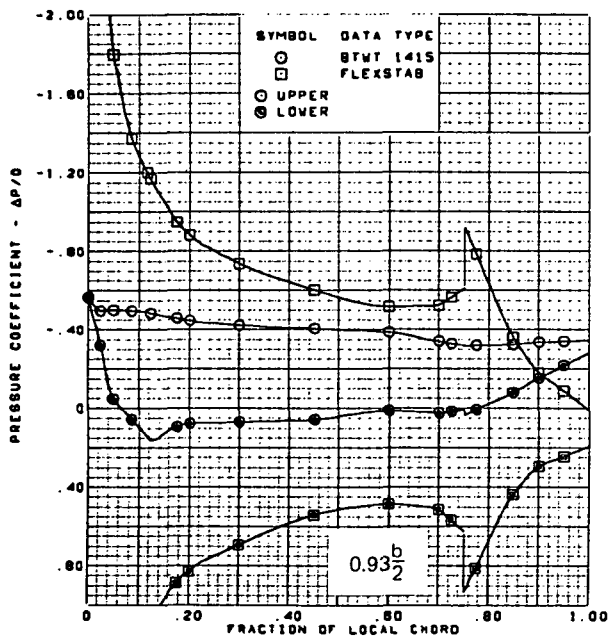
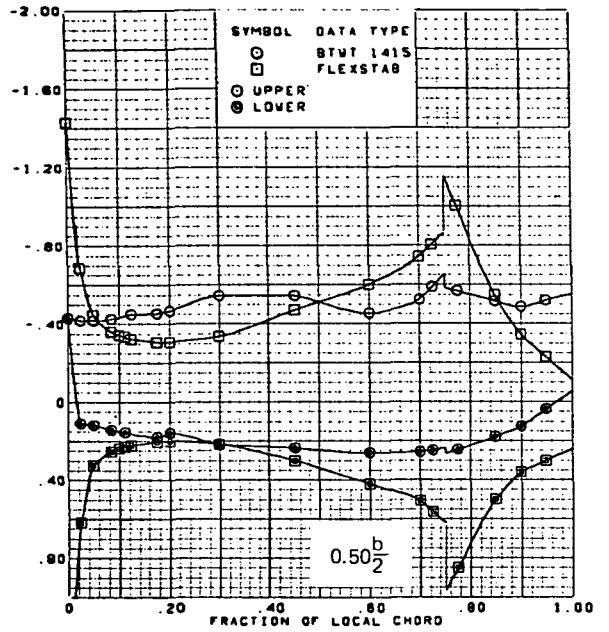
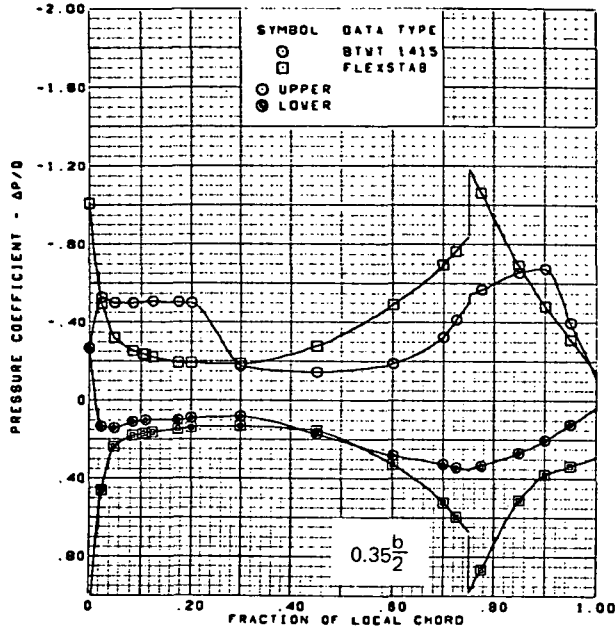
( a ) (Concluded)

Figure 30.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.8^\circ$

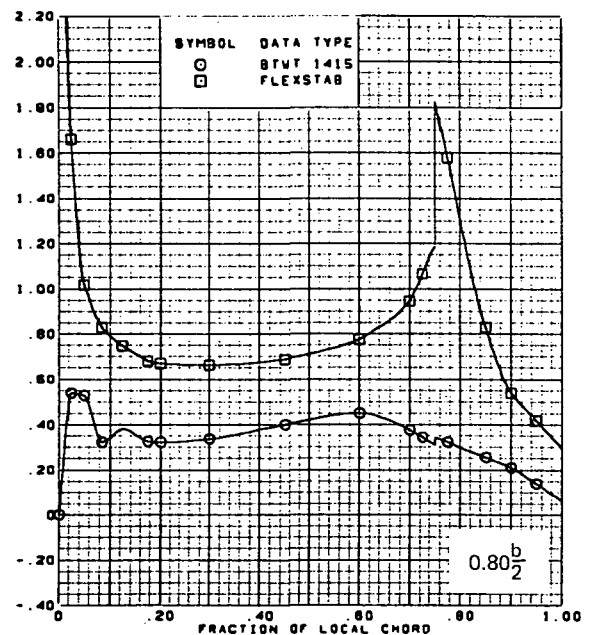
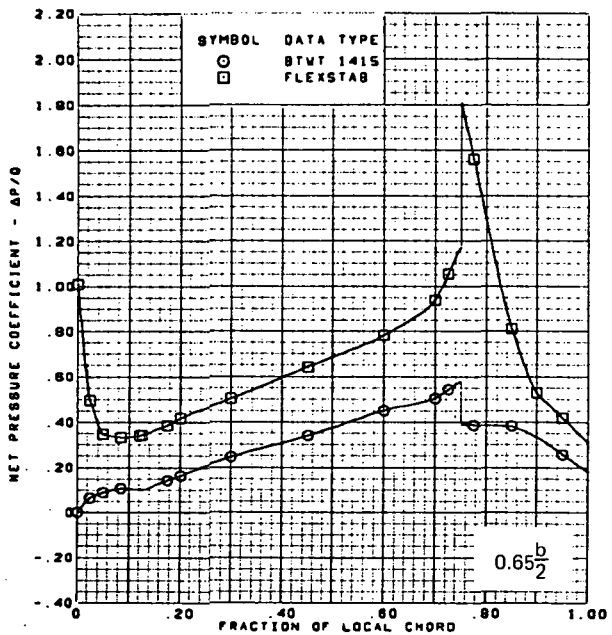
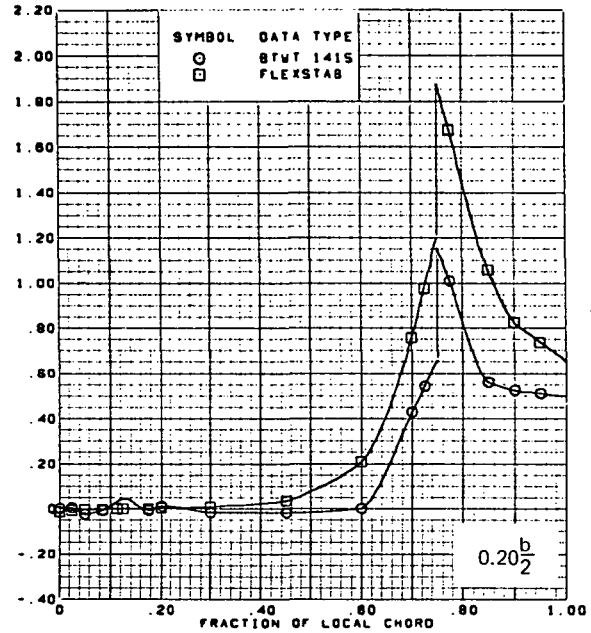
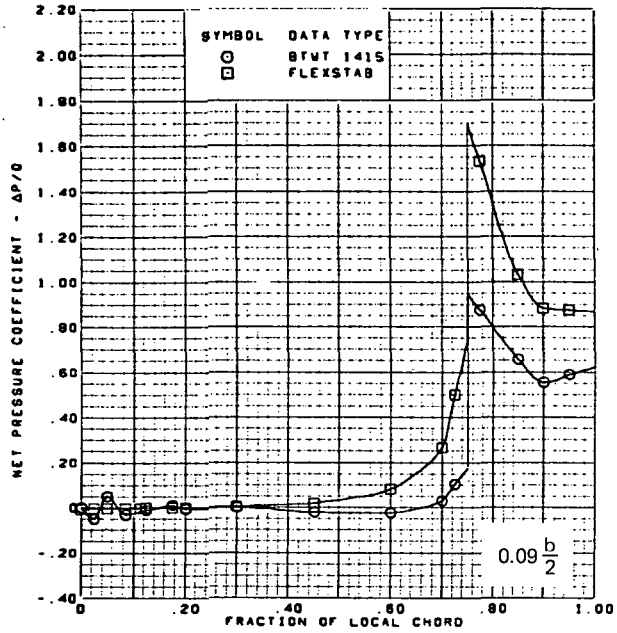
Figure 30.-(Continued)



$M = 1.05$  (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

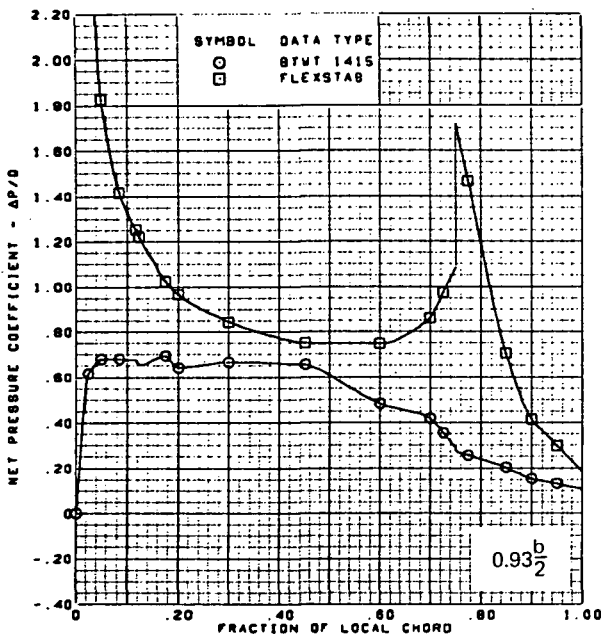
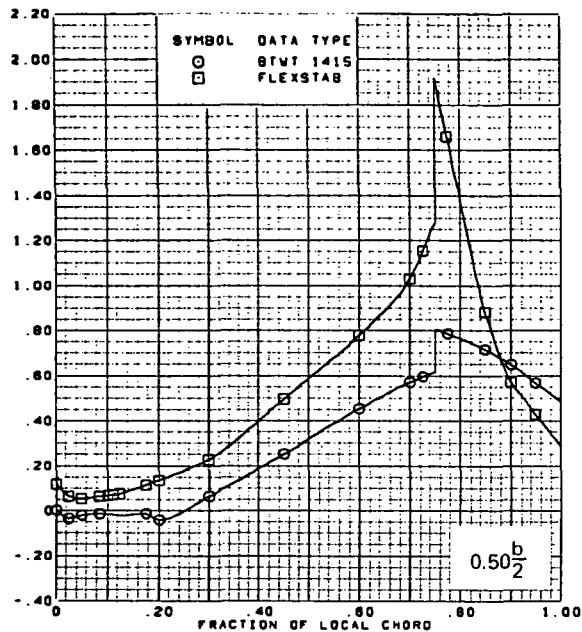
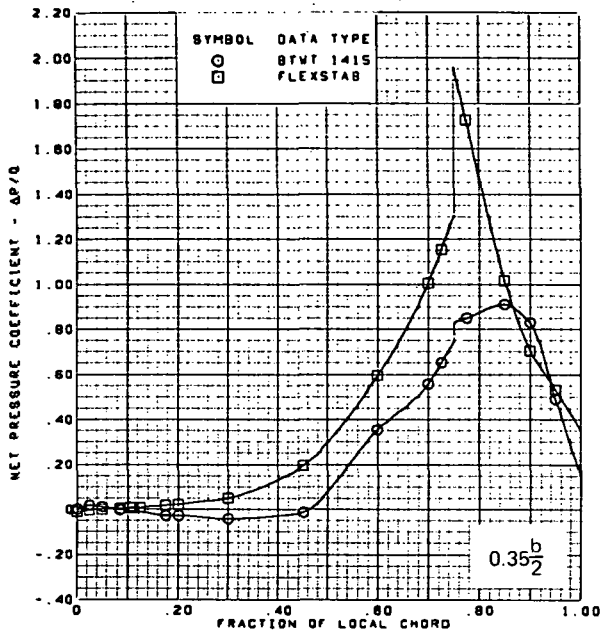
(b) (Concluded)

Figure 30.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = -0.1^\circ$

Figure 30.-(Continued)

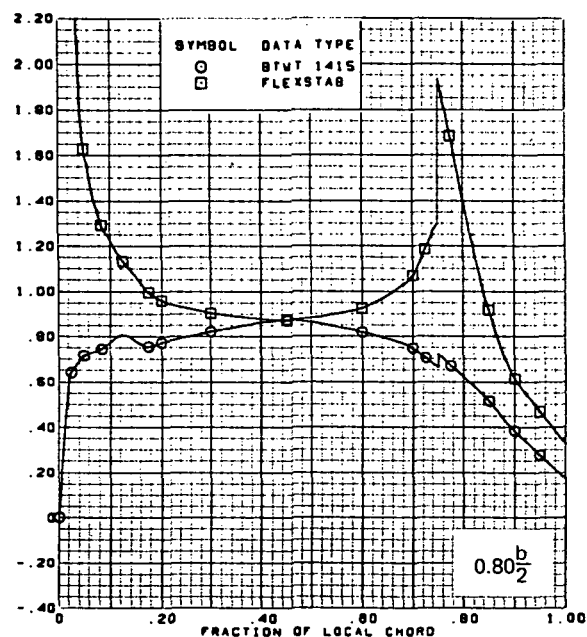
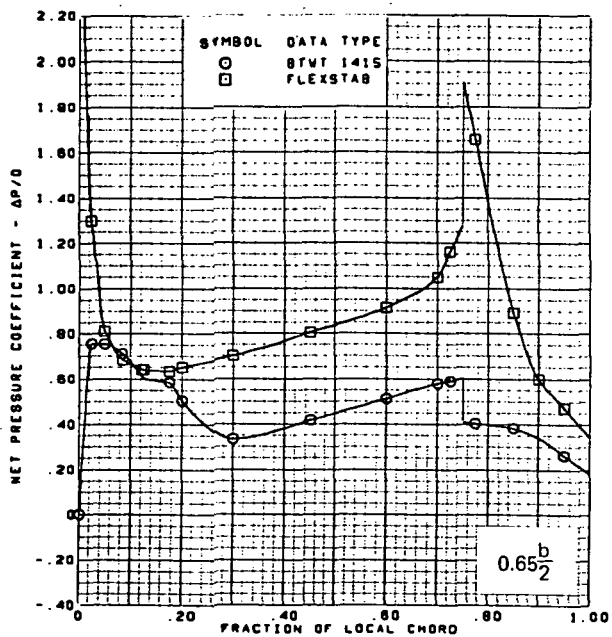
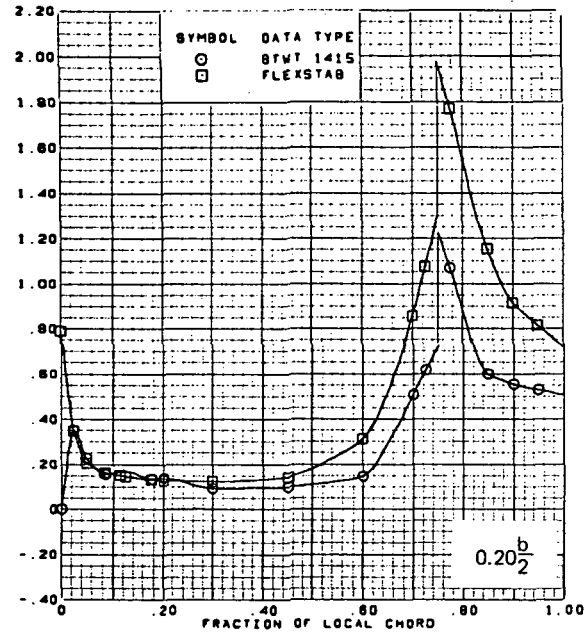
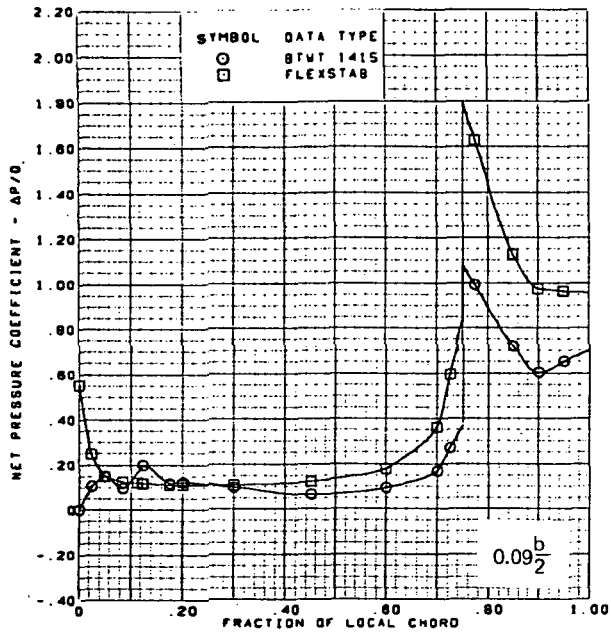


M = 1.05 (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

(c) (Concluded)

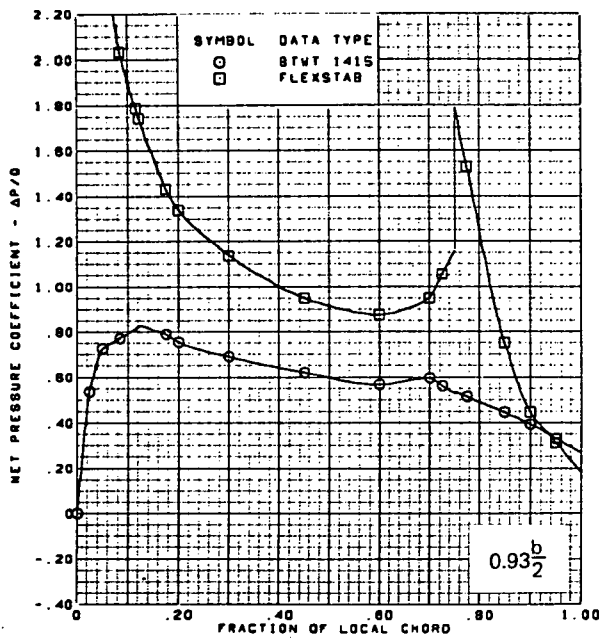
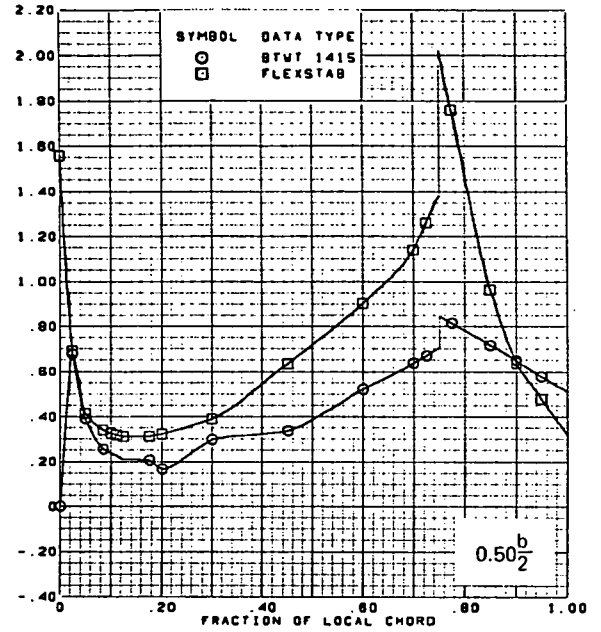
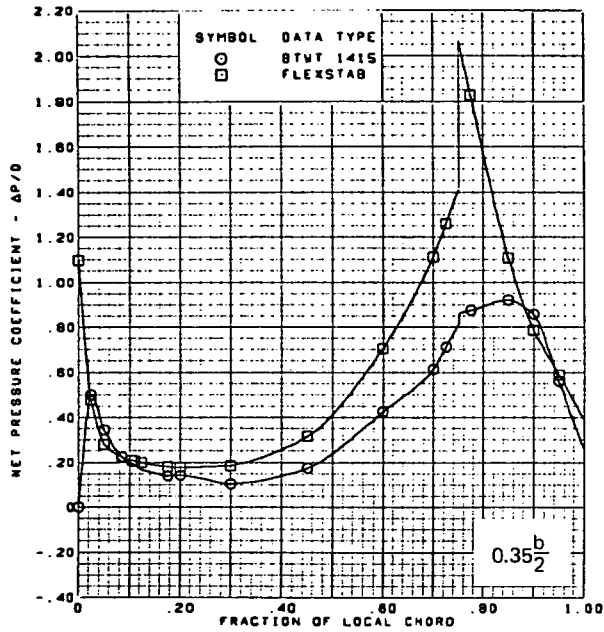
Figure 30.-(Continued)





(d) Net Chordwise Pressure Distributions,  $\alpha = 3.9^\circ$

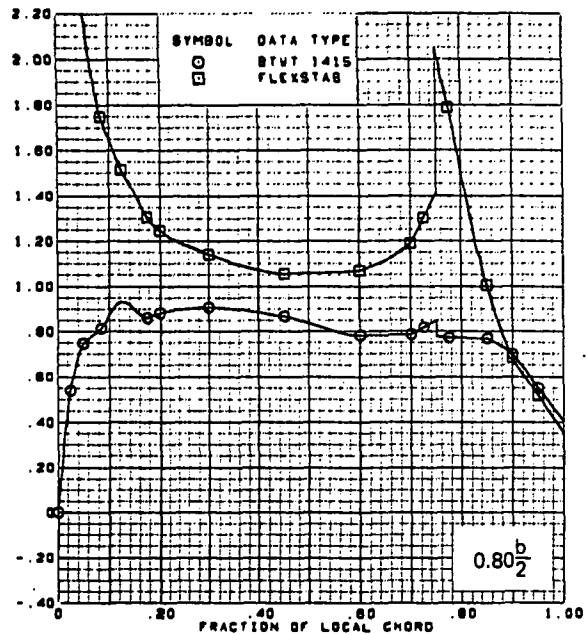
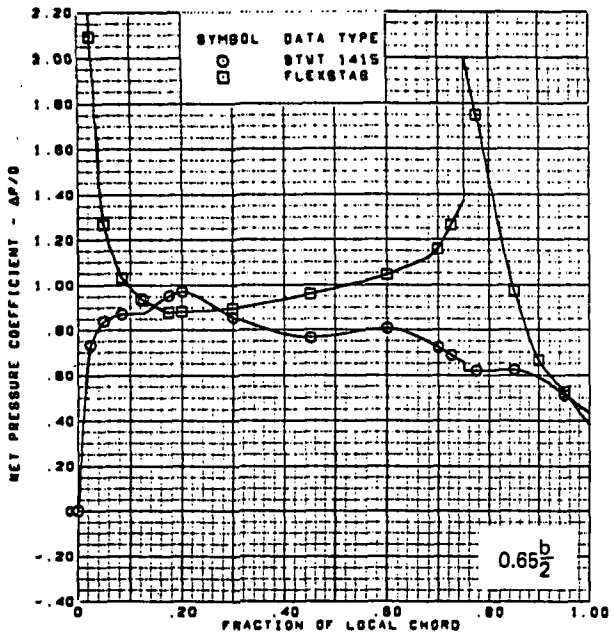
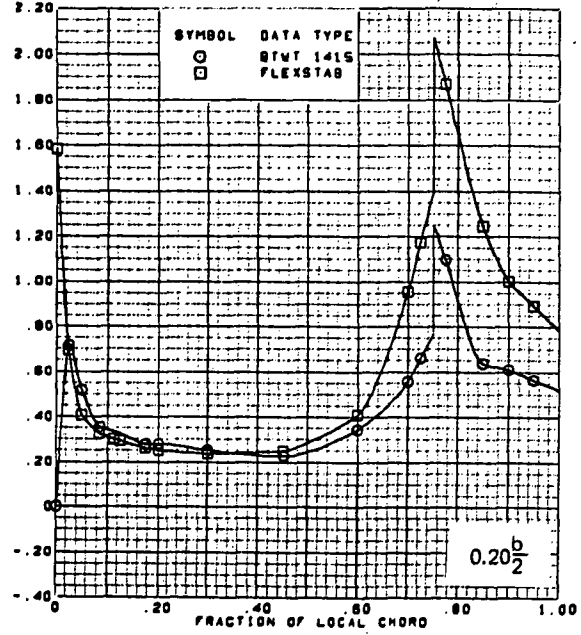
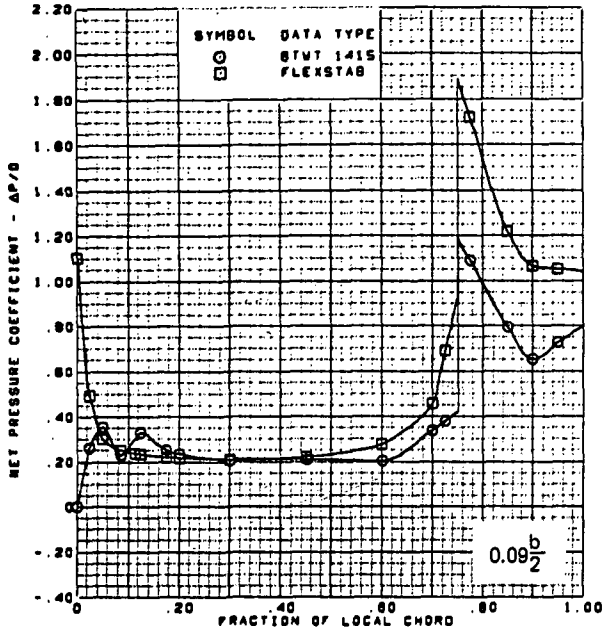
Figure 30.-(Continued)



M = 1.05 (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

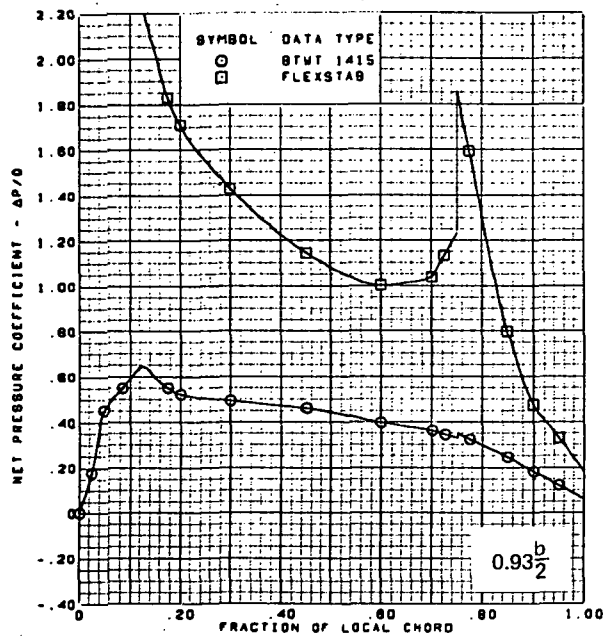
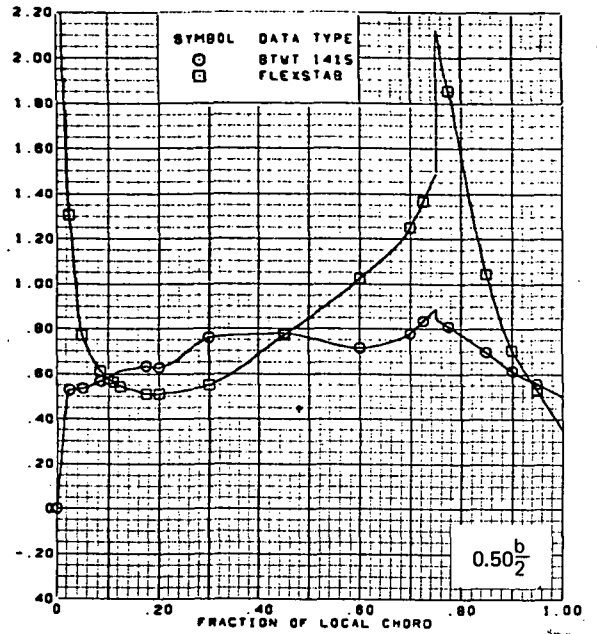
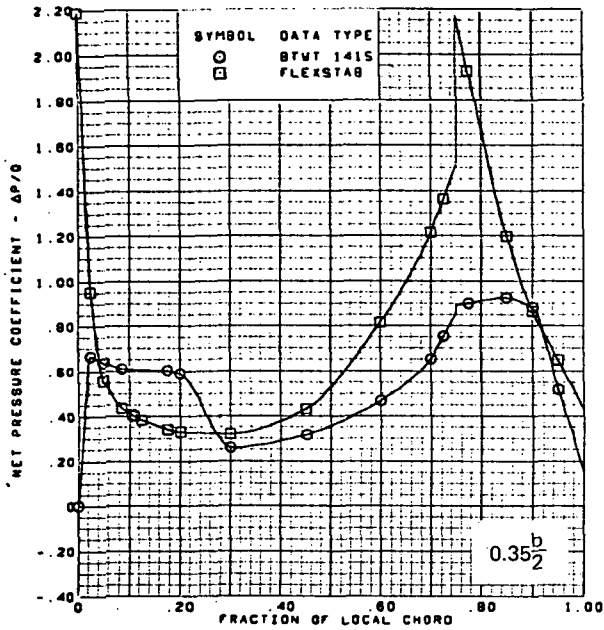
(d) (Concluded)

Figure 30.-(Continued)



(e) Net Chordwise Pressure Distributions,  $\alpha = 7.8^\circ$

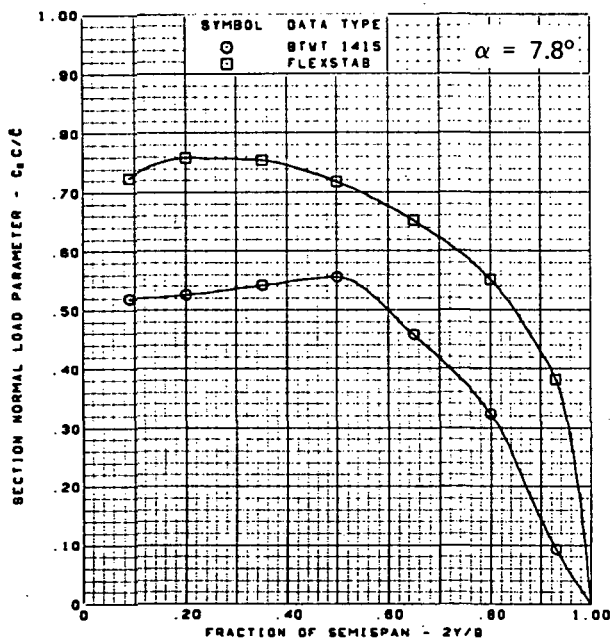
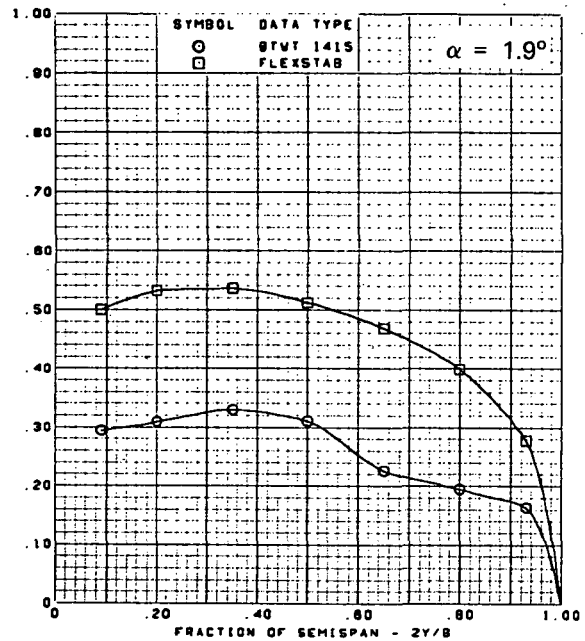
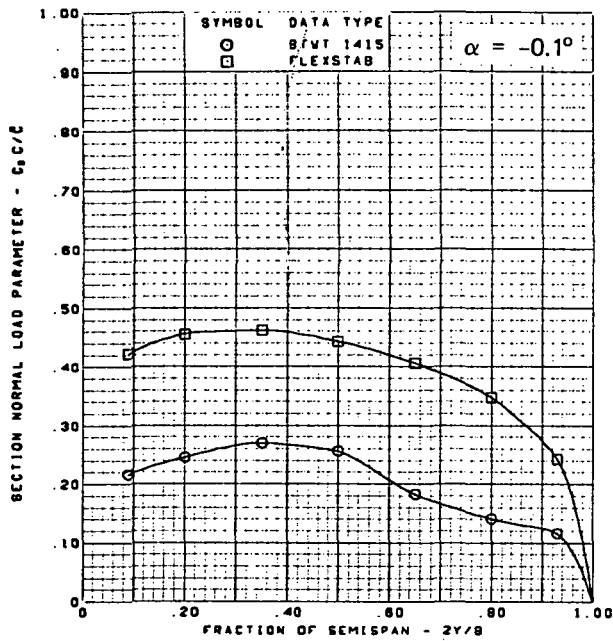
Figure 30.-(Continued)



$M = 1.05$  (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

(e) (Concluded)

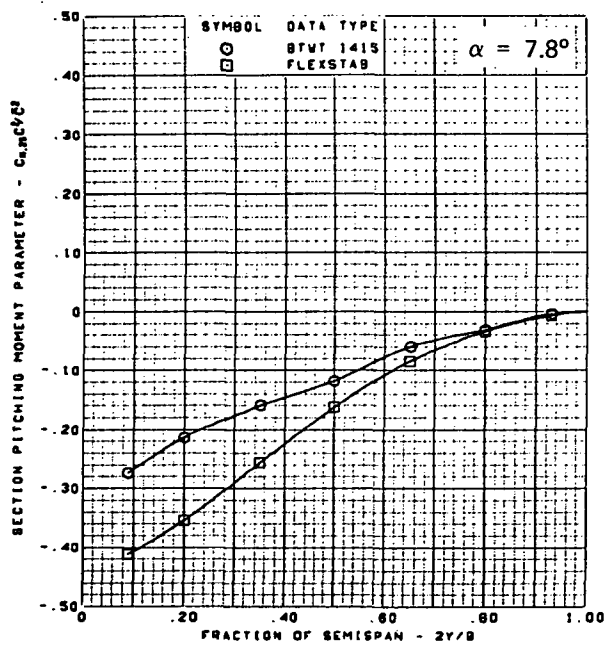
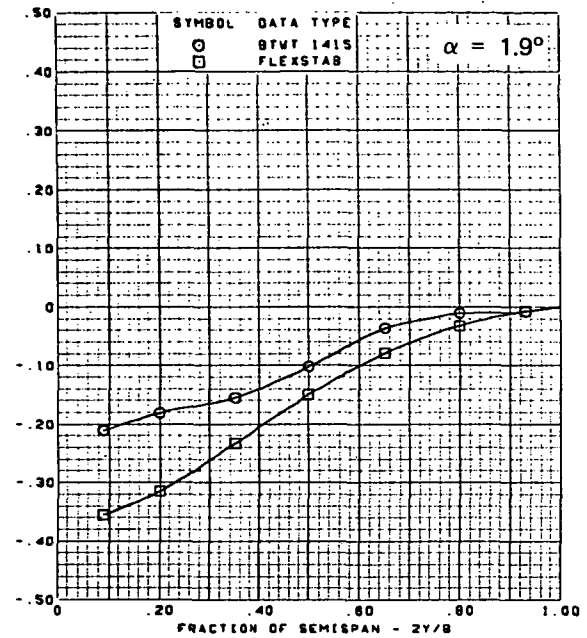
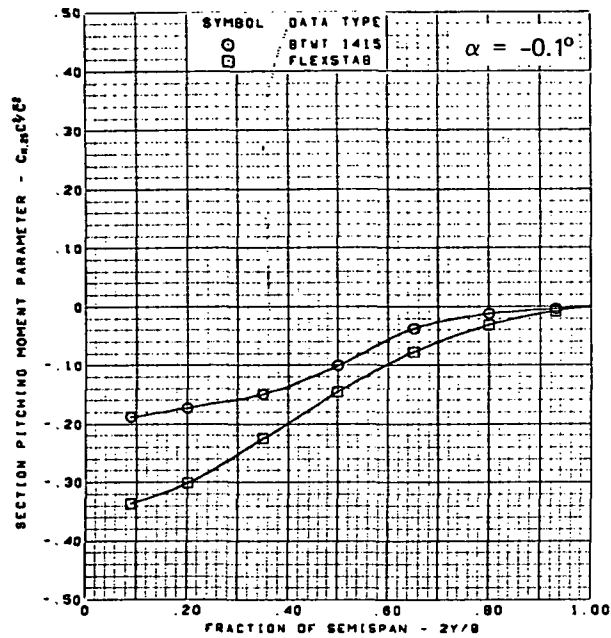
Figure 30.-(Continued)



M = 1.05 (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

(f) Spanload Distributions—Normal Force

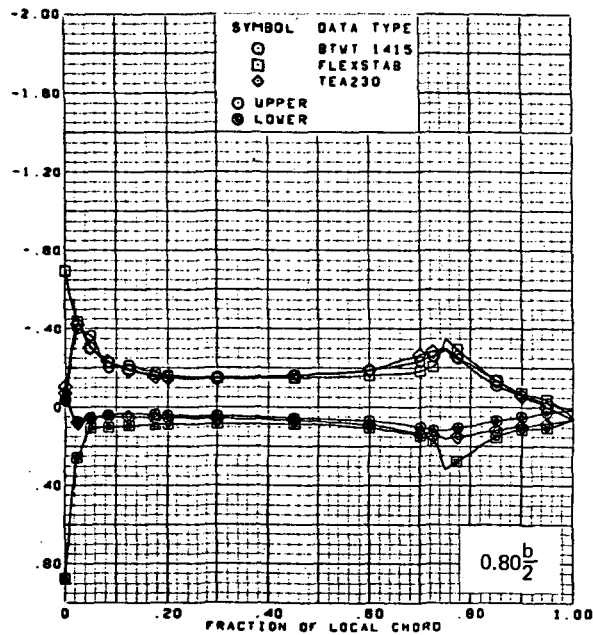
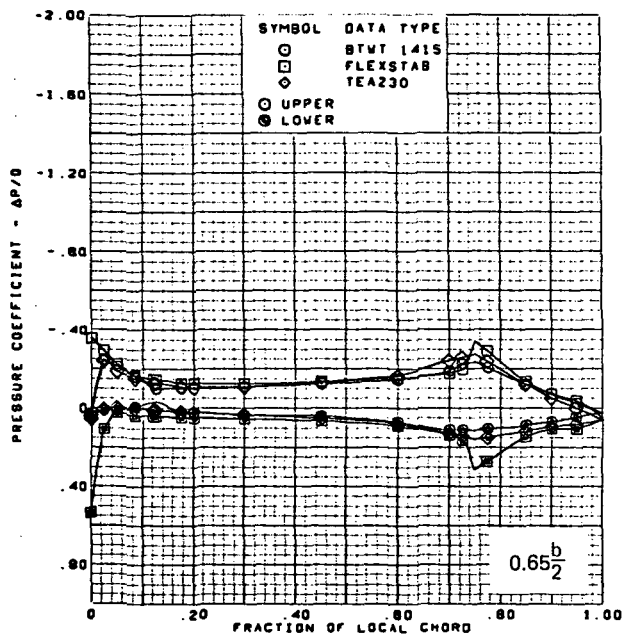
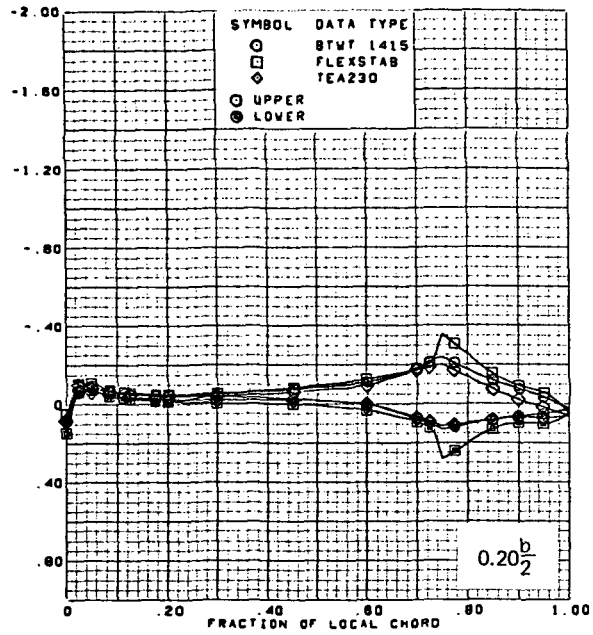
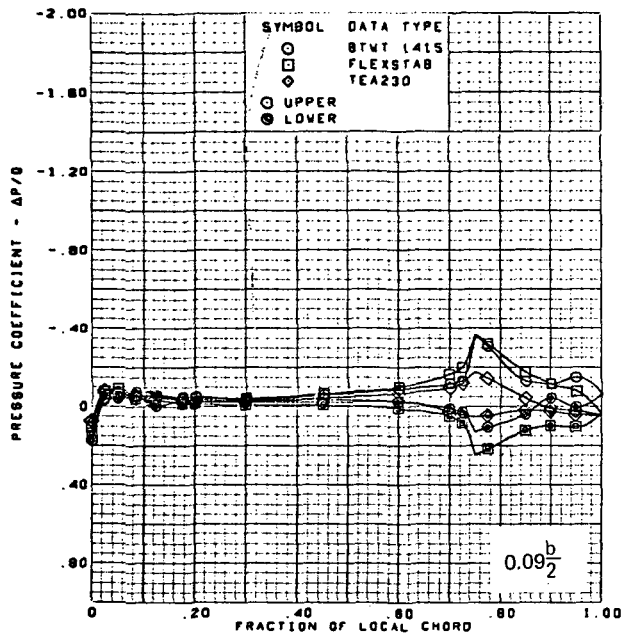
Figure 30.—(Continued)



M = 1.05 (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 17.7°

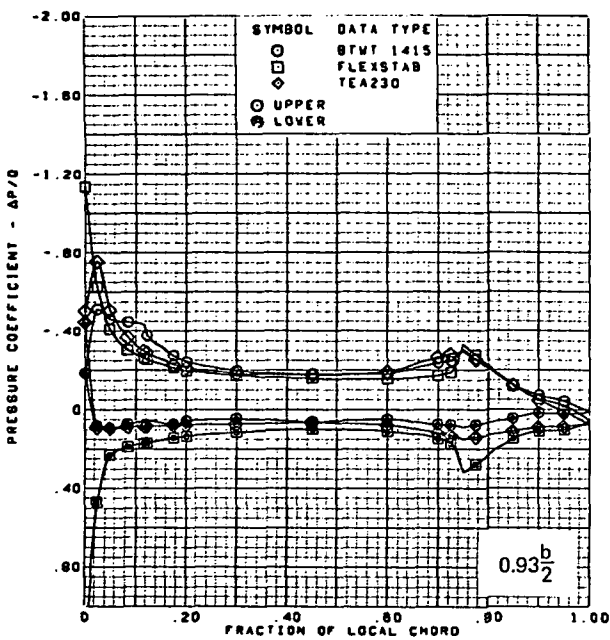
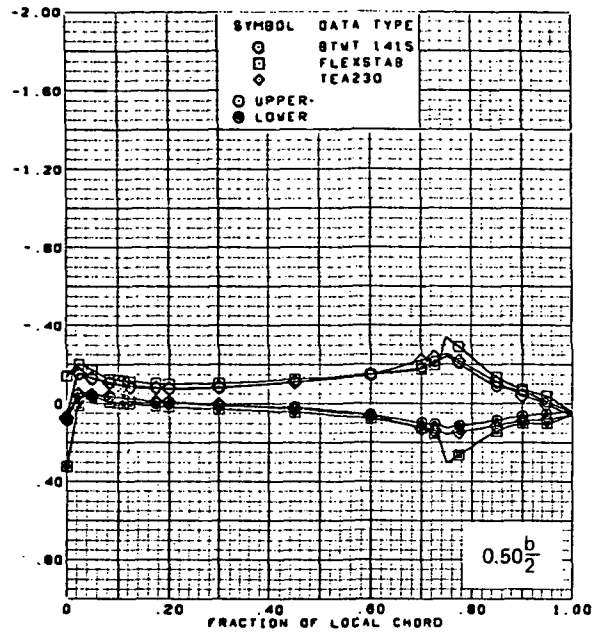
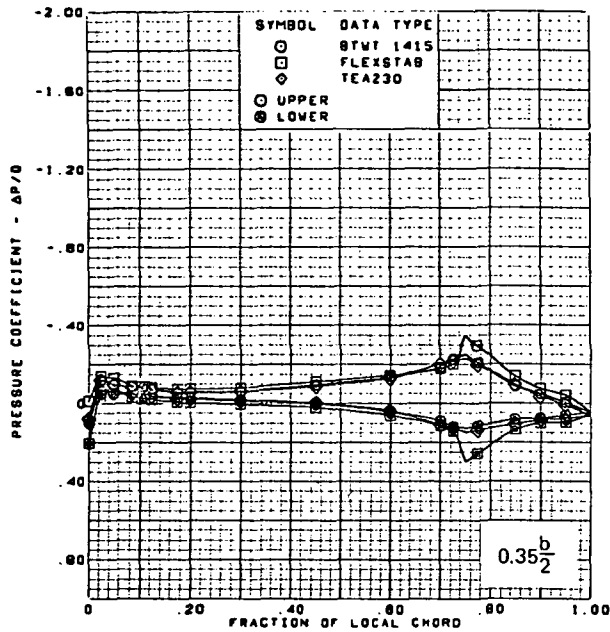
(g) Spanload Distributions—Pitching Moment

Figure 30.—(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.1^\circ$

Figure 31.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$ ;  $M = 0.40$

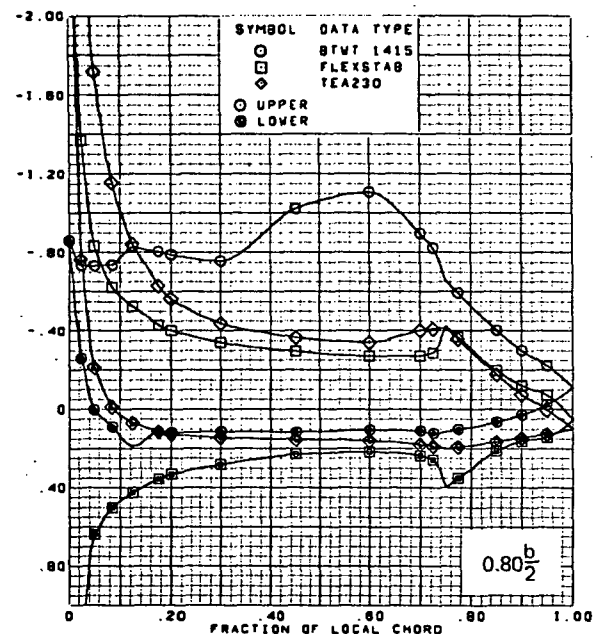
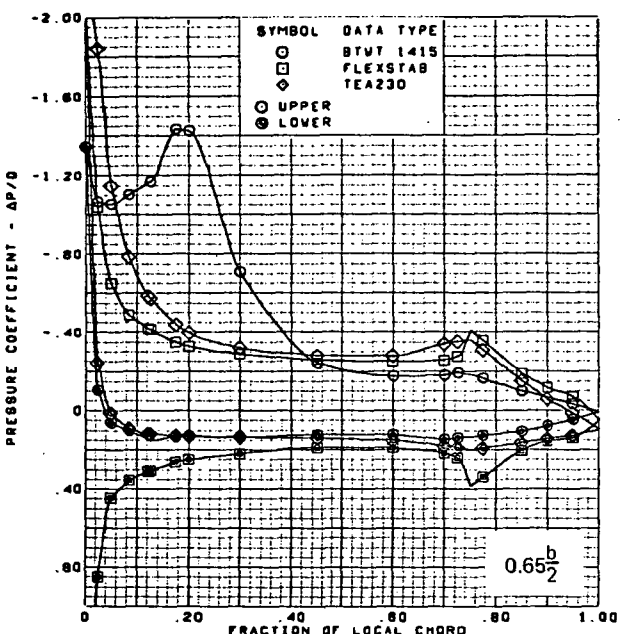
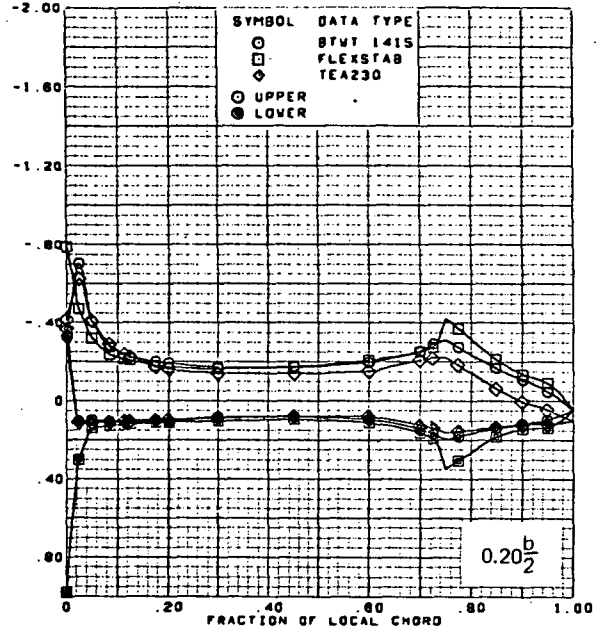
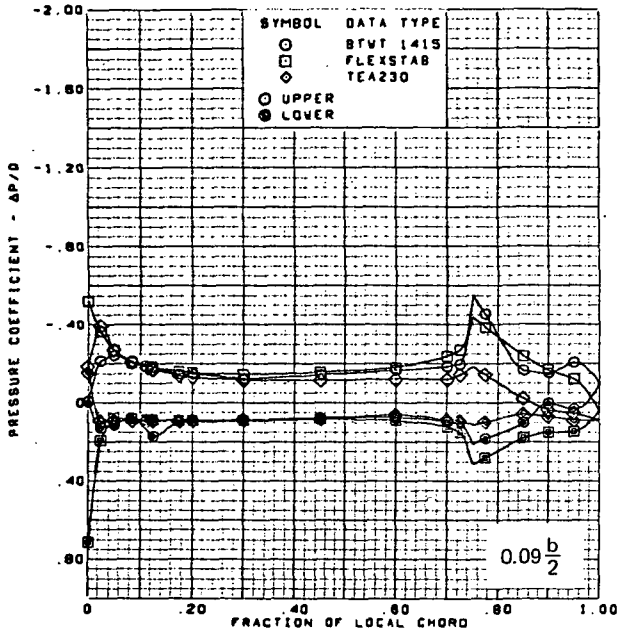


$M = 0.40$  (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

( a ) (Concluded)

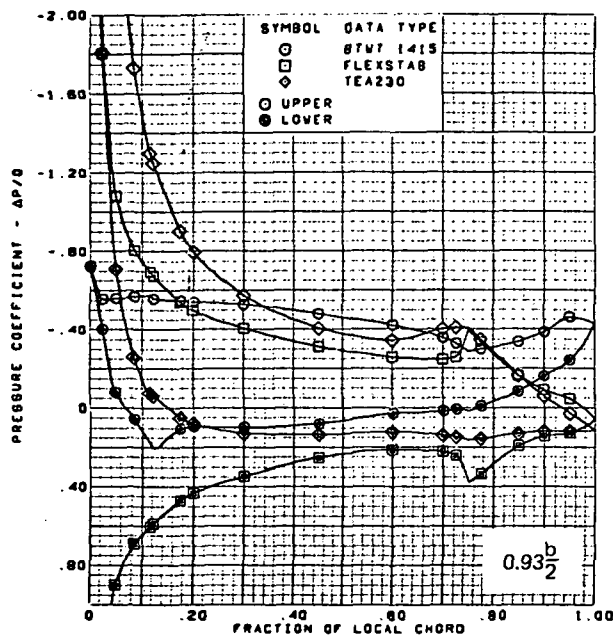
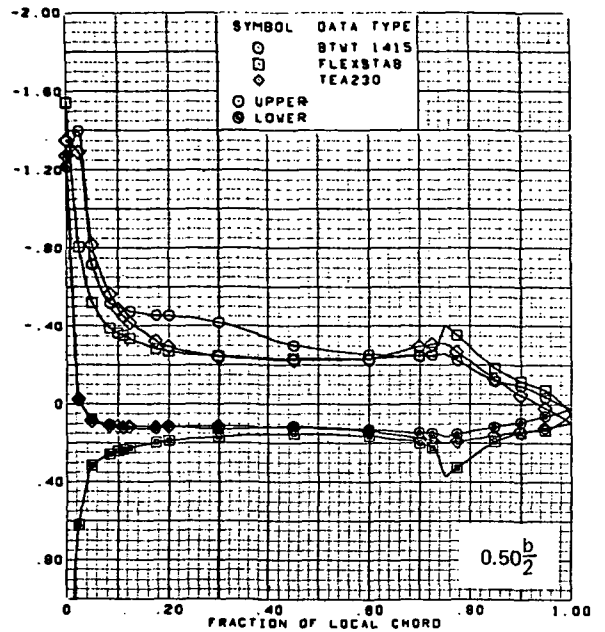
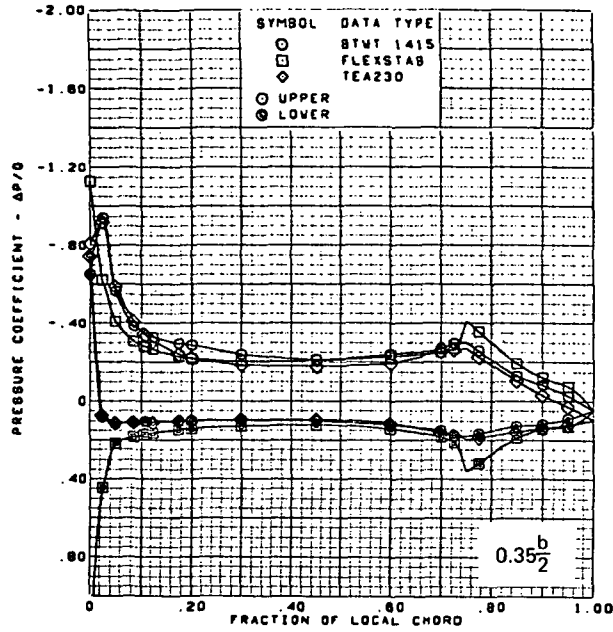
Figure 31.-(Continued)





(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

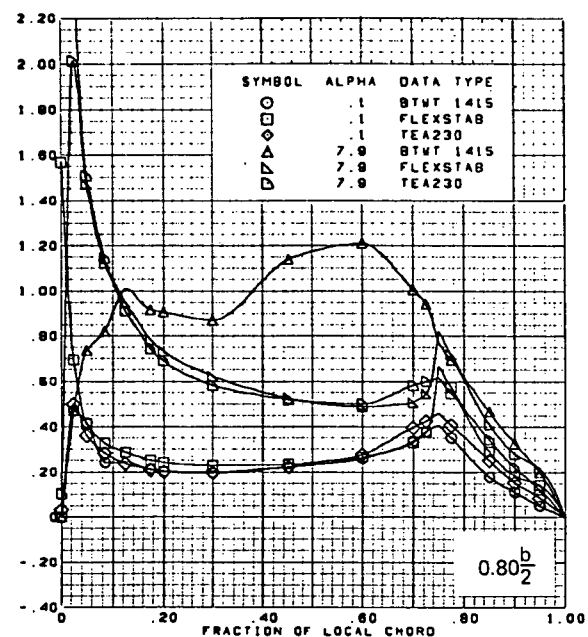
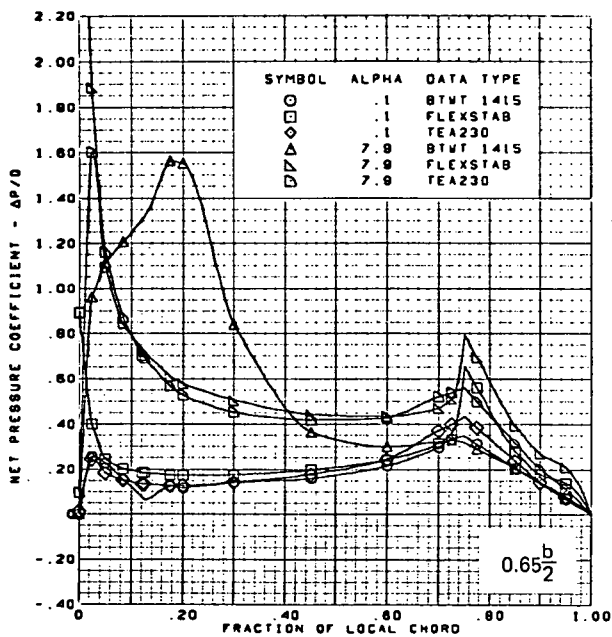
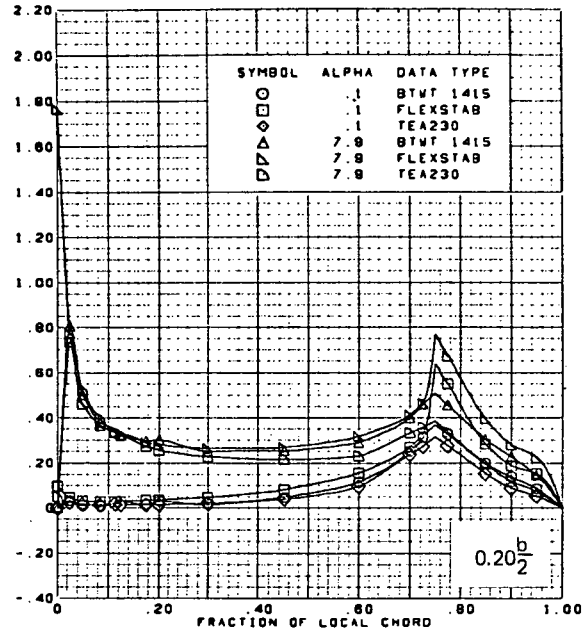
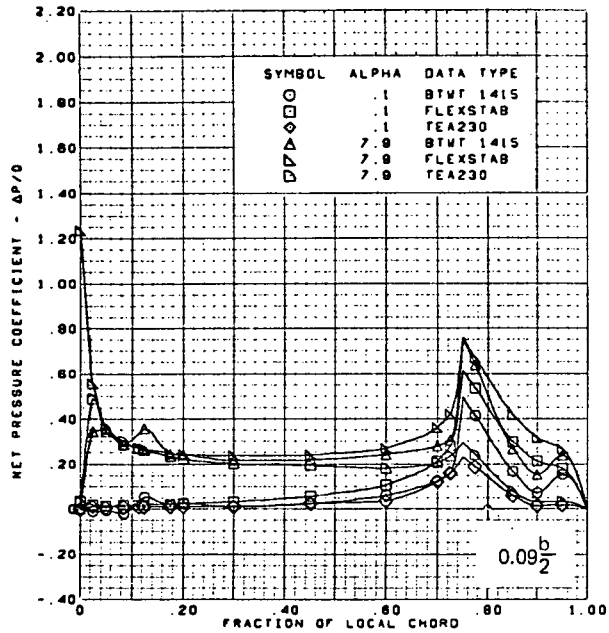
Figure 31.-(Continued)



$M = 0.40$  (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

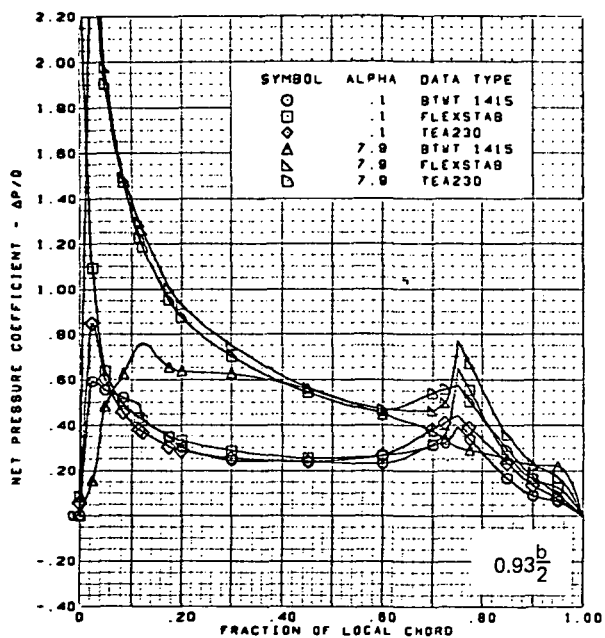
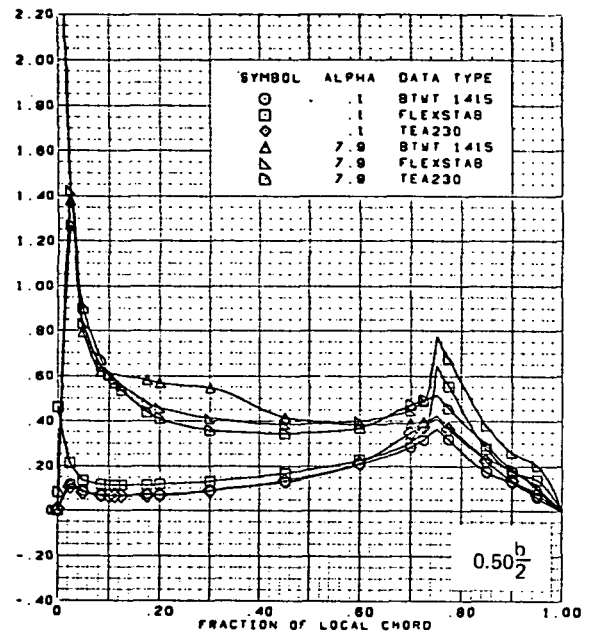
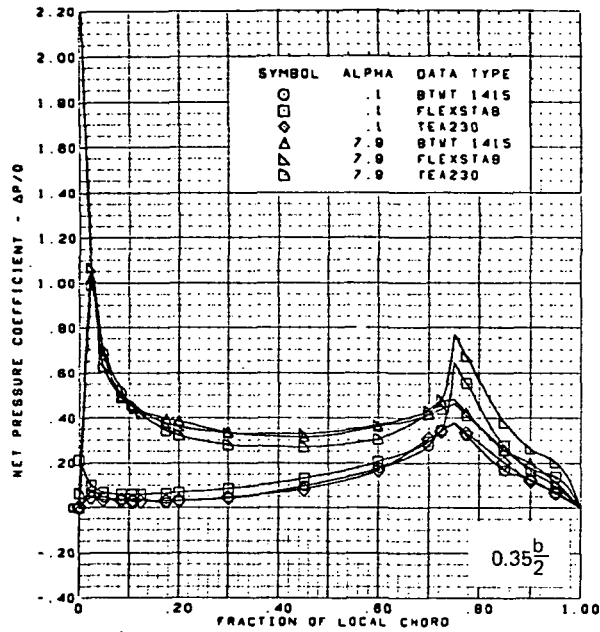
(b) (Concluded)

Figure 31.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = 0.1^\circ, 7.9^\circ$

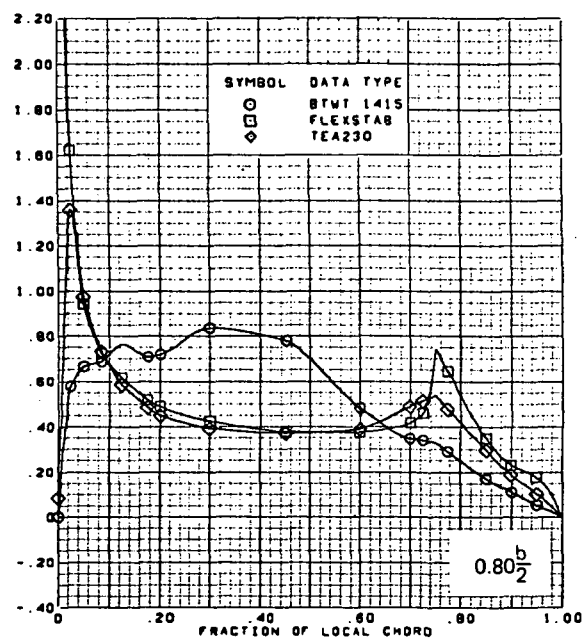
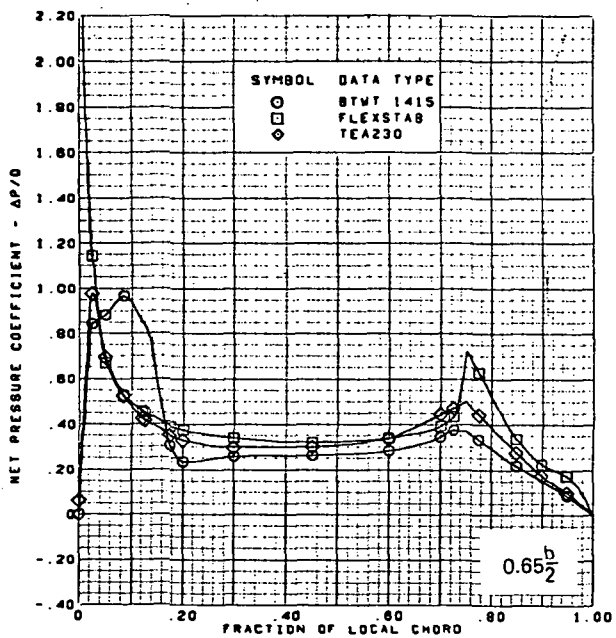
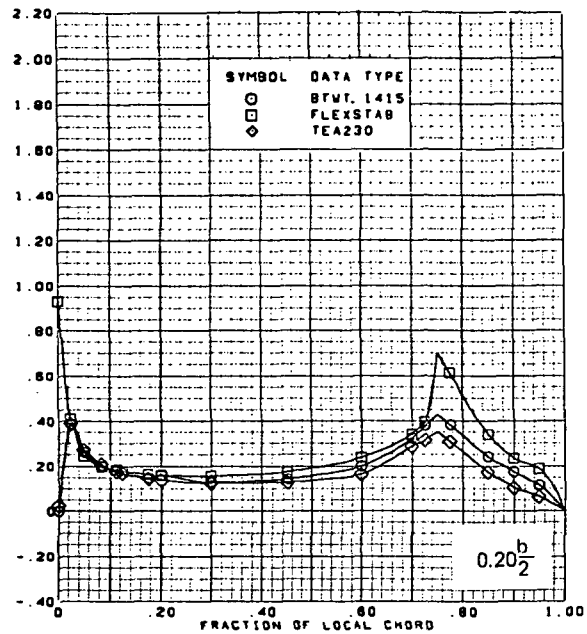
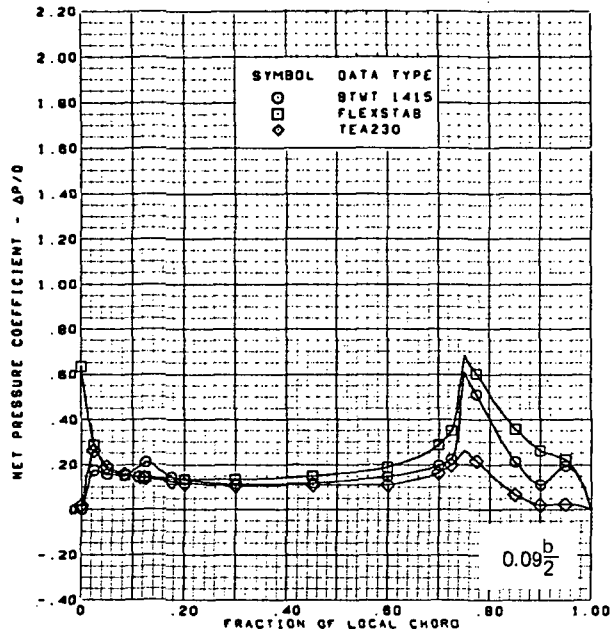
Figure 31.-(Continued)



M = 0.40 (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

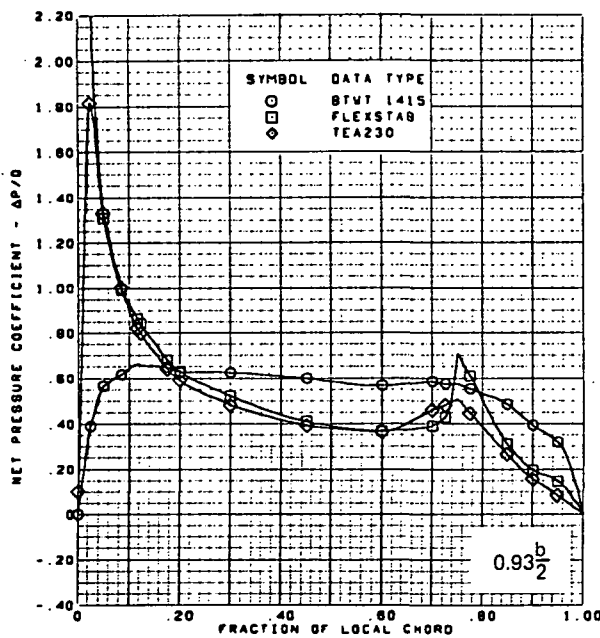
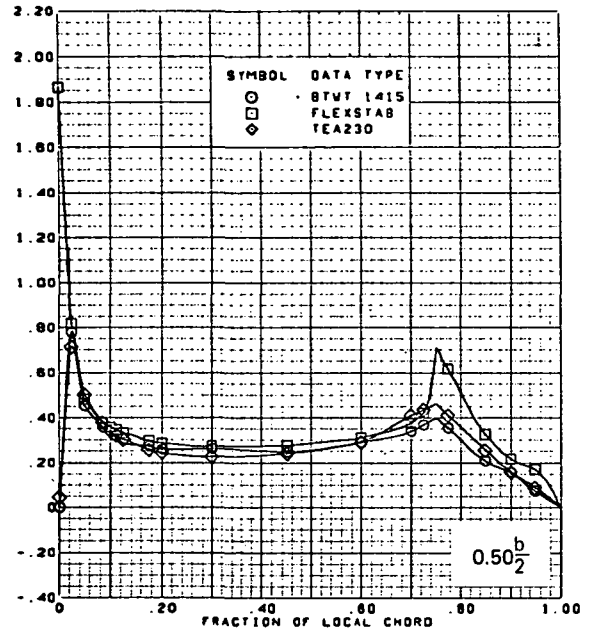
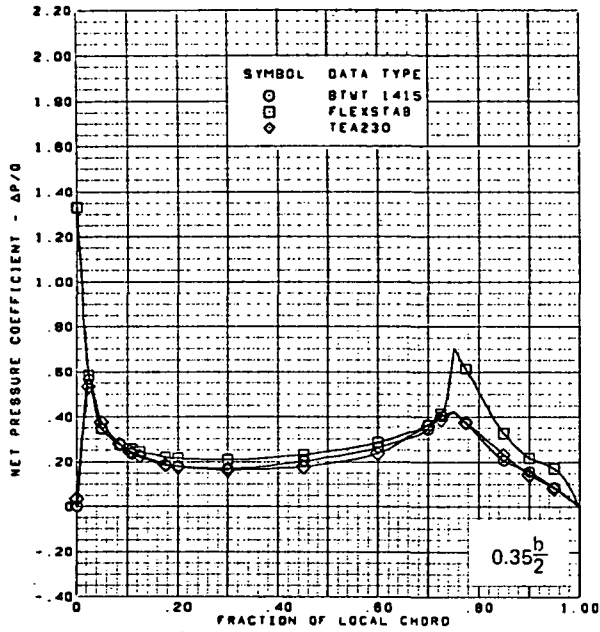
(c) (Concluded)

Figure 31.-(Continued)



(d) Net Chordwise Pressure Distributions,  $\alpha = 4.0^\circ$

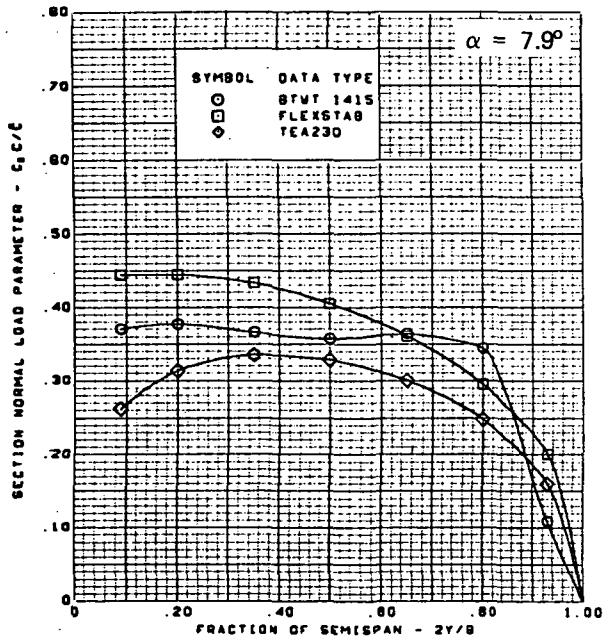
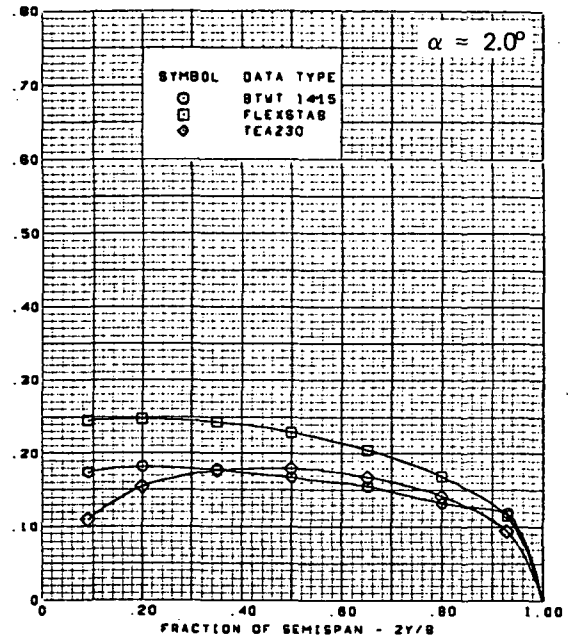
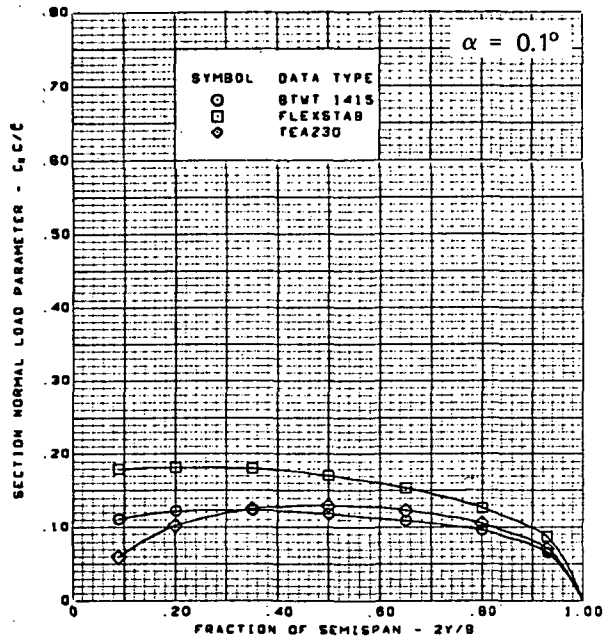
Figure 31.-(Continued)



$M = 0.40$  (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

(d) (Concluded)

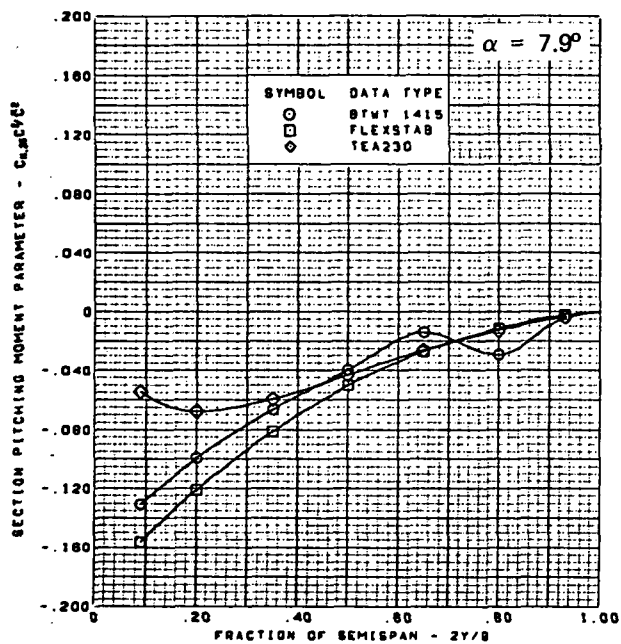
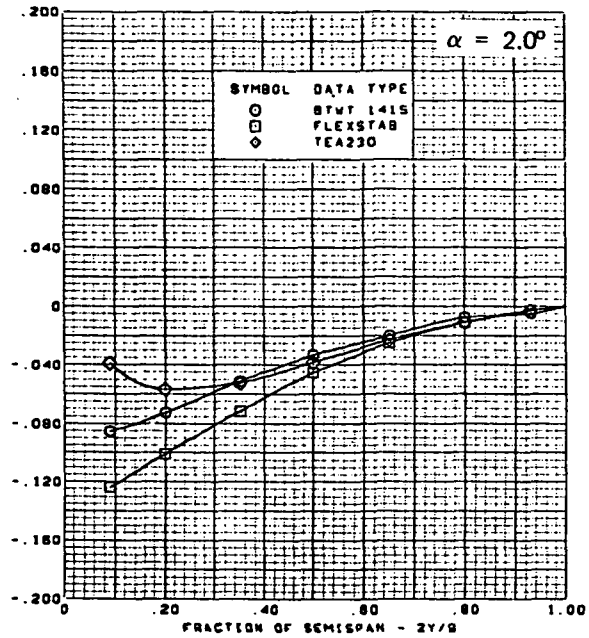
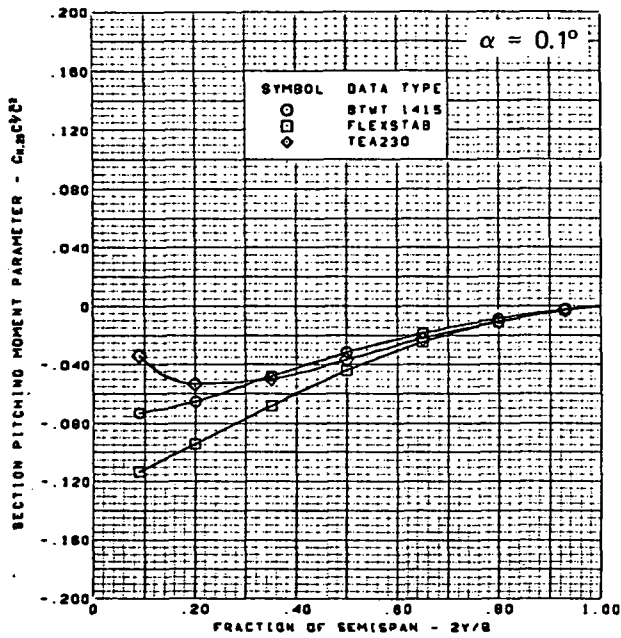
Figure 31.-(Continued)



$M = 0.40$  (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

(e) Spanload Distributions—Normal Force

Figure 31.—(Continued)

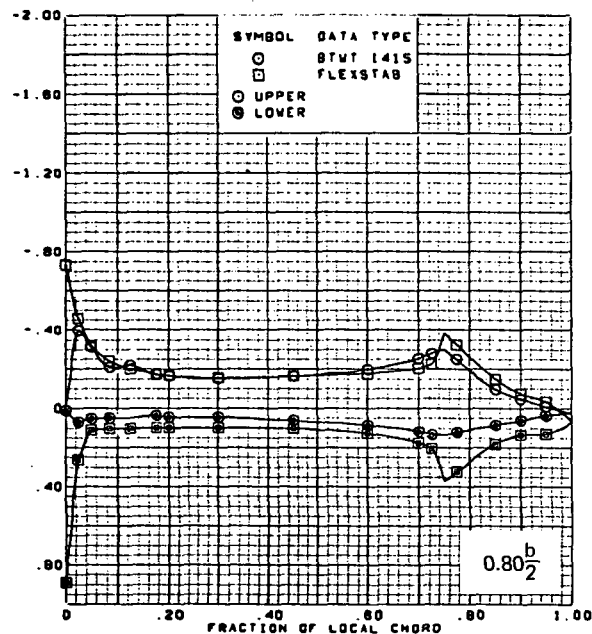
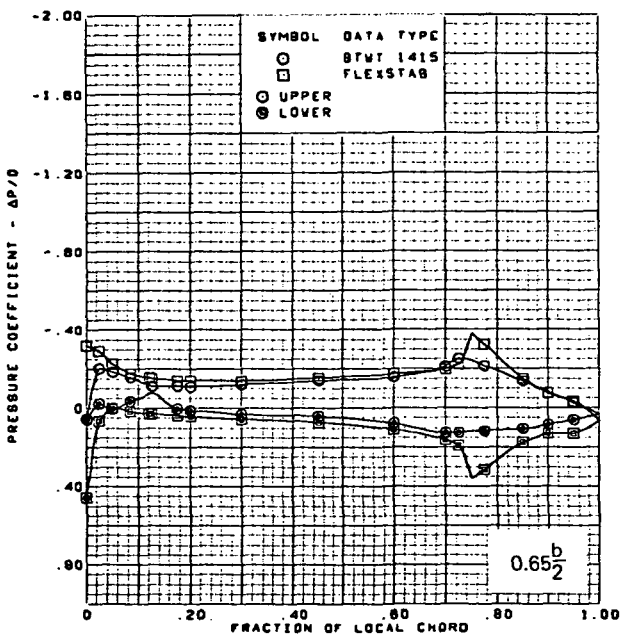
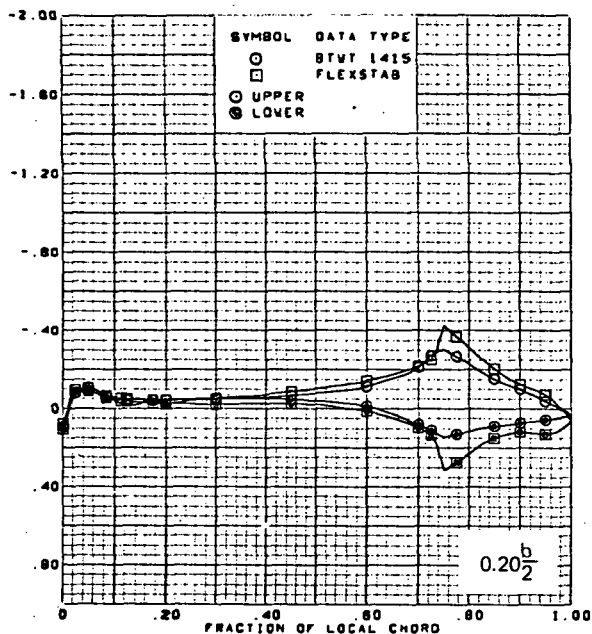
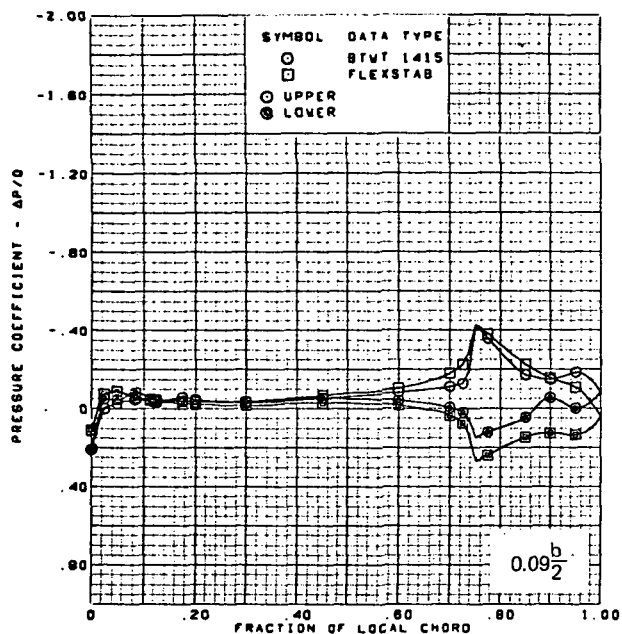


M = 0.40 (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

(f) Spanload Distributions—Pitching Moment

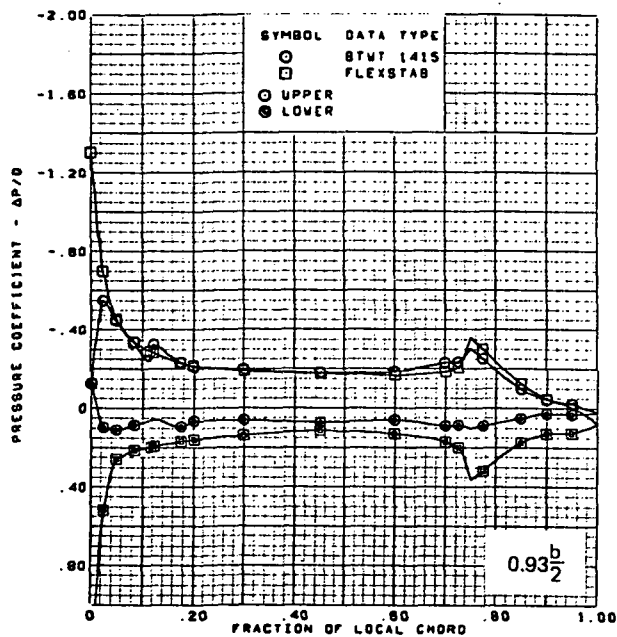
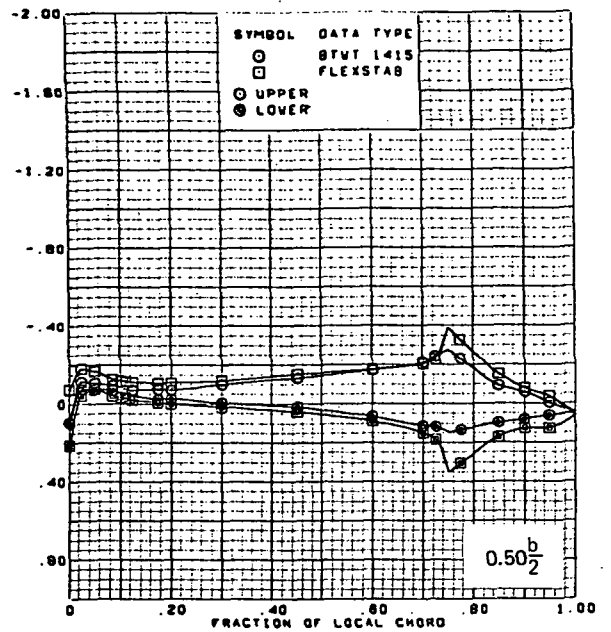
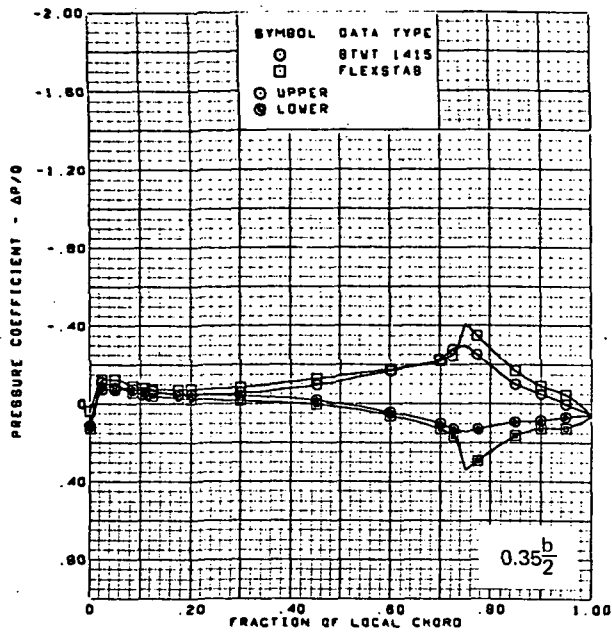
Figure 31.—(Concluded)





(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.0^\circ$

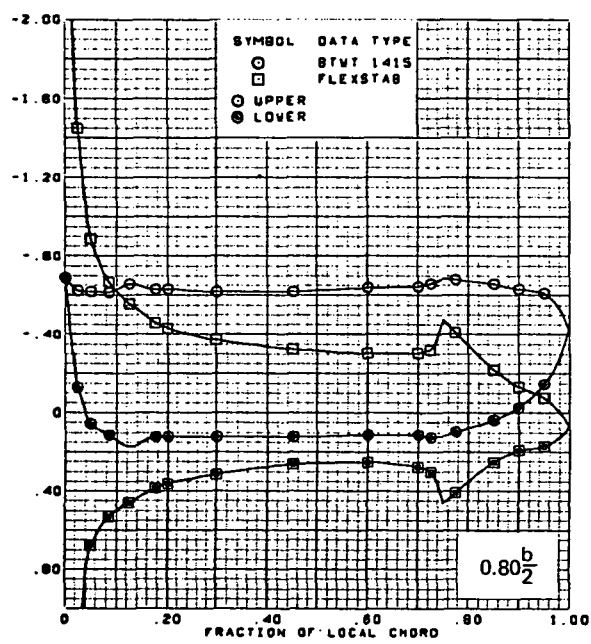
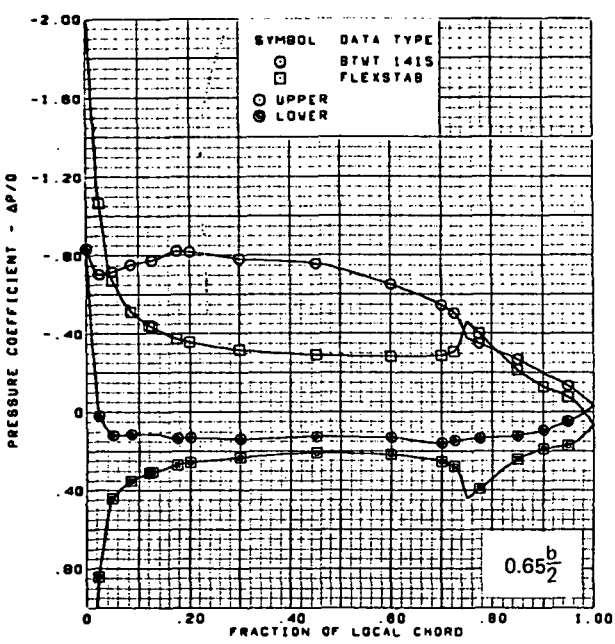
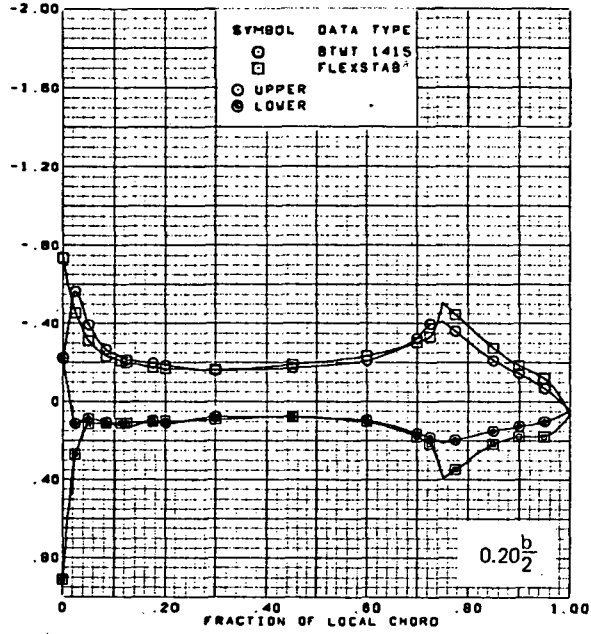
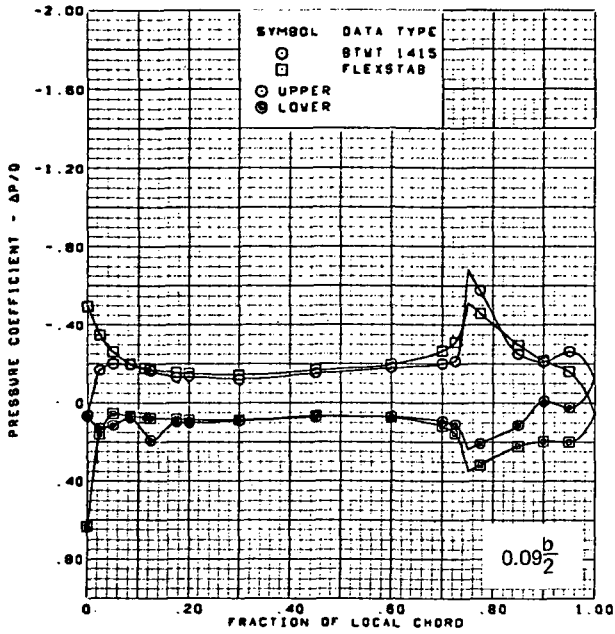
Figure 32.—Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$ ;  $M = 0.85$



M = 0.85 (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

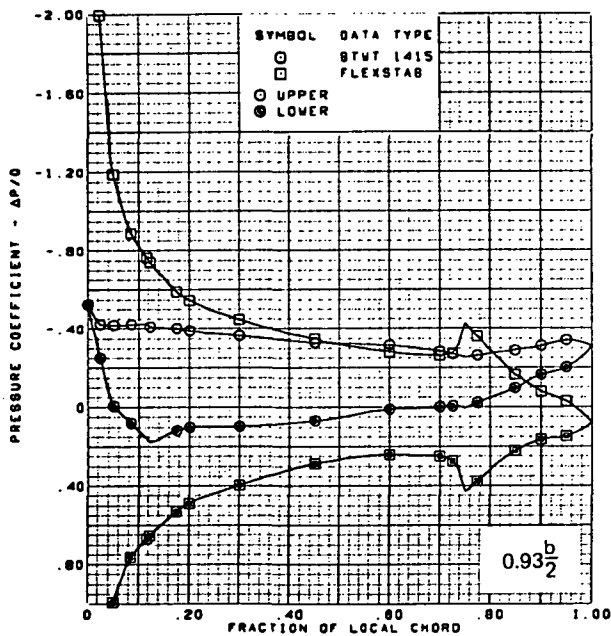
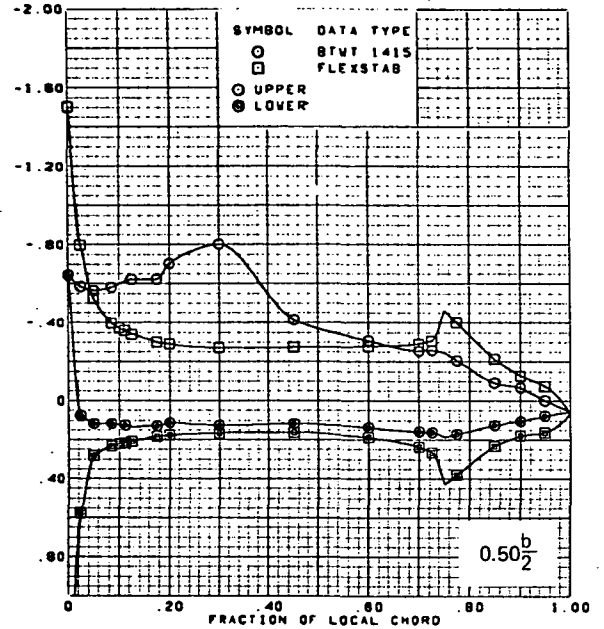
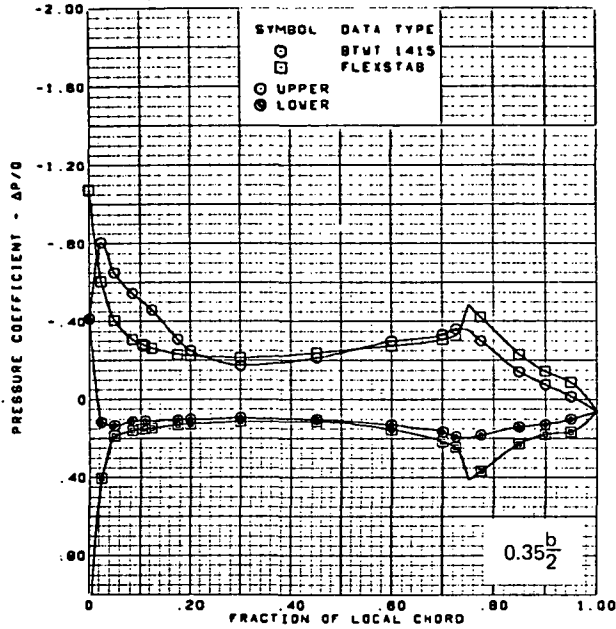
( a ) (Concluded)

Figure 32.--(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.9^\circ$

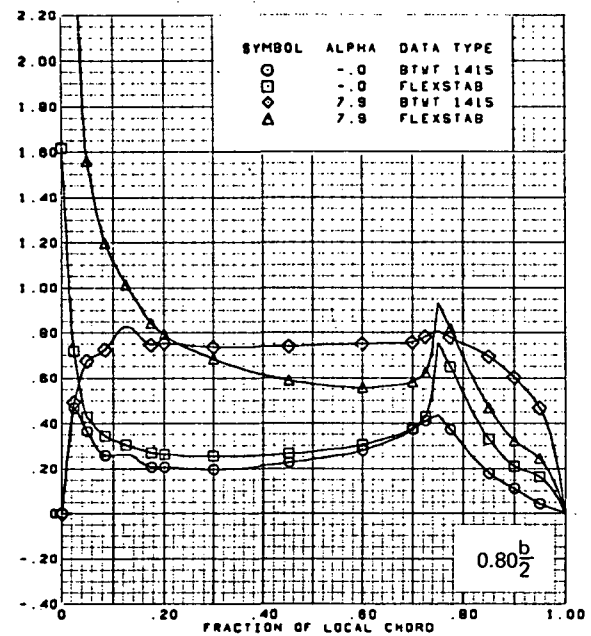
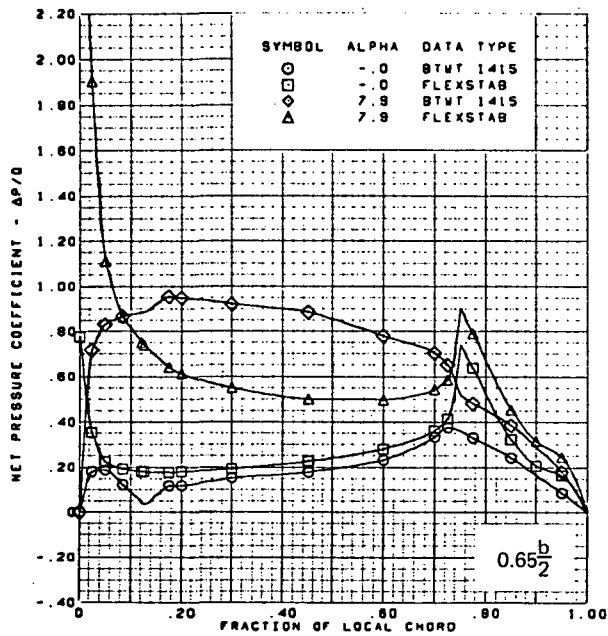
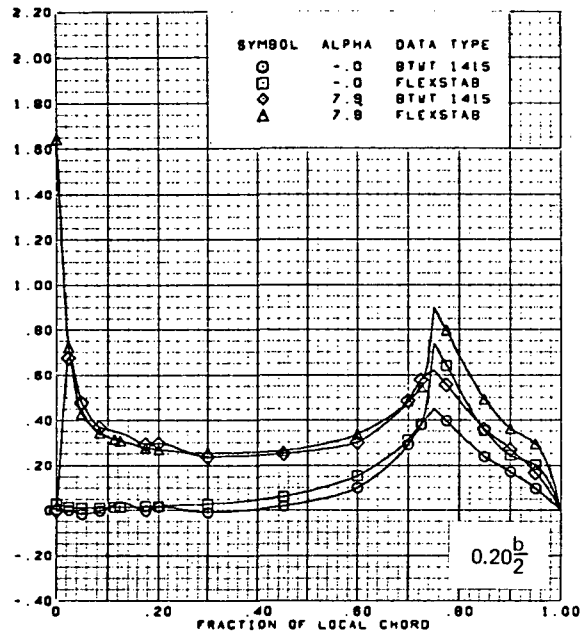
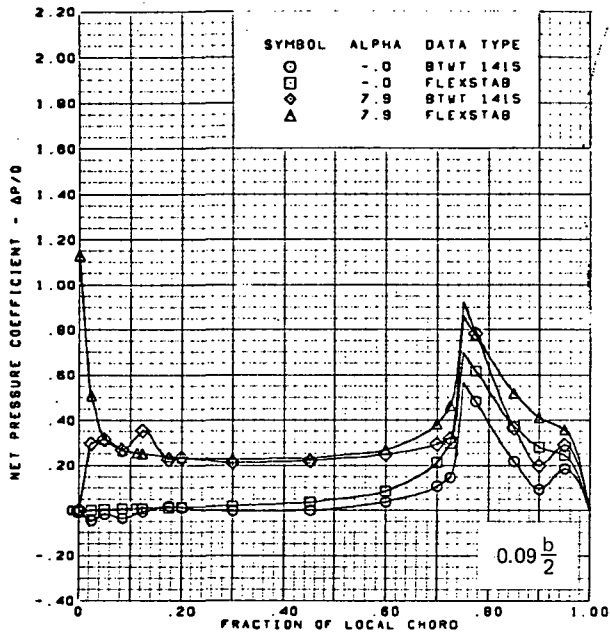
Figure 32.-(Continued)



M = 0.85 (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

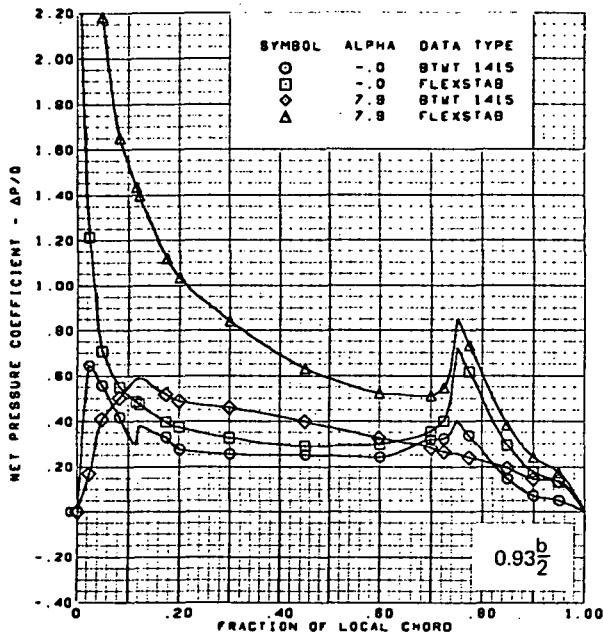
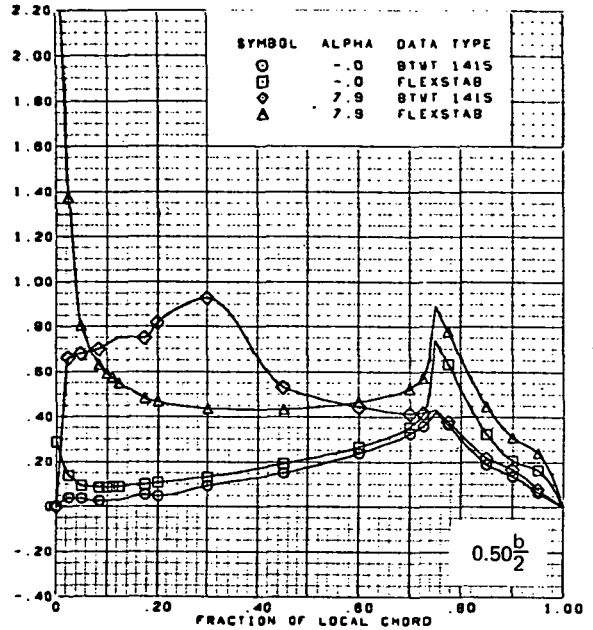
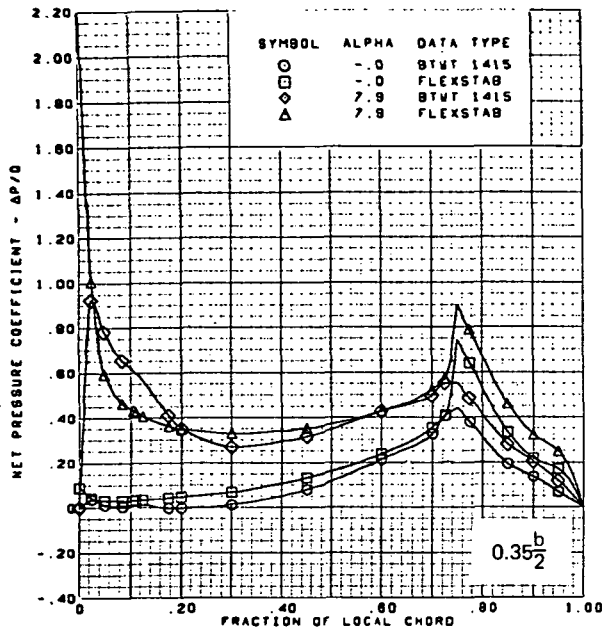
(b) (Concluded)

Figure 32.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = 0.0^\circ, 7.9^\circ$

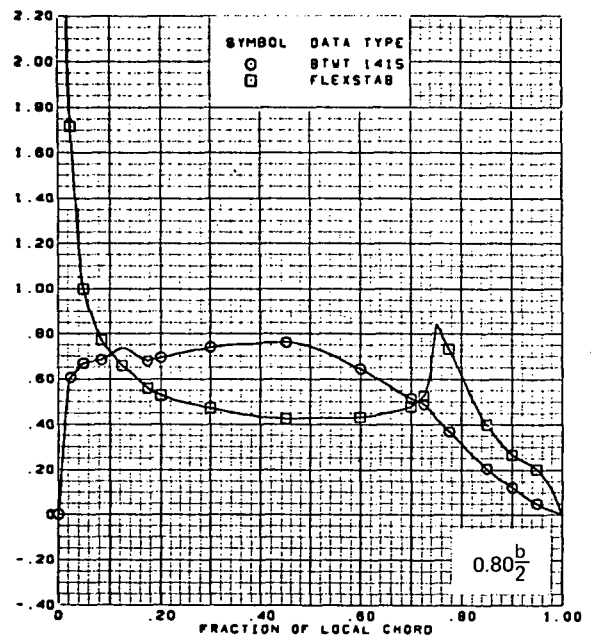
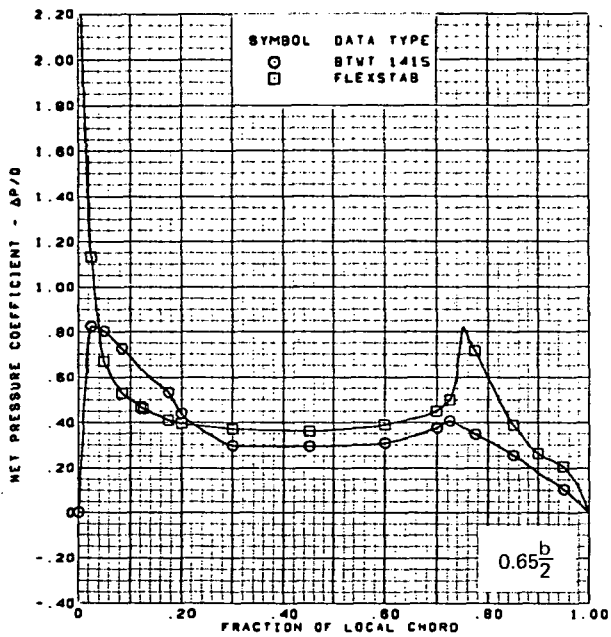
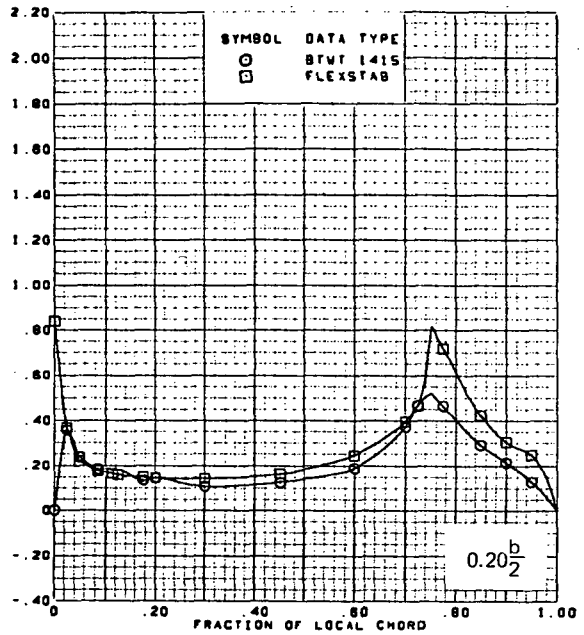
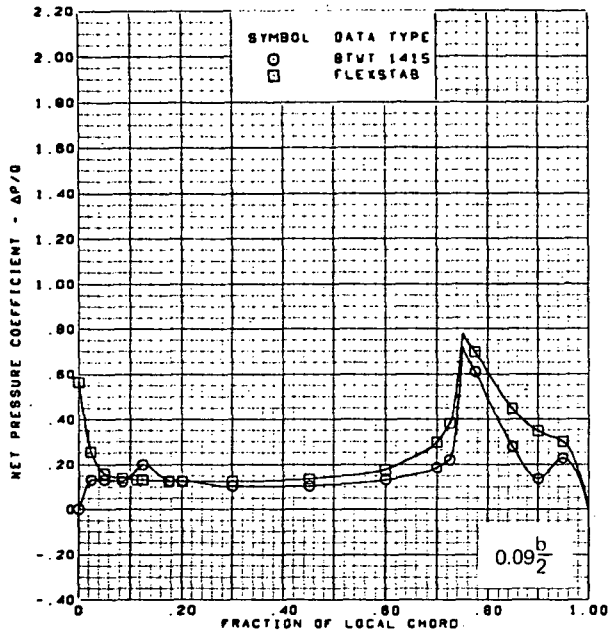
Figure 32.--(Continued)



M = 0.85 (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

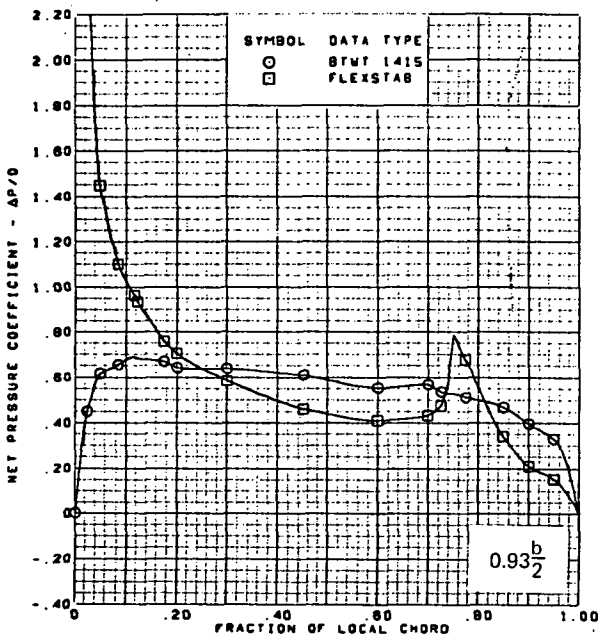
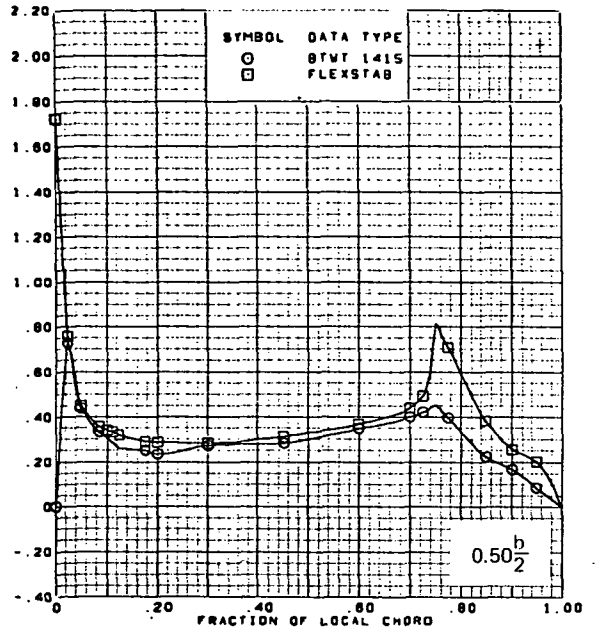
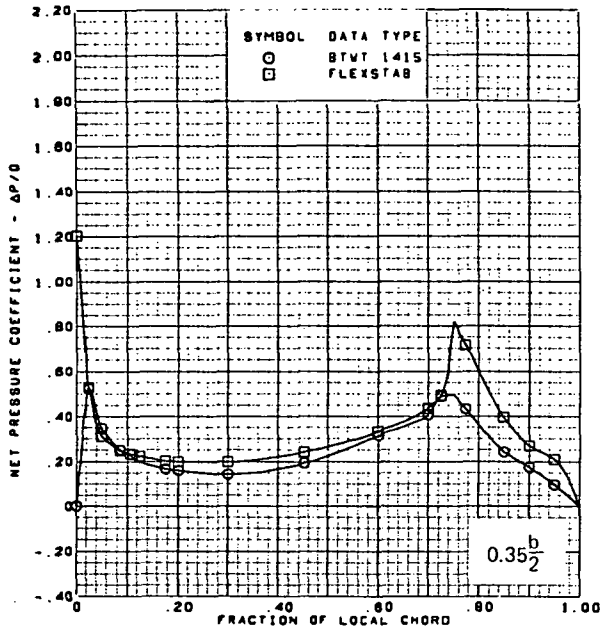
(c) (Concluded)

Figure 32.-(Continued)



(d) Net Chordwise Pressure Distributions,  $\alpha = 3.9^\circ$

Figure 32.-(Continued)

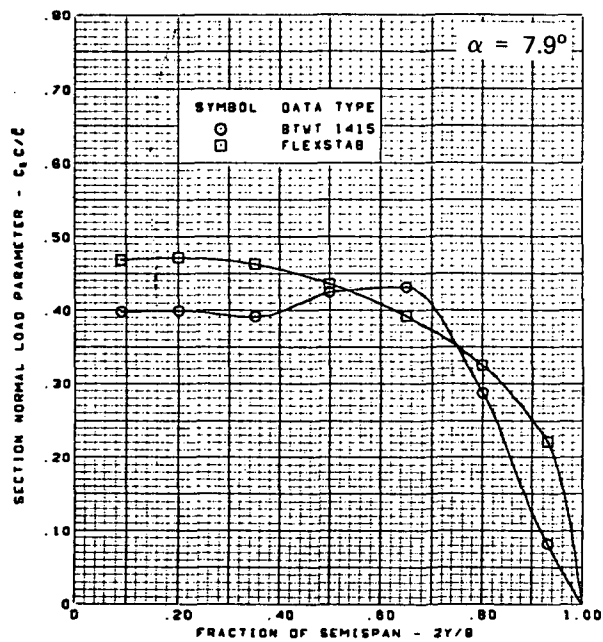
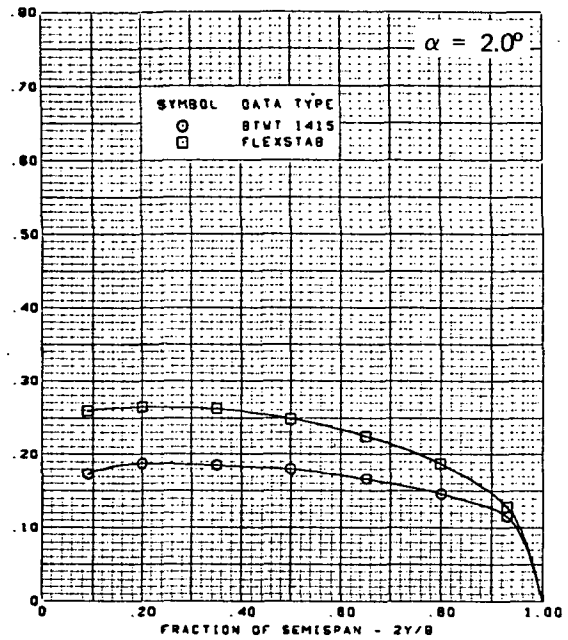
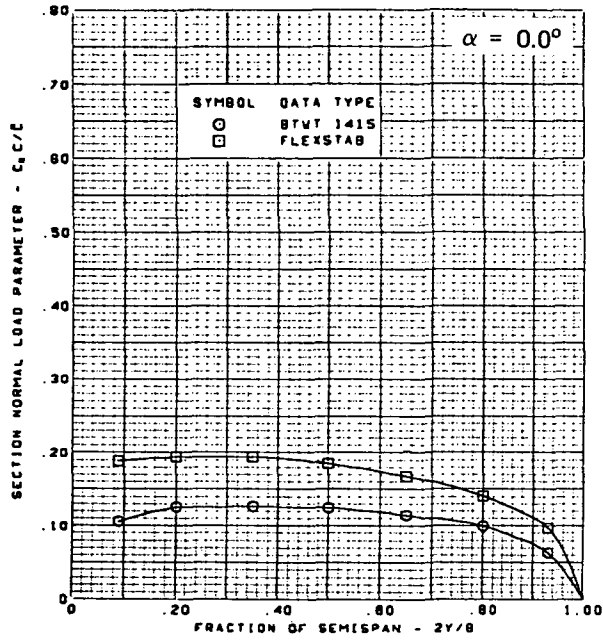


$M = 0.85$  (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

(d) (Concluded)

Figure 32.--(Continued)

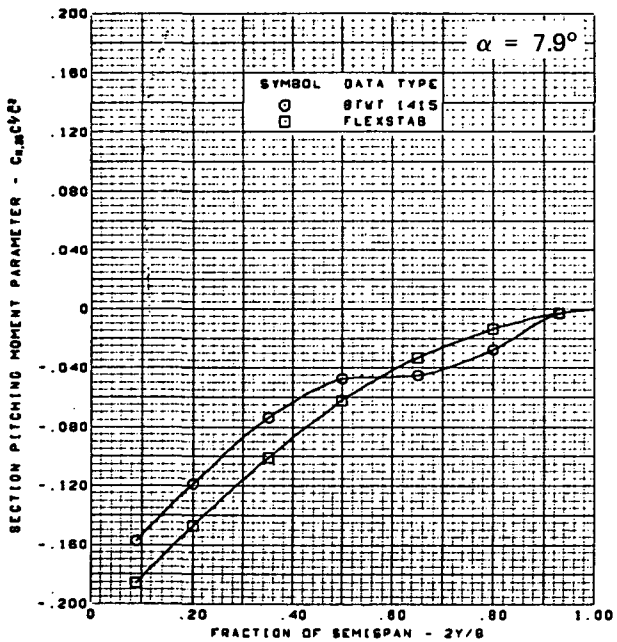
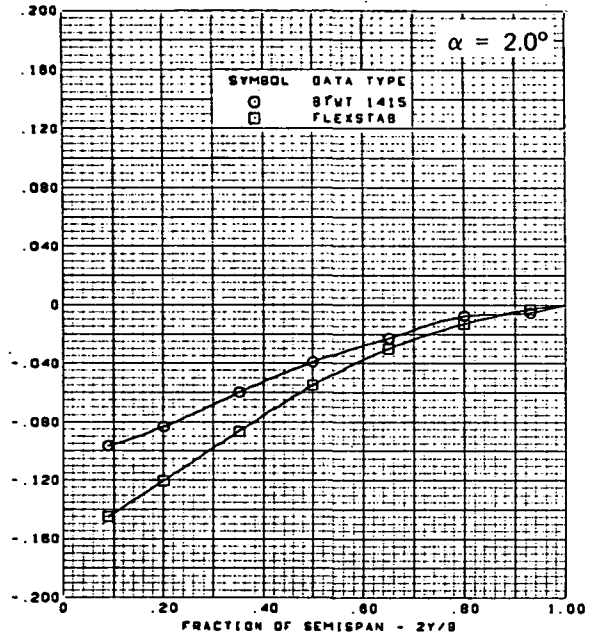
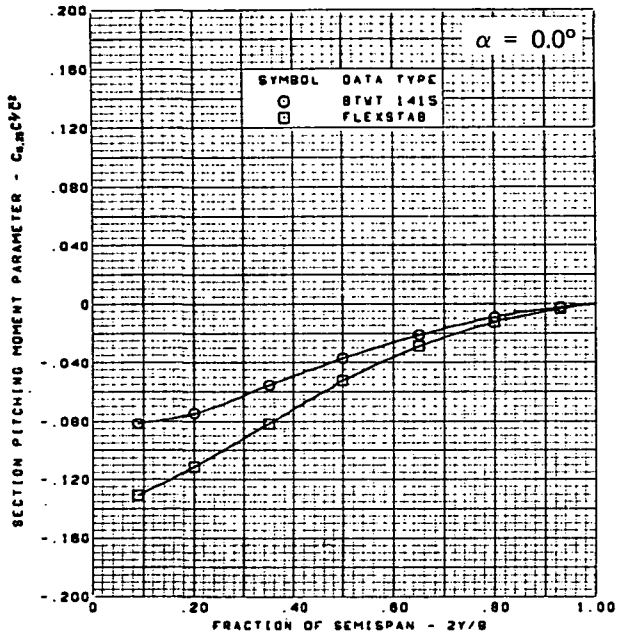




$M = 0.85$  (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

(e) Spanload Distributions—Normal Force

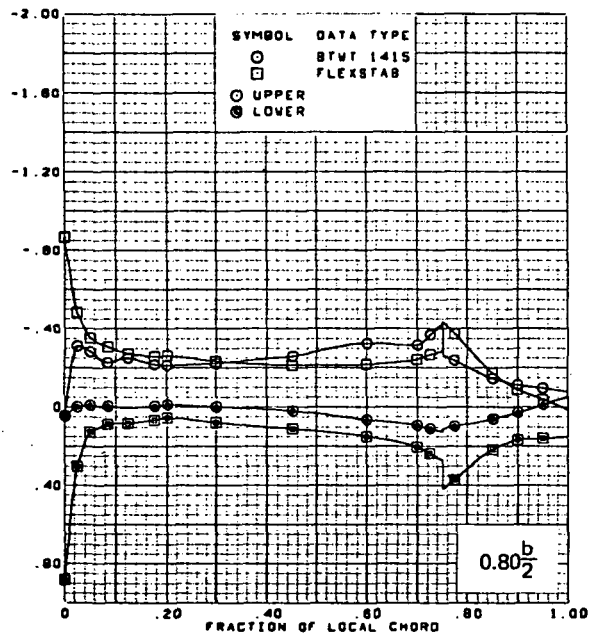
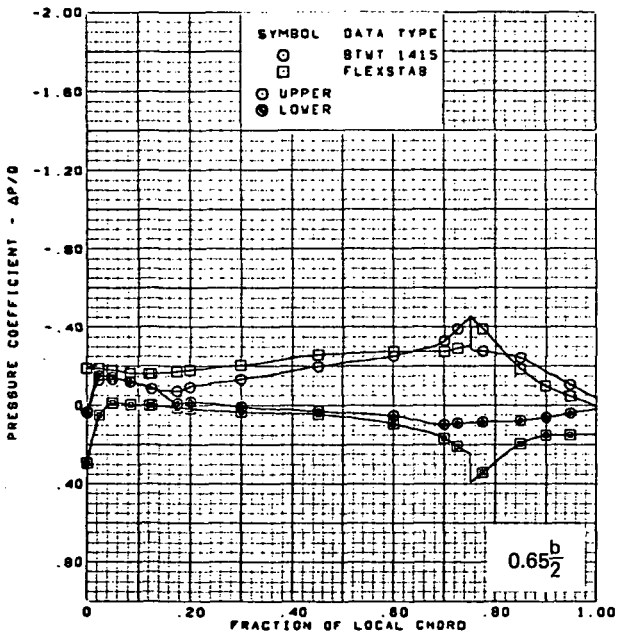
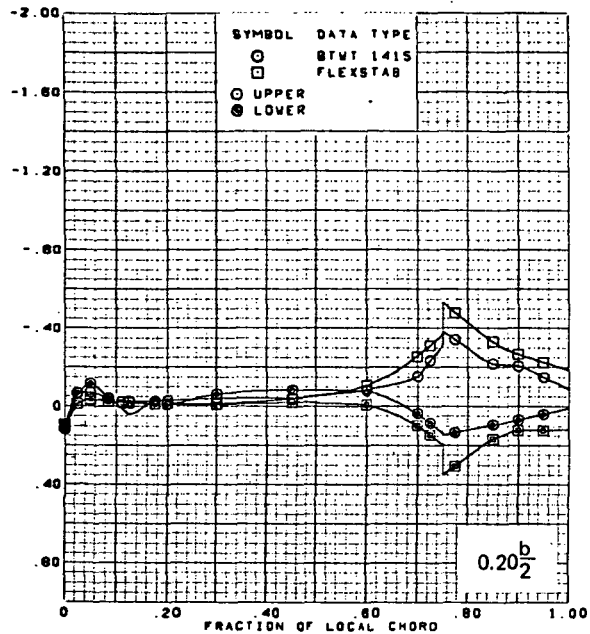
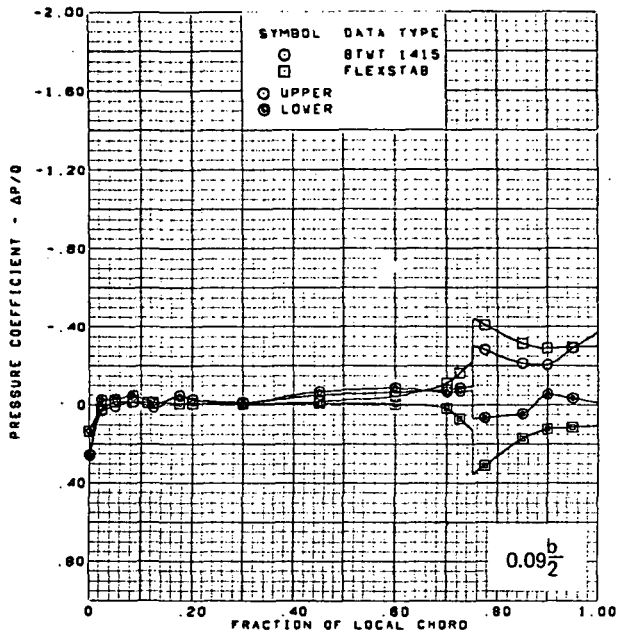
Figure 32.—(Continued)



$M = 0.85$  (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

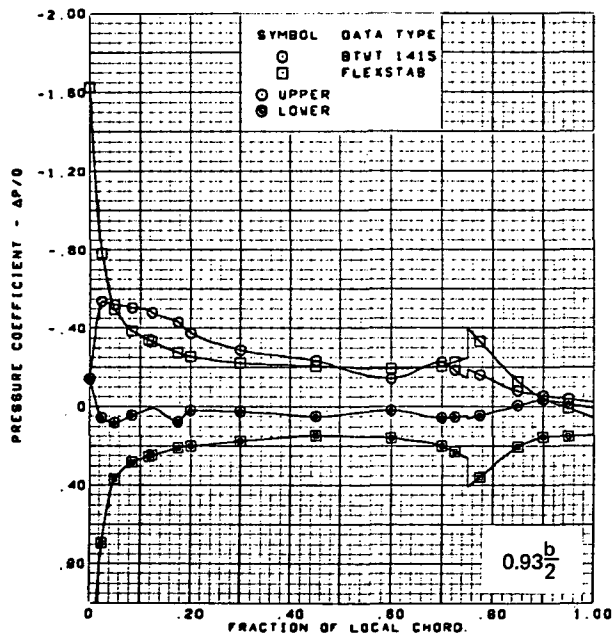
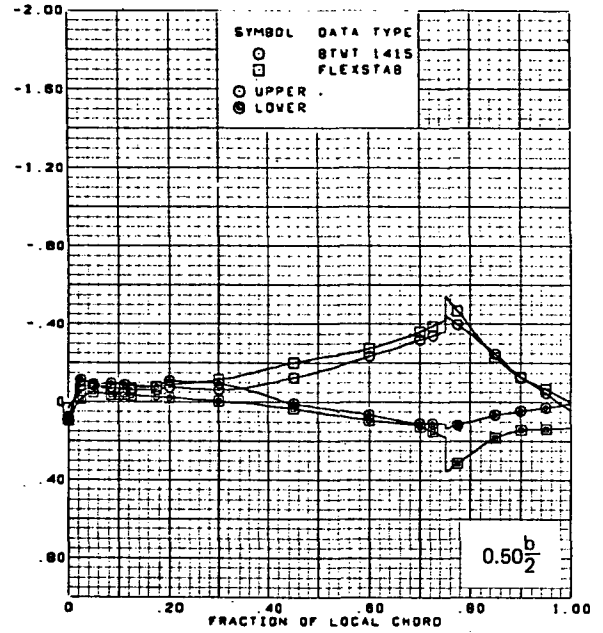
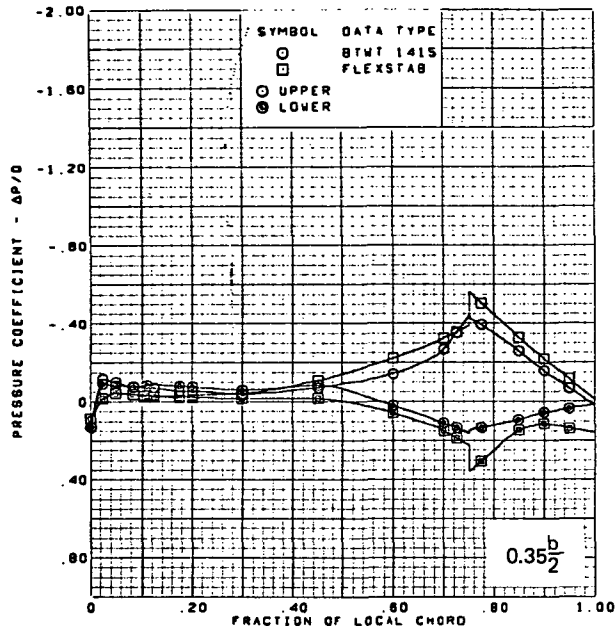
(f) Spanload Distributions—Pitching Moment

Figure 32.—(Concluded)



(a) Surface Chordwise Pressure Distributions,  $\alpha = 0.0^\circ$

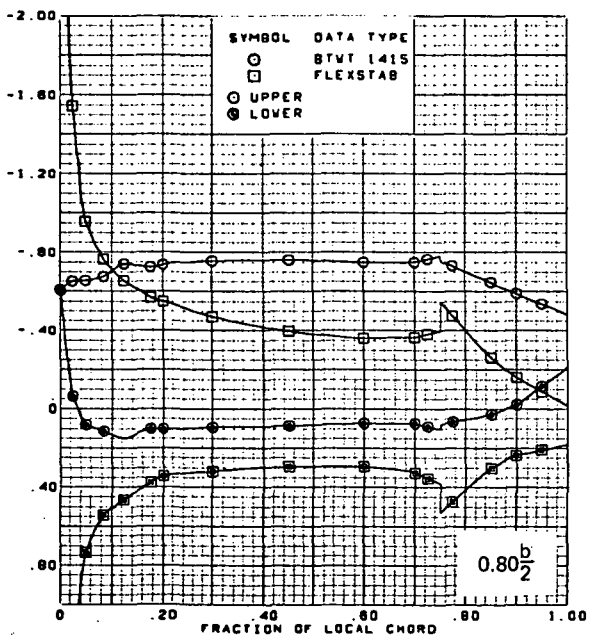
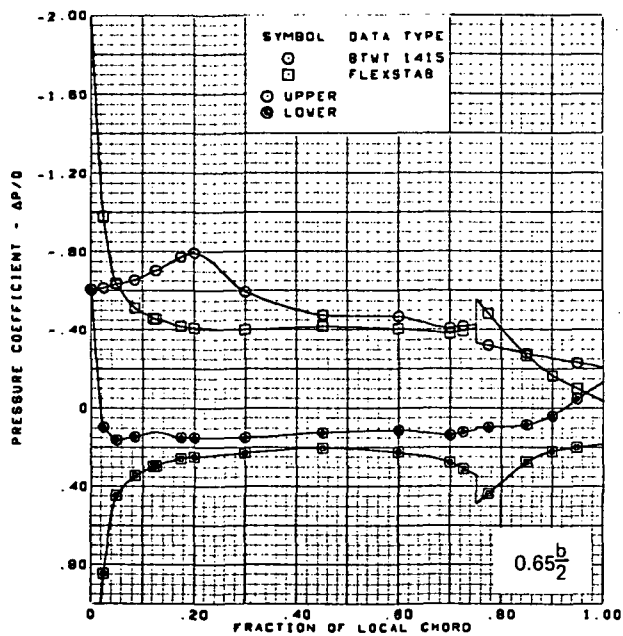
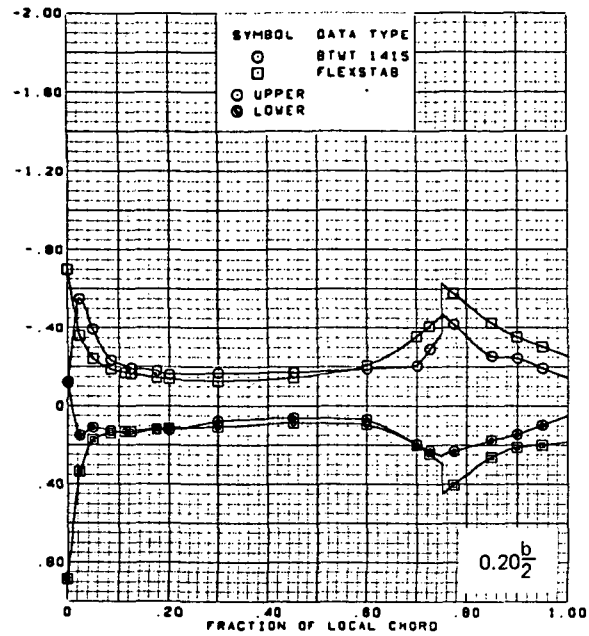
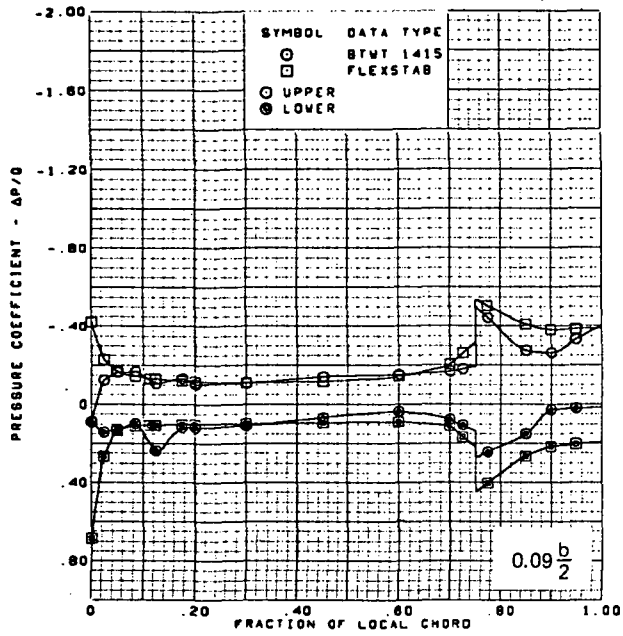
Figure 33.-Wing Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$ ;  $M = 1.05$



M = 1.05 (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

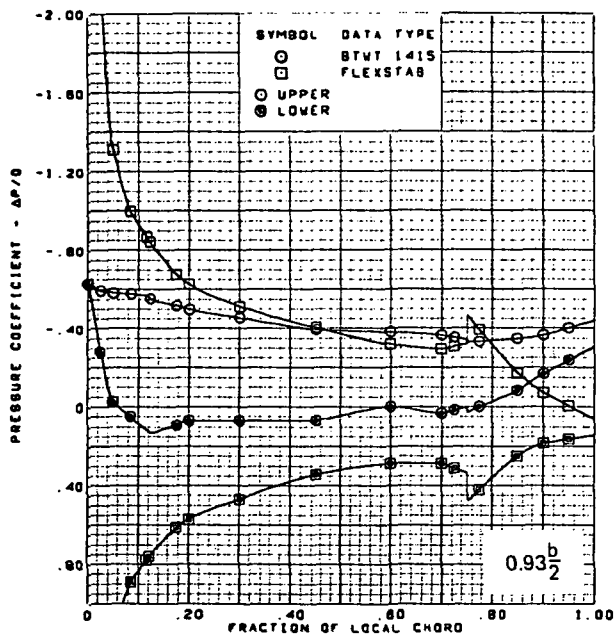
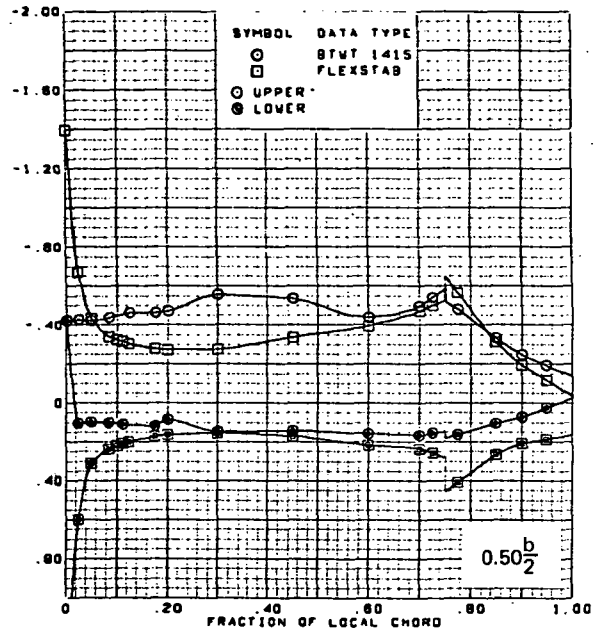
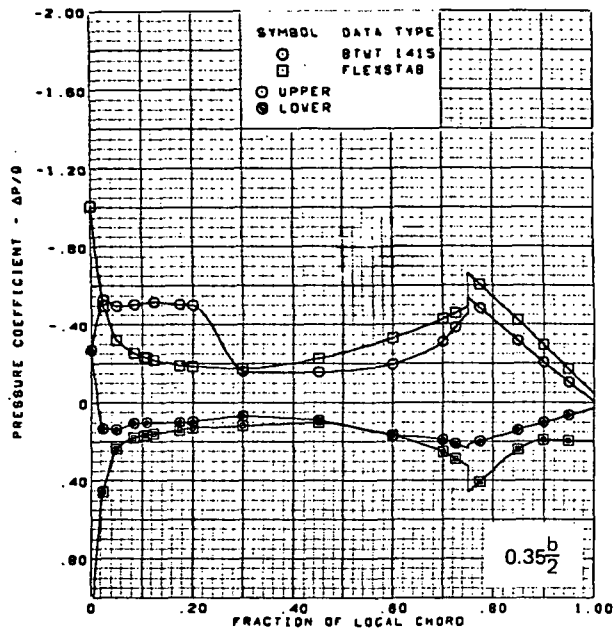
( a ) (Concluded)

Figure 33.-(Continued)



(b) Surface Chordwise Pressure Distributions,  $\alpha = 7.8^\circ$

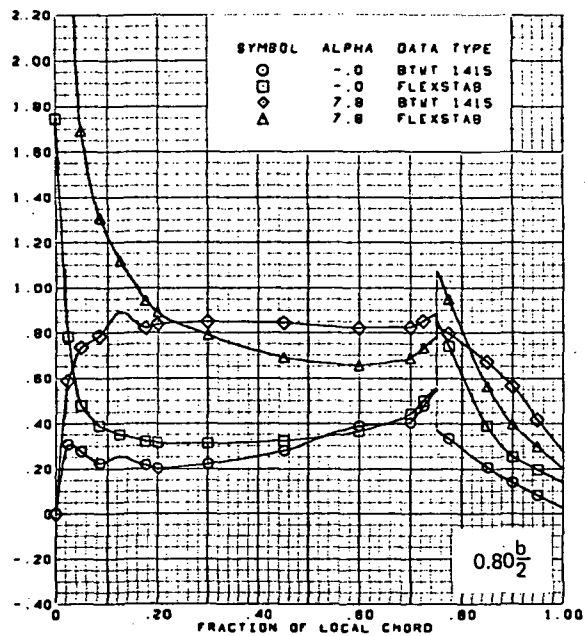
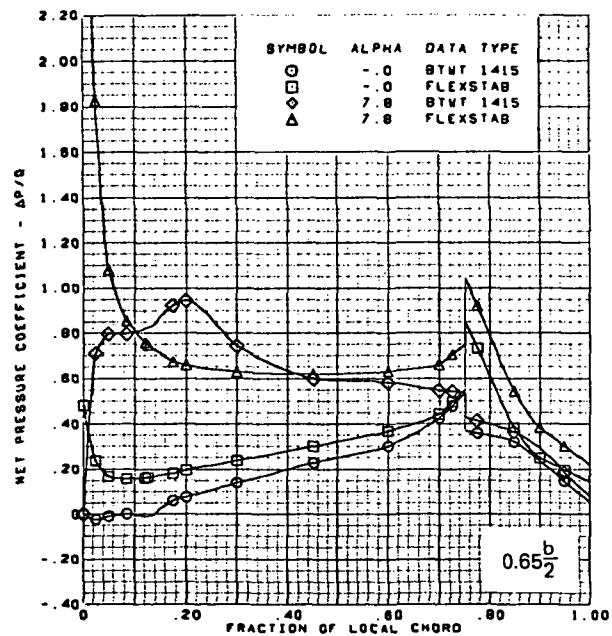
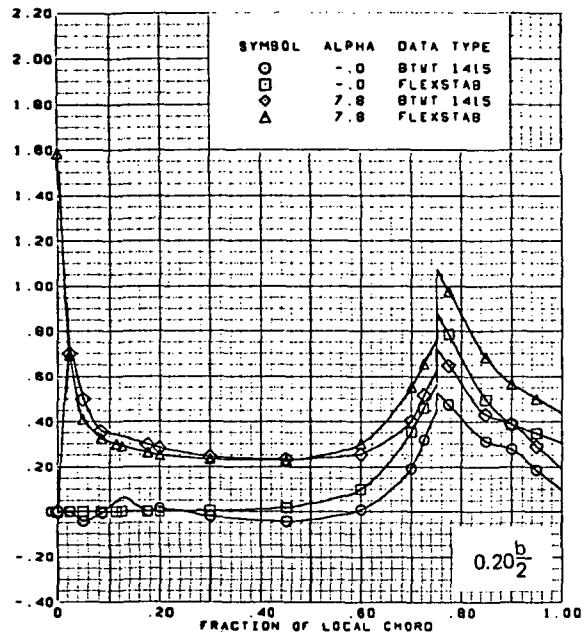
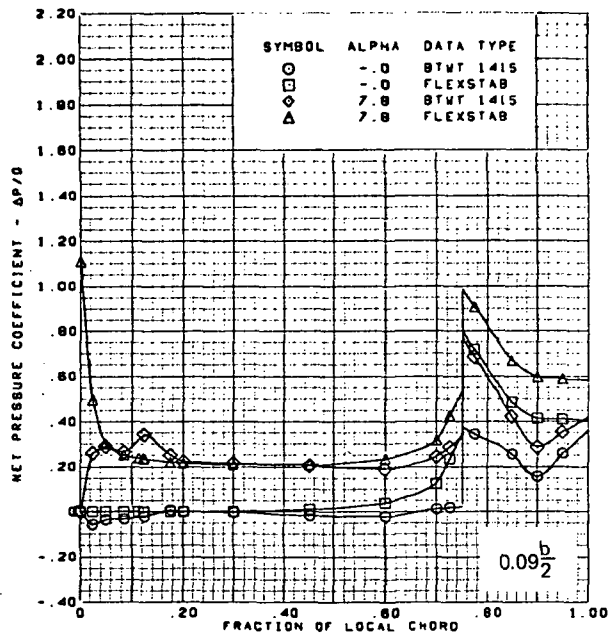
Figure 33.-(Continued)



M = 1.05 (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

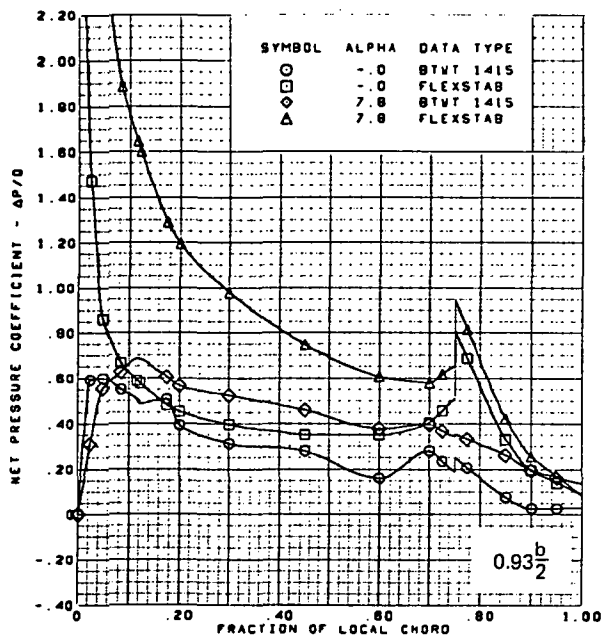
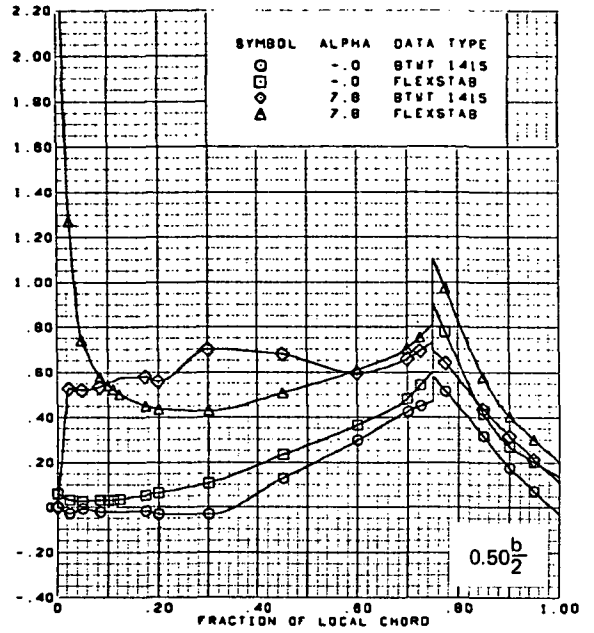
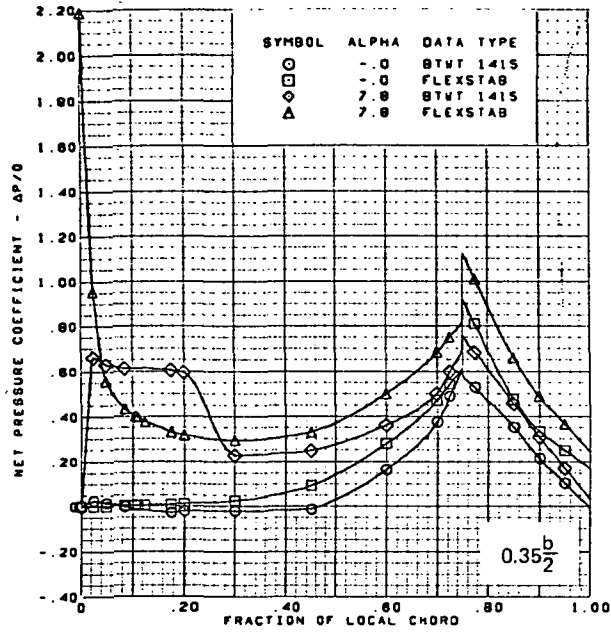
( b ) (Concluded)

Figure 33.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha = 0.0^\circ, 7.8^\circ$

Figure 33.-(Continued)

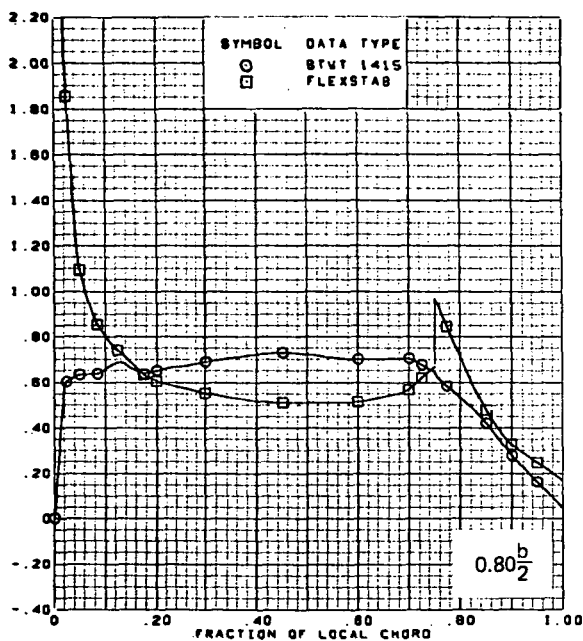
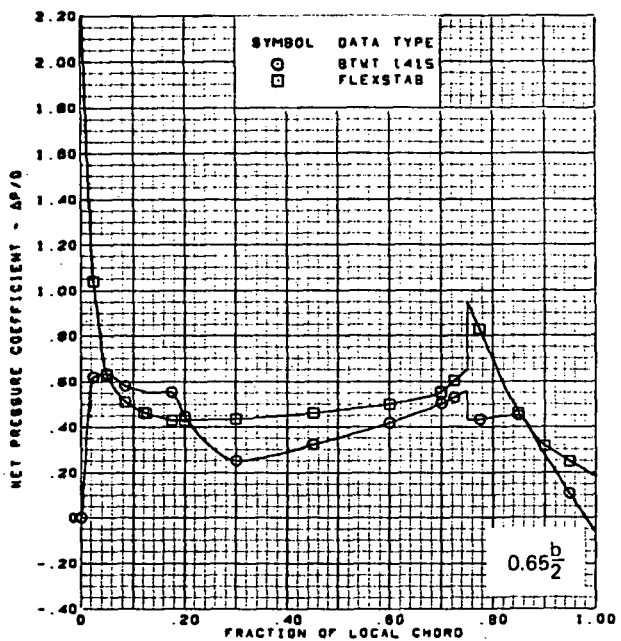
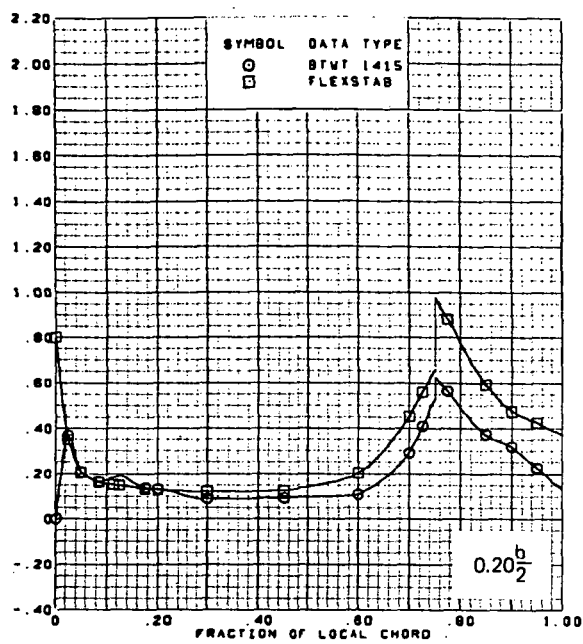
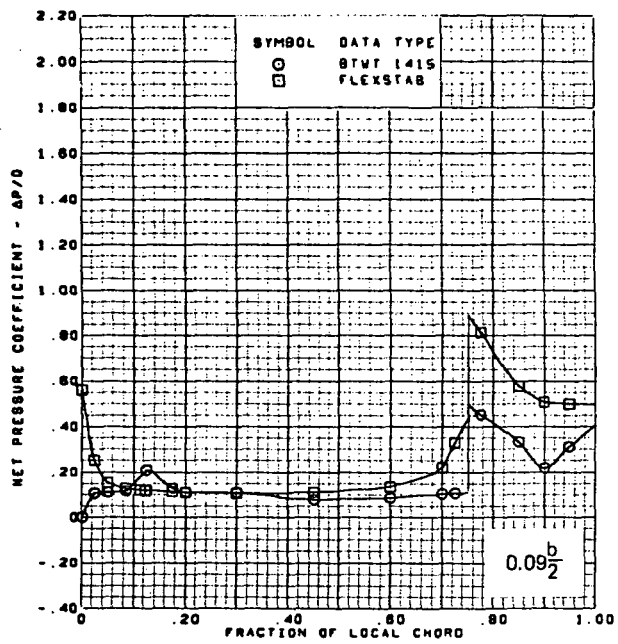


M = 1.05 (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, full span = 8.3°

(c) (Concluded)

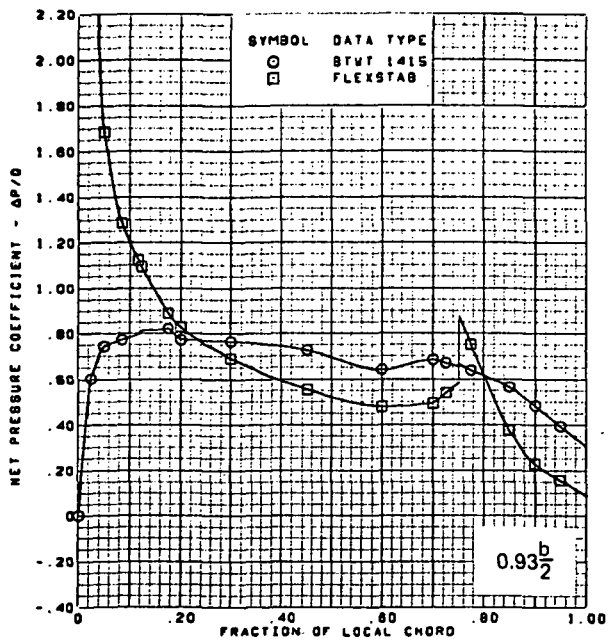
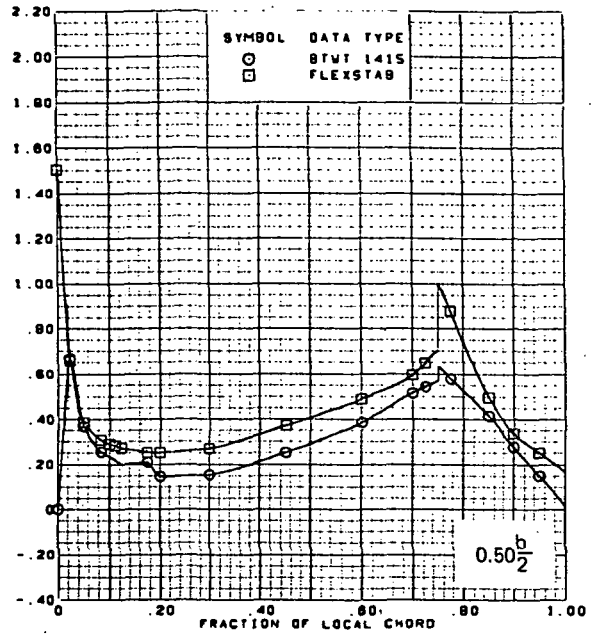
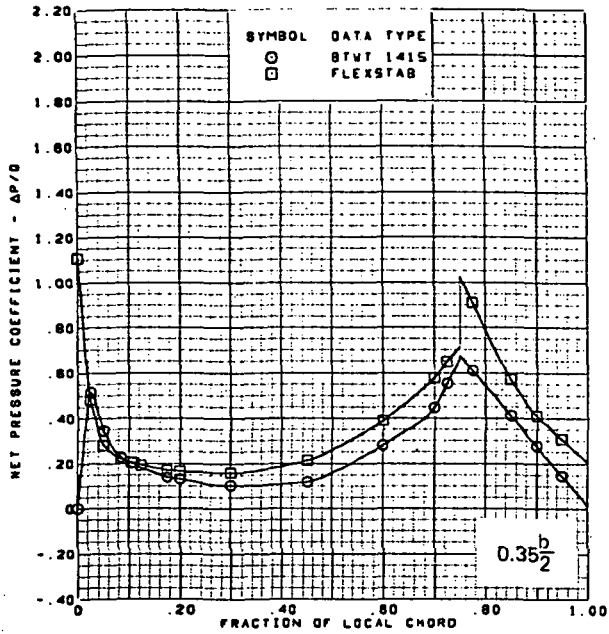
Figure 33.-(Continued)





(d) Net Chordwise Pressure Distributions,  $\alpha = 3.9^\circ$

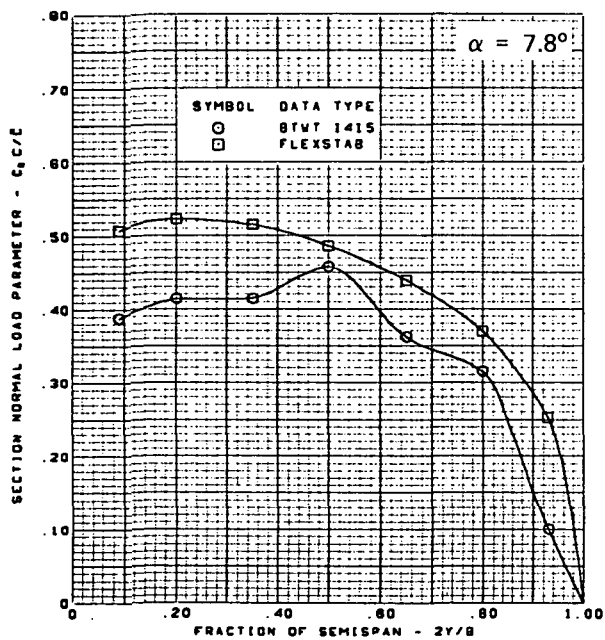
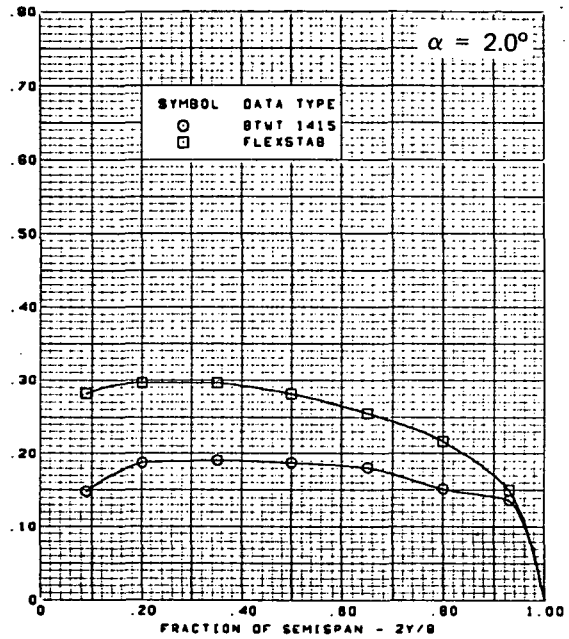
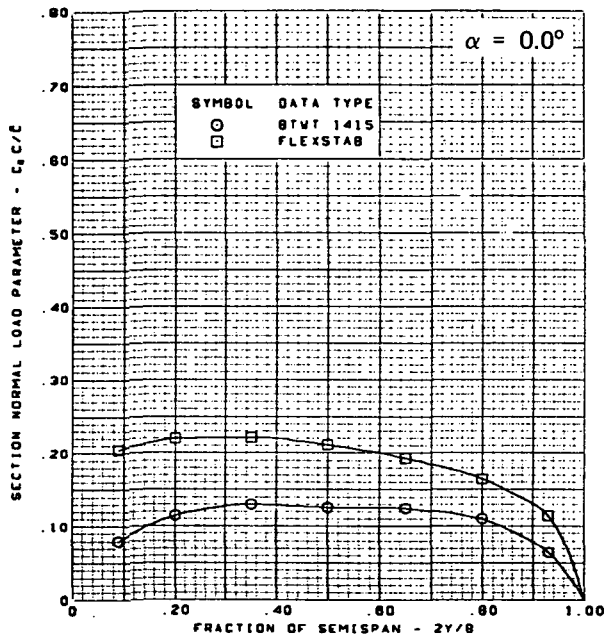
Figure 33.-(Continued)



M = 1.05 (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

(d) (Concluded)

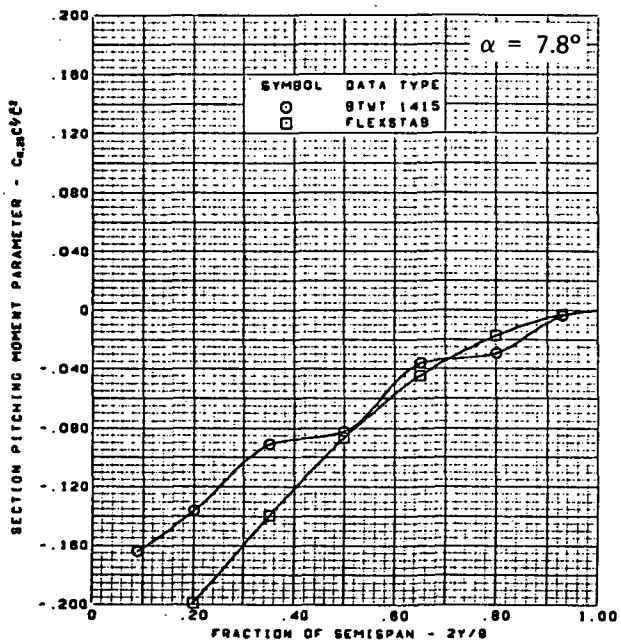
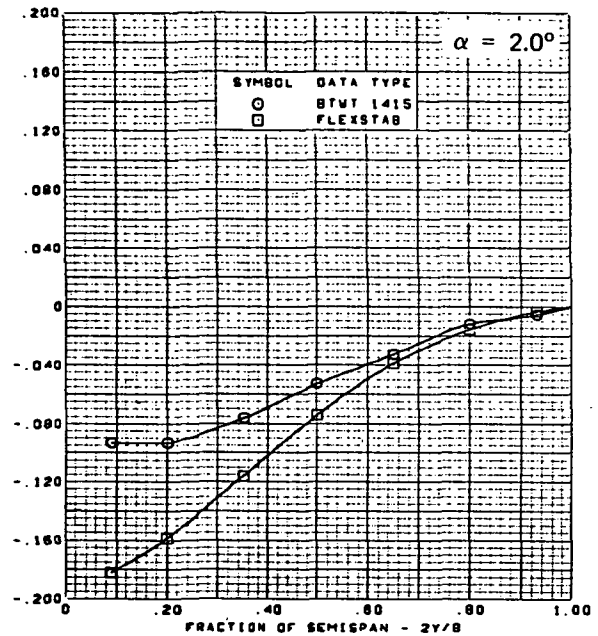
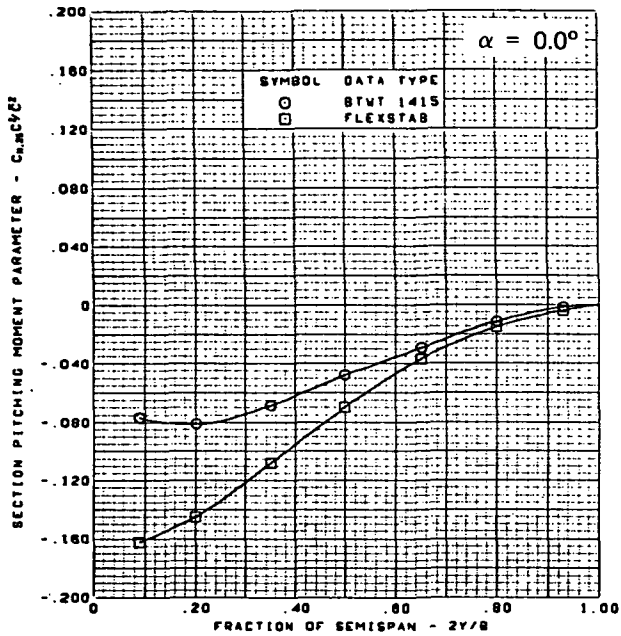
Figure 33.-(Continued)



$M = 1.05$  (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

(e) Spanload Distributions—Normal Force

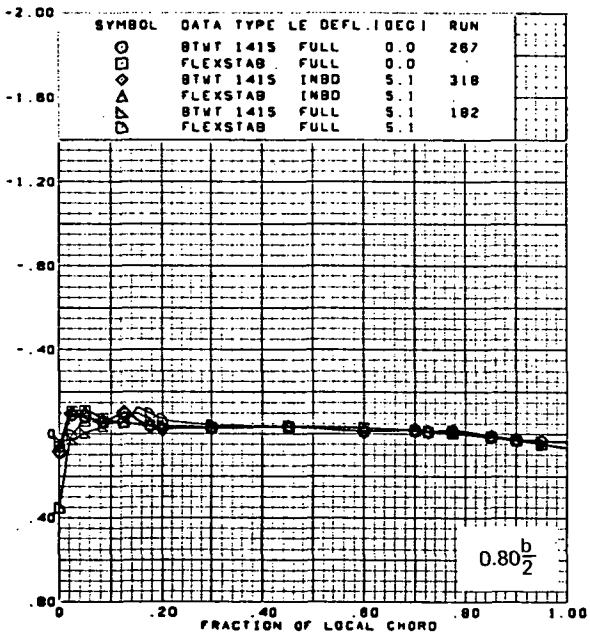
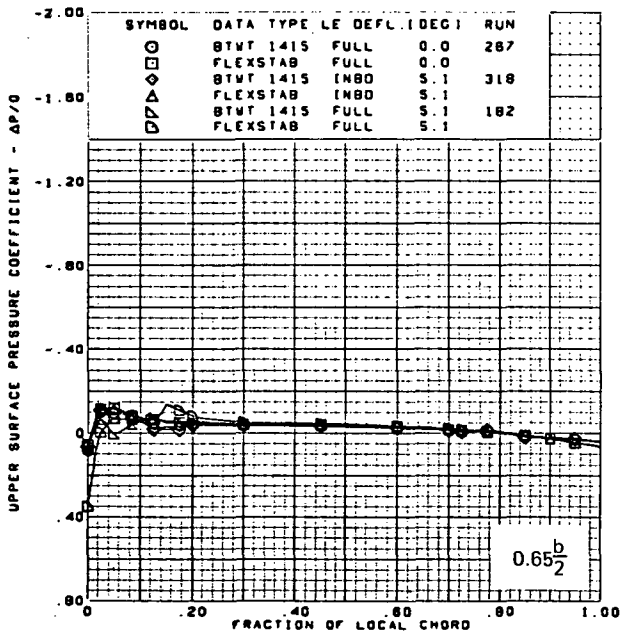
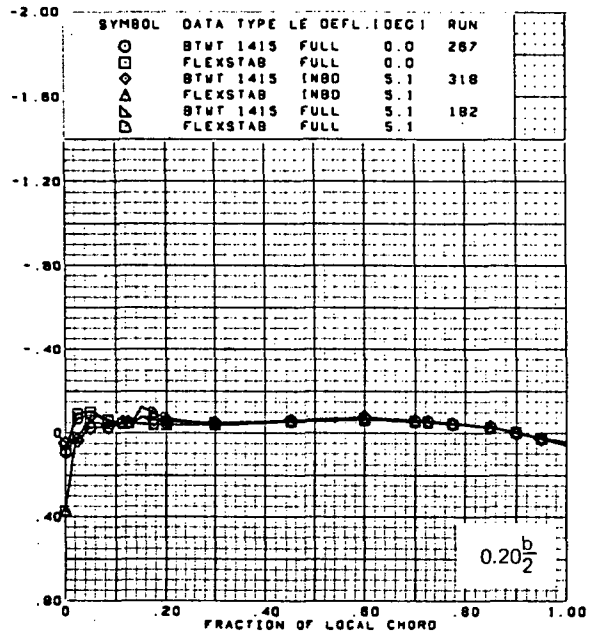
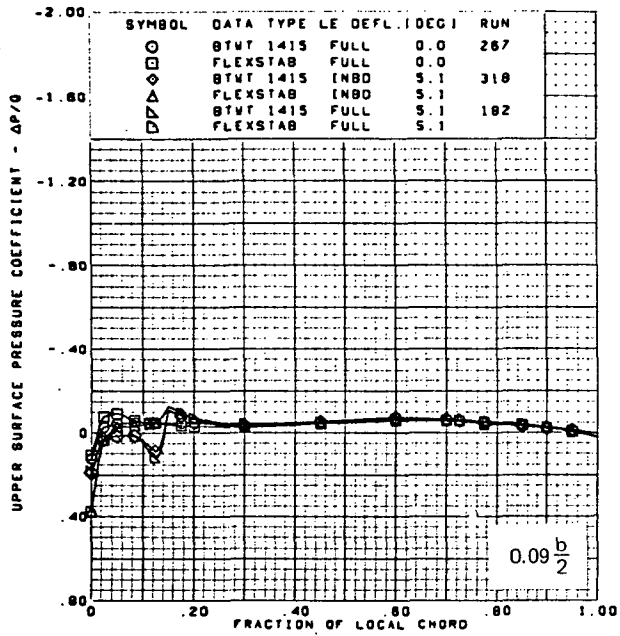
Figure 33.—(Continued)



$M = 1.05$  (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

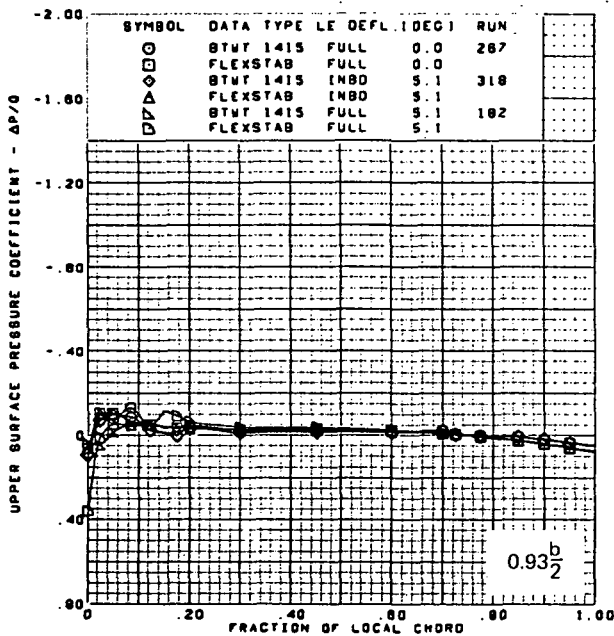
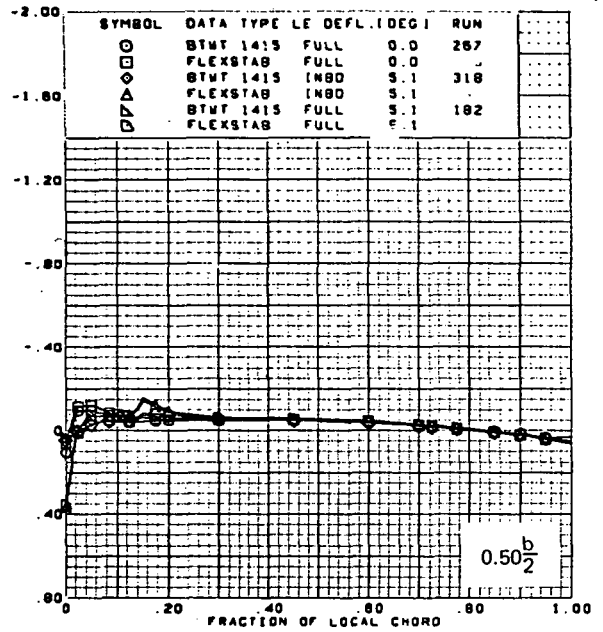
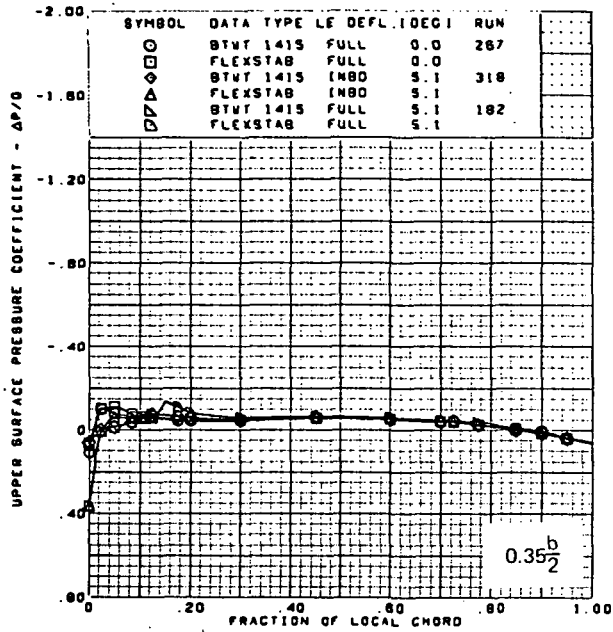
(f) Spanload Distributions—Pitching Moment

Figure 33.—(Concluded)



(a) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

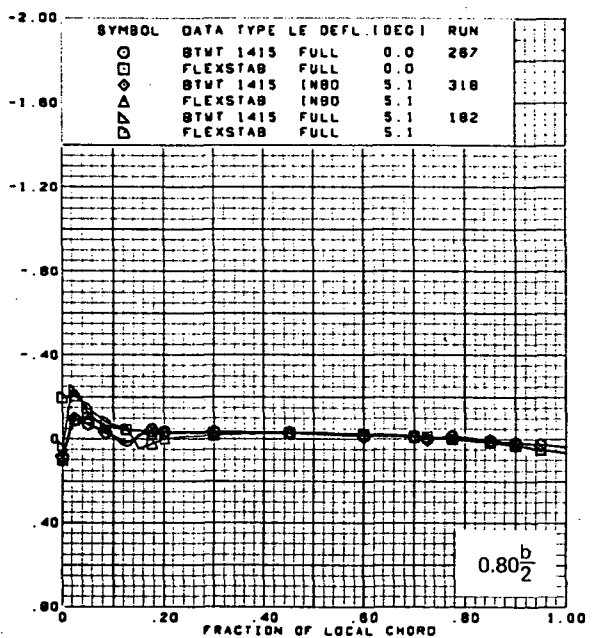
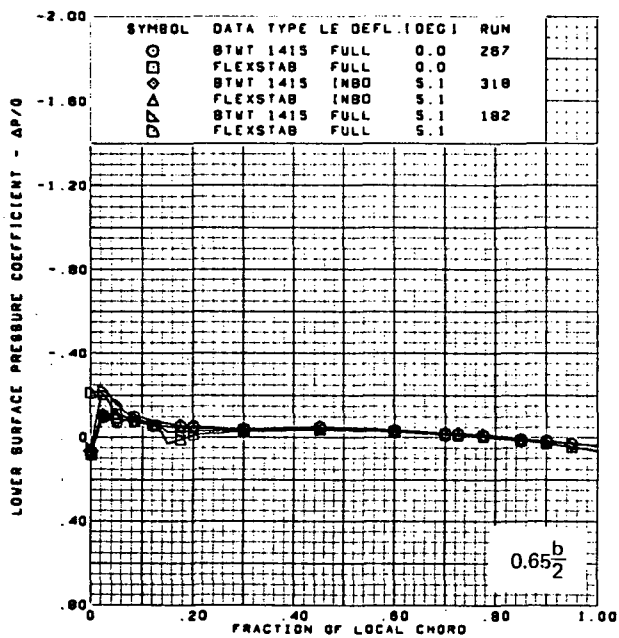
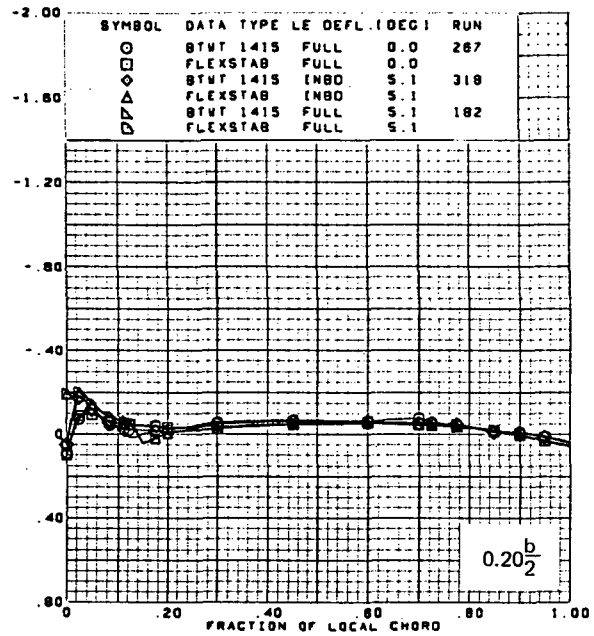
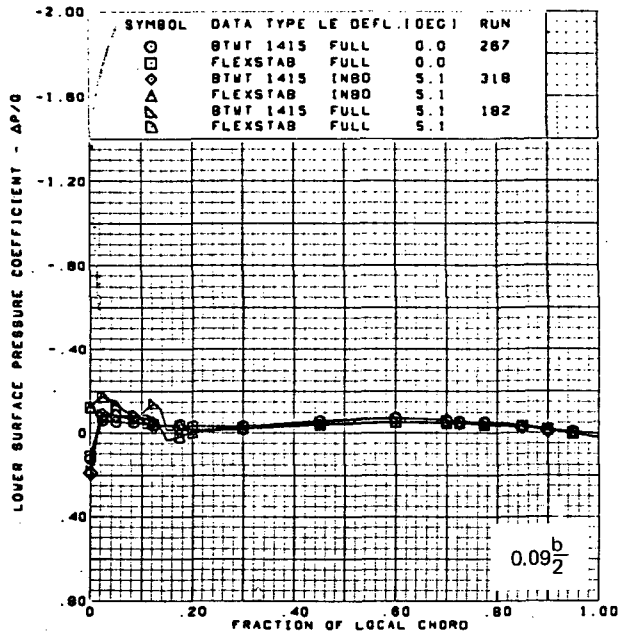
Figure 34.—Wing Theory-to-Experiment Comparison—Effect of Partial Span Inboard L.E. Deflection; Flat Wing; Round L.E.; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

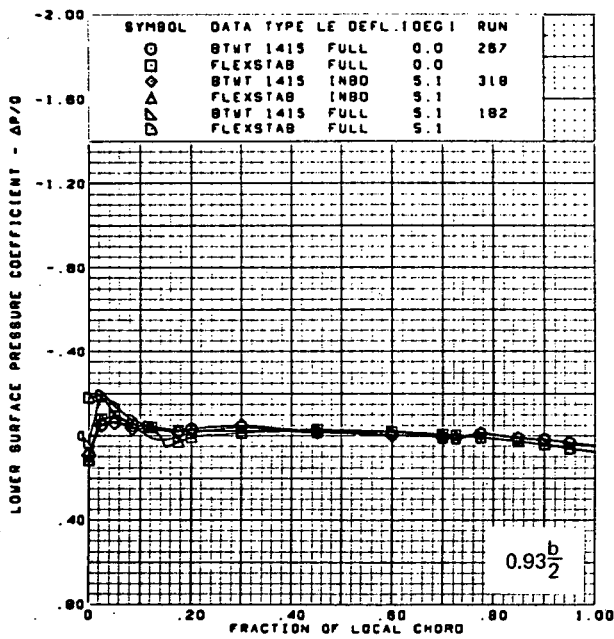
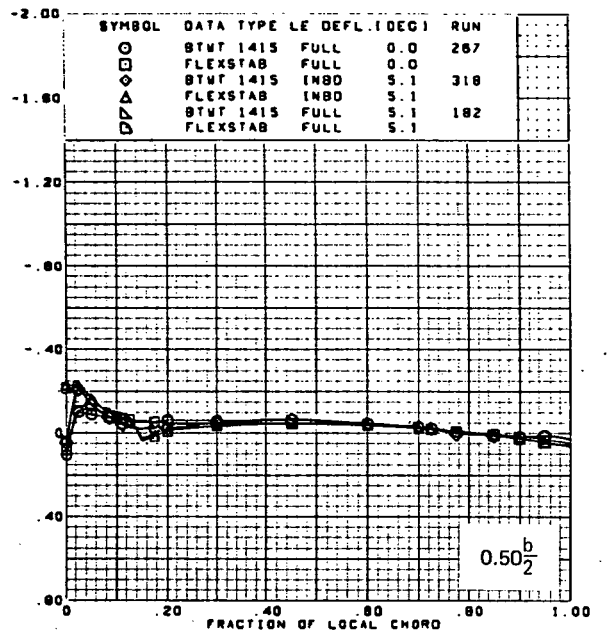
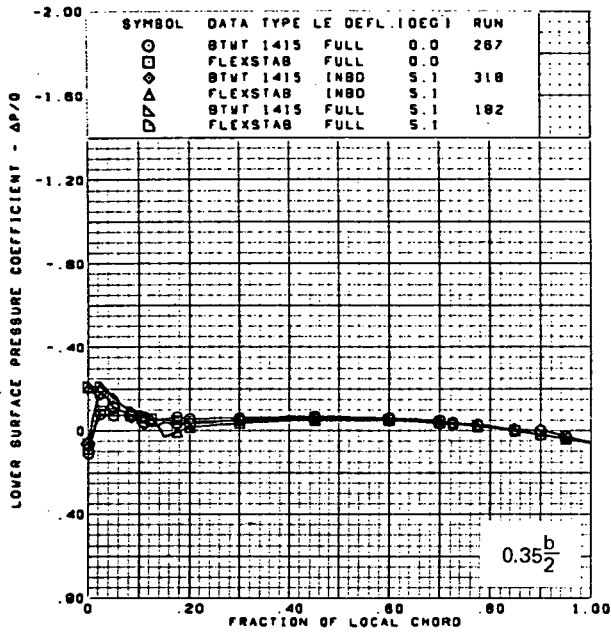
( a ) (Concluded)

Figure 34.-(Continued)



(b) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

Figure 34.-(Continued)

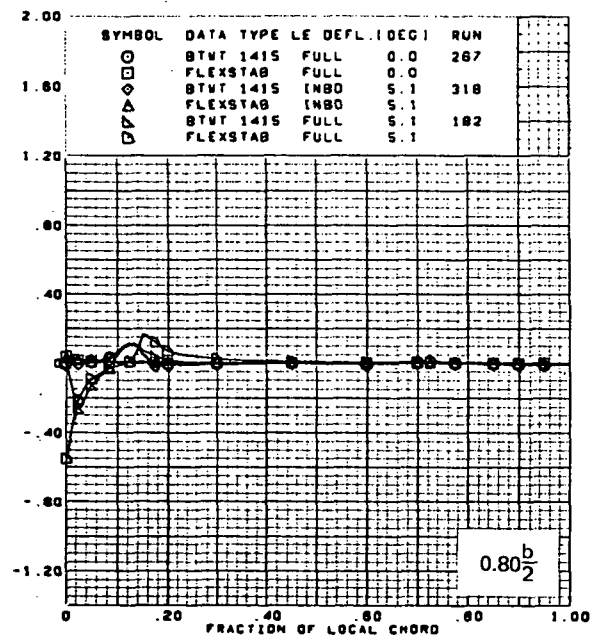
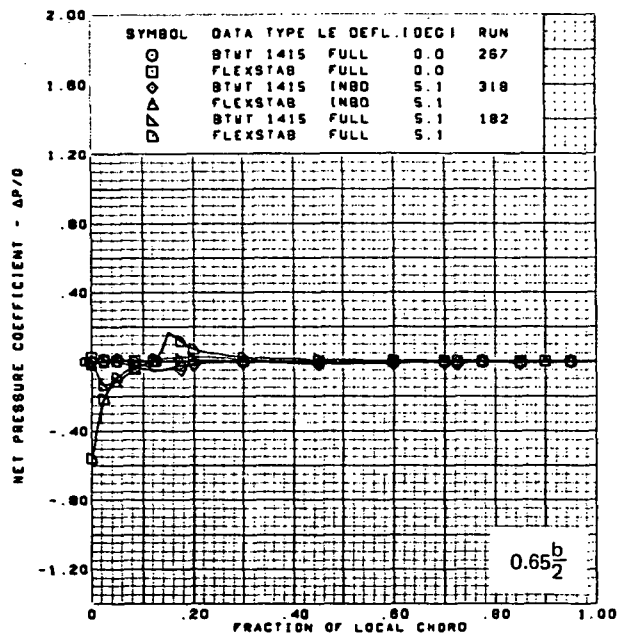
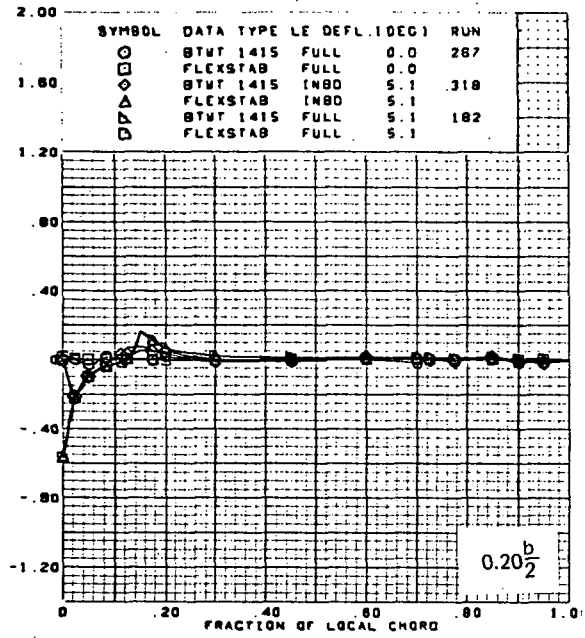
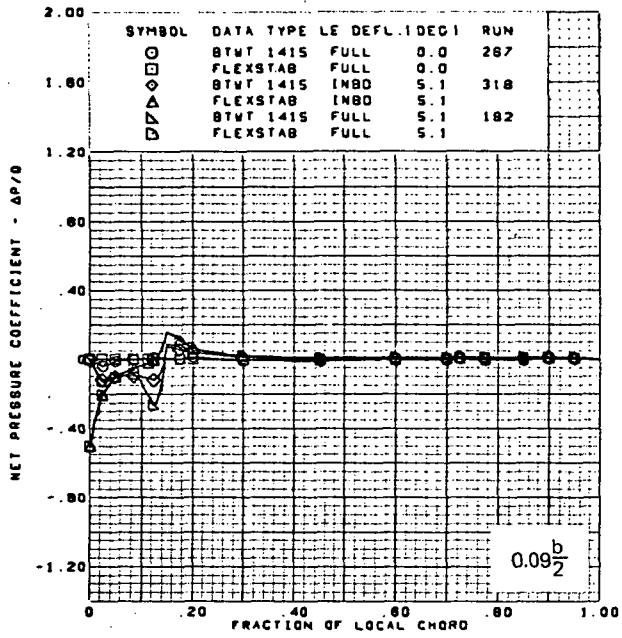


$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

( b ) ( Concluded )

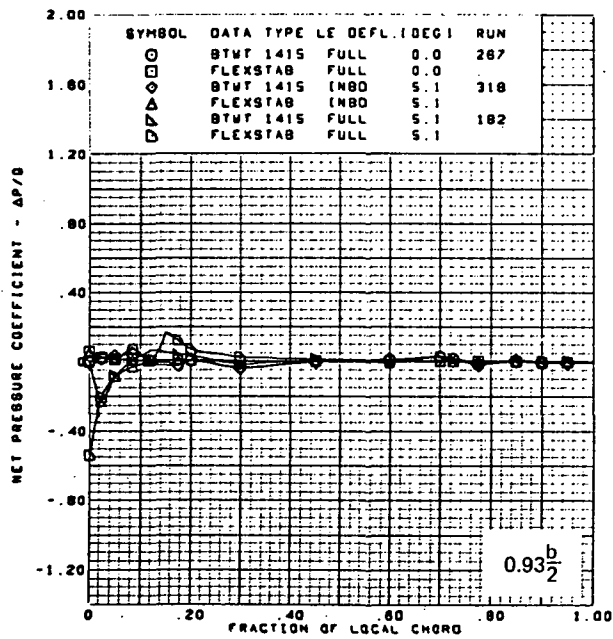
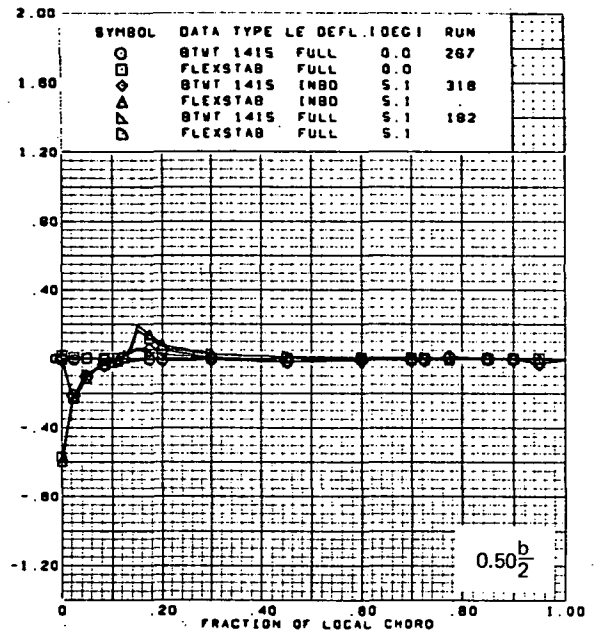
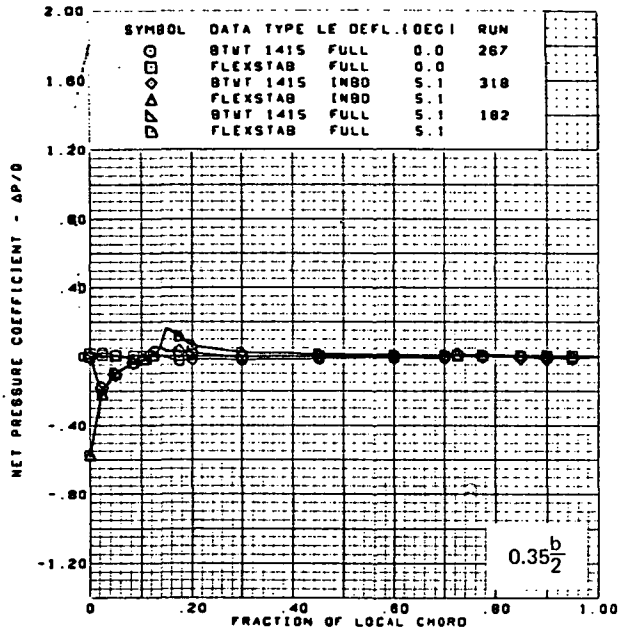
Figure 34.-(Continued)





(c) Net Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

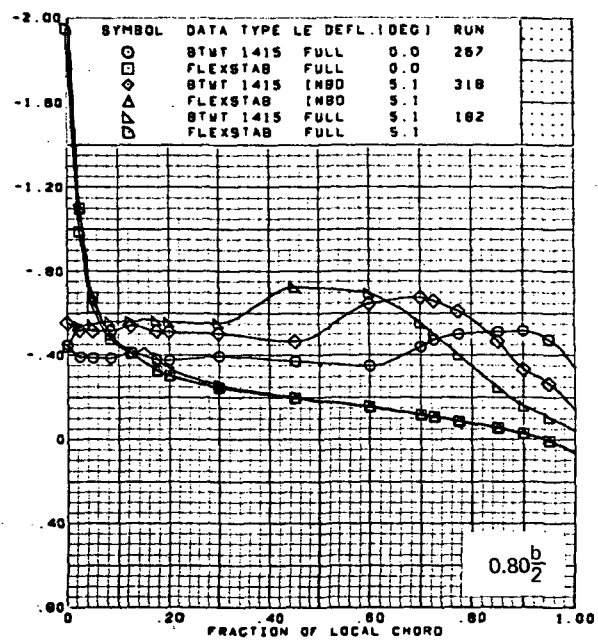
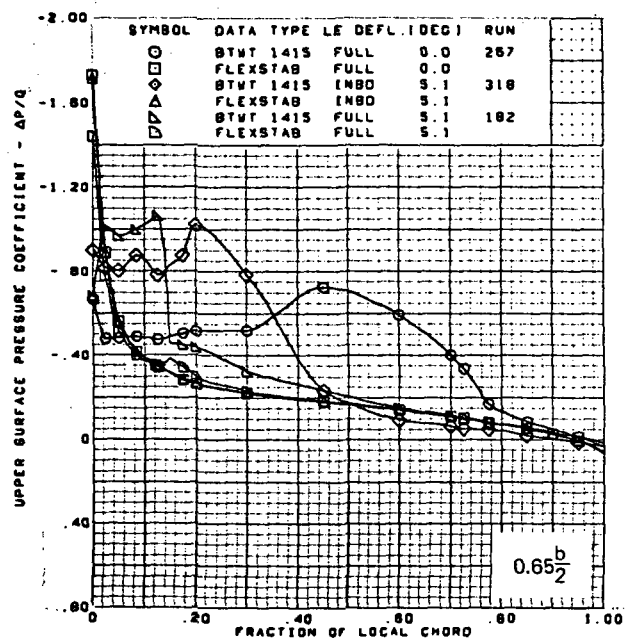
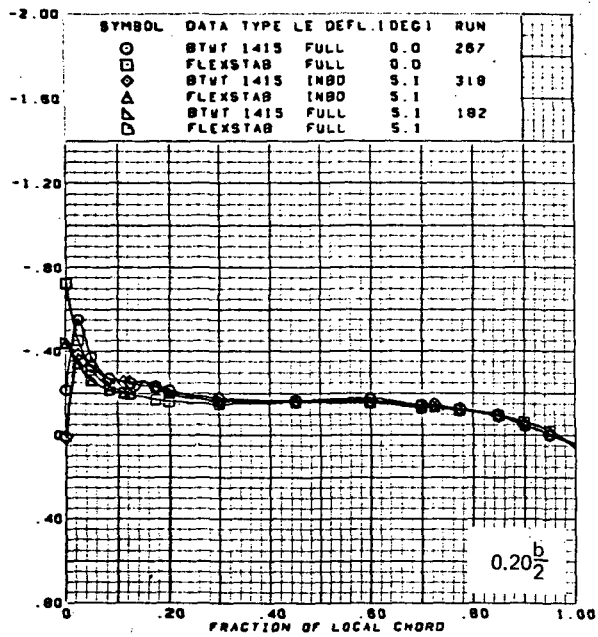
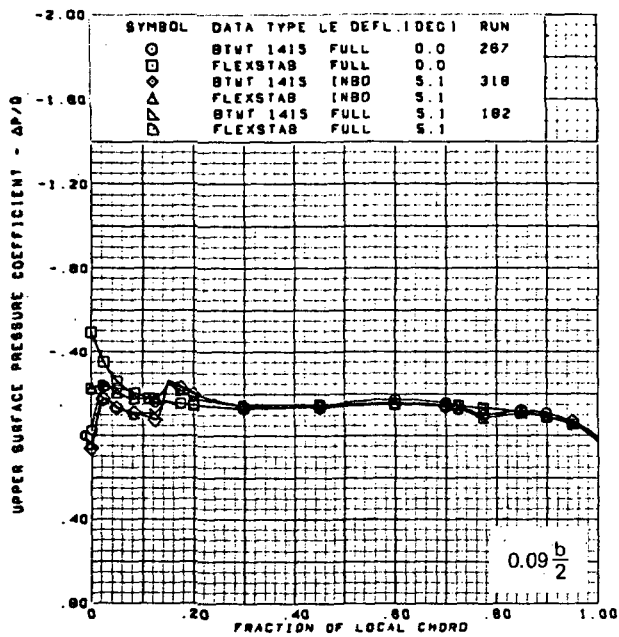
Figure 34.-(Continued)



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

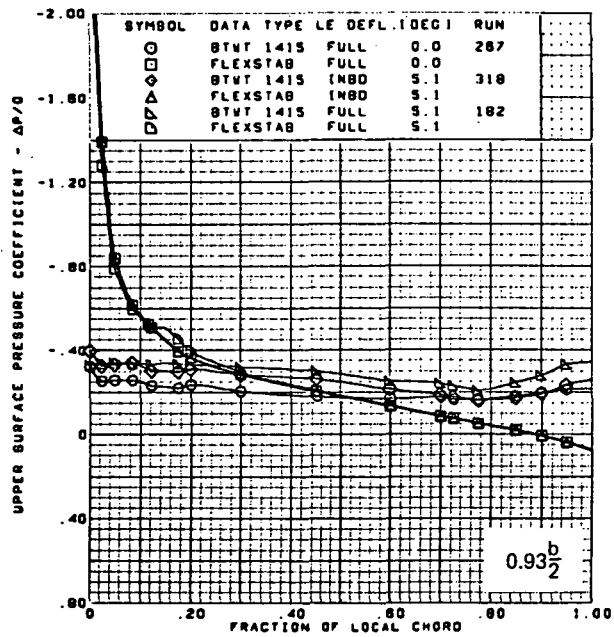
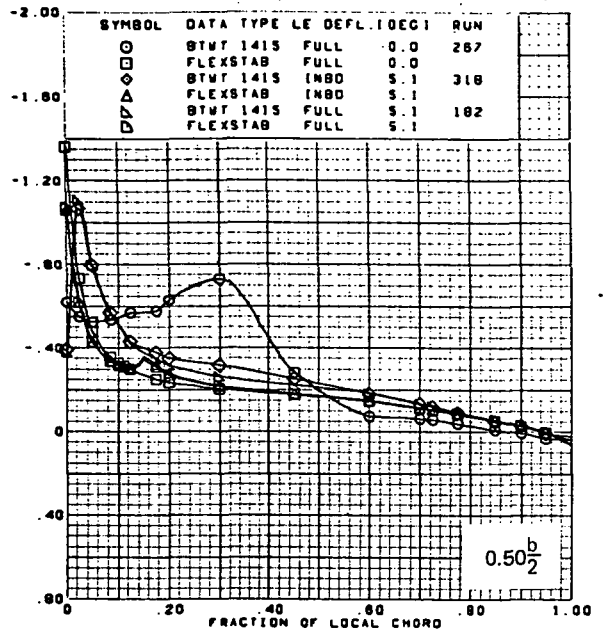
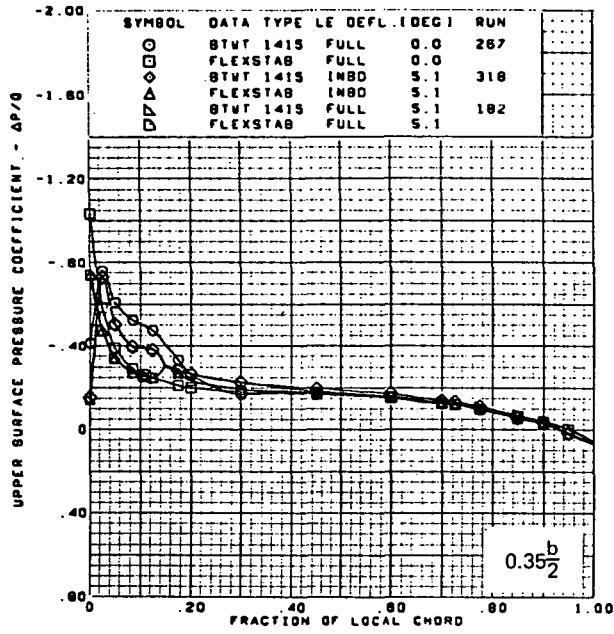
(c) (Concluded)

Figure 34.-(Continued)



(d) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

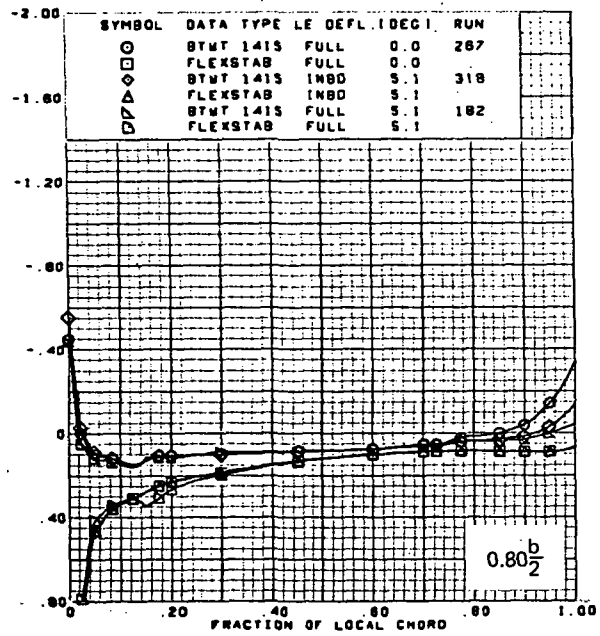
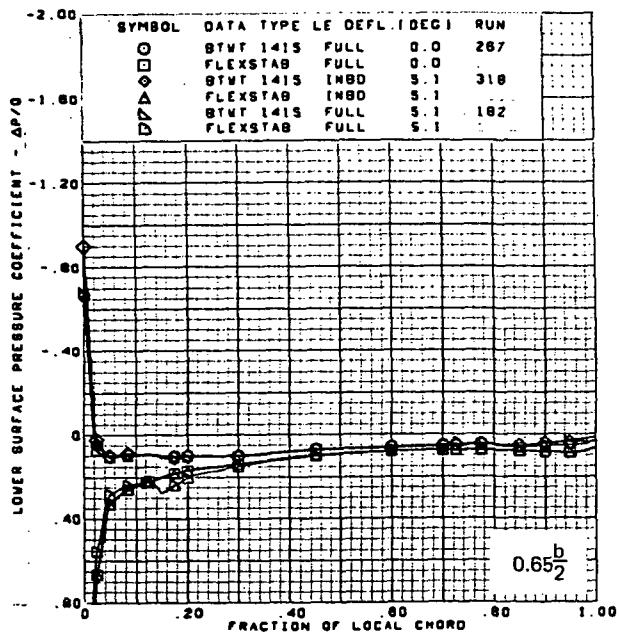
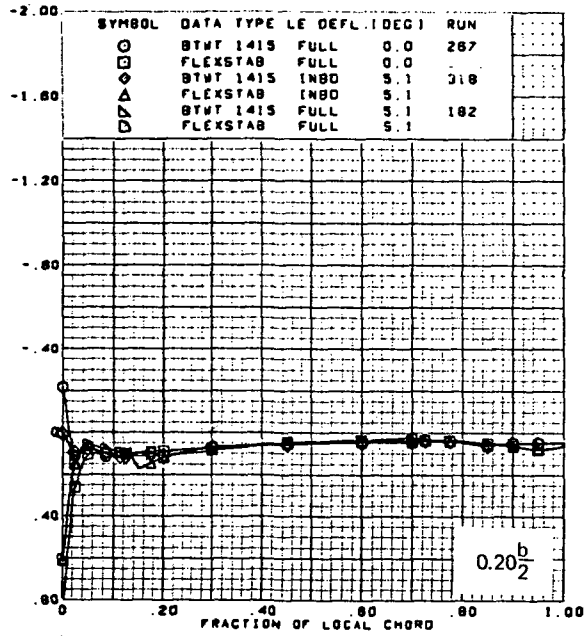
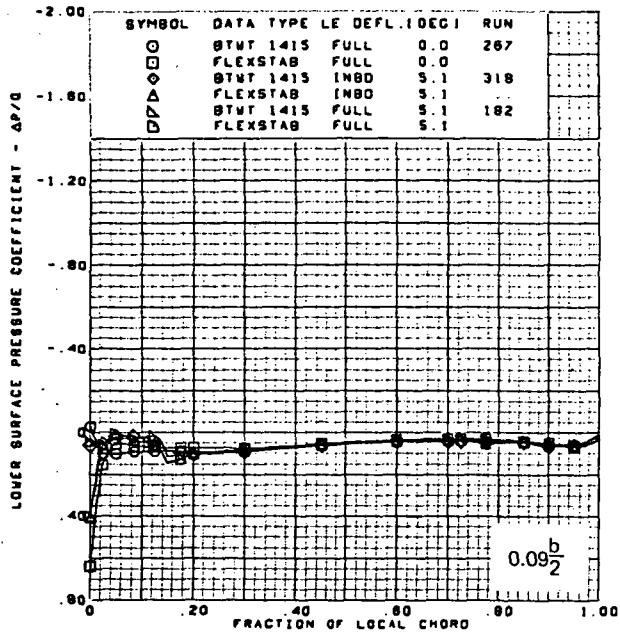
Figure 34.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

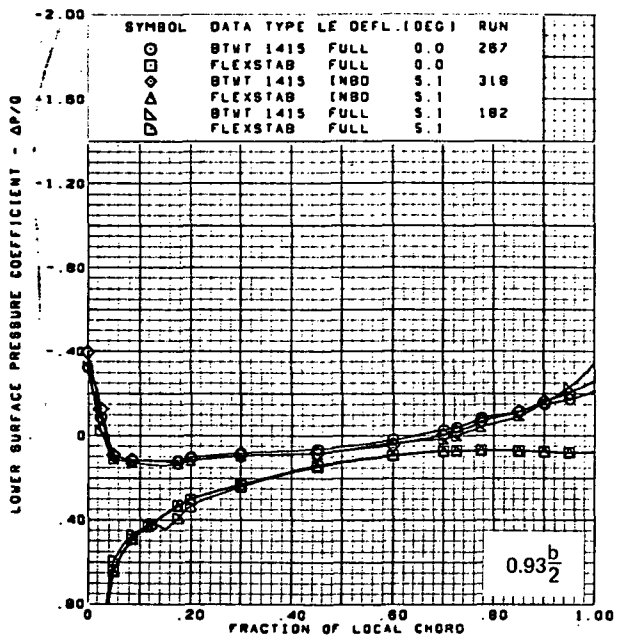
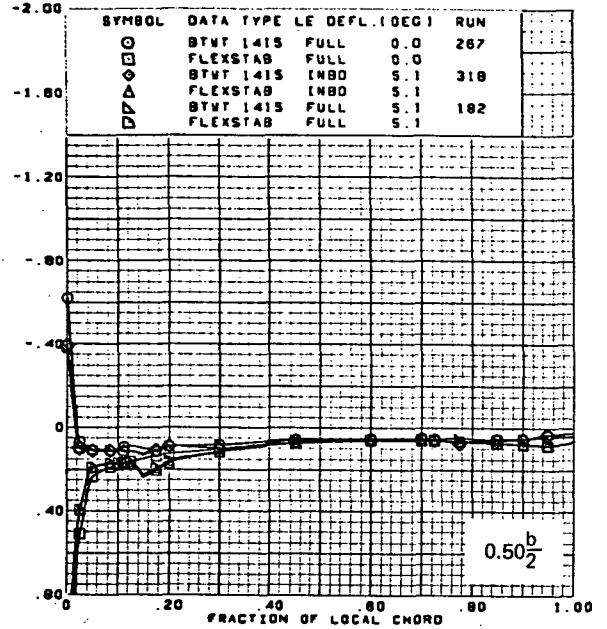
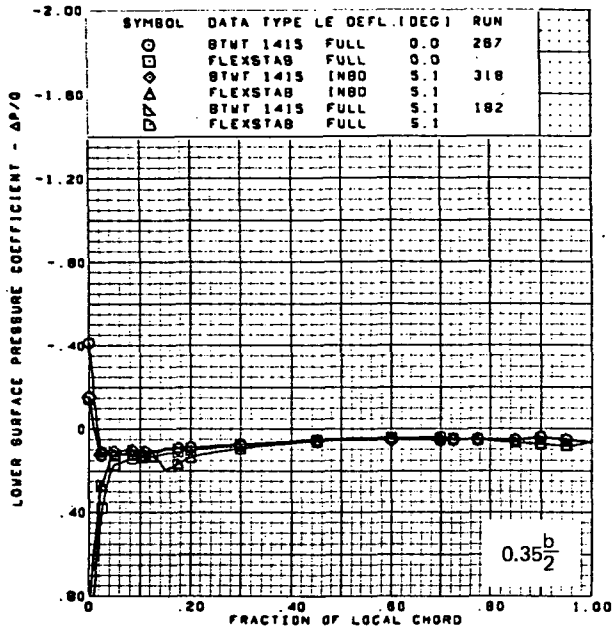
(d) (Concluded)

Figure 34.-(Continued)



(e) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

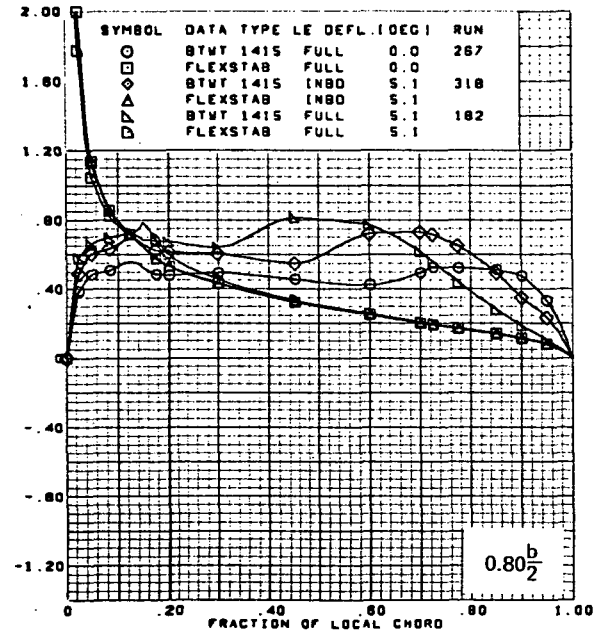
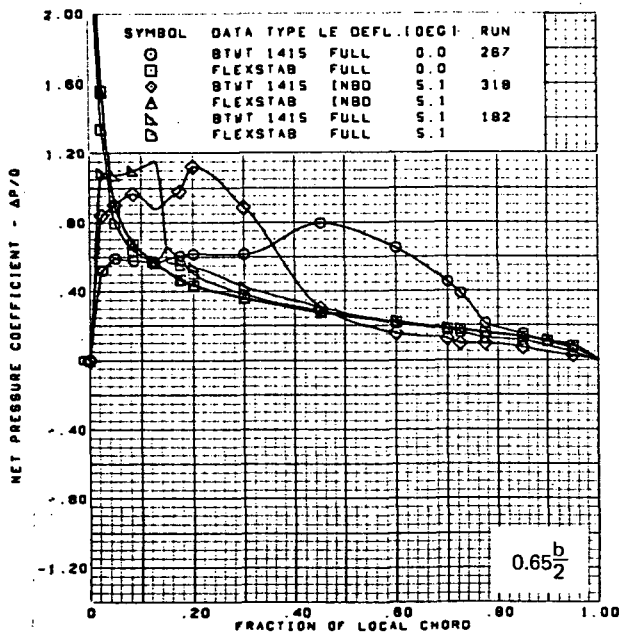
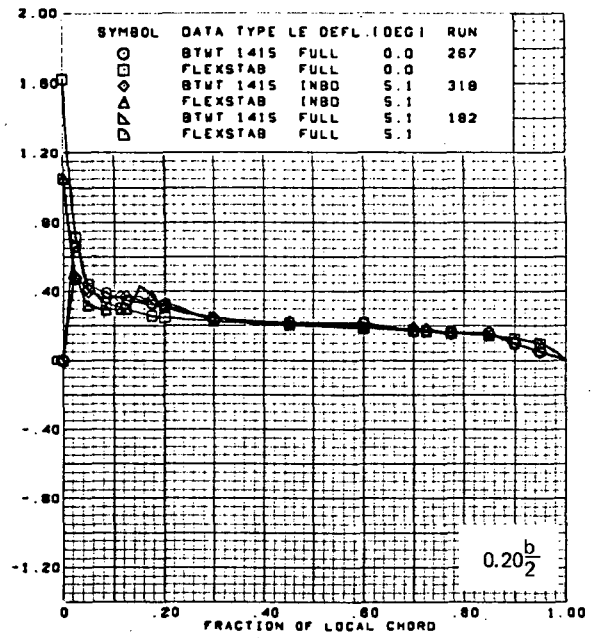
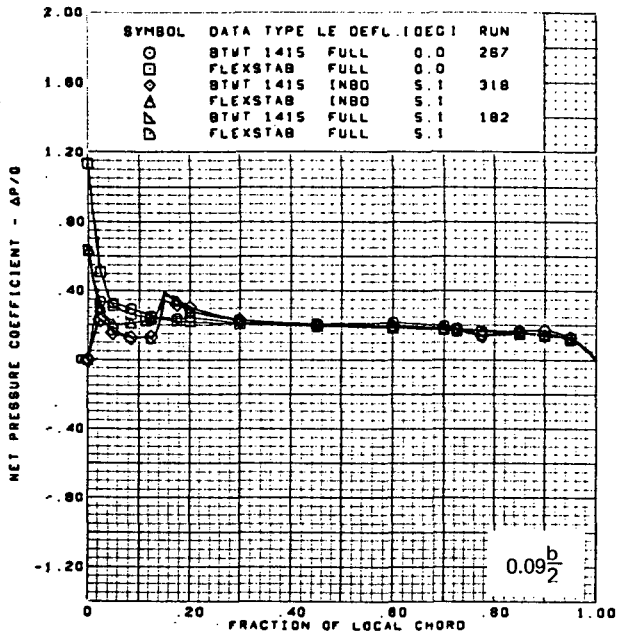
Figure 34.--(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

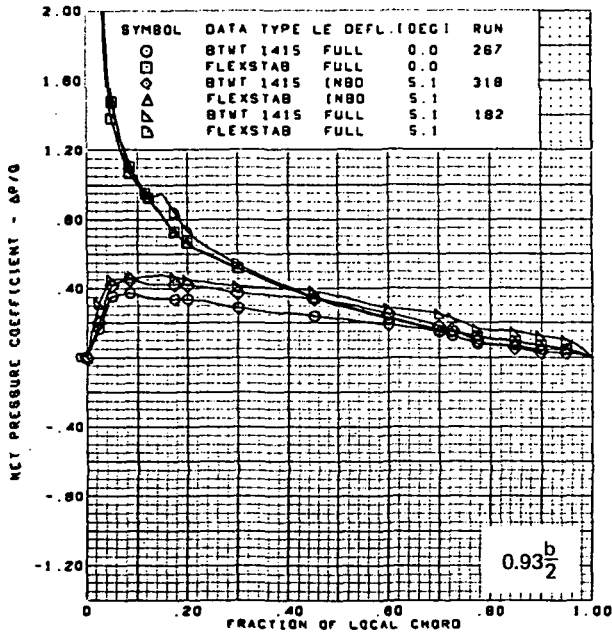
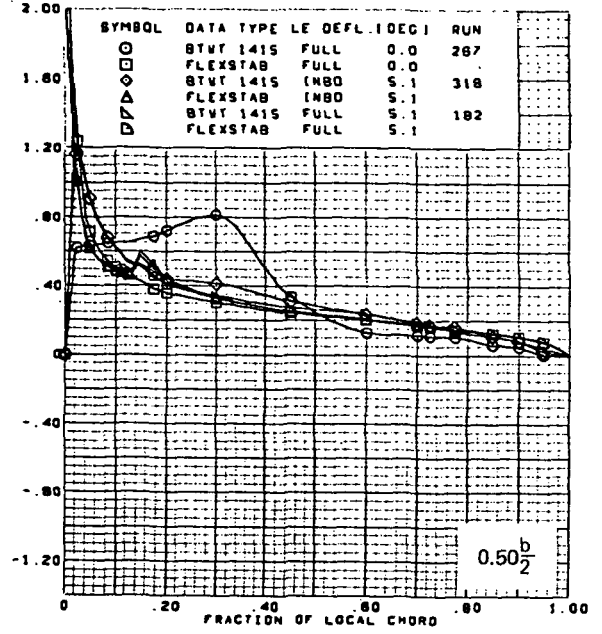
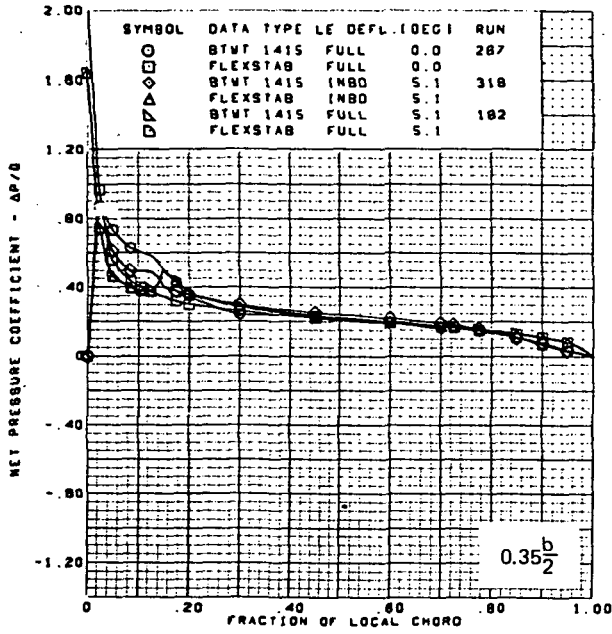
(e) (Concluded)

Figure 34.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

Figure 34.--(Continued)

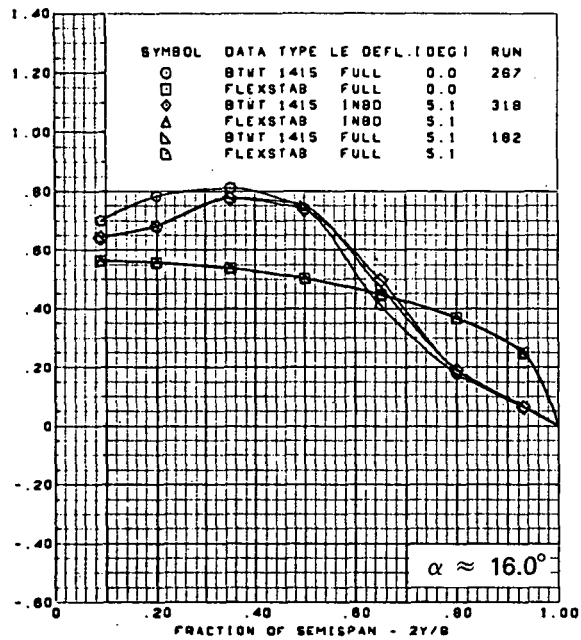
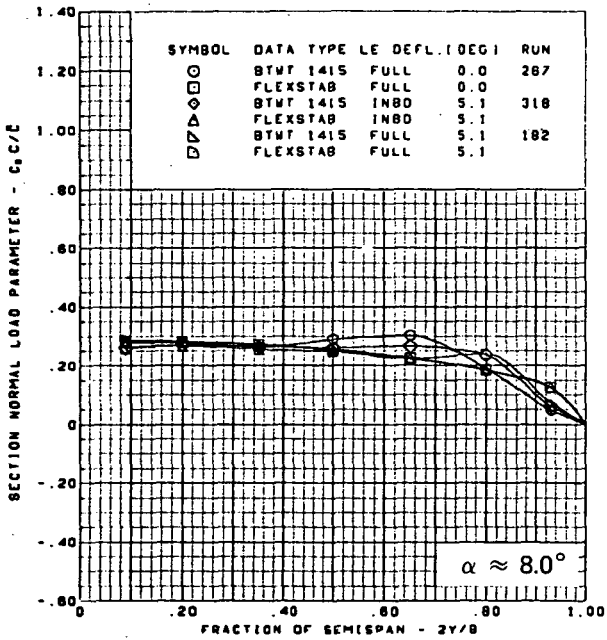
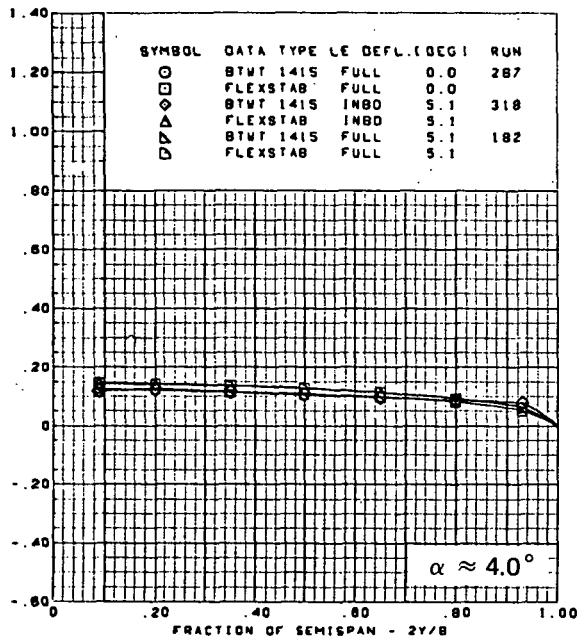
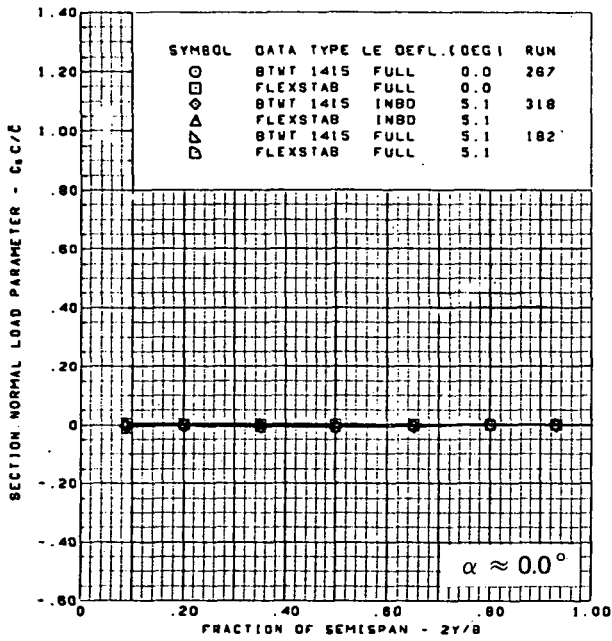


$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

(f) (Concluded)

Figure 34.-(Continued)

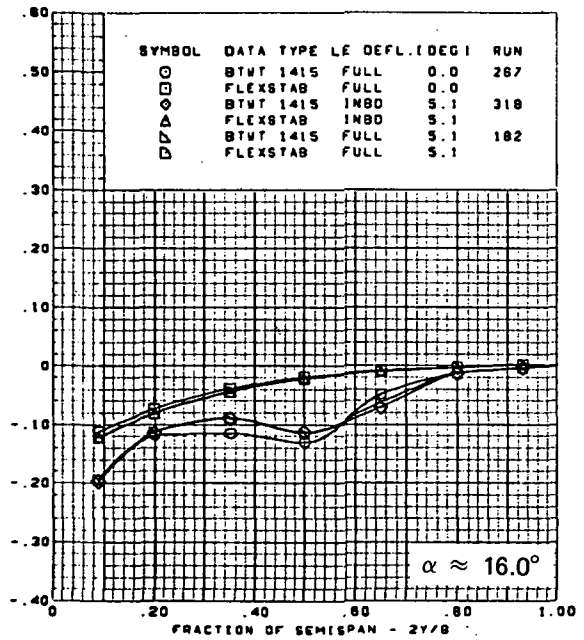
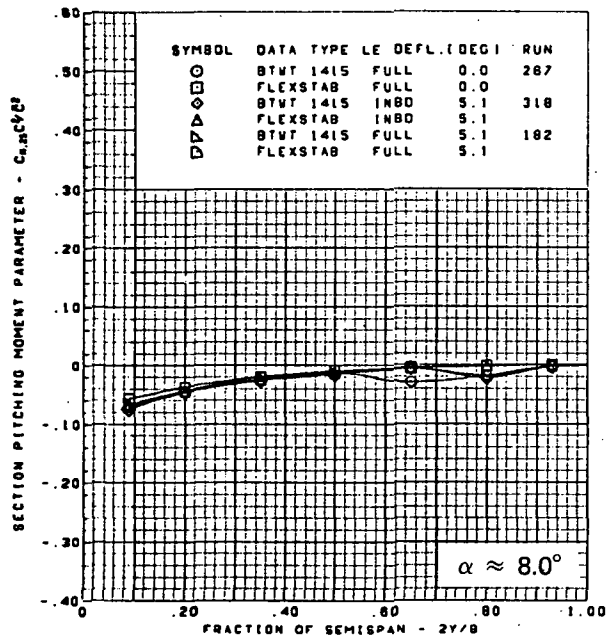
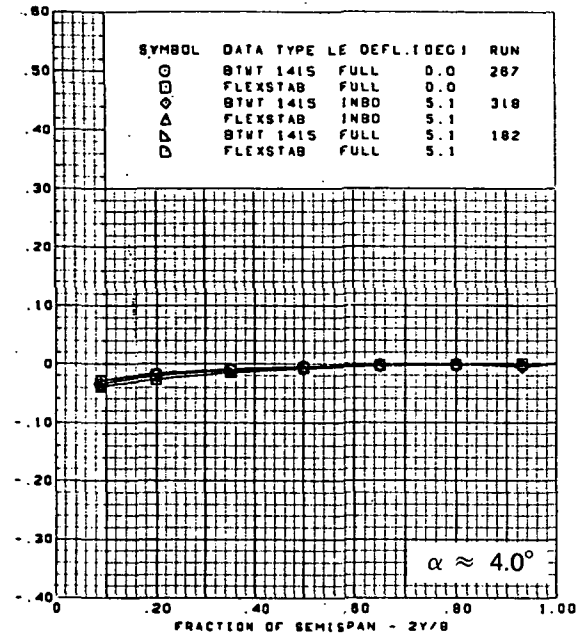
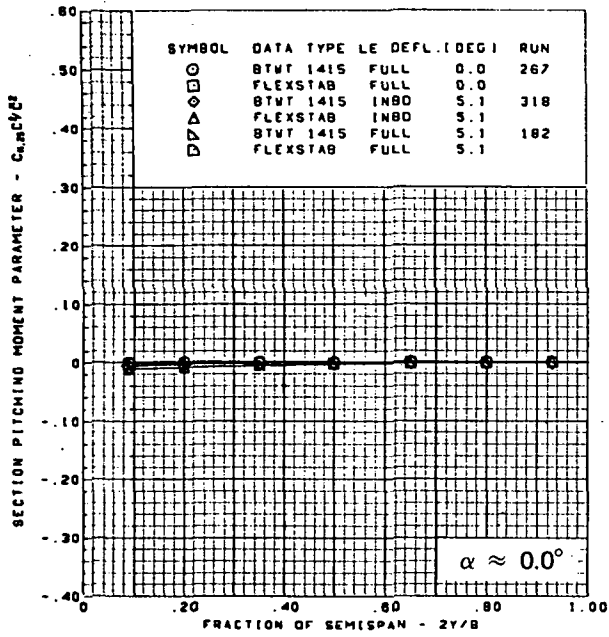




M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

(g) Spanload Distributions—Normal Force

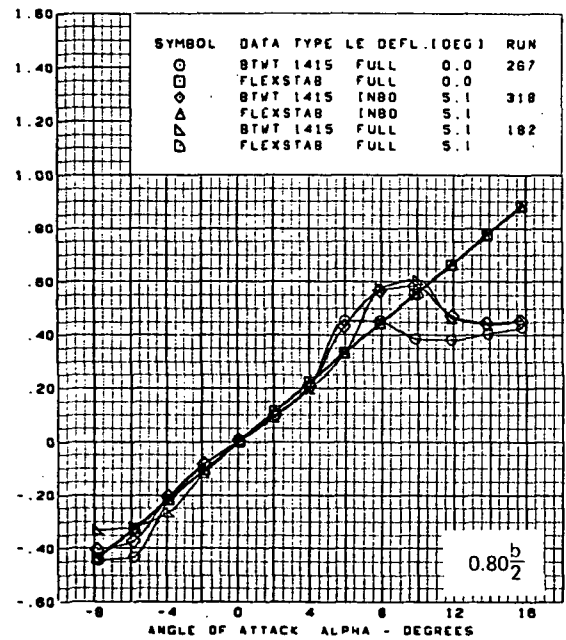
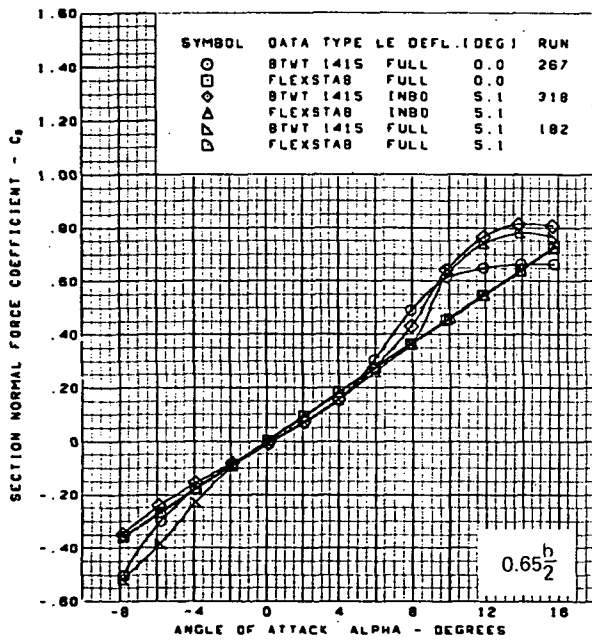
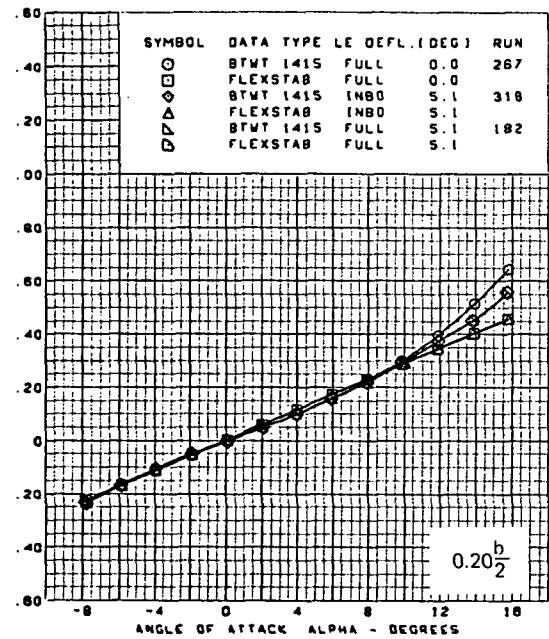
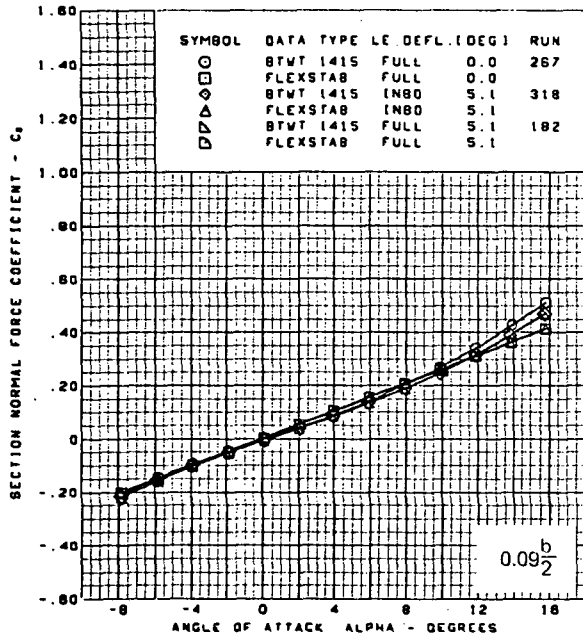
Figure 34.—(Continued)



M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

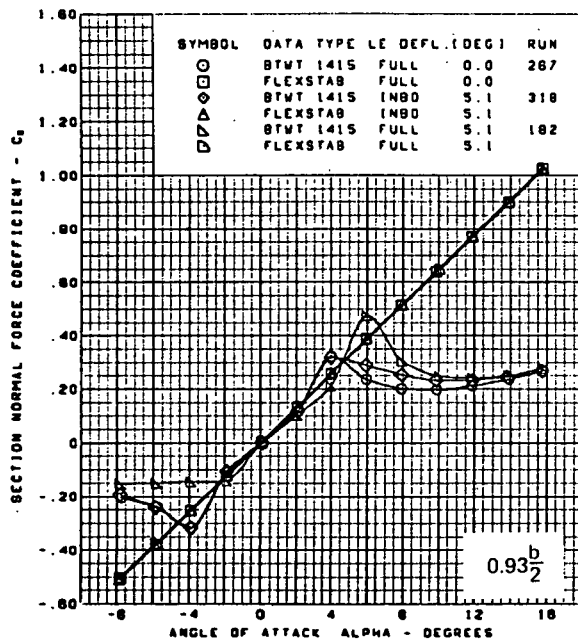
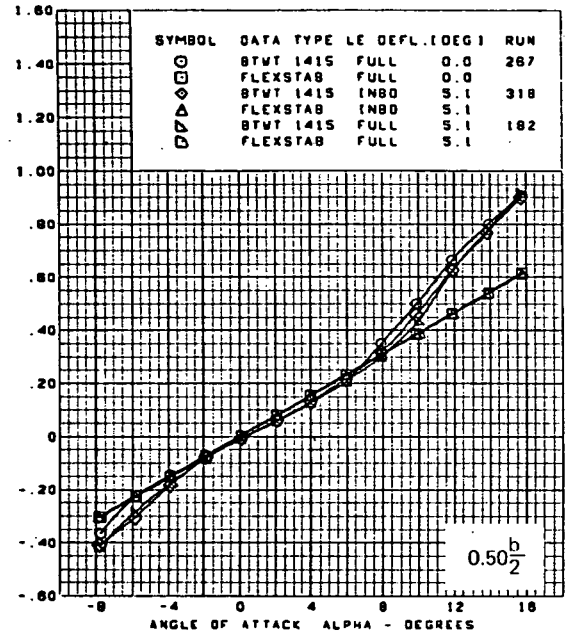
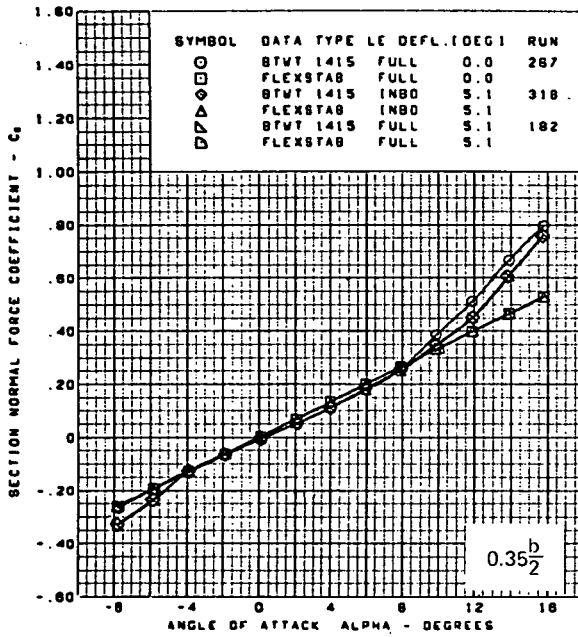
(h) Spanload Distributions—Pitching Moment

Figure 34.—(Continued)



(I) Section Aerodynamic Coefficients - Normal Force

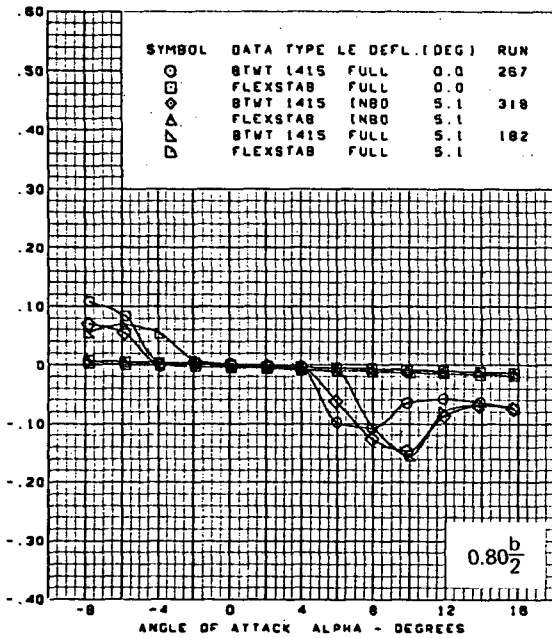
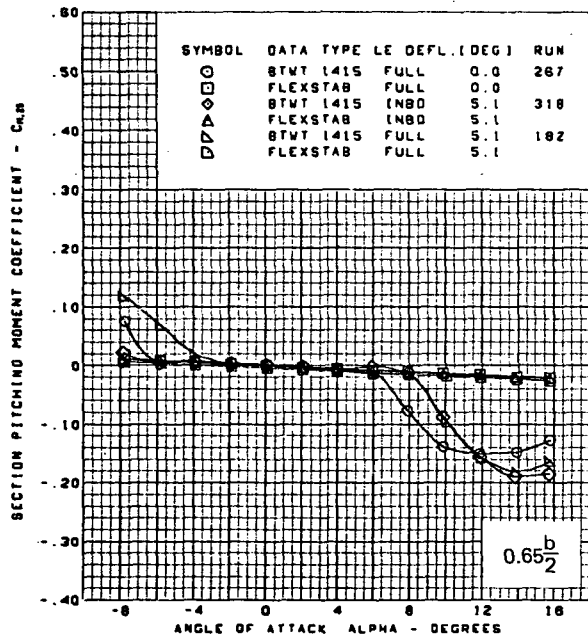
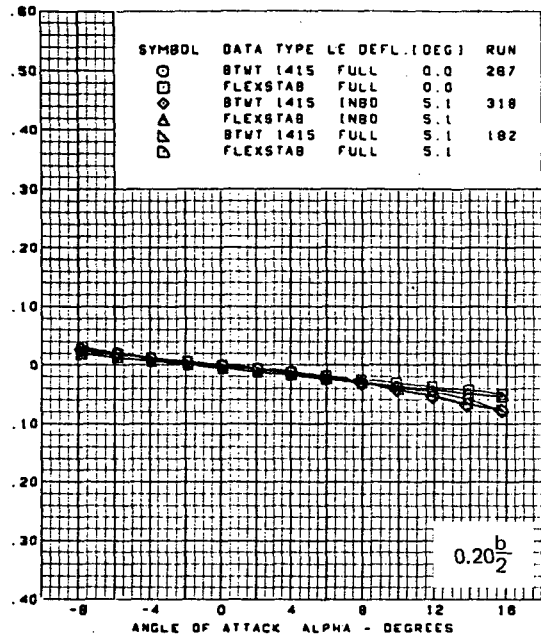
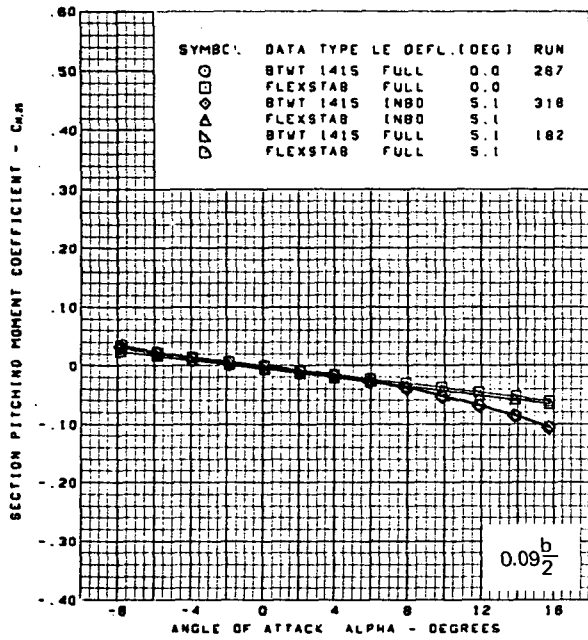
Figure 34.-(Continued)



M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

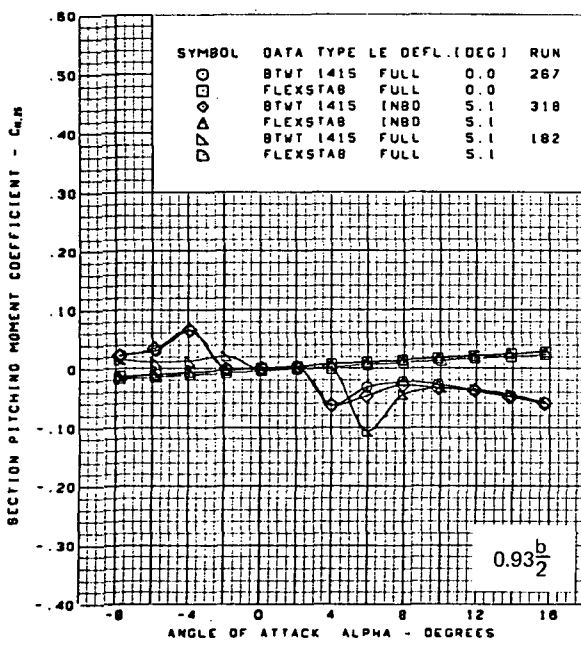
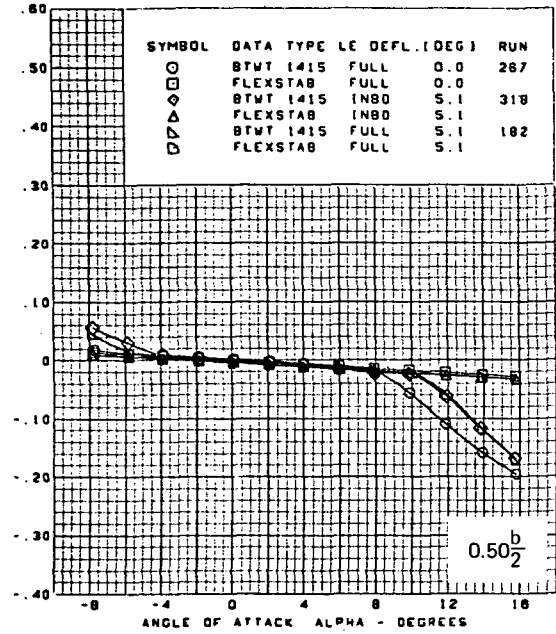
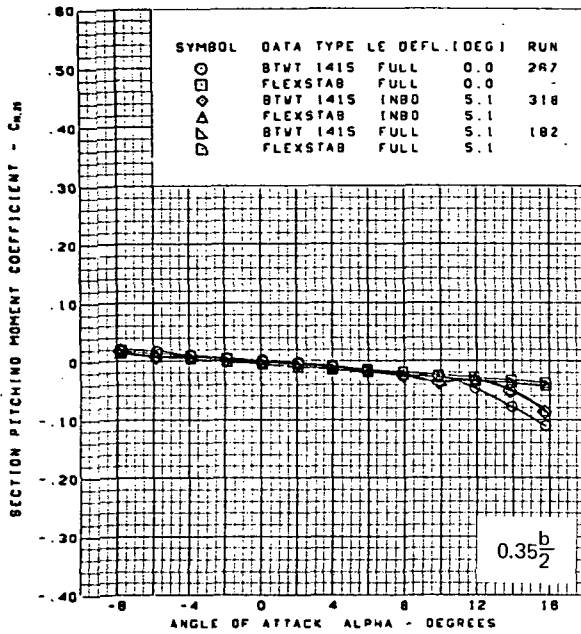
(I) (Concluded)

Figure 34.-(Continued)



(j) Section Aerodynamic Coefficients – Pitching Moment

Figure 34.-(Continued)

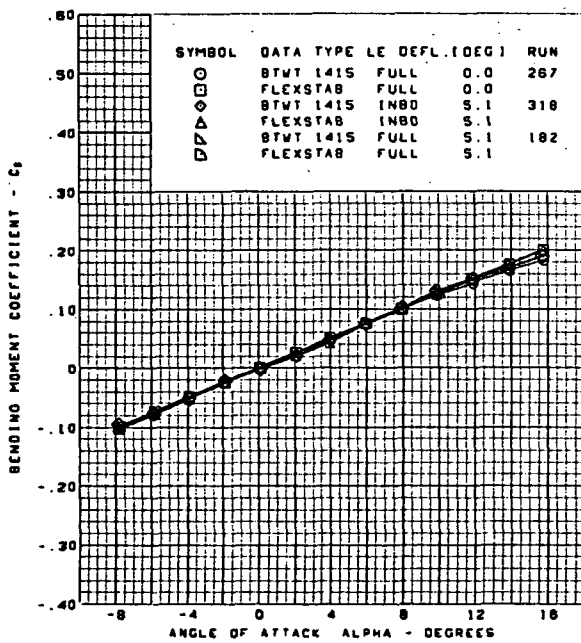
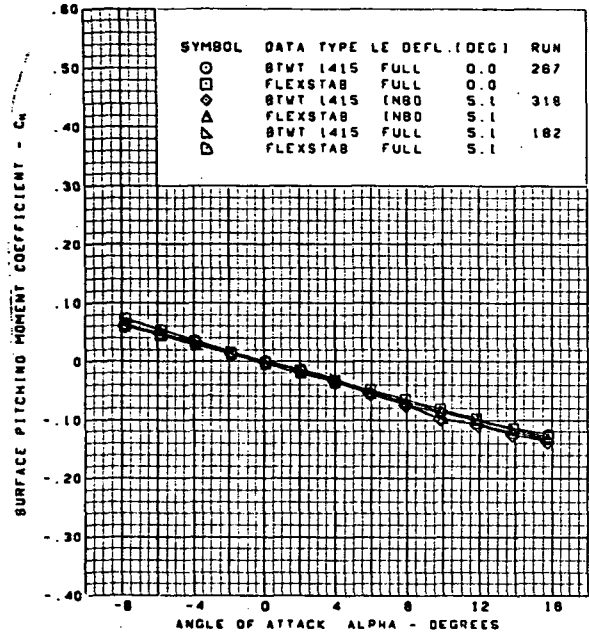
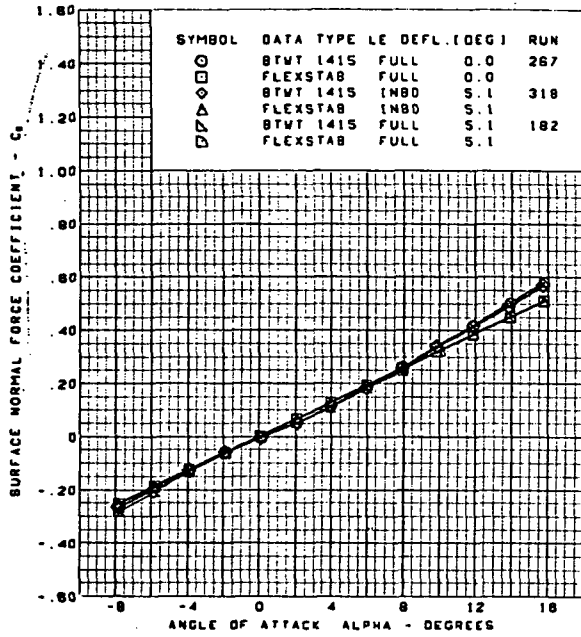


M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

(j) (Concluded)

Figure 34.-(Continued)

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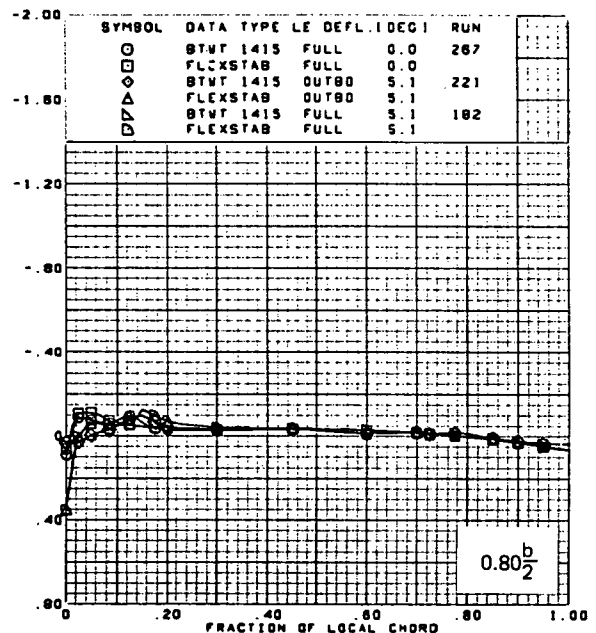
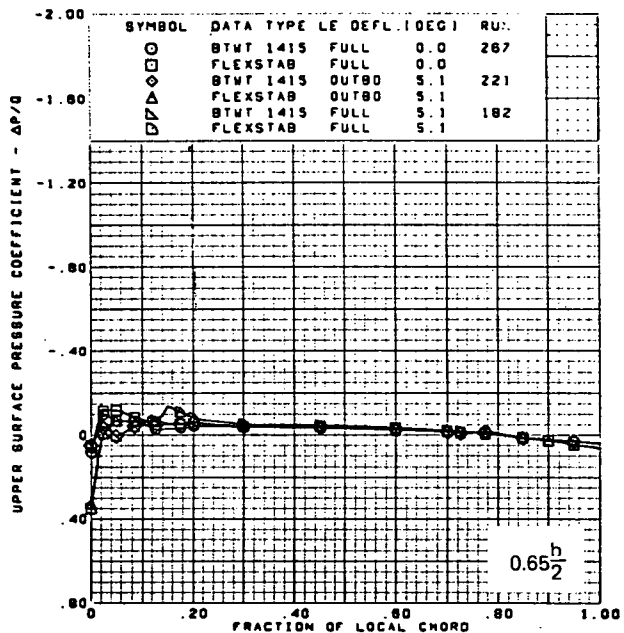
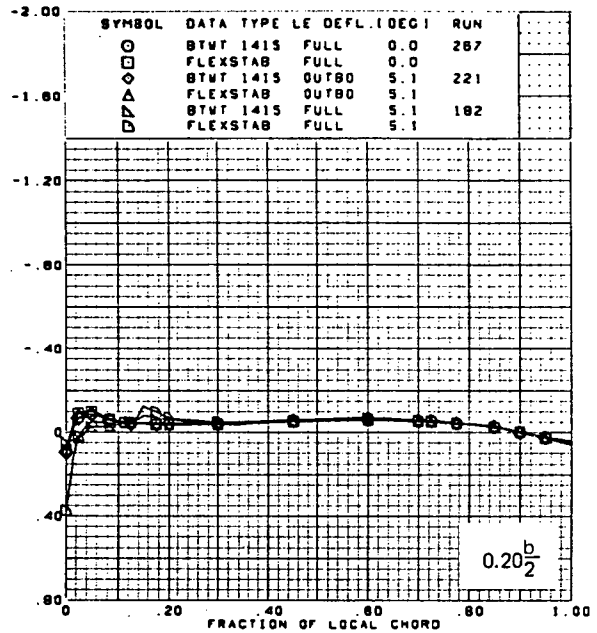
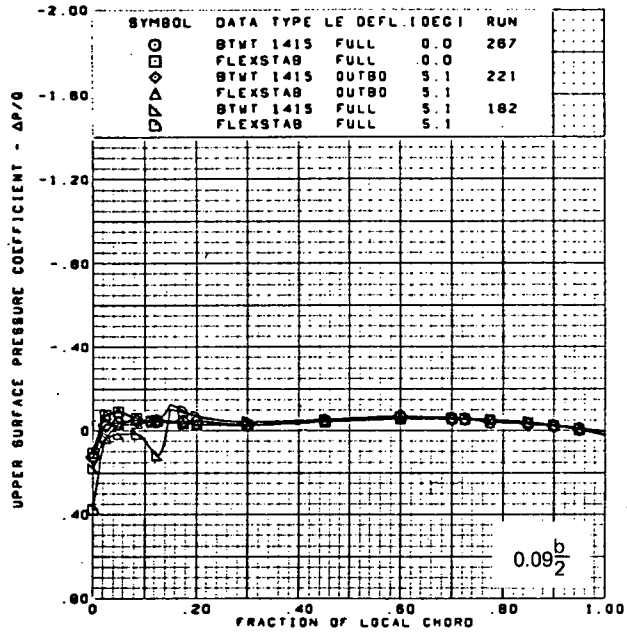


M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

(k) Wing Aerodynamic Coefficients

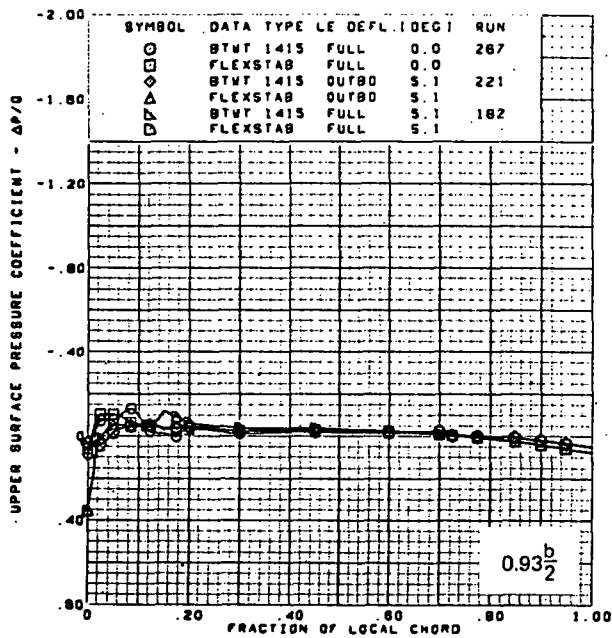
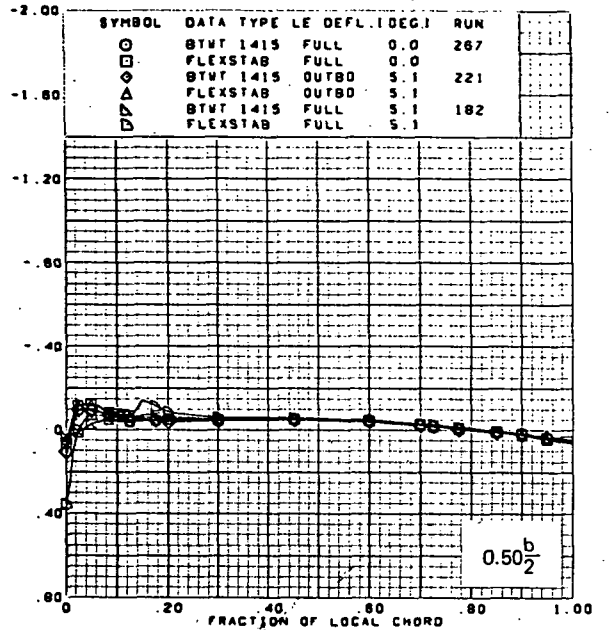
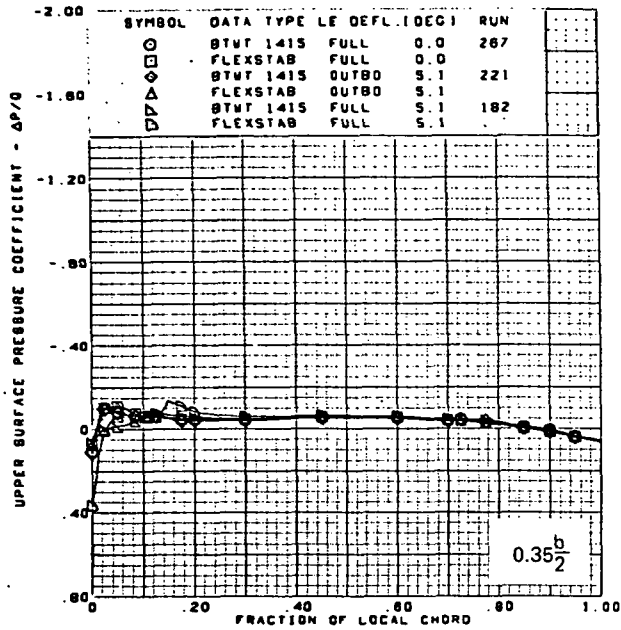
Figure 34.-(Concluded)





(a) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

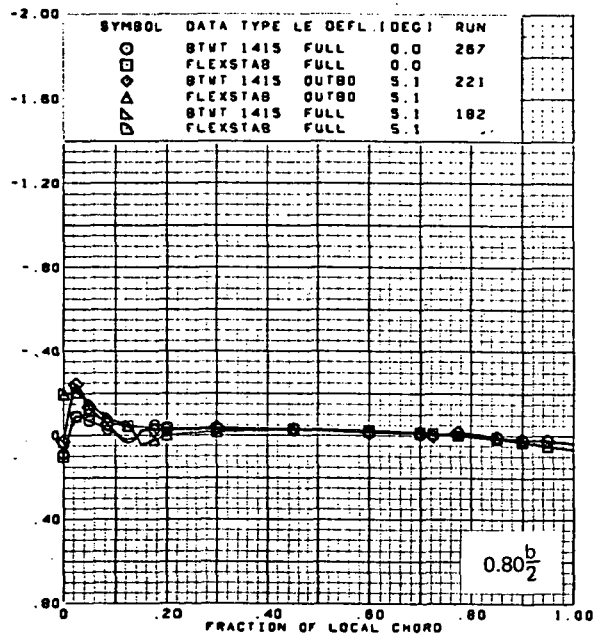
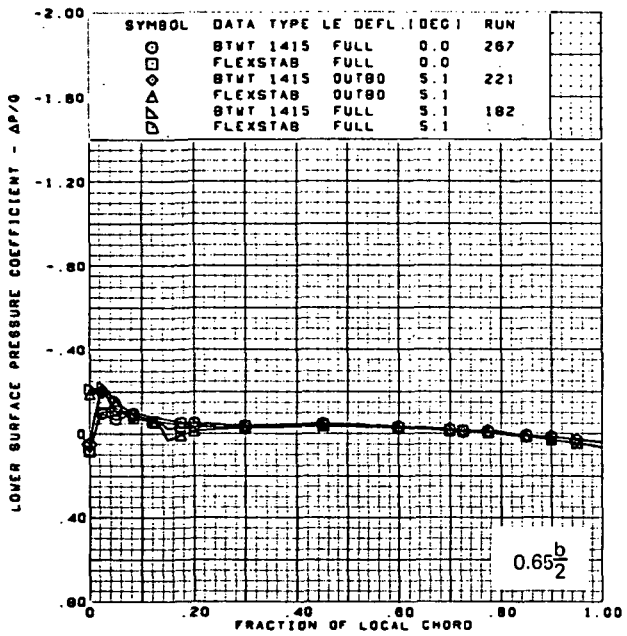
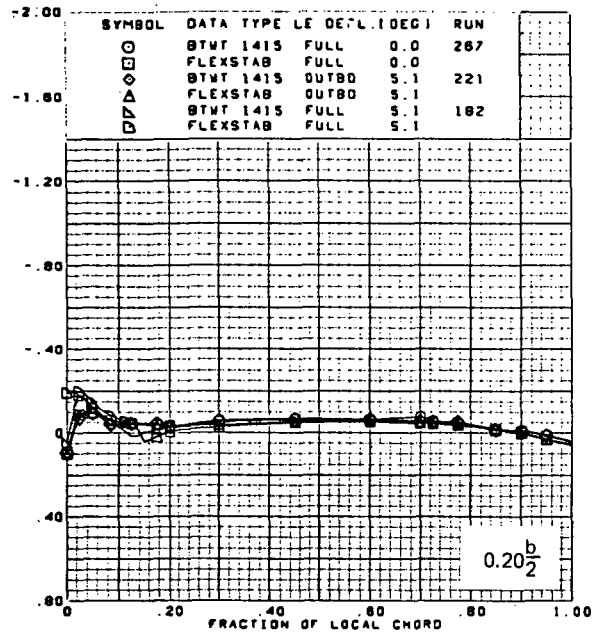
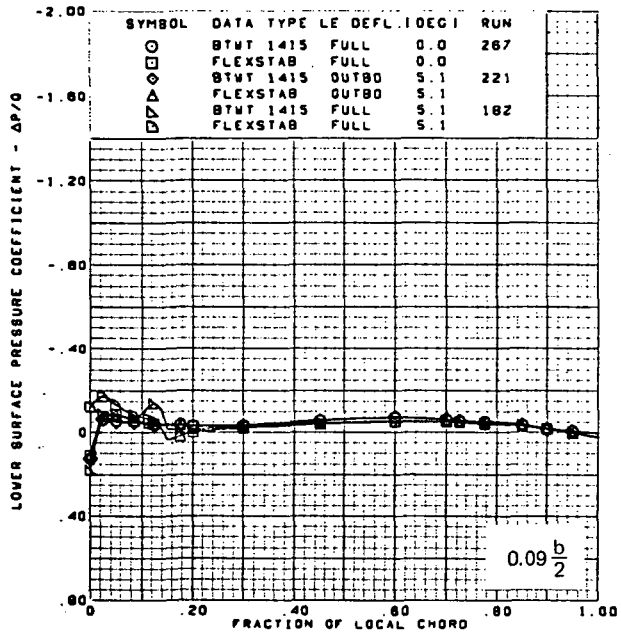
Figure 35.—Wing Theory-to-Experiment Comparison—Effect of Partial Span Outboard L.E. Deflection; Flat Wing; Round L.E.; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

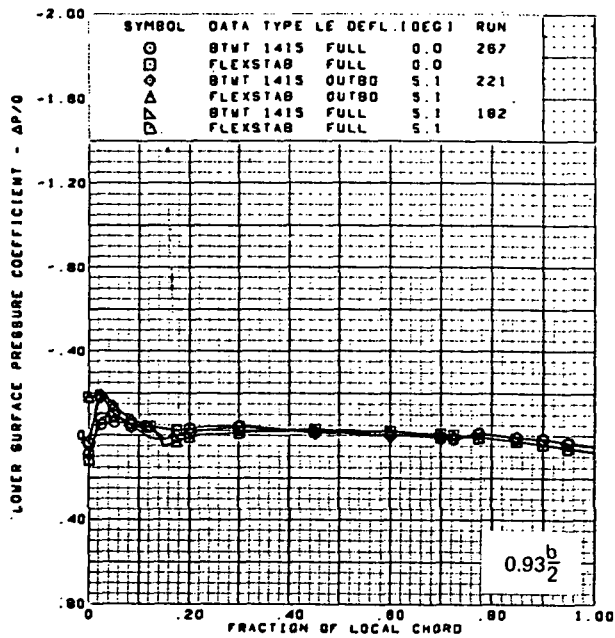
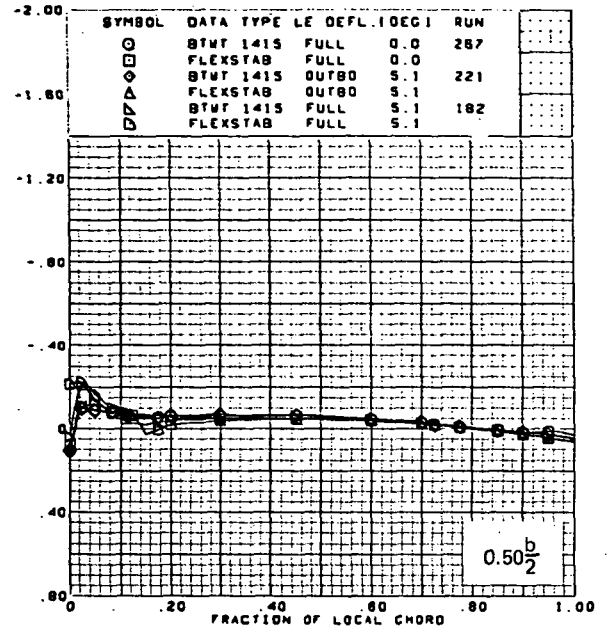
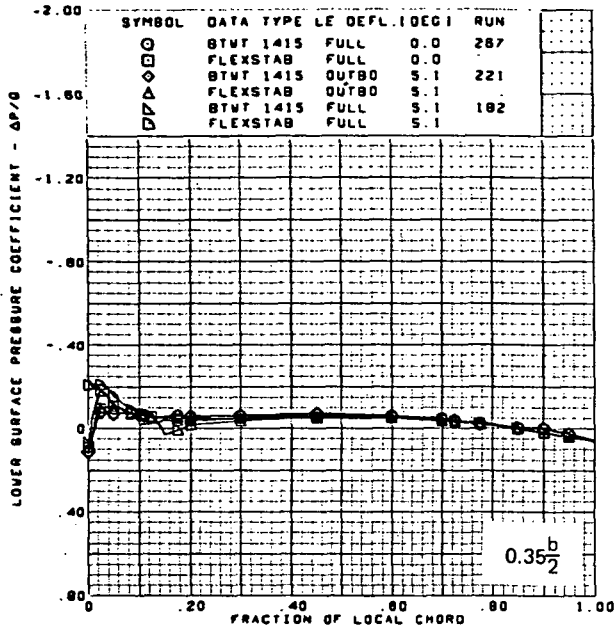
( a ) ( Concluded )

Figure 35.-(Continued)



(b) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

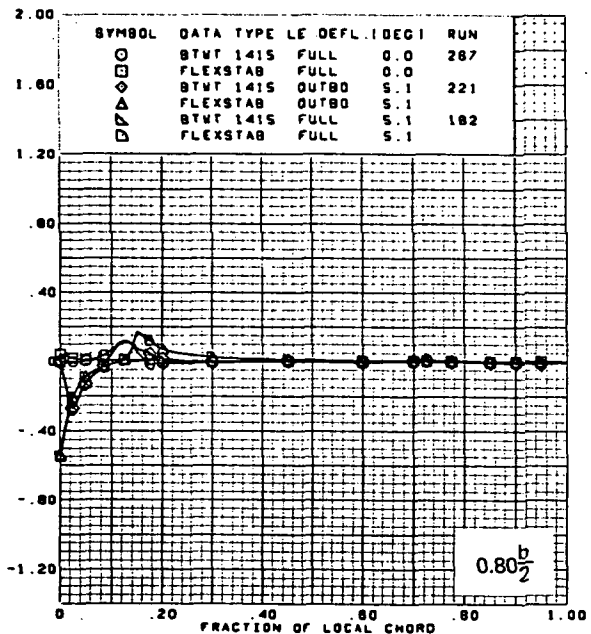
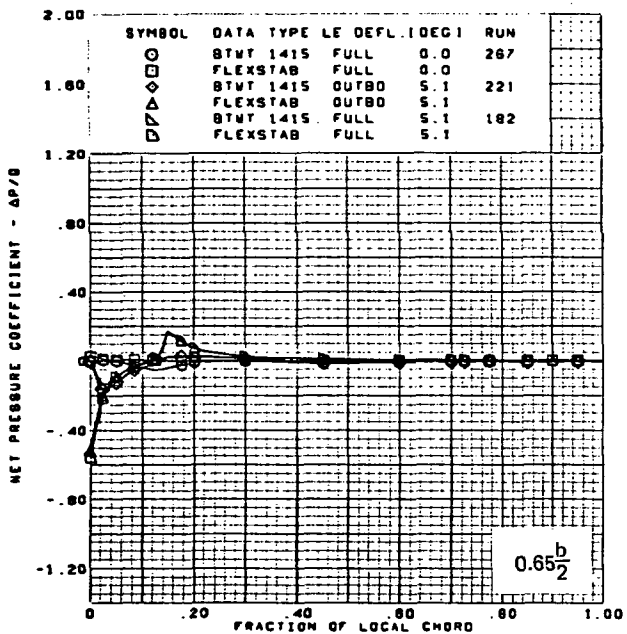
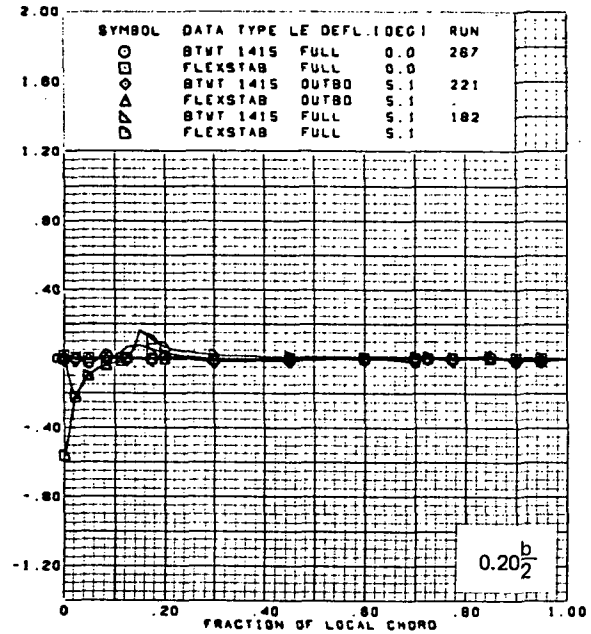
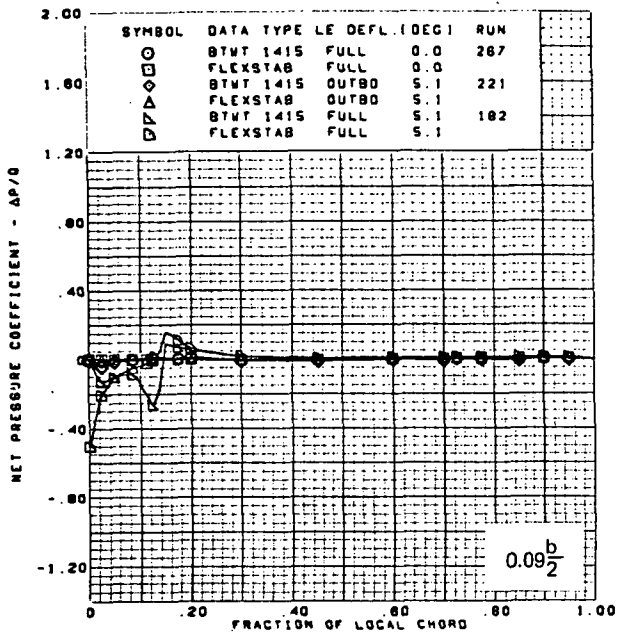
Figure 35.-(Continued)



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

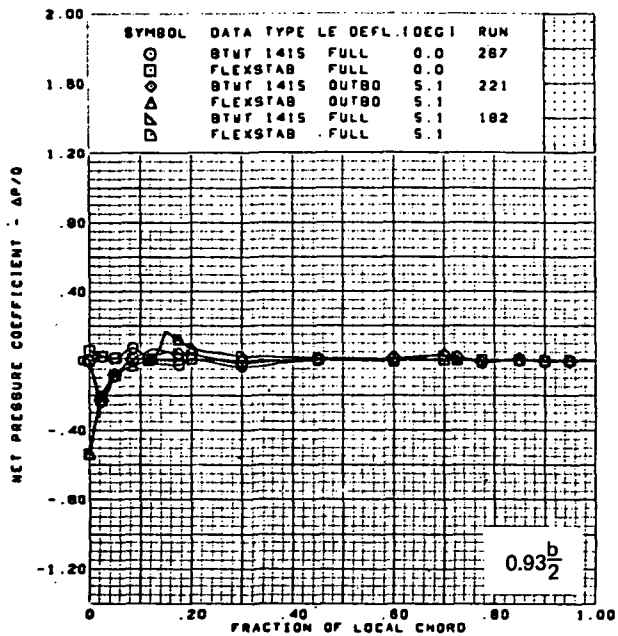
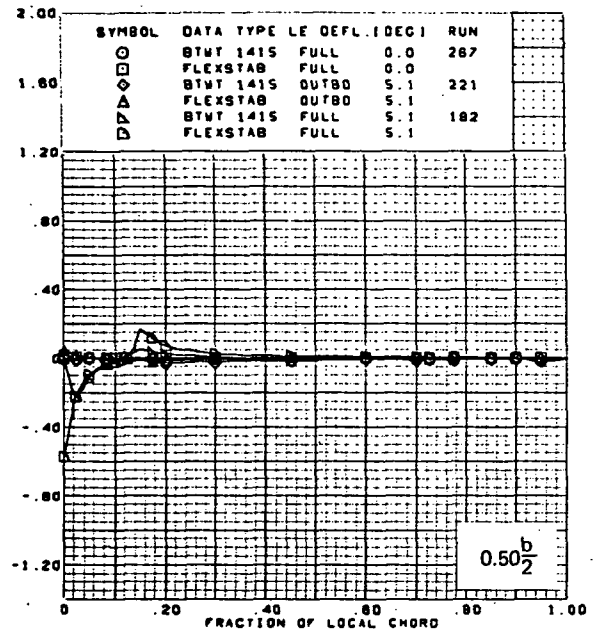
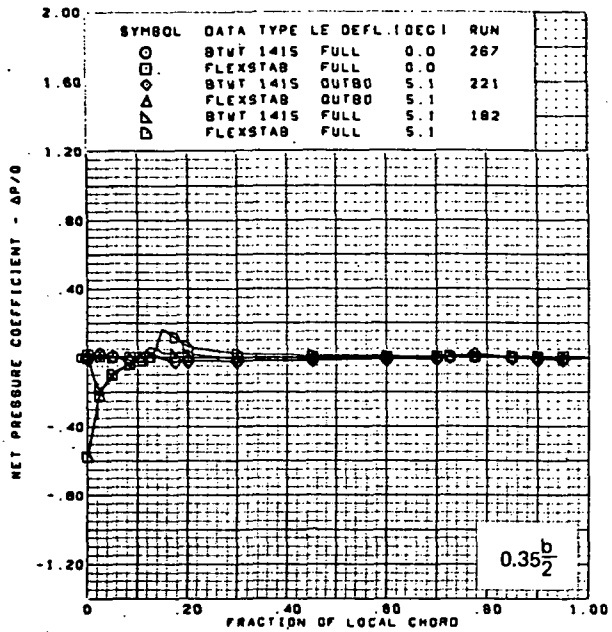
(b) (Concluded)

Figure 35.—(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

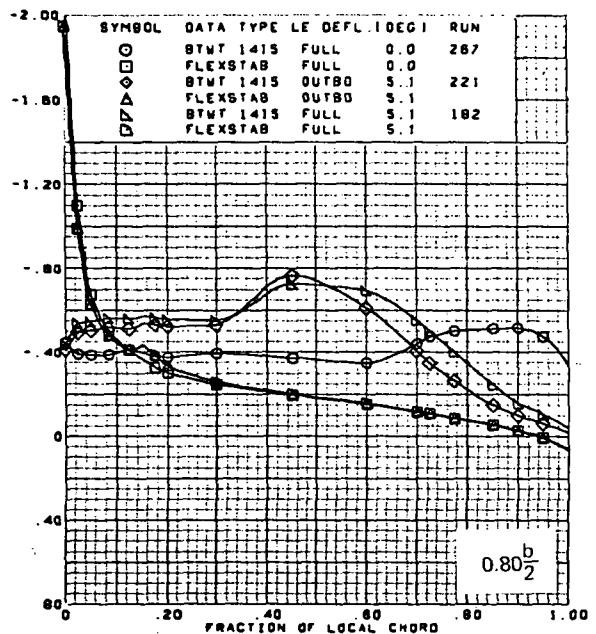
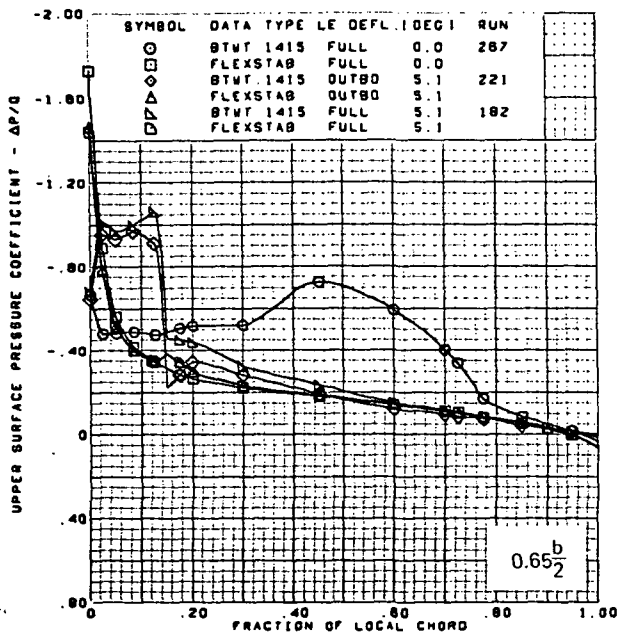
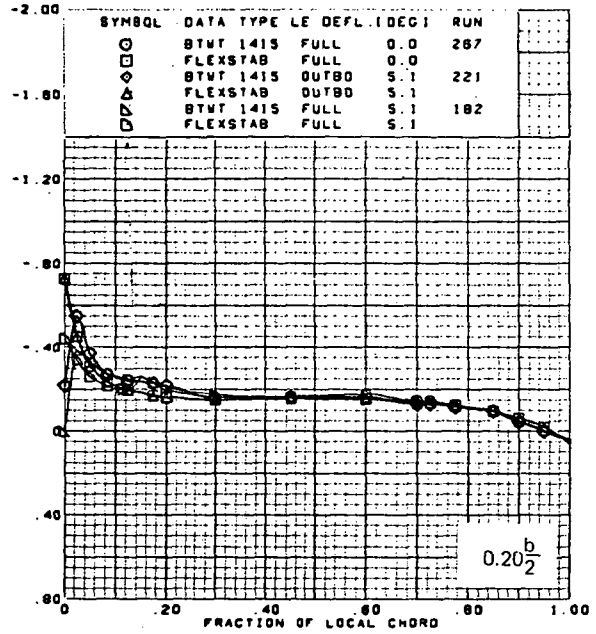
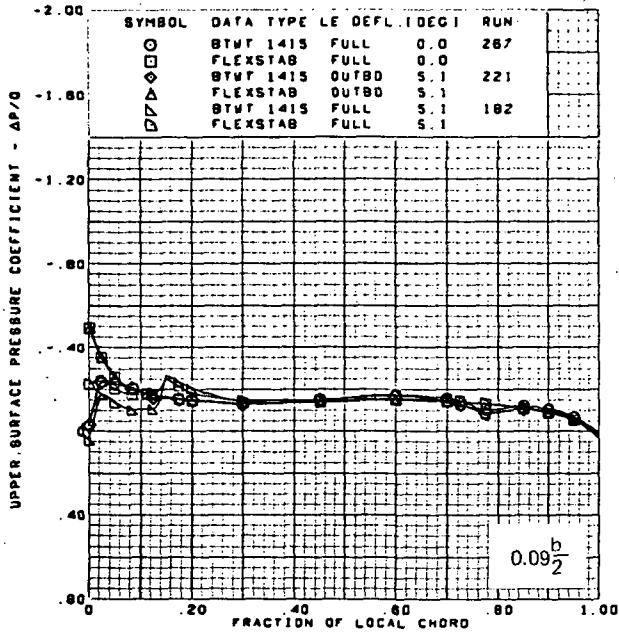
Figure 35.-(Continued)



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

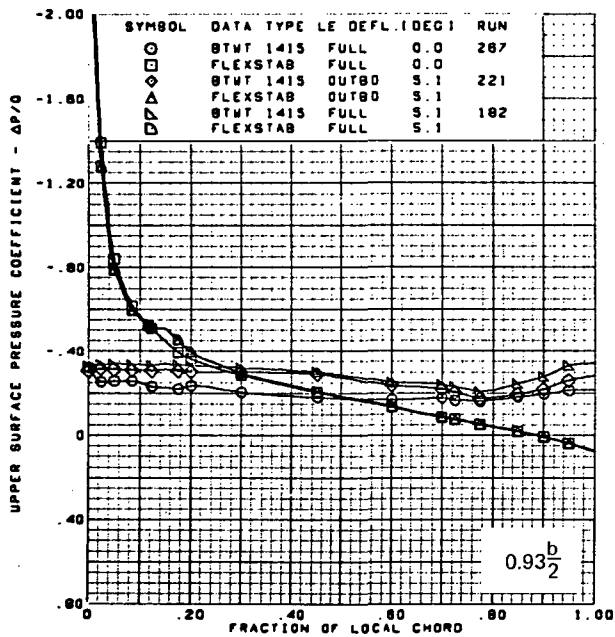
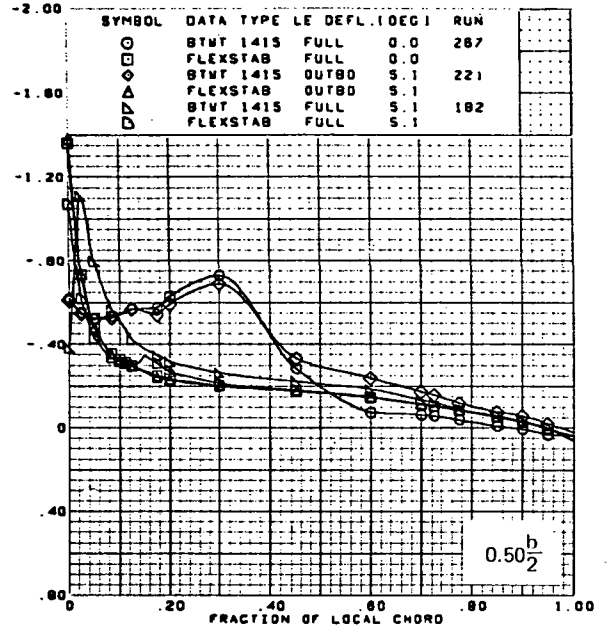
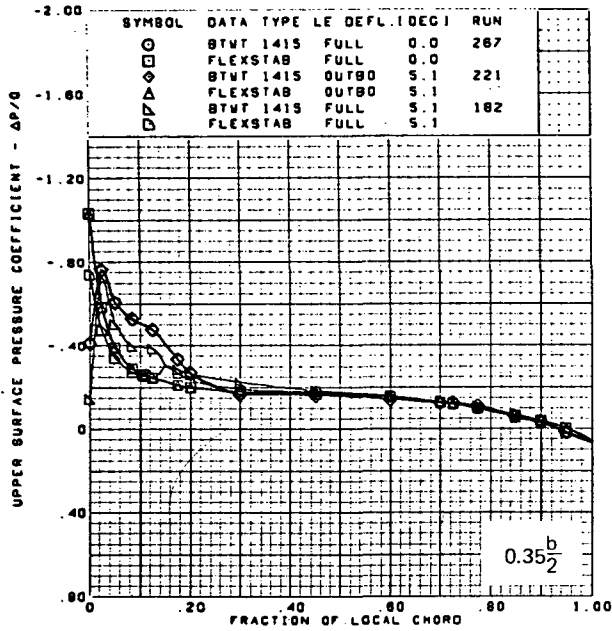
(c) (Concluded)

Figure 35.-(Continued)



(d) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

Figure 35.-(Continued)

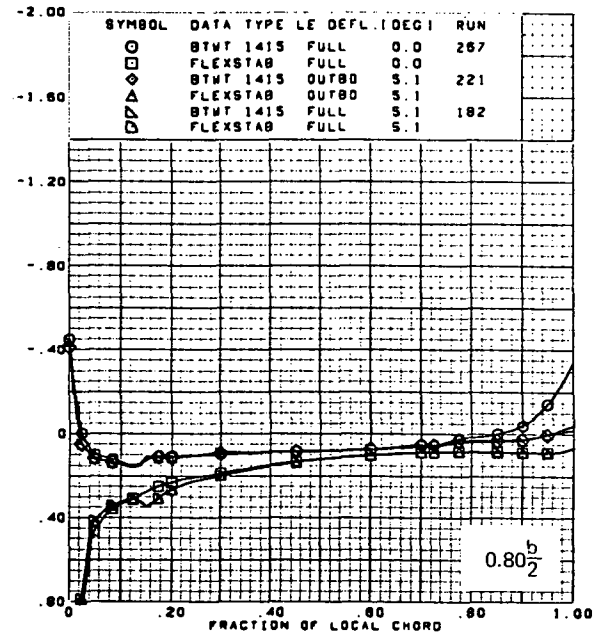
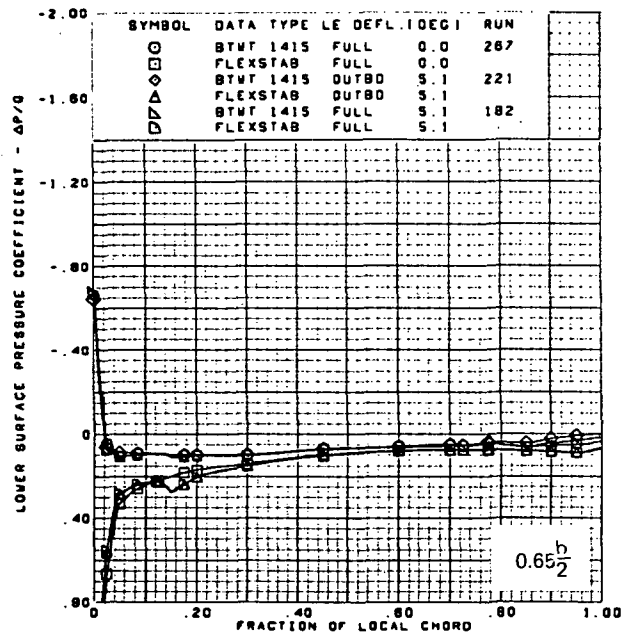
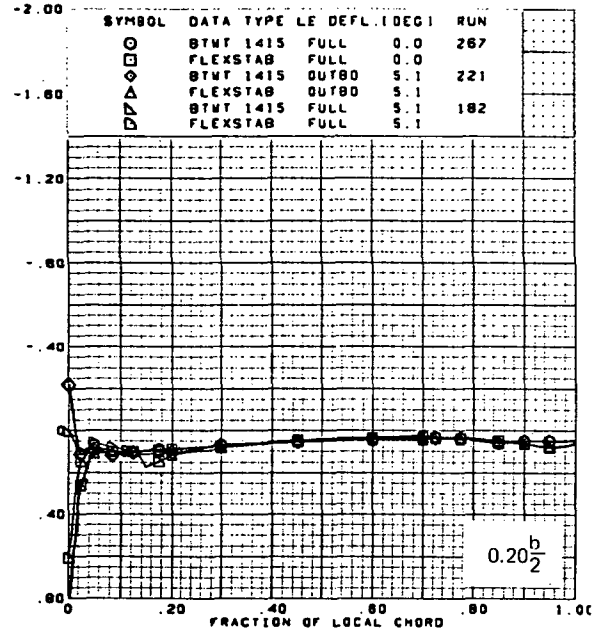
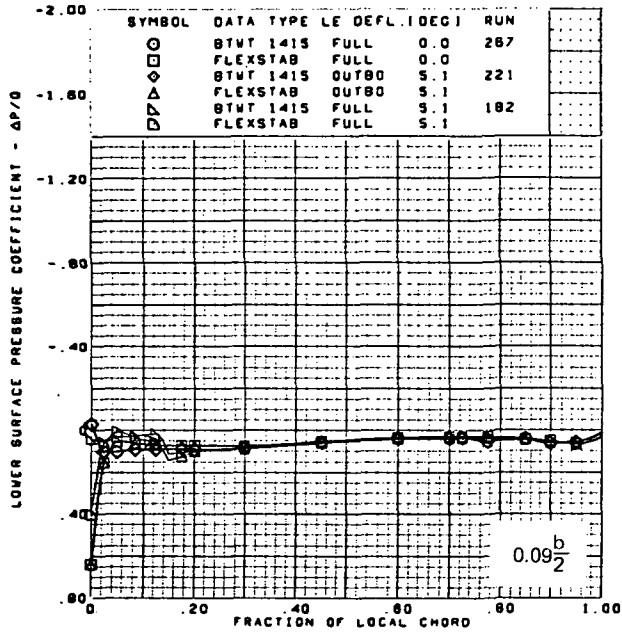


$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

(d) (Concluded)

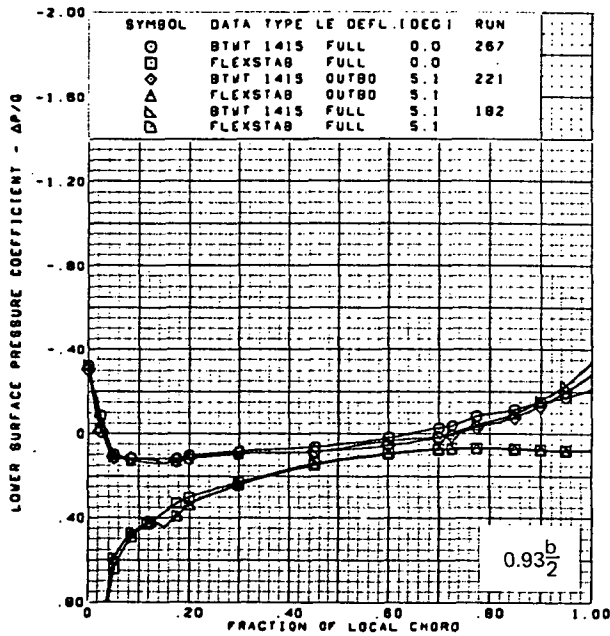
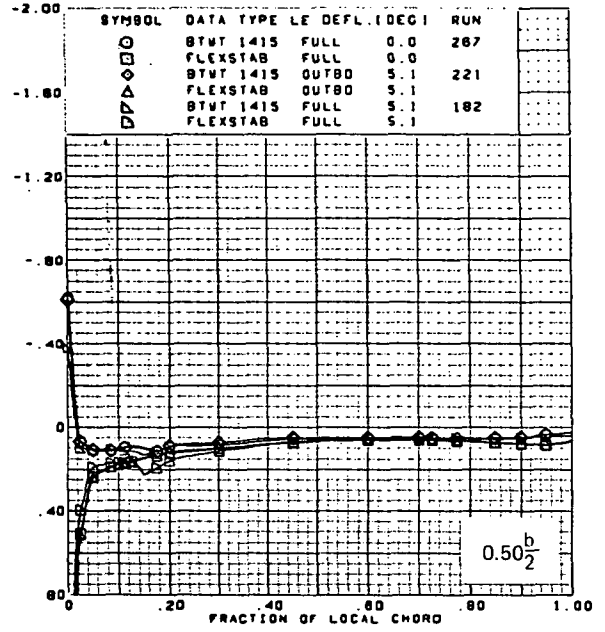
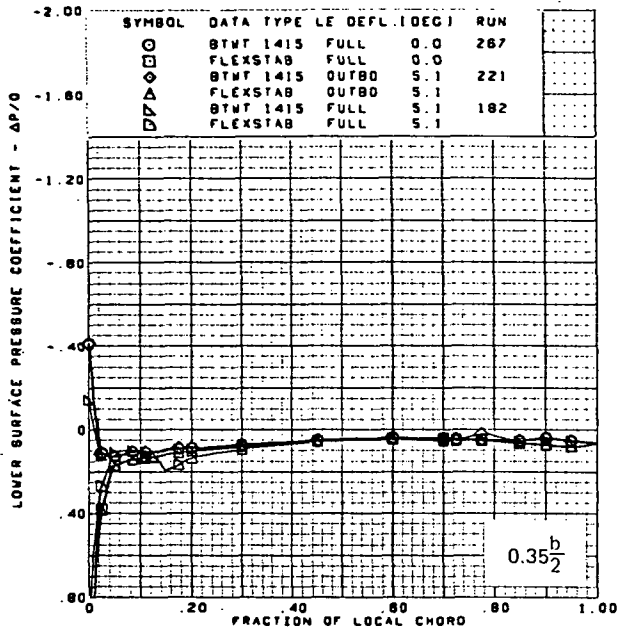
Figure 35.--(Continued)





(e) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

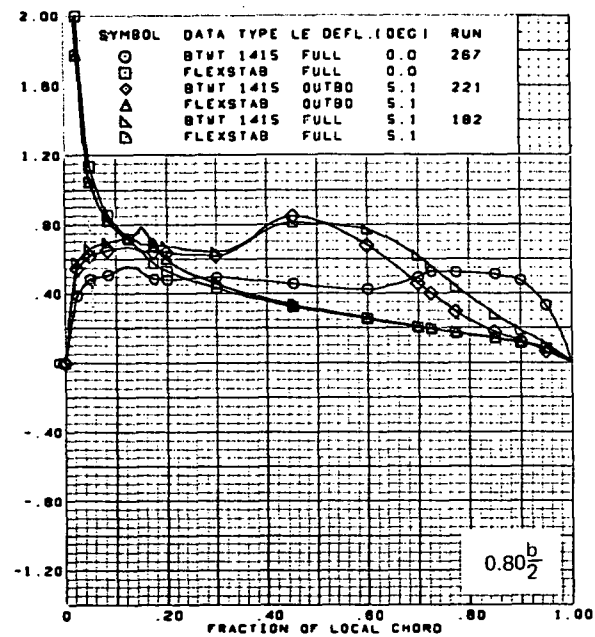
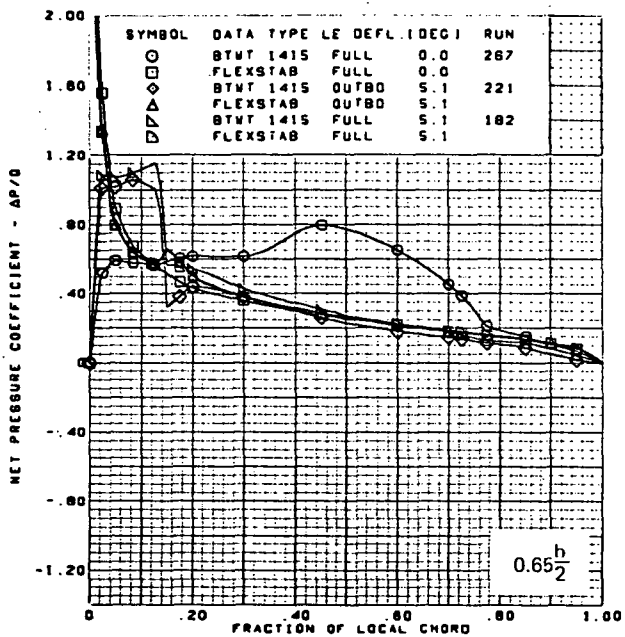
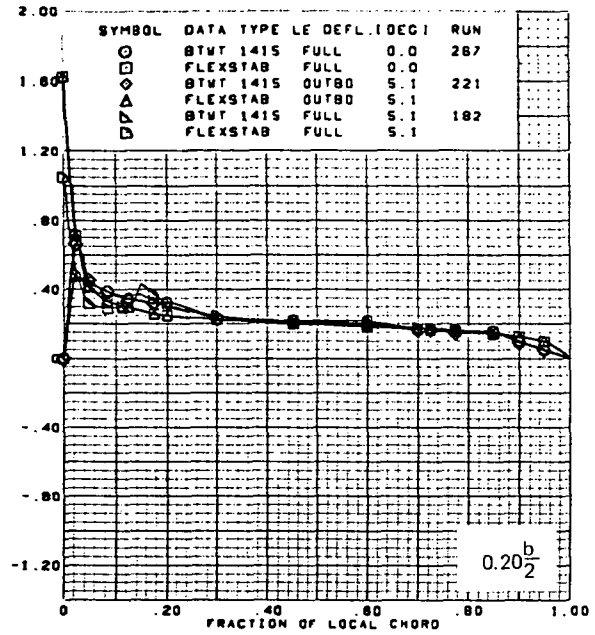
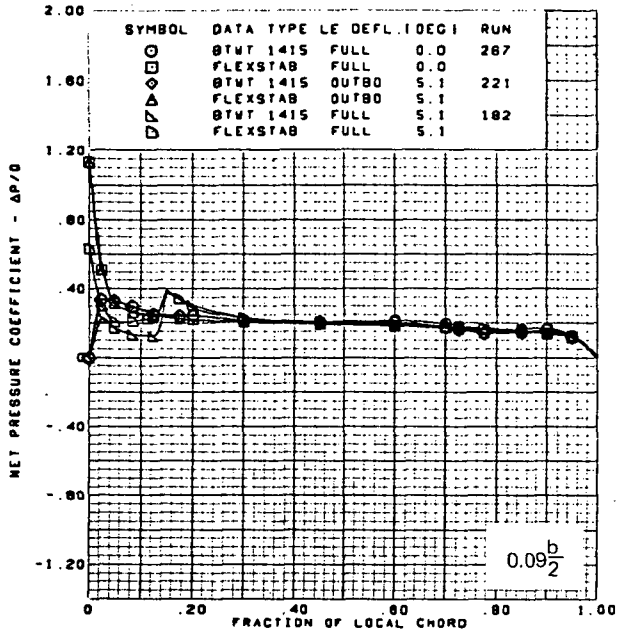
Figure 35.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

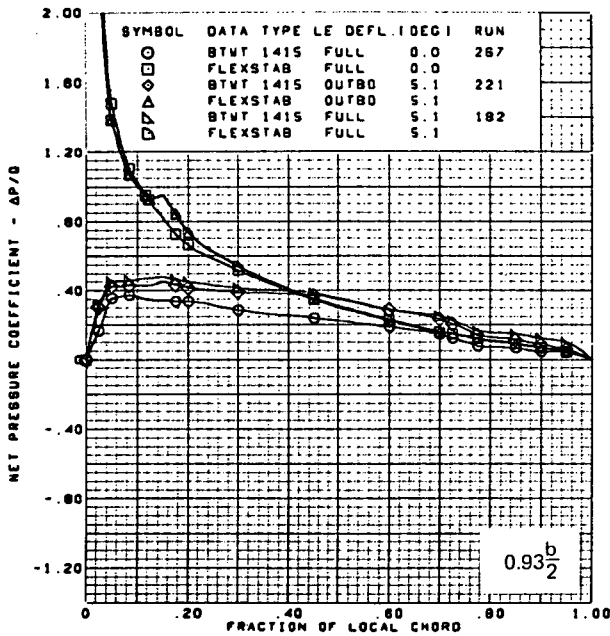
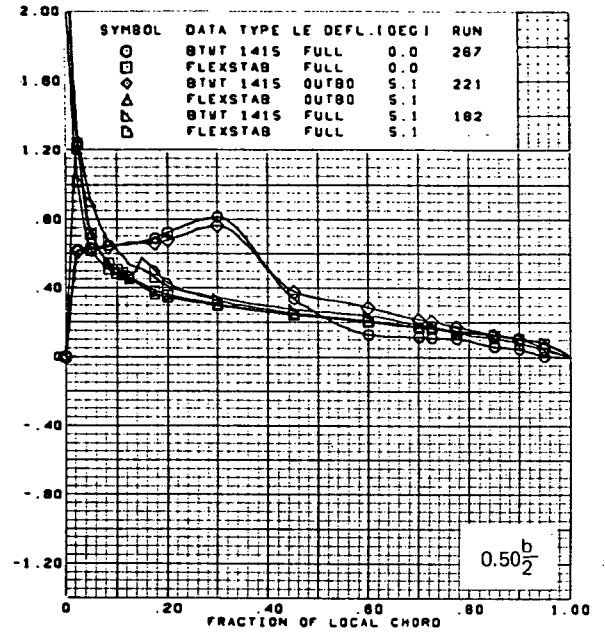
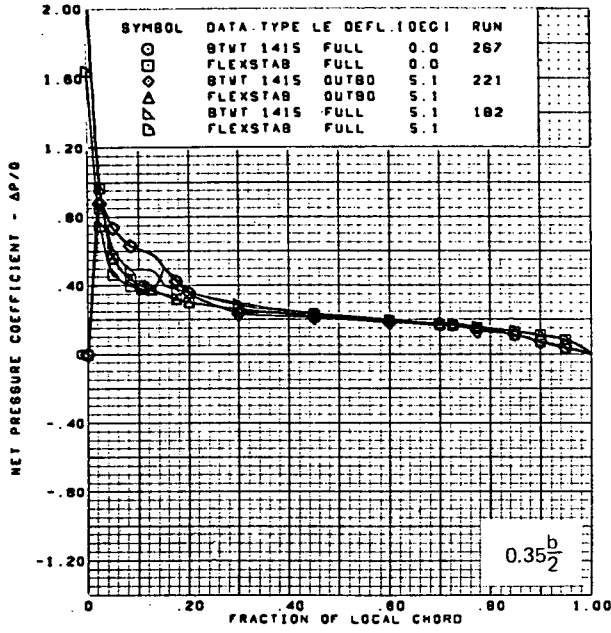
(e) (Concluded)

Figure 35.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

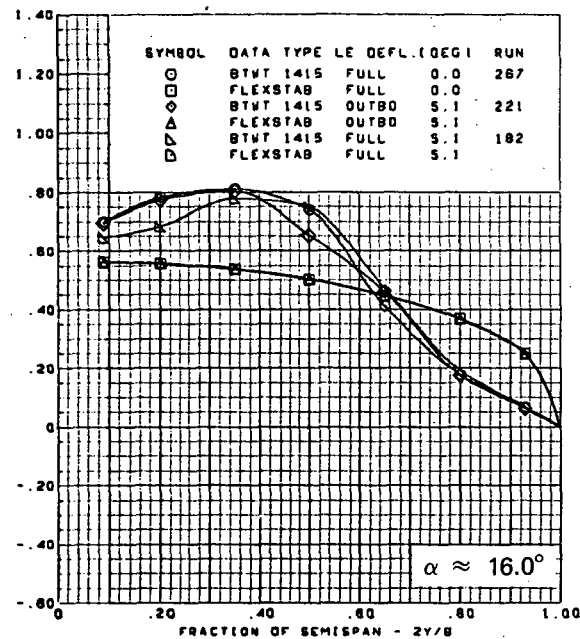
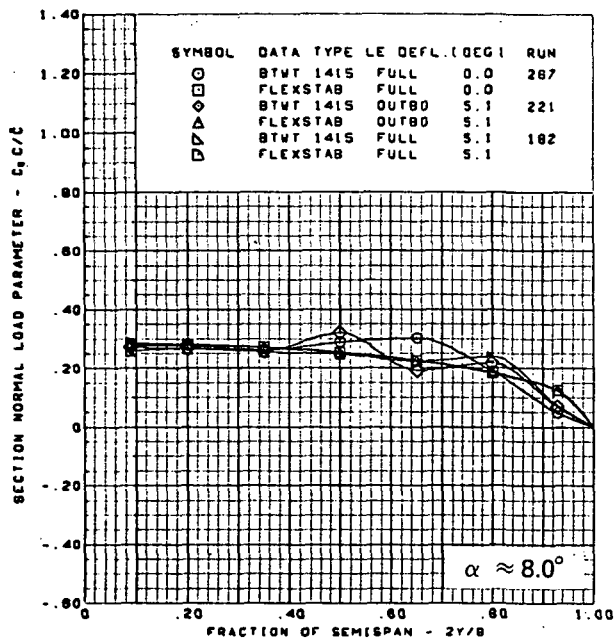
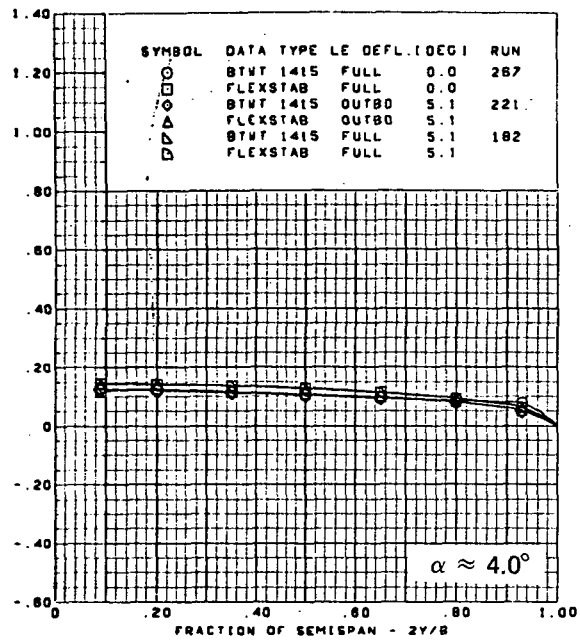
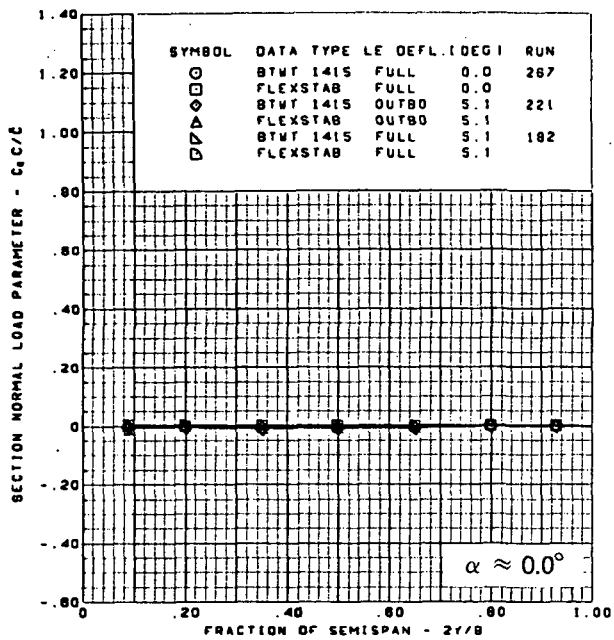
Figure 35.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

( f ) ( Concluded )

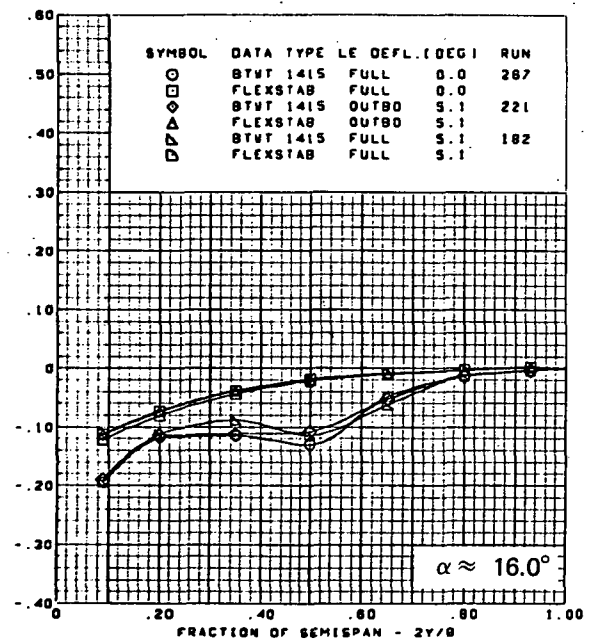
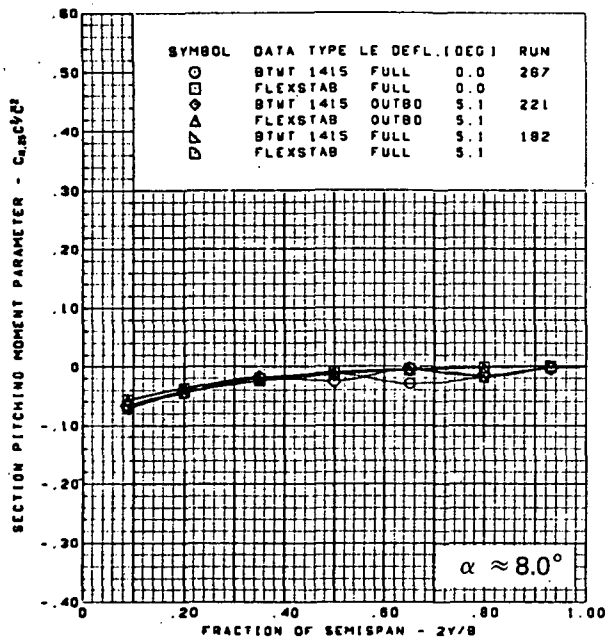
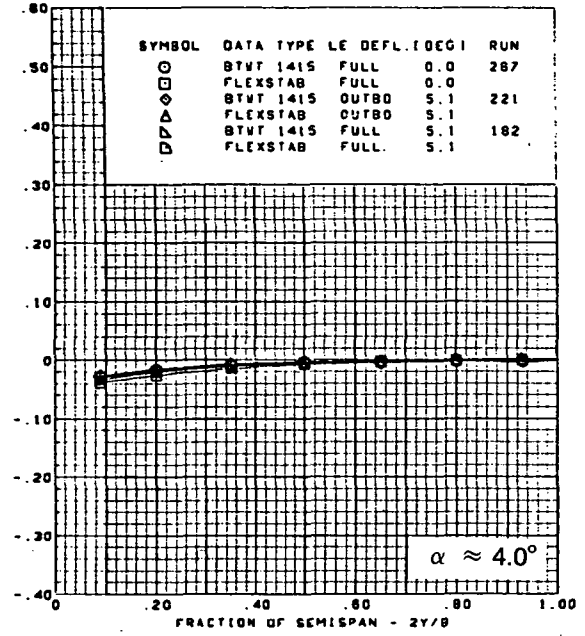
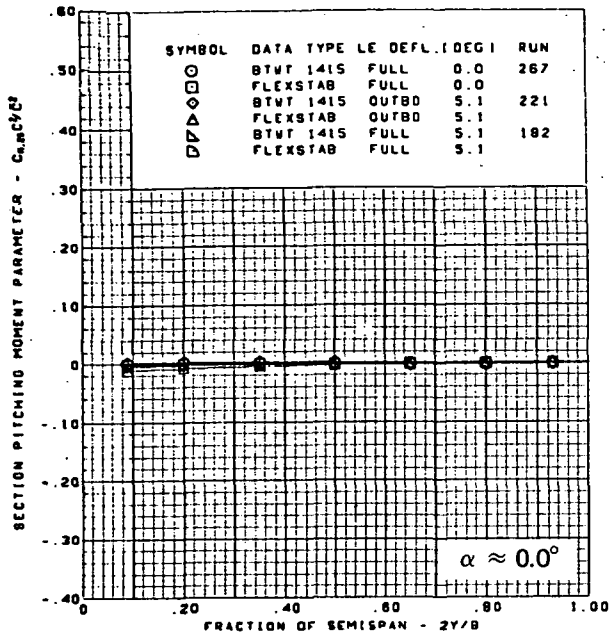
Figure 35.-(Continued)



M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

(g) Spanload Distributions—Normal Force

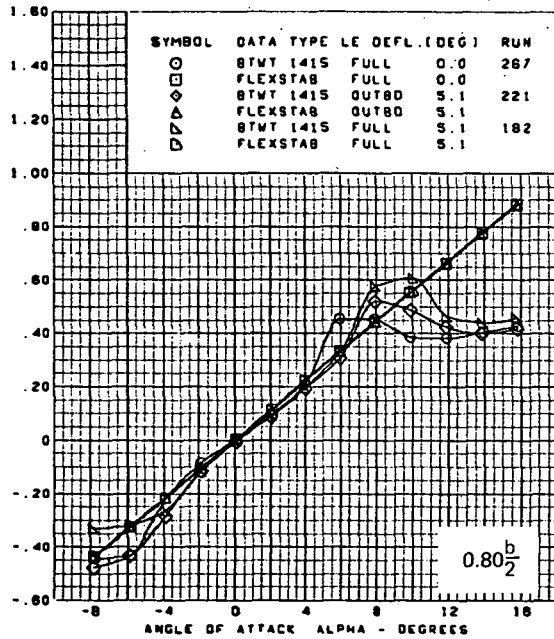
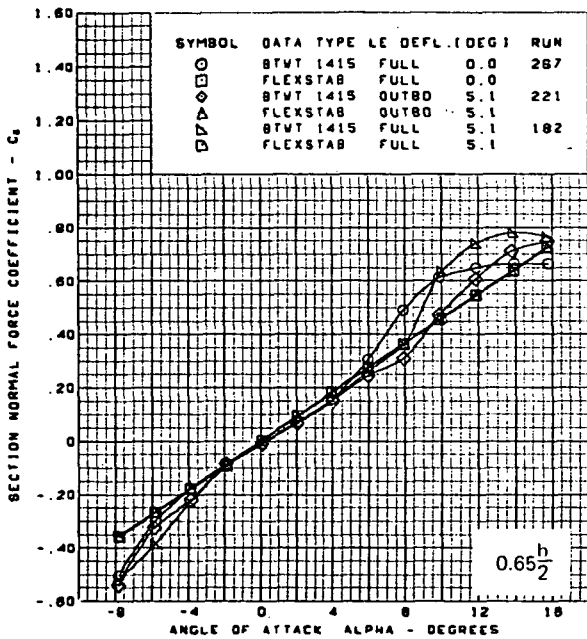
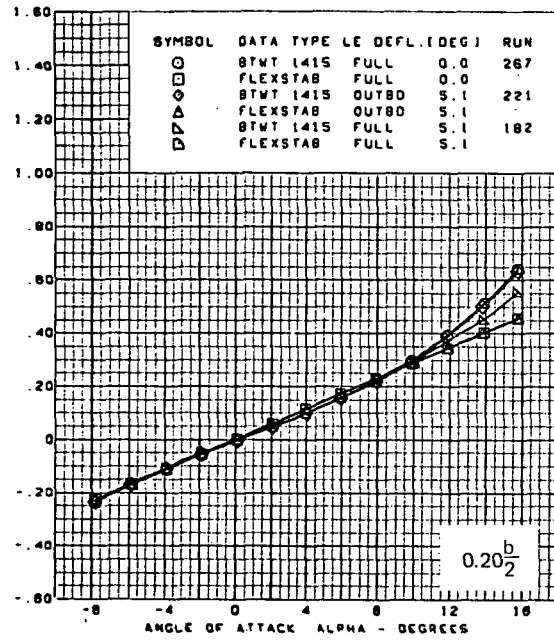
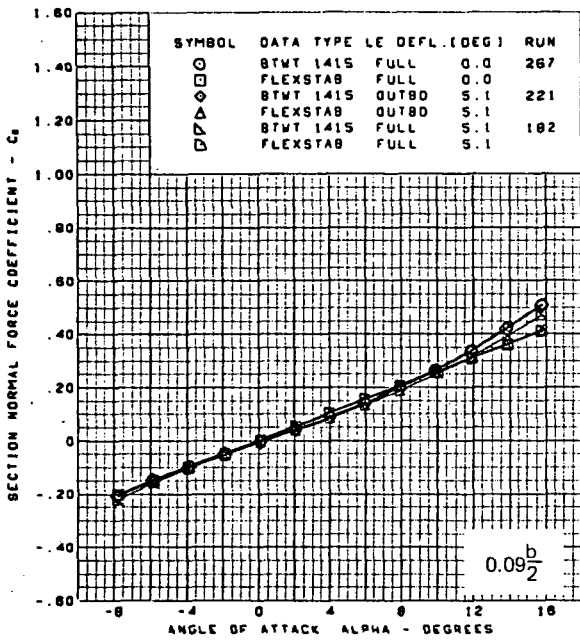
Figure 35.—(Continued)



M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

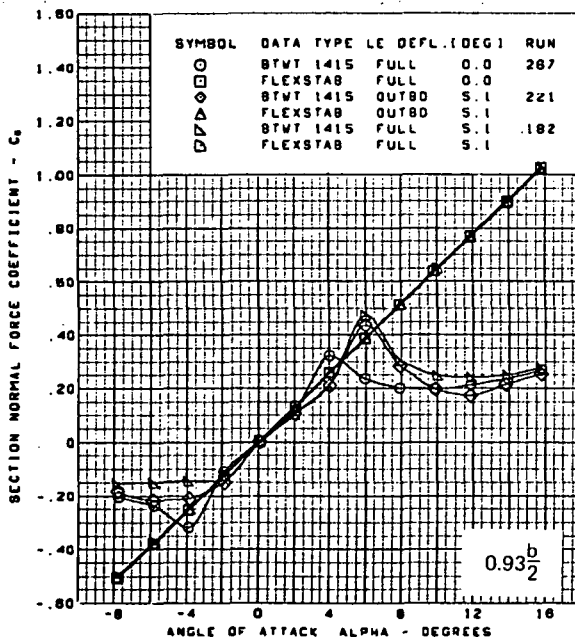
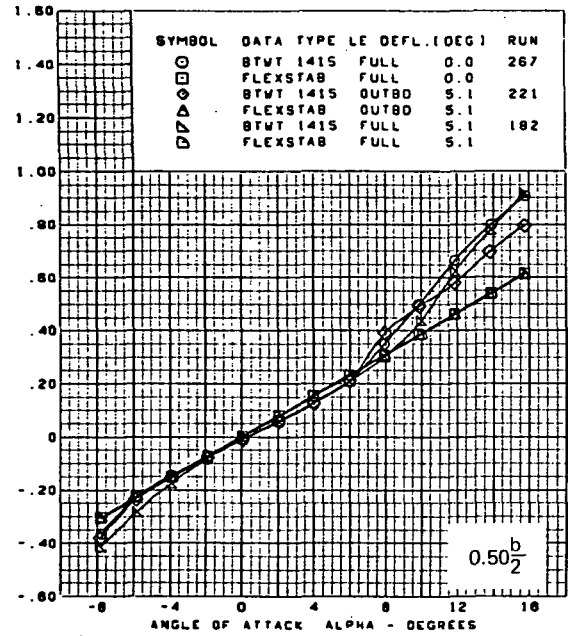
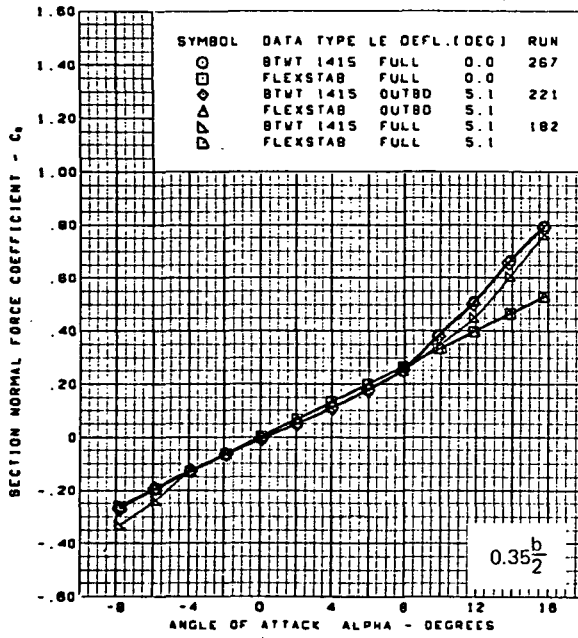
(h) Spanload Distributions—Pitching Moment

Figure 35.—(Continued)



(i) Section Aerodynamic Coefficients - Normal Force

Figure 35.-(Continued)

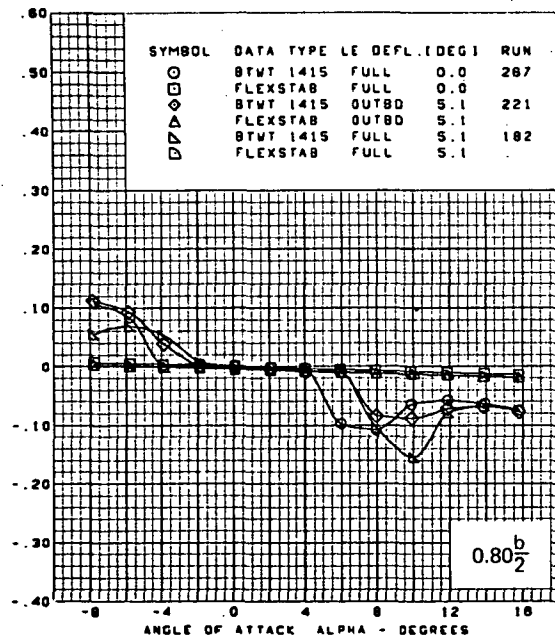
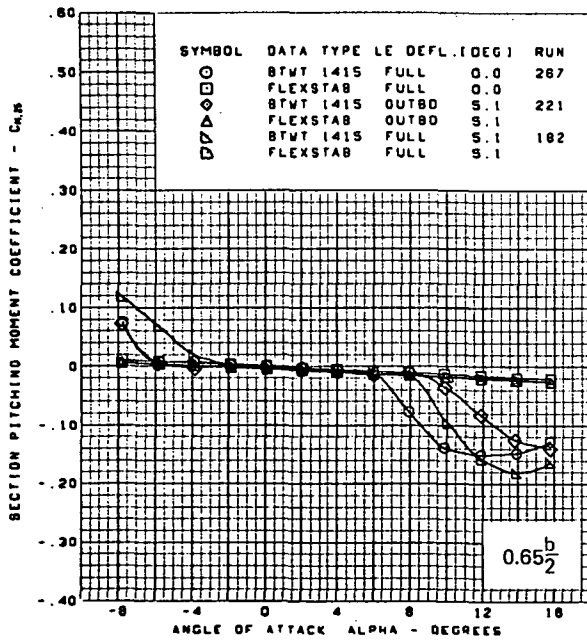
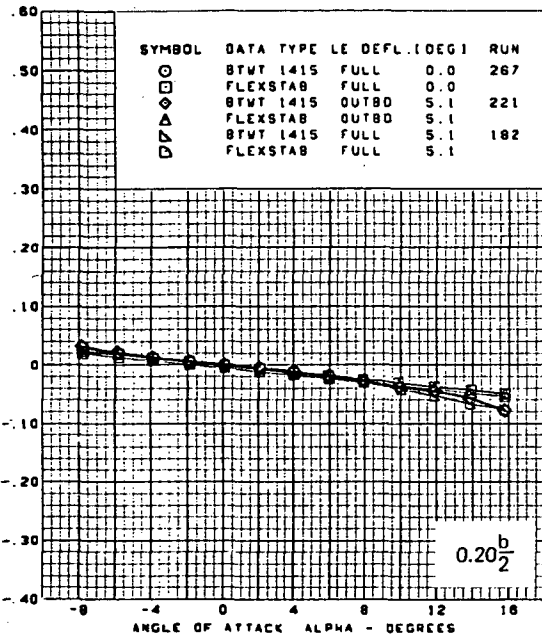
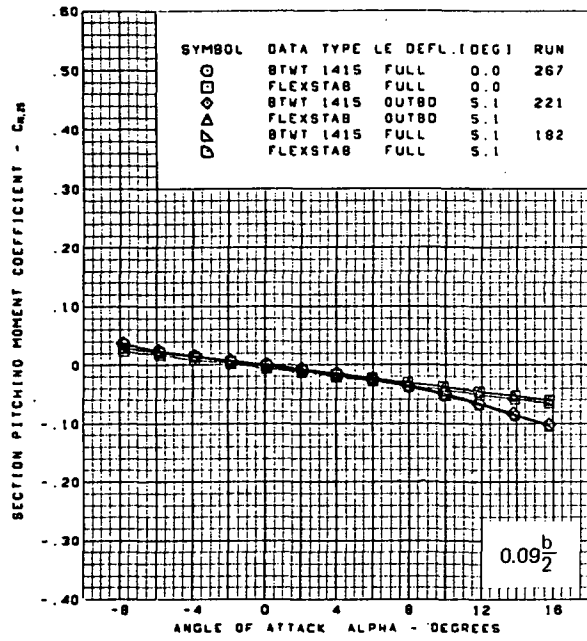


M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

(I) (Concluded)

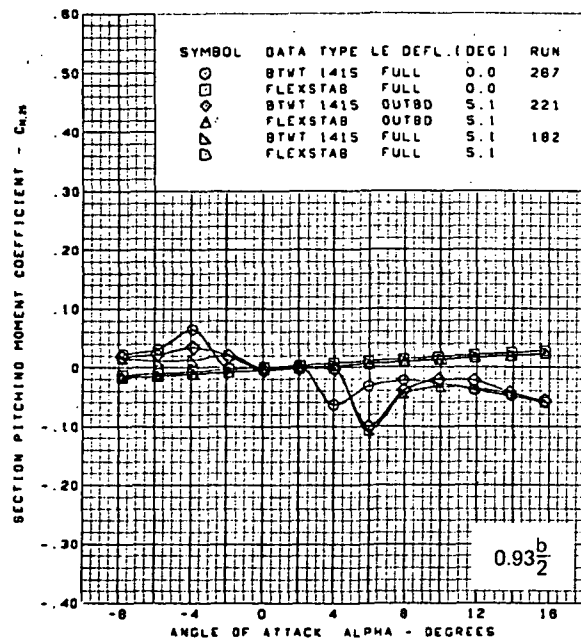
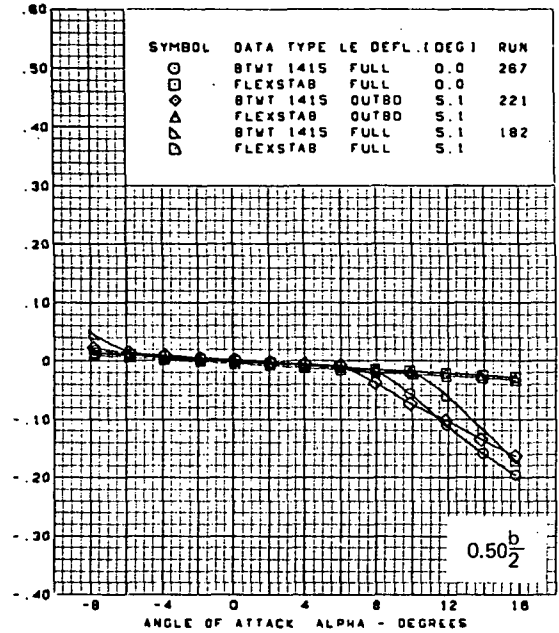
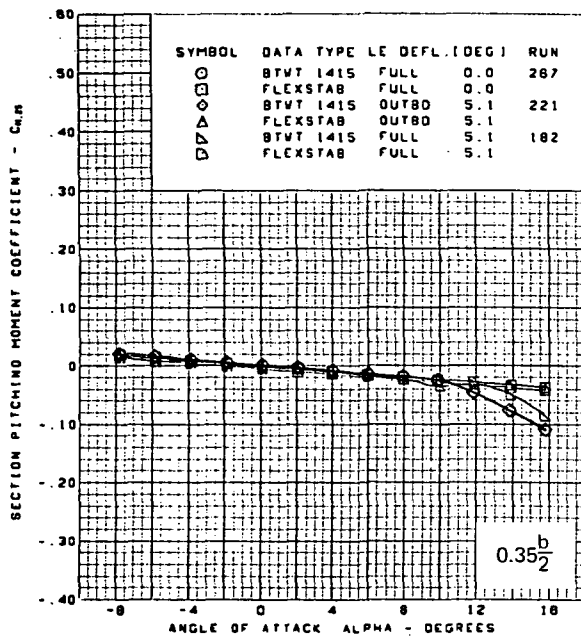
Figure 35.-(Continued)





(j) Section Aerodynamic Coefficients – Pitching Moment

Figure 35.-(Continued)

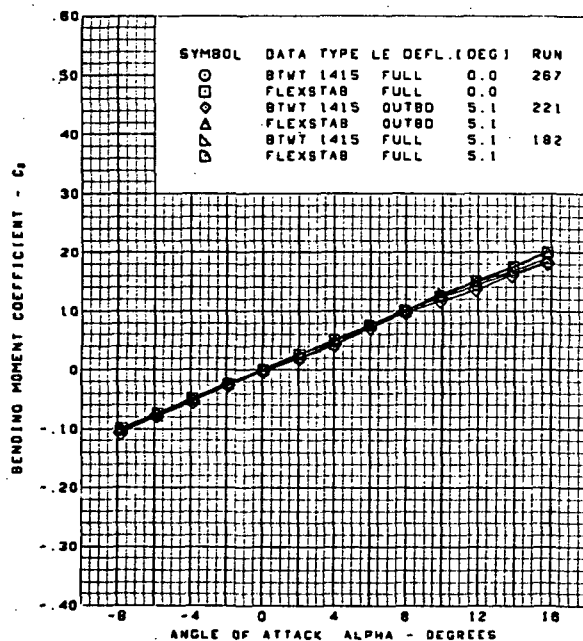
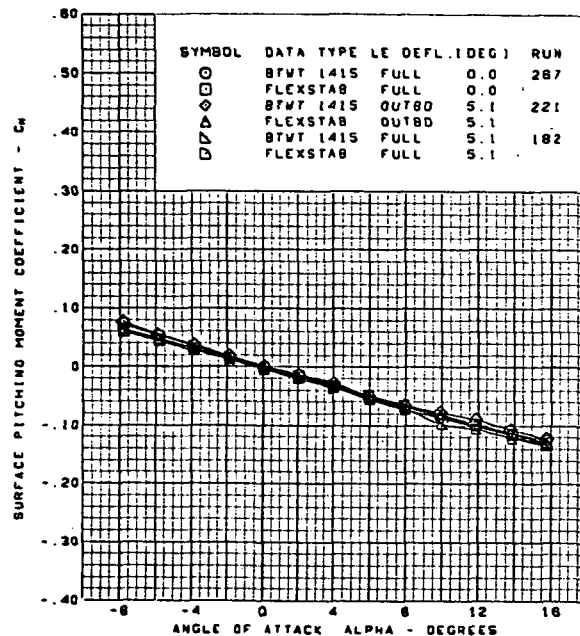
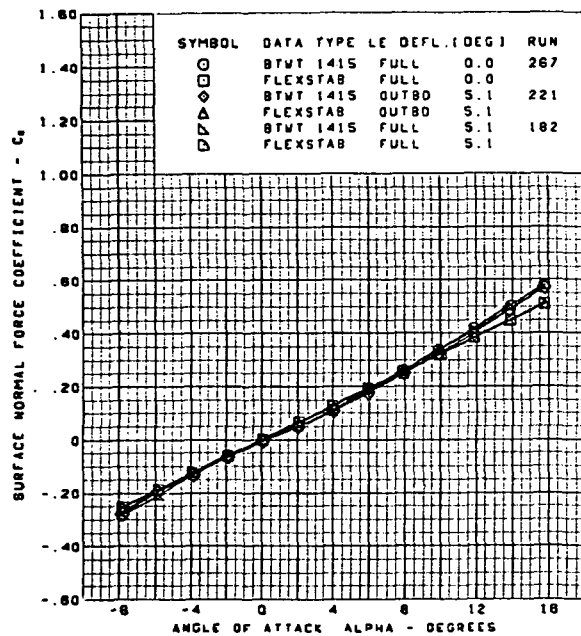


M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span =  $0.0^\circ$

(j) (Concluded)

Figure 35.-(Continued)

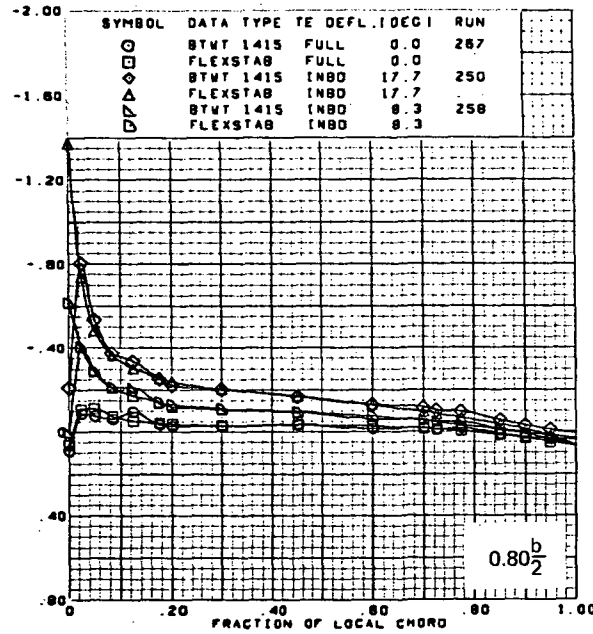
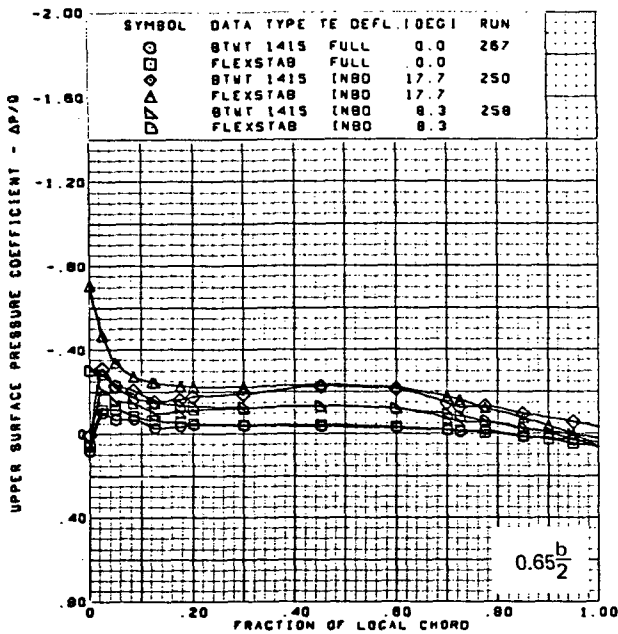
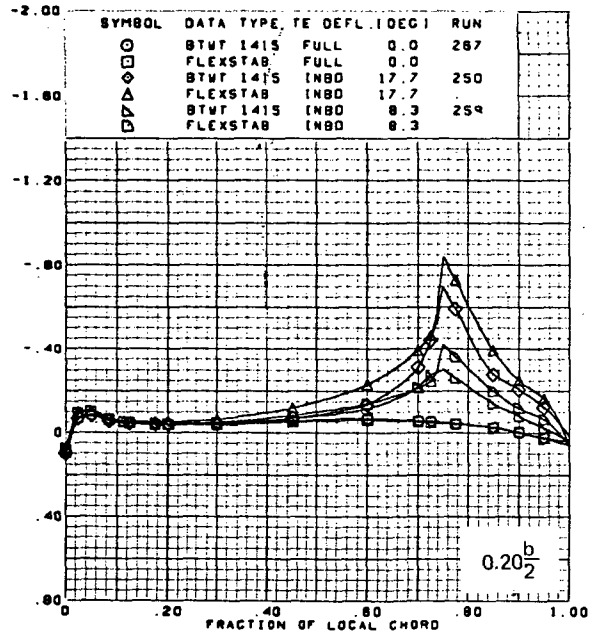
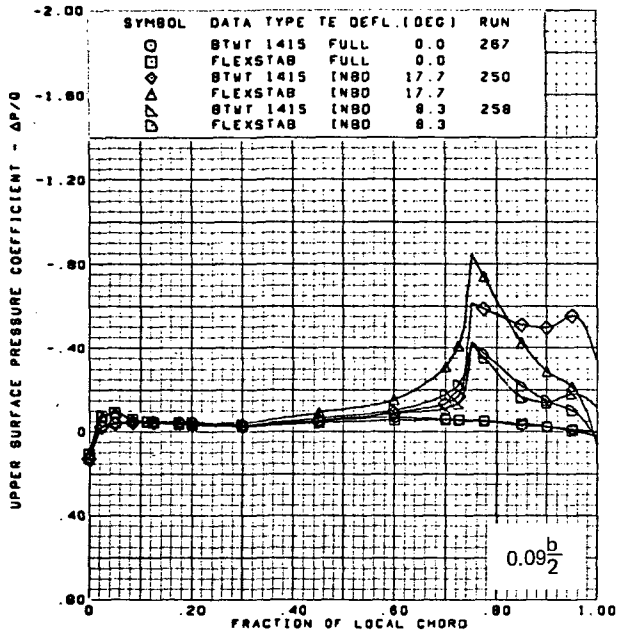
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M = 0.85  
 Flat wing, round L.E.  
 T.E. deflection, full span = 0.0°

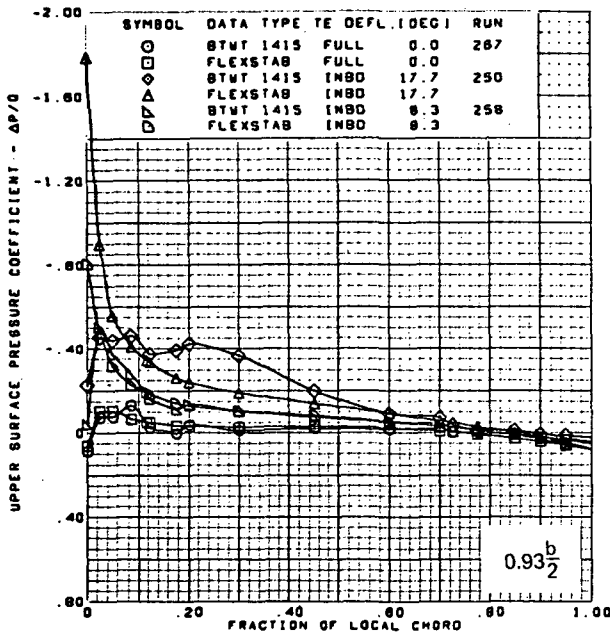
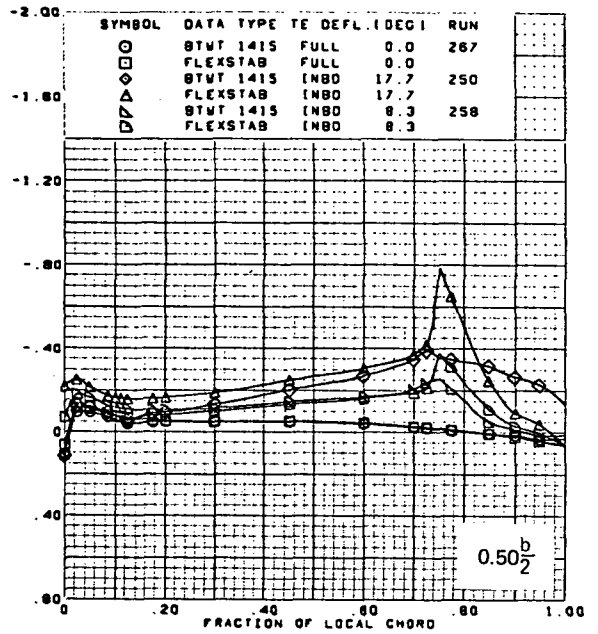
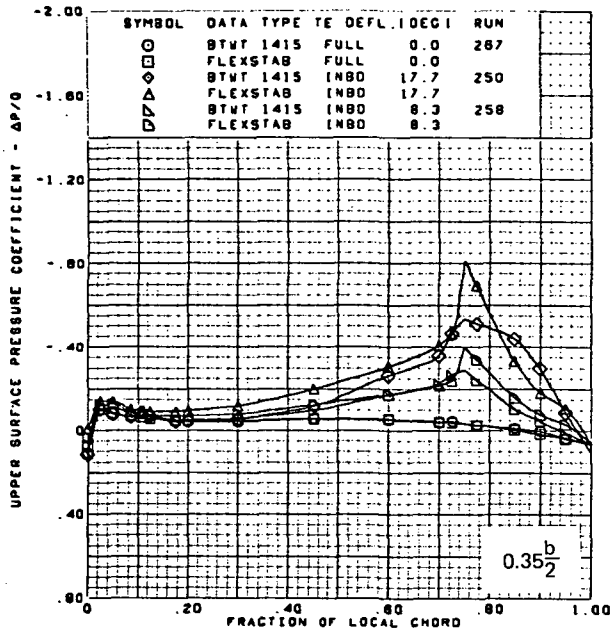
(k) Wing Aerodynamic Coefficients

Figure 35.-(Concluded)



(a) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

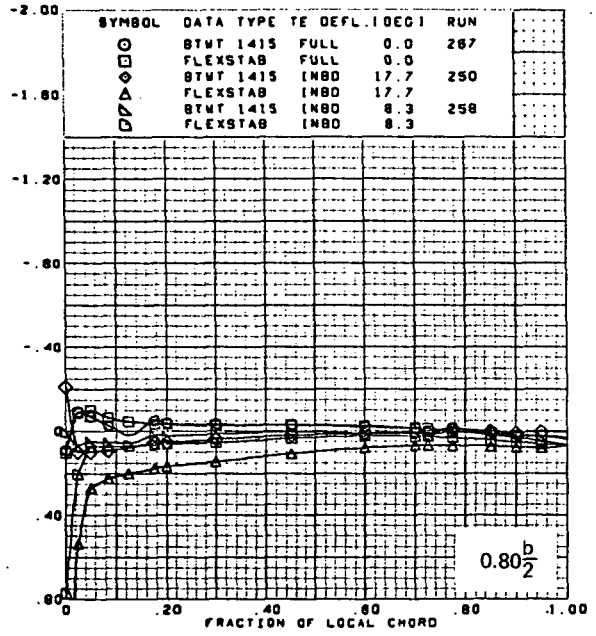
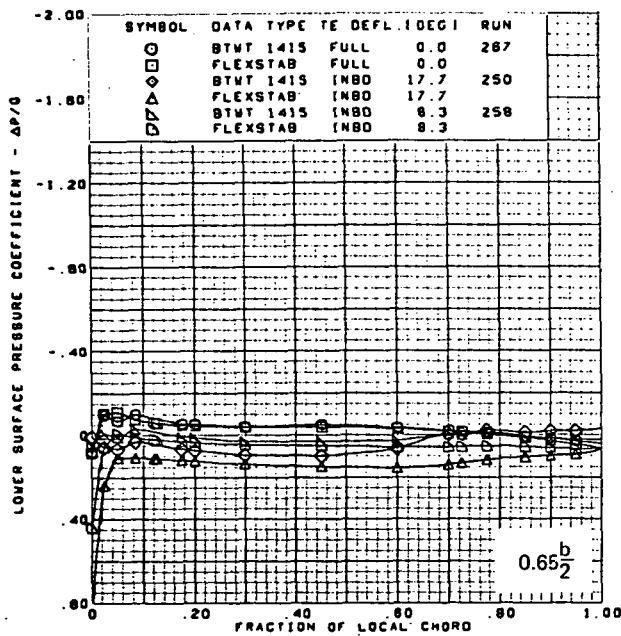
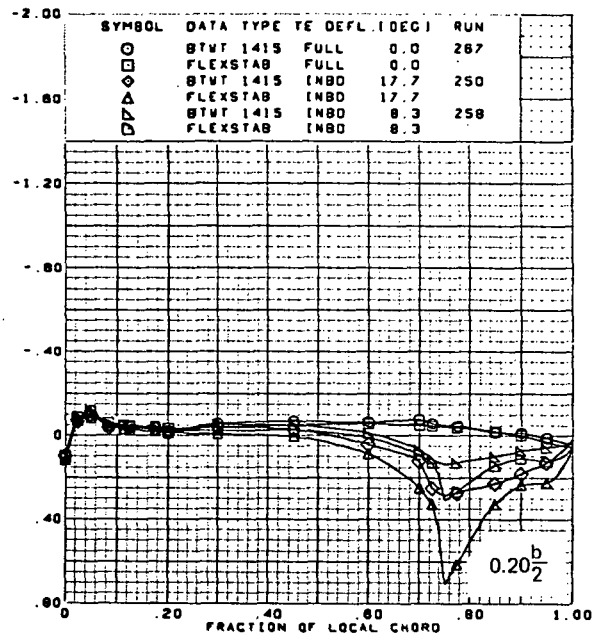
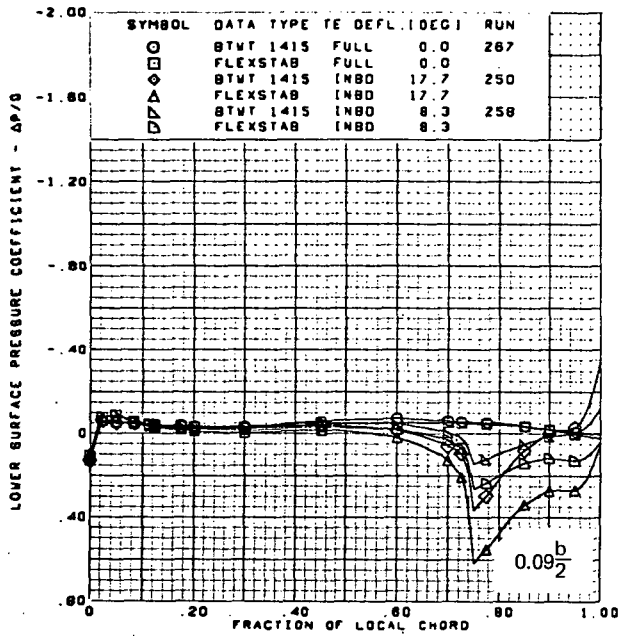
Figure 36.—Wing Theory-to-Experiment Comparison—Effect of Partial Span Inboard T.E. Deflection; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Outboard =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

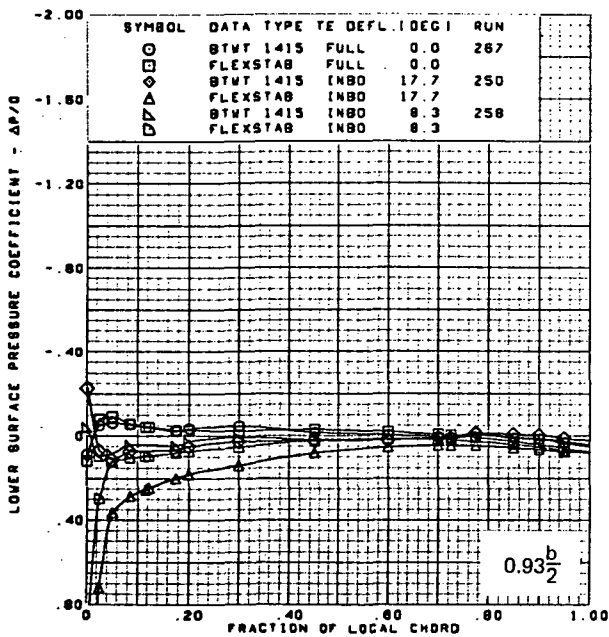
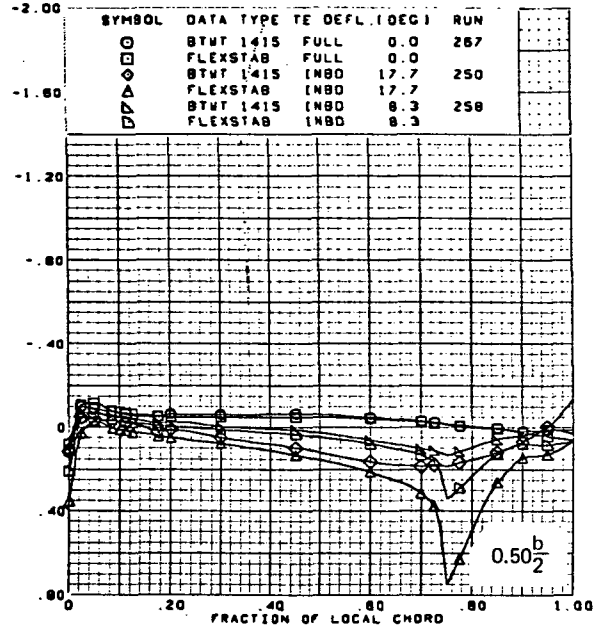
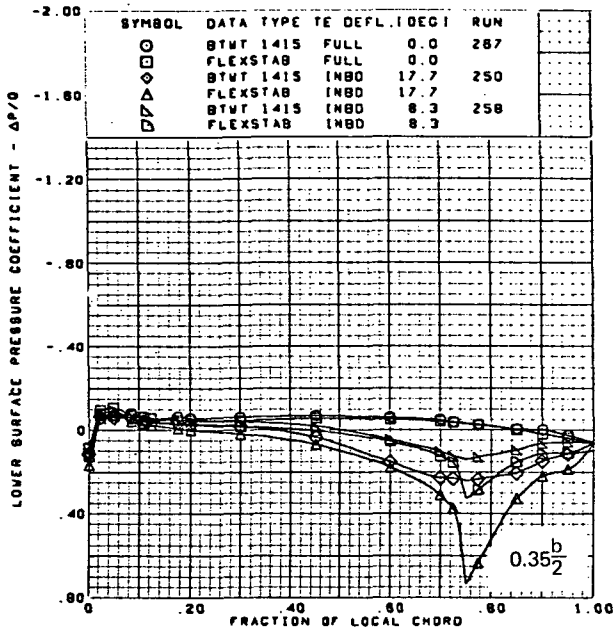
( a ) (Concluded)

Figure 36.-(Continued)



(b) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

Figure 36.-(Continued)

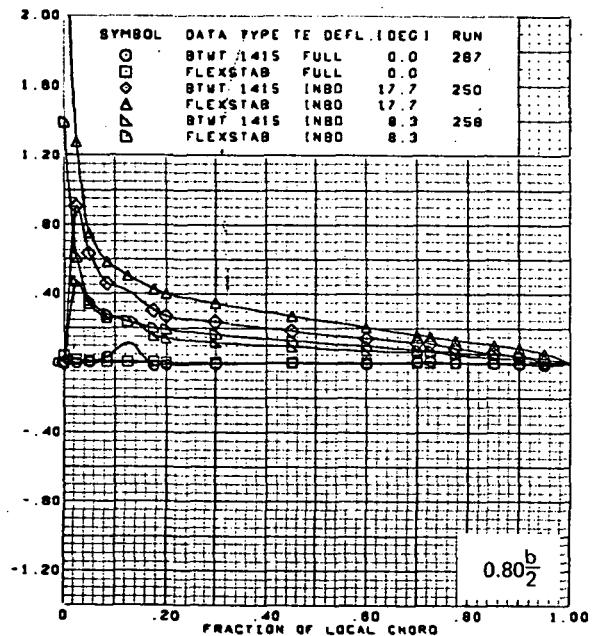
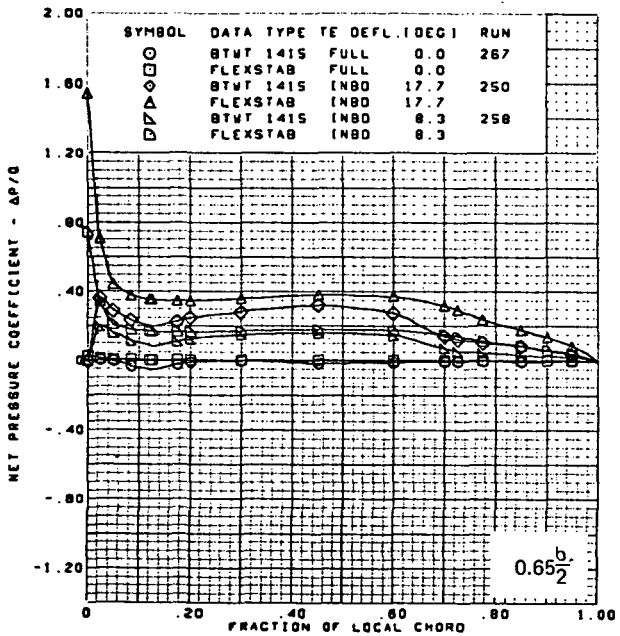
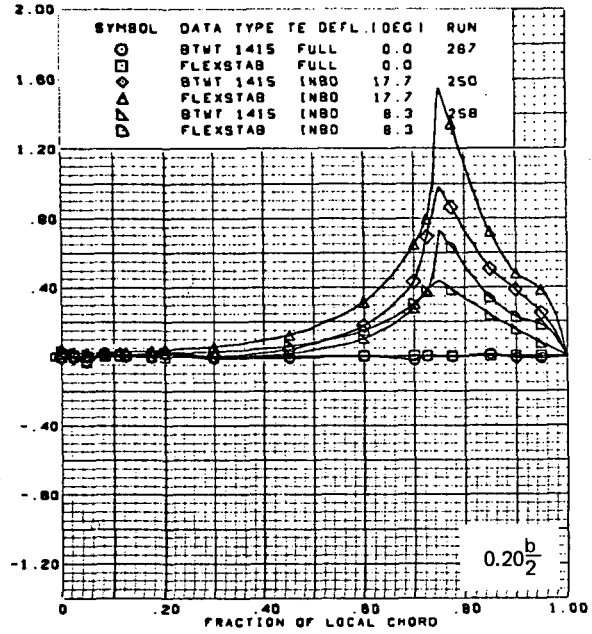
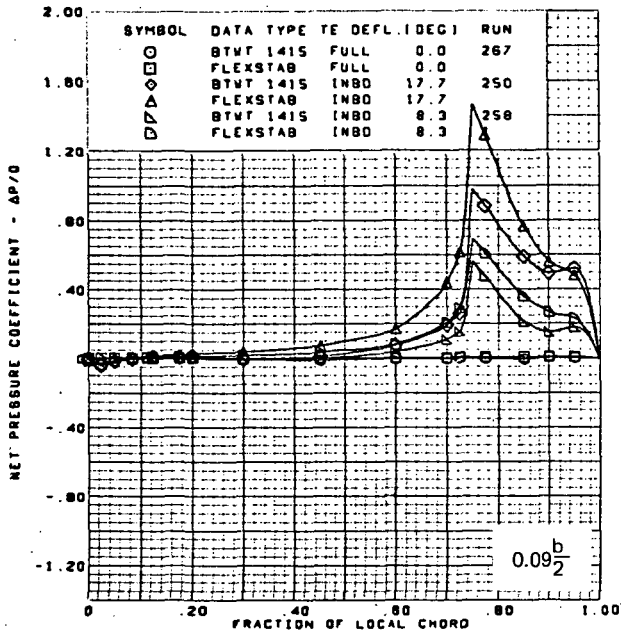


$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

(b) (Concluded)

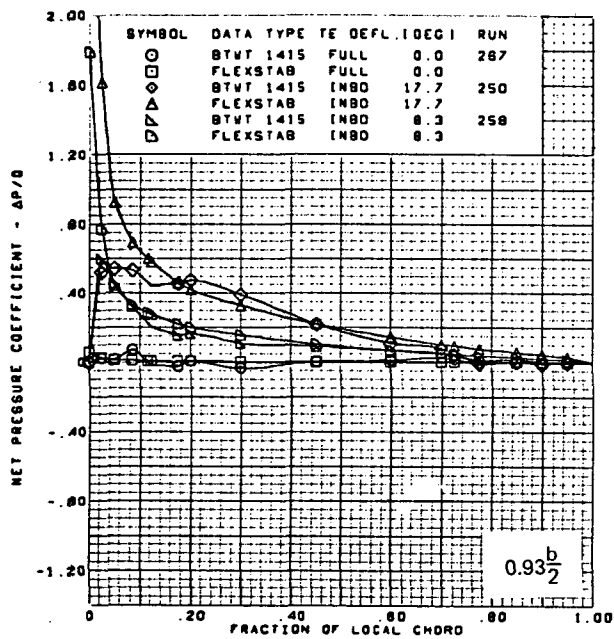
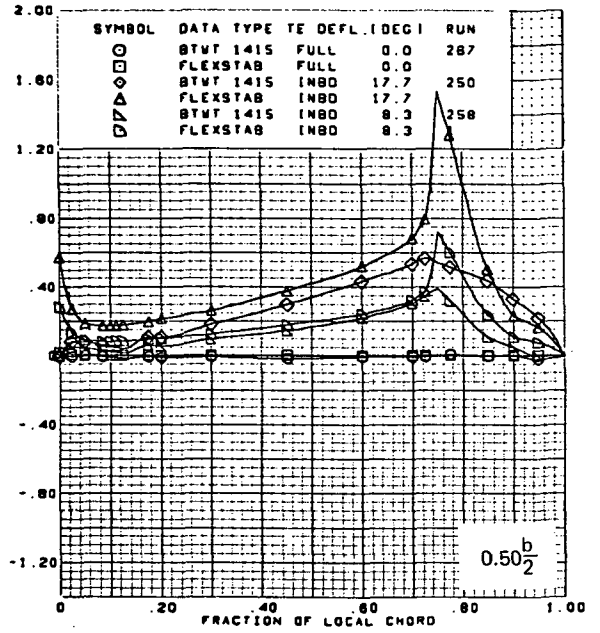
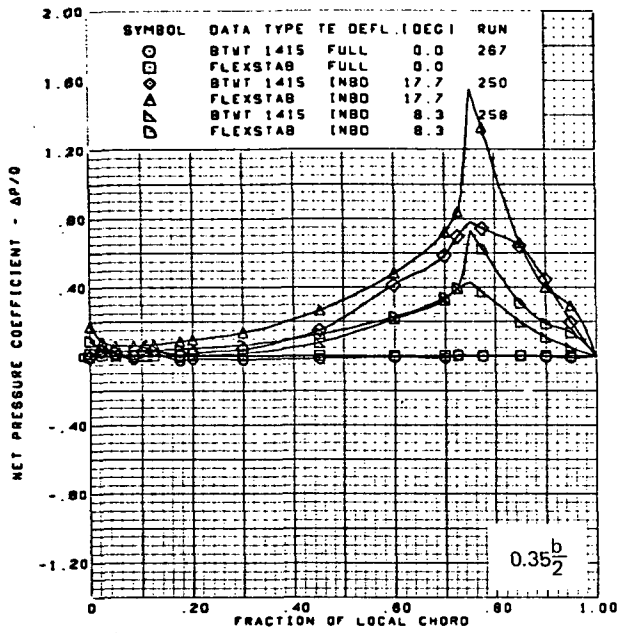
Figure 36.-(Continued)





(c) Net Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

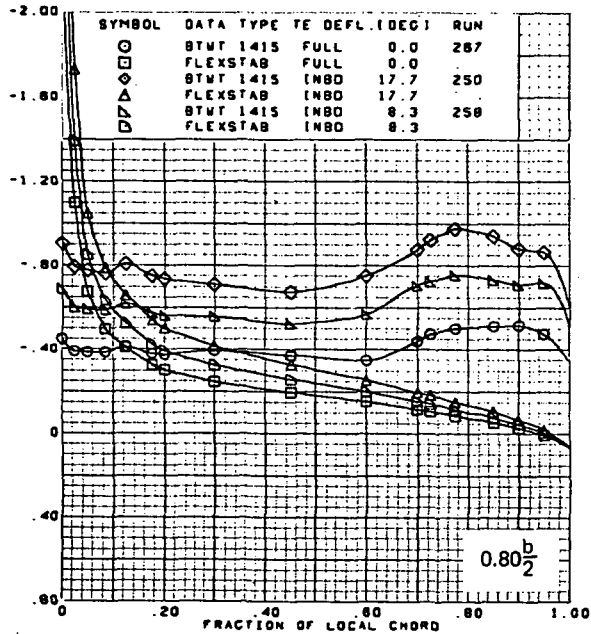
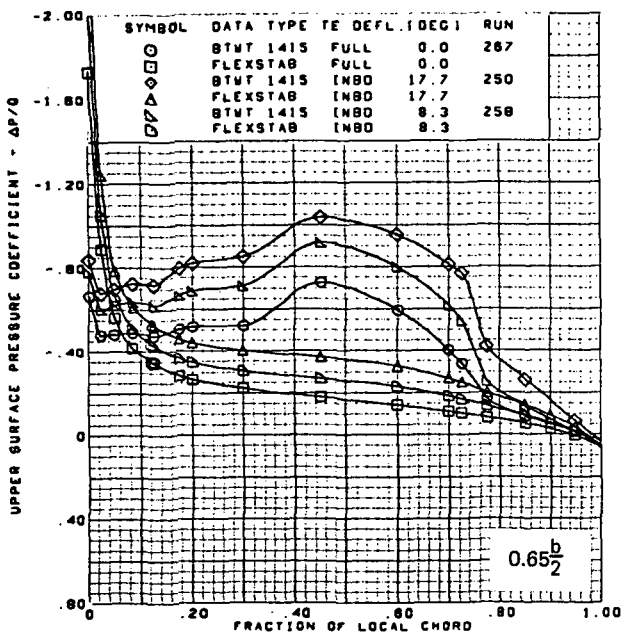
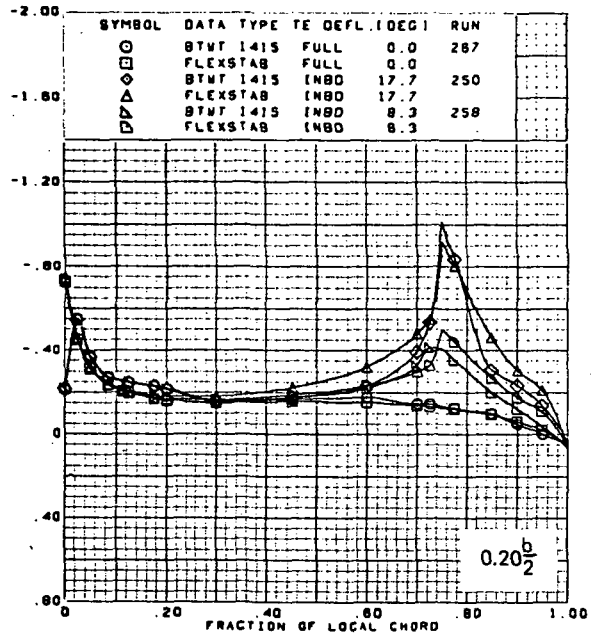
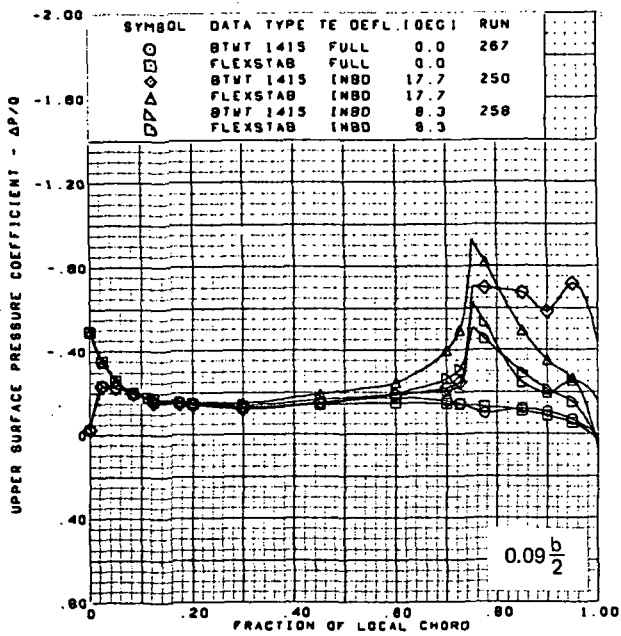
Figure 36.-(Continued)



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

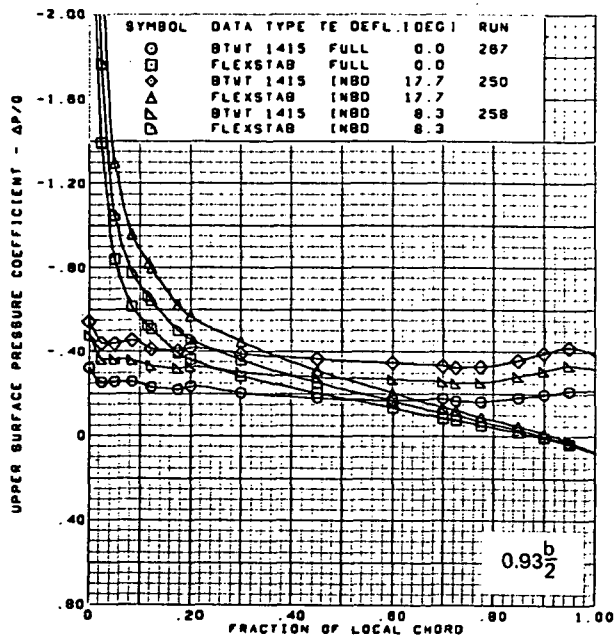
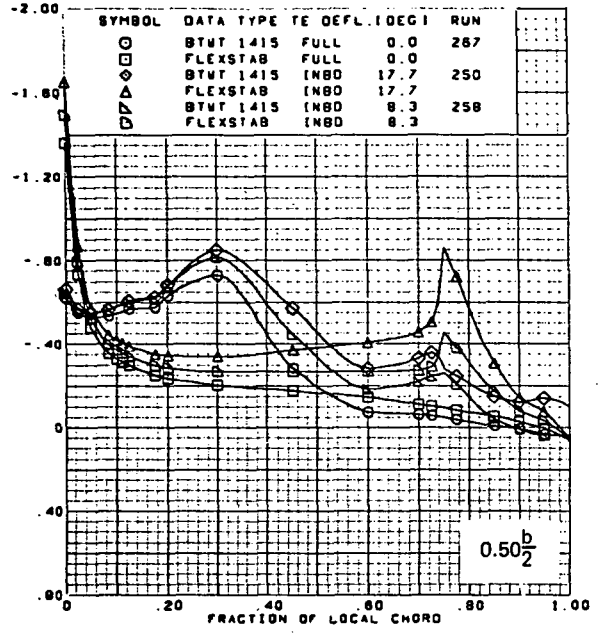
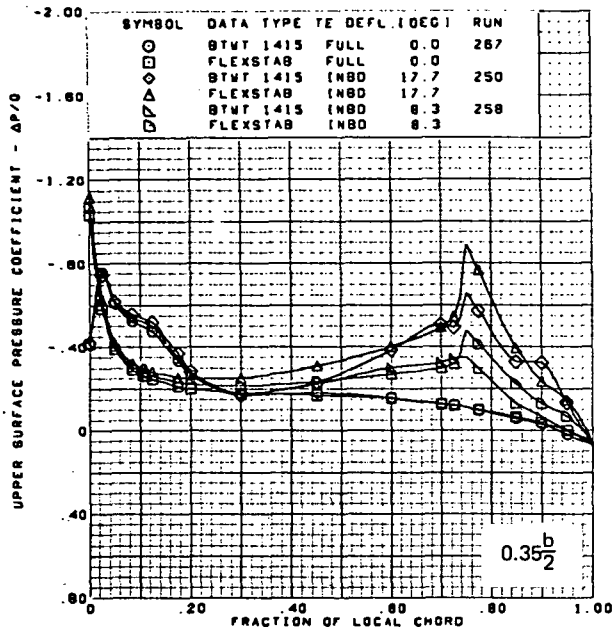
(c) (Concluded)

Figure 36.-(Continued)



(d) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

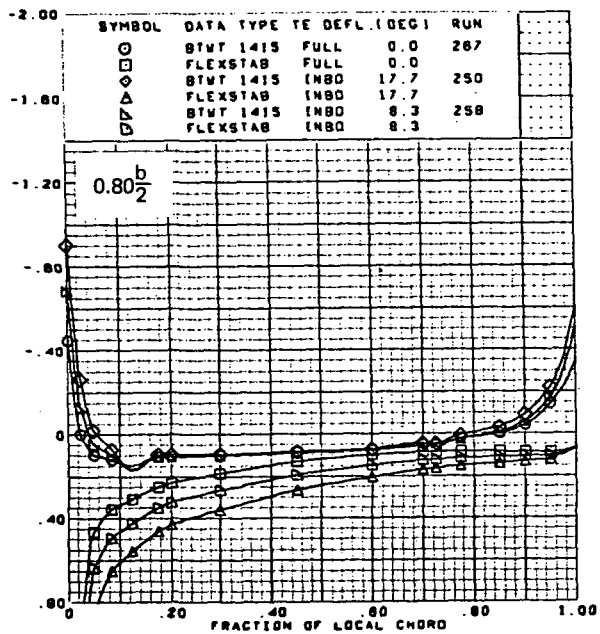
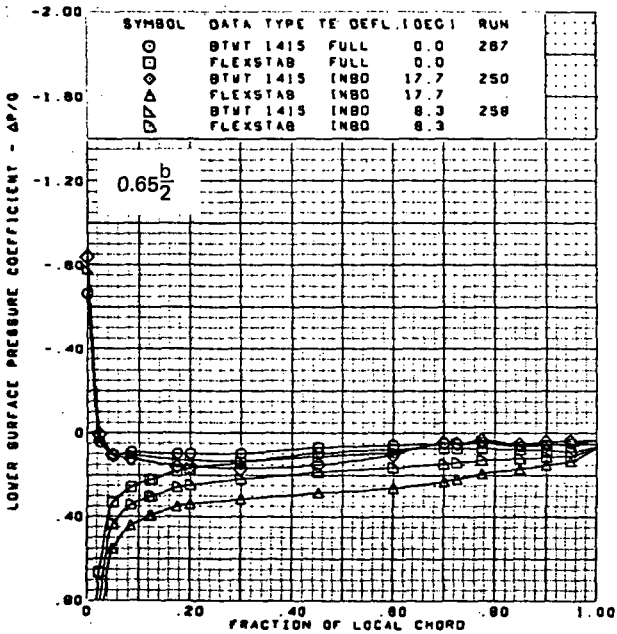
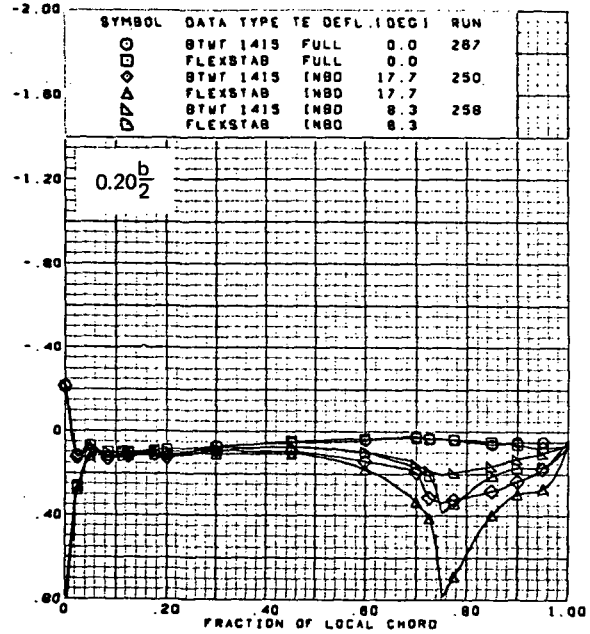
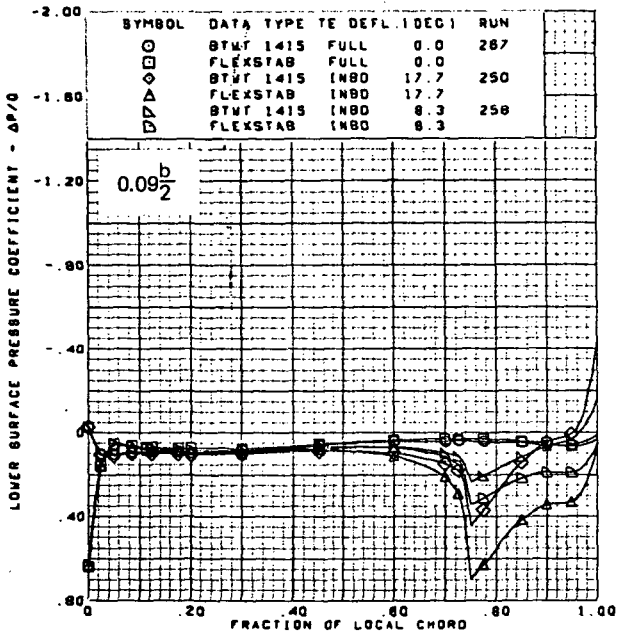
Figure 36.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

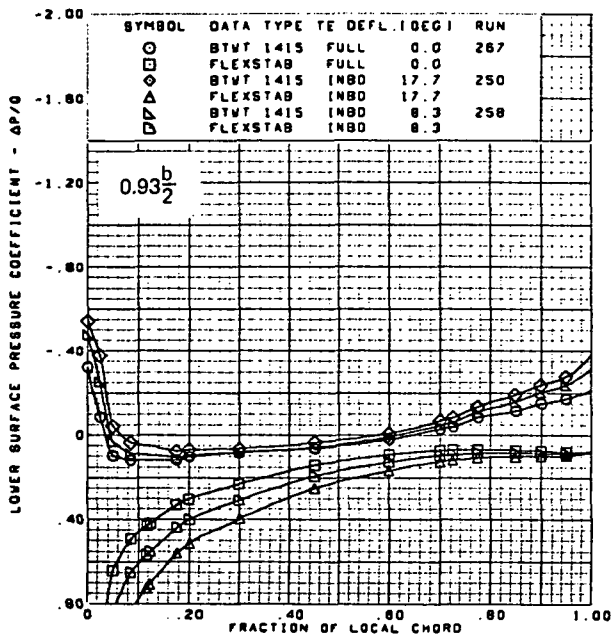
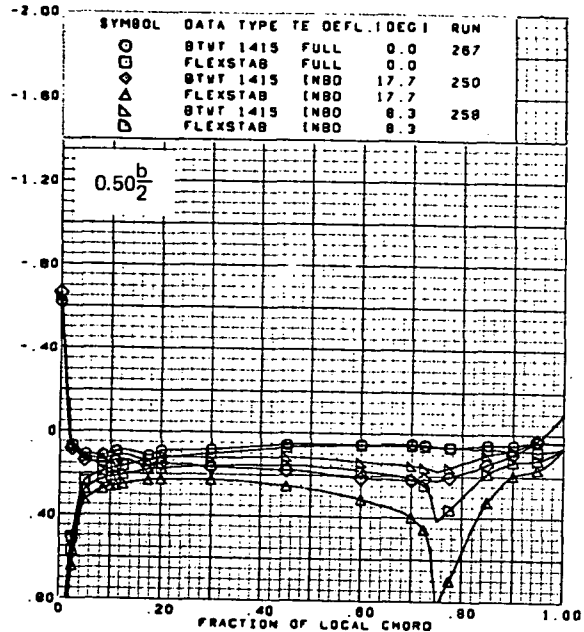
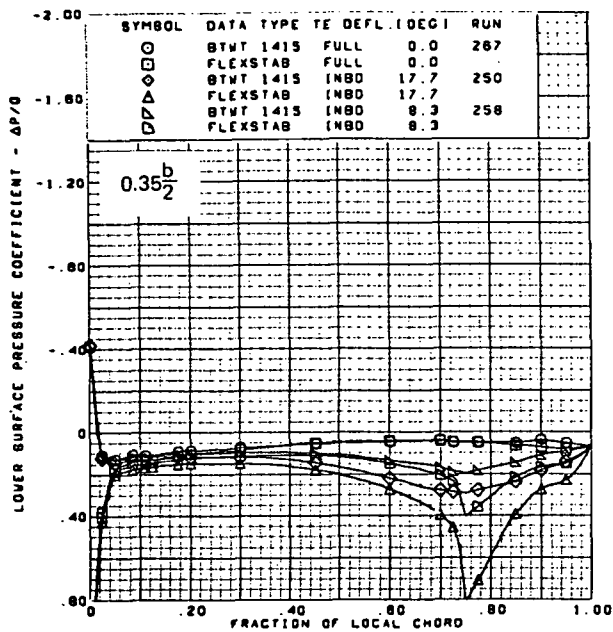
(d) (Concluded)

Figure 36.-(Continued)



(e) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

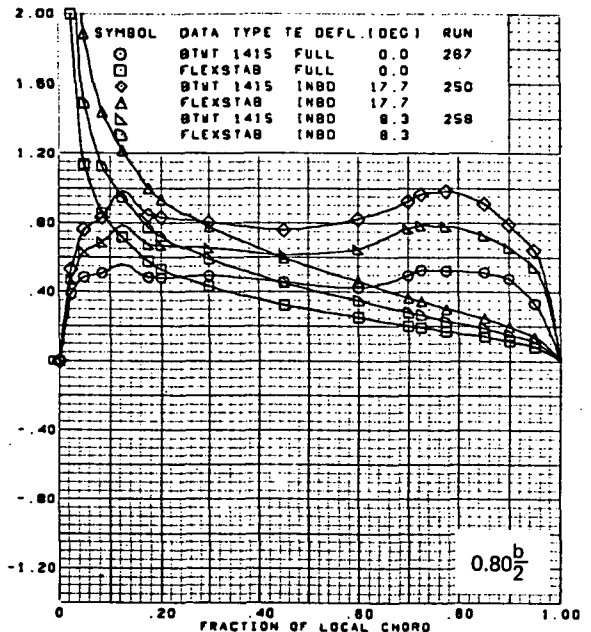
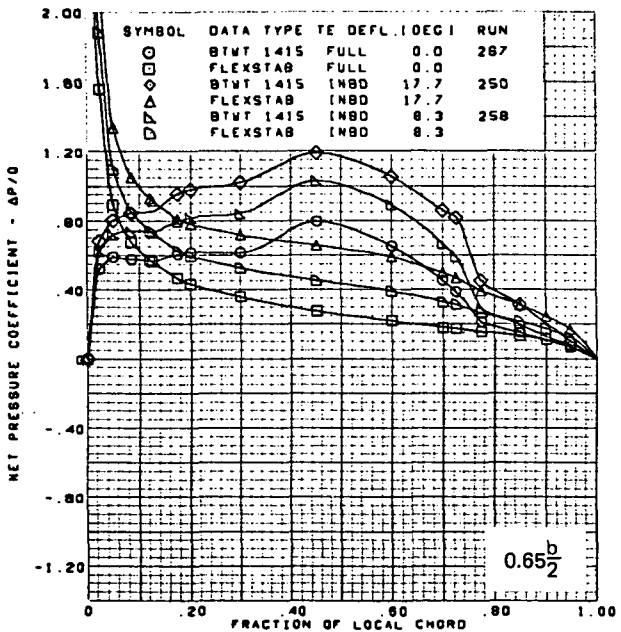
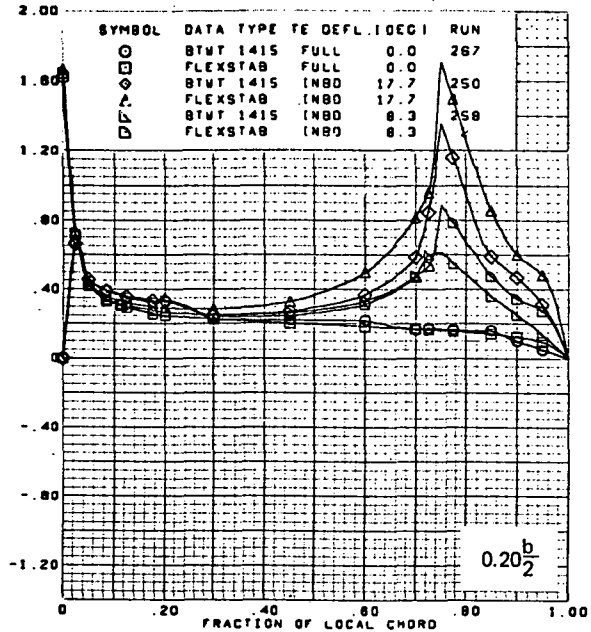
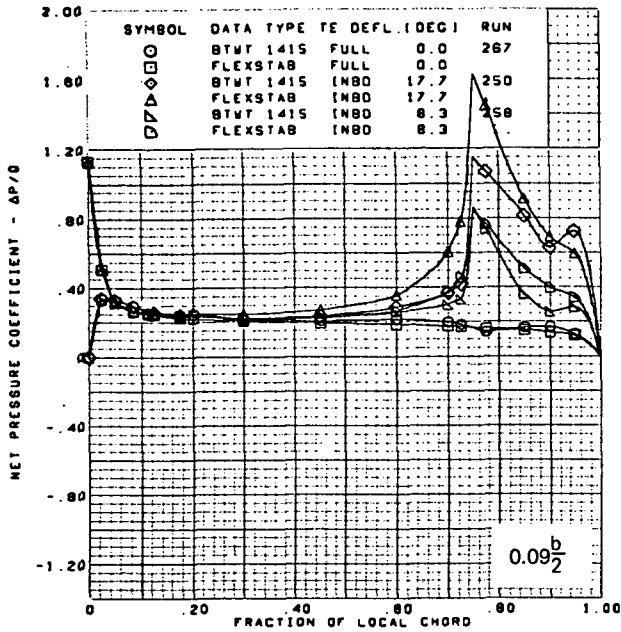
Figure 36.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

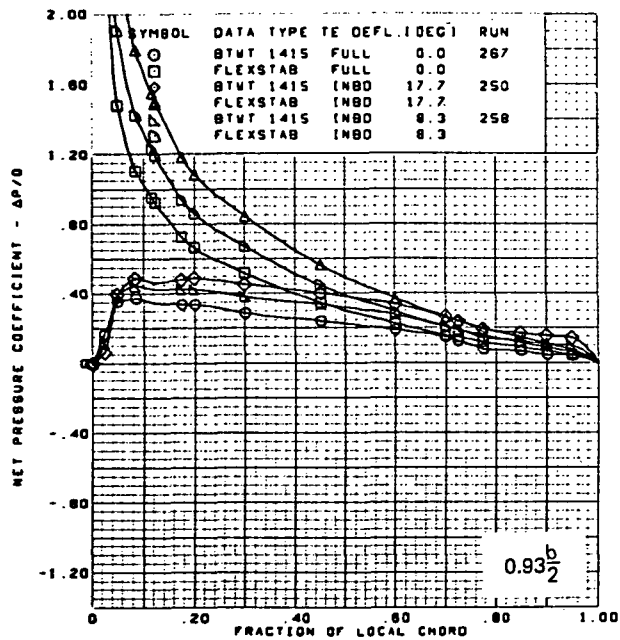
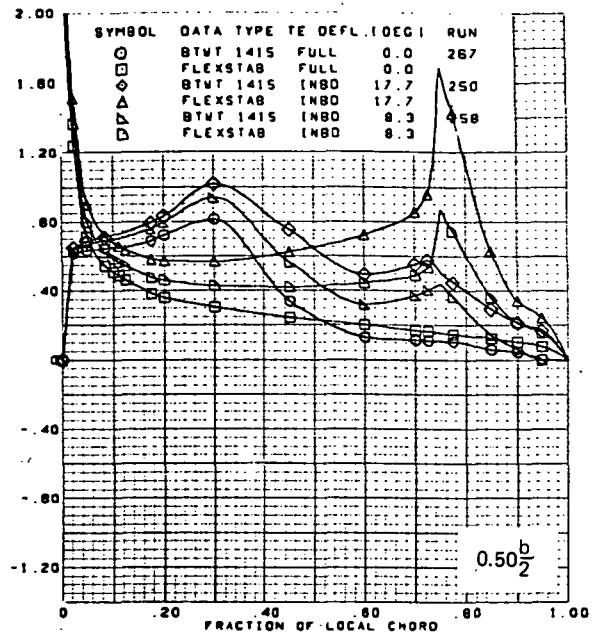
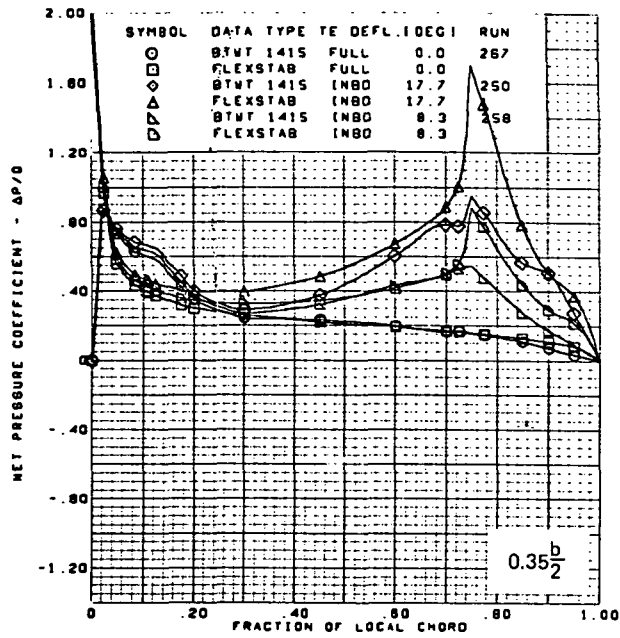
( e ) ( Concluded )

Figure 36.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

Figure 36.-(Continued)

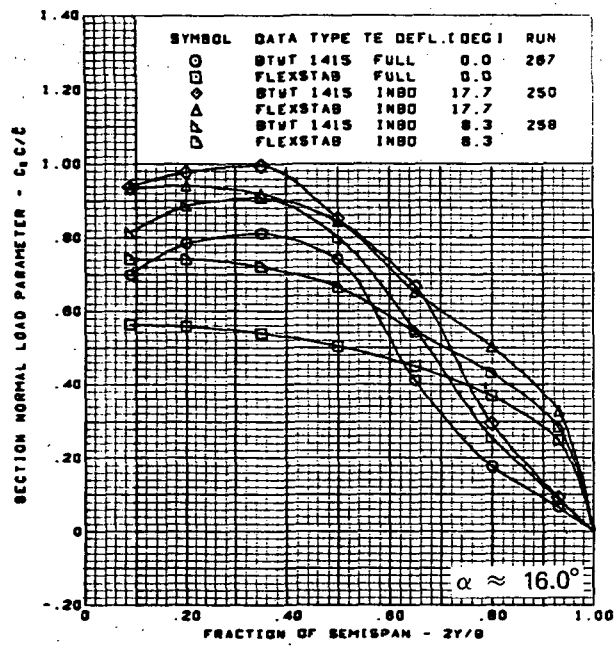
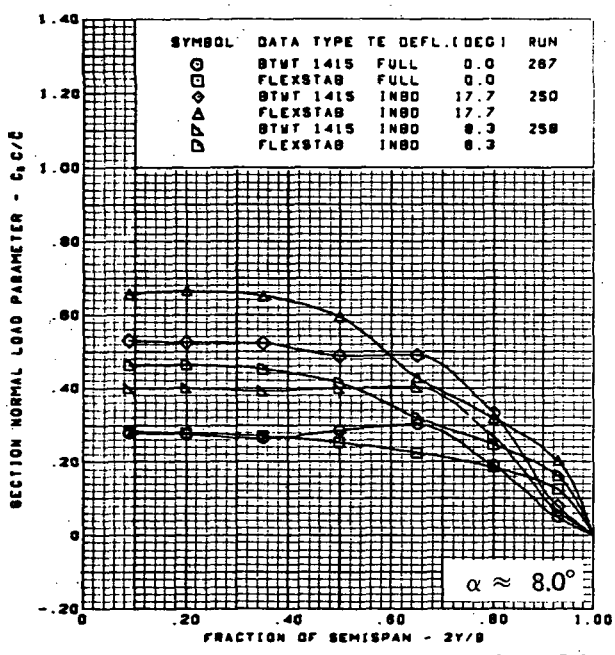
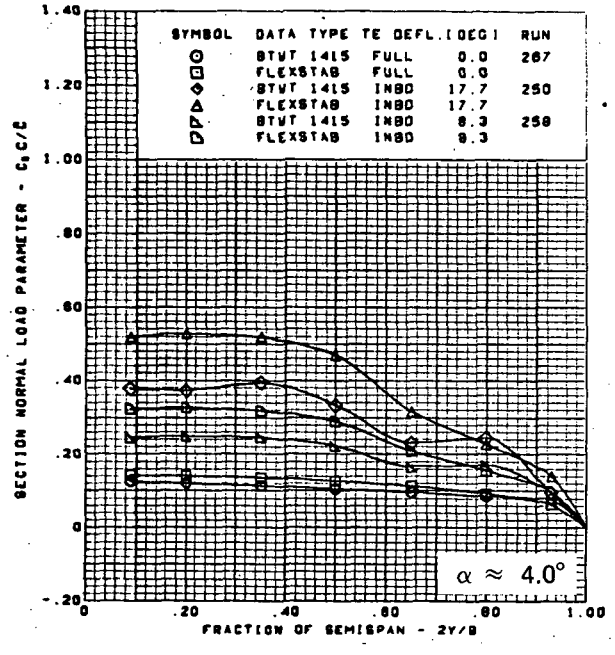
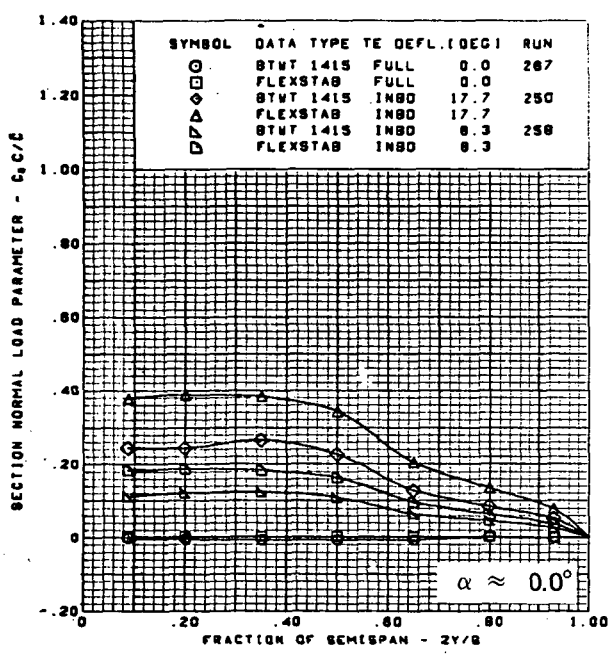


$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

( f ) ( Concluded )

Figure 36.-(Continued)

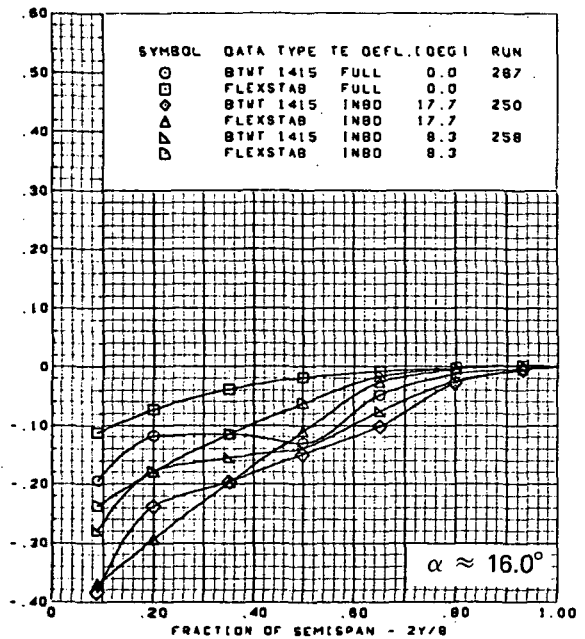
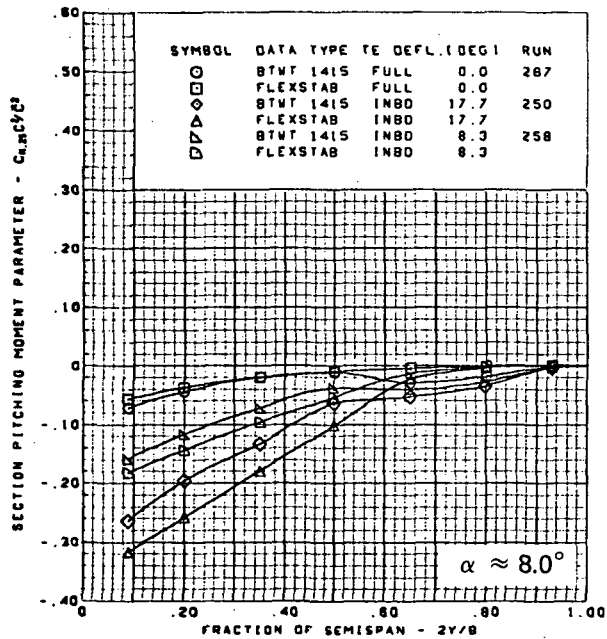
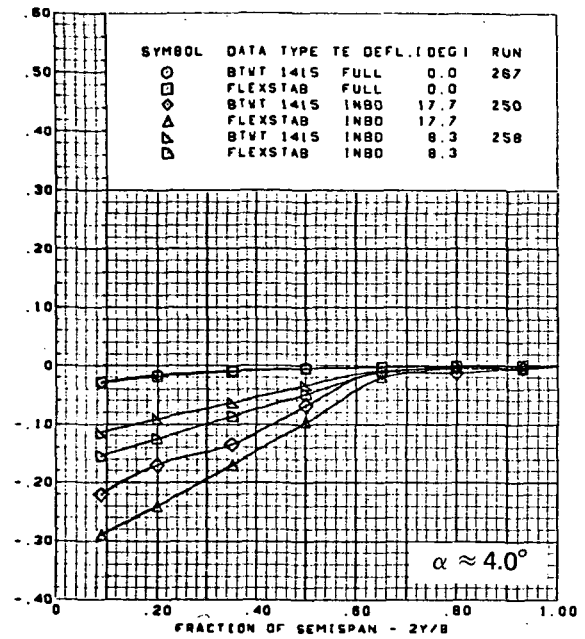
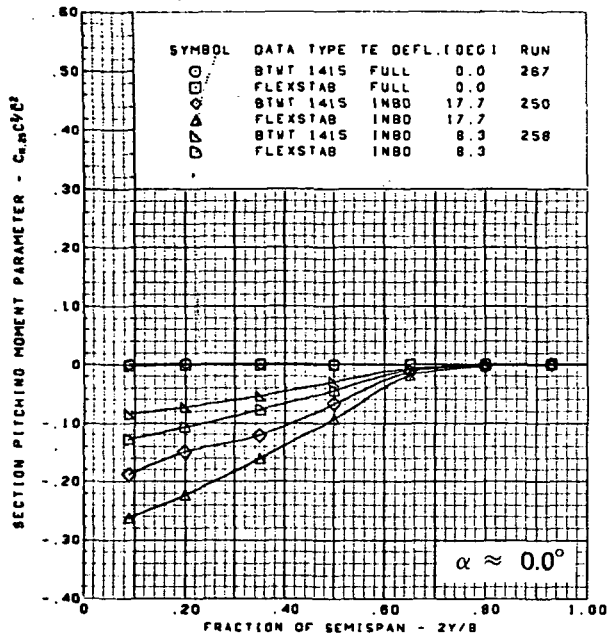




M = 0.85  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, outboard = 0.0°

(g) Spanload Distributions—Normal Force

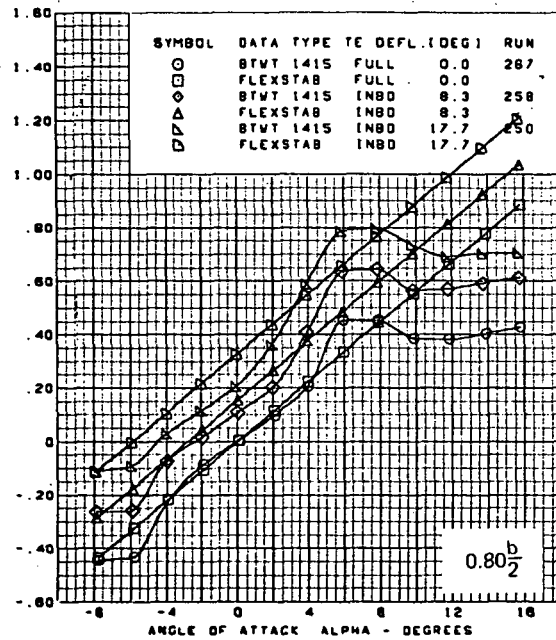
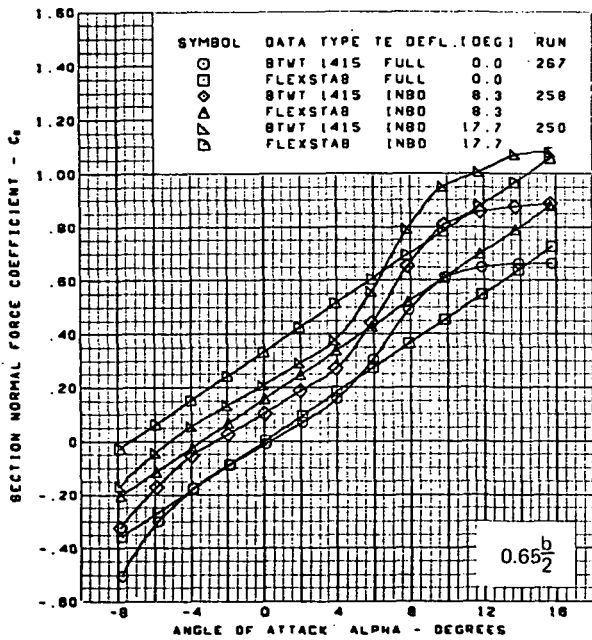
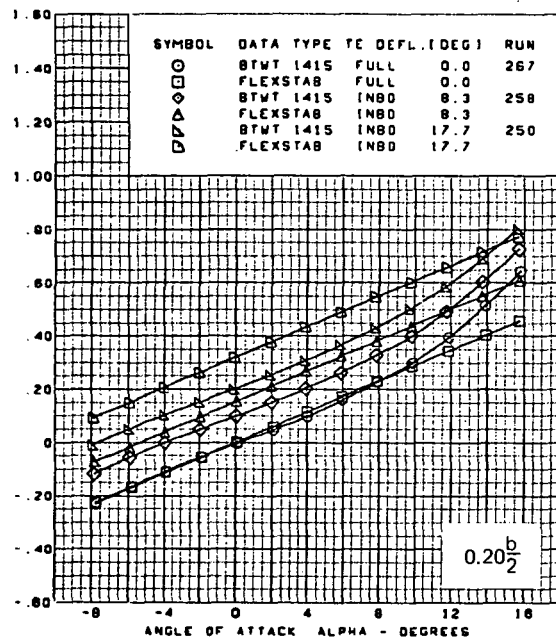
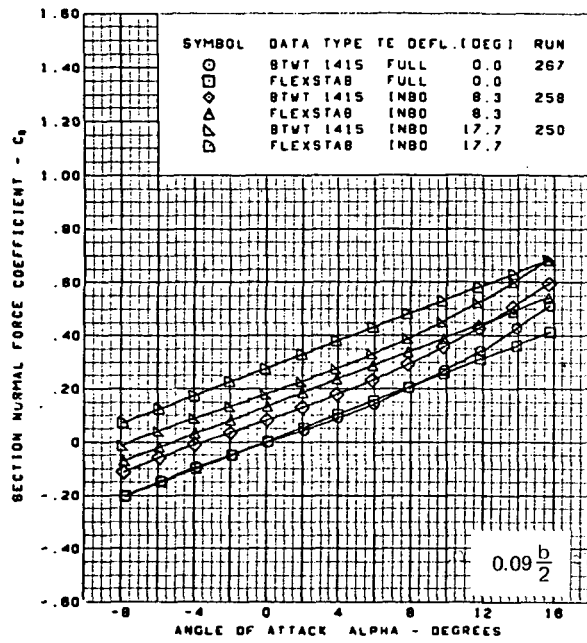
Figure 36.—(Continued)



$M = 0.85$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

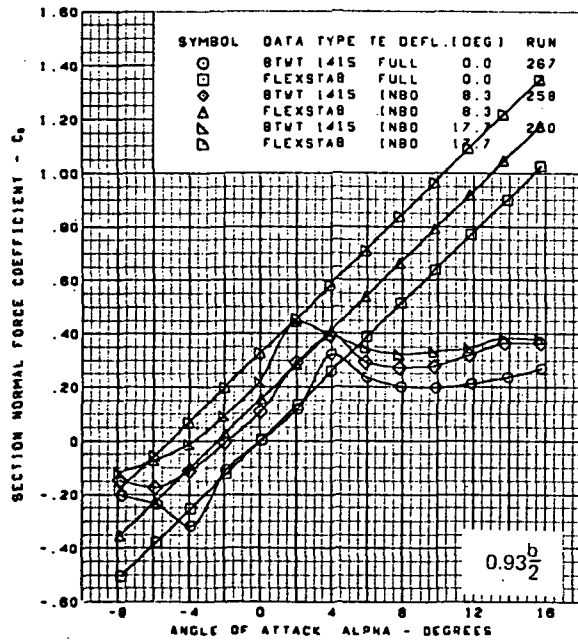
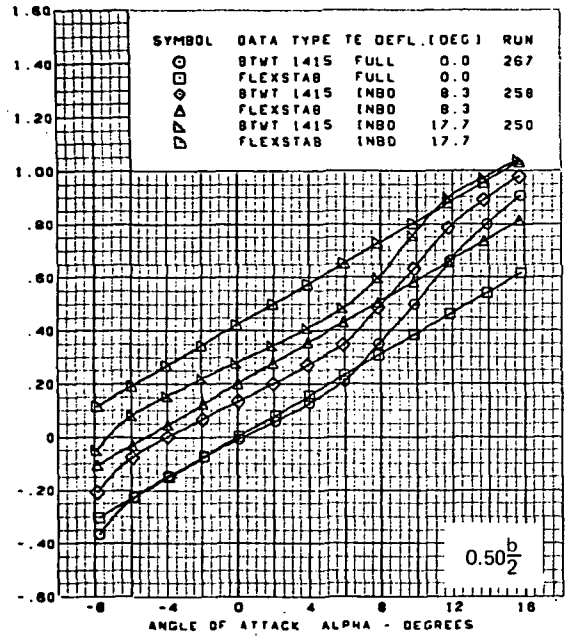
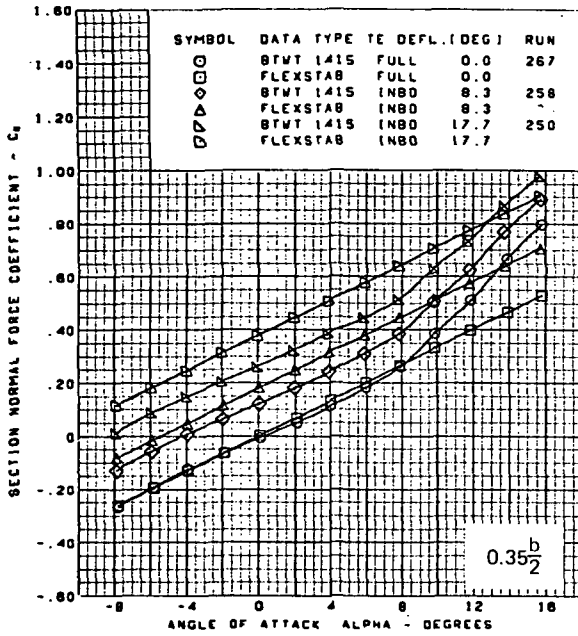
(h) Spanload Distributions—Pitching Moment

Figure 36.—(Continued)



(i) Section Aerodynamic Coefficients – Normal Force

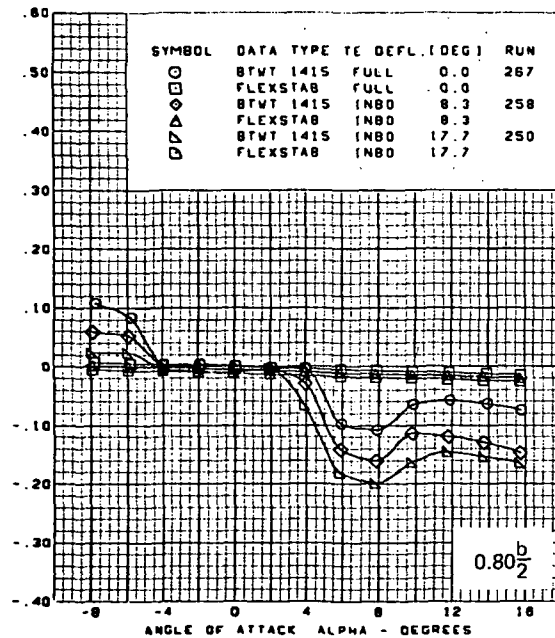
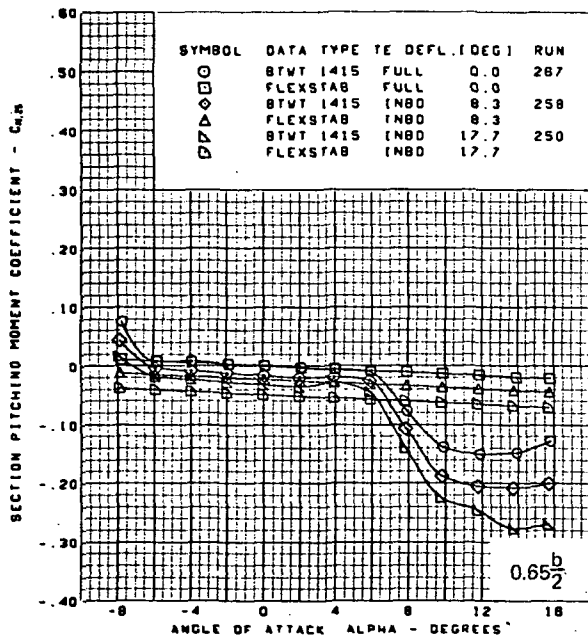
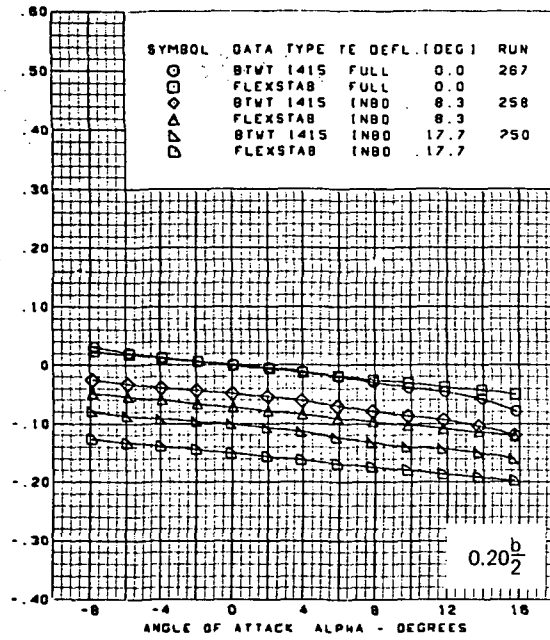
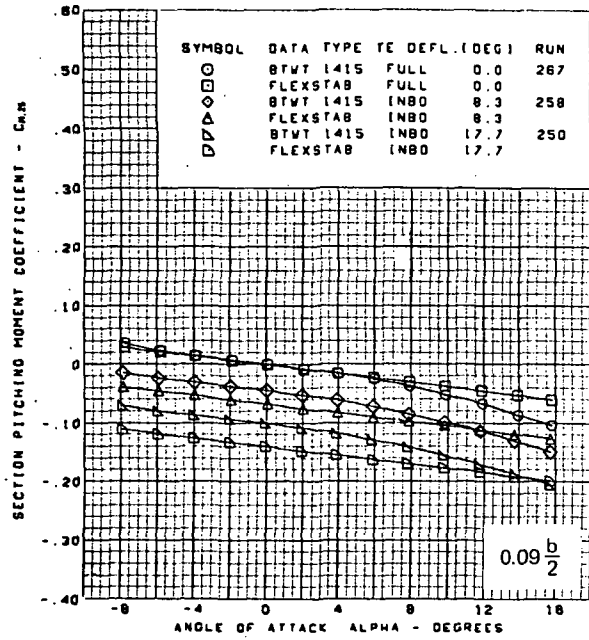
Figure 36.-(Continued)



M = 0.85  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, outboard = 0.0°

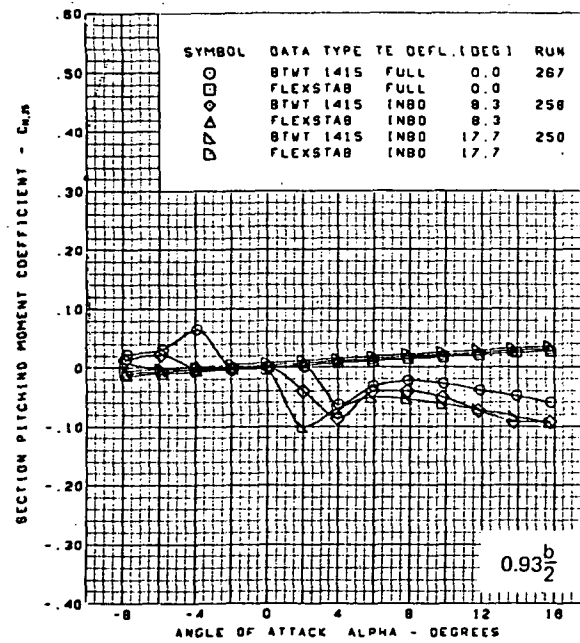
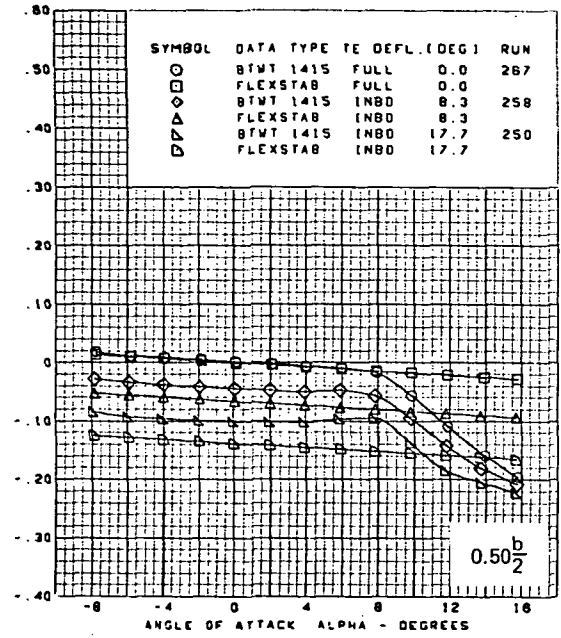
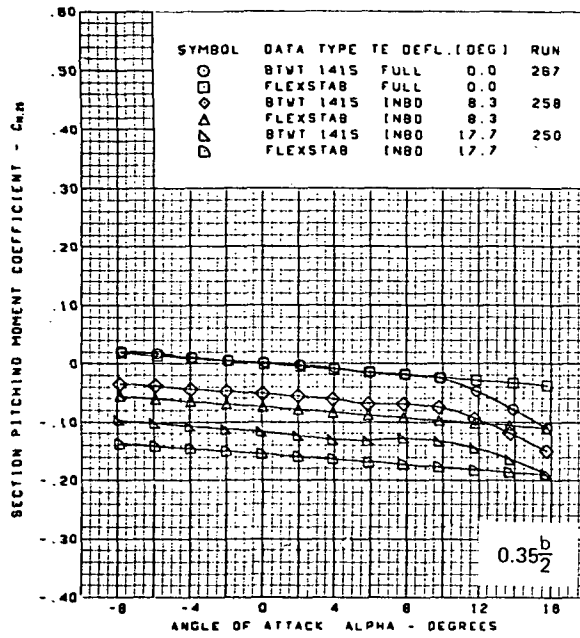
(I) (Concluded)

Figure 36.-(Continued)



(j) Section Aerodynamic Coefficients - Pitching Moment

Figure 36.-(Continued)

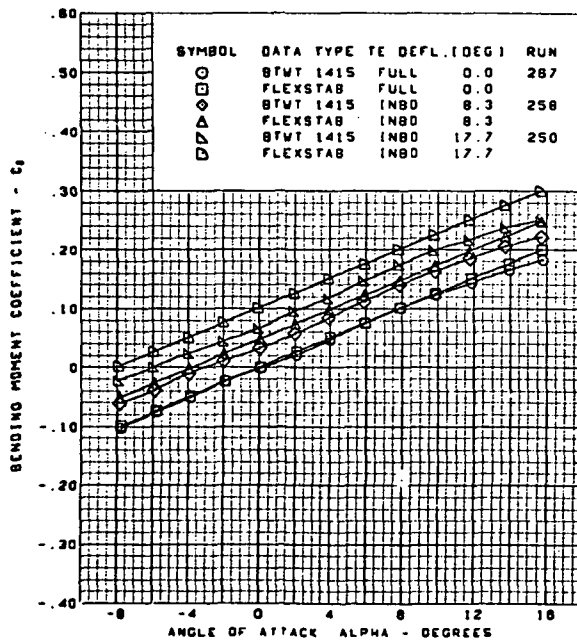
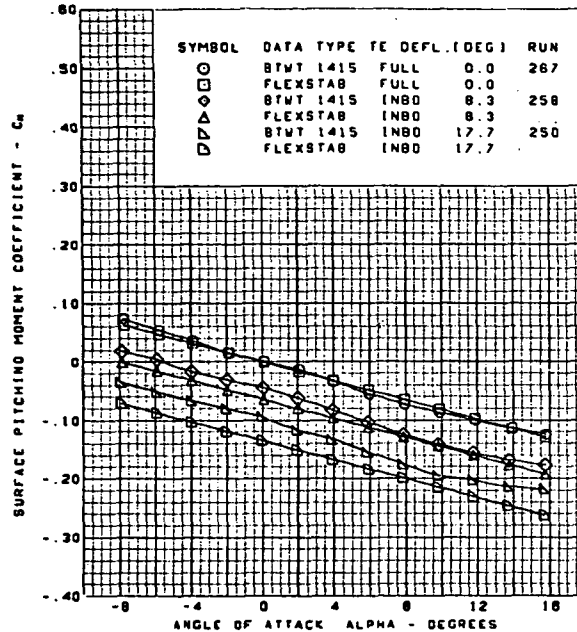
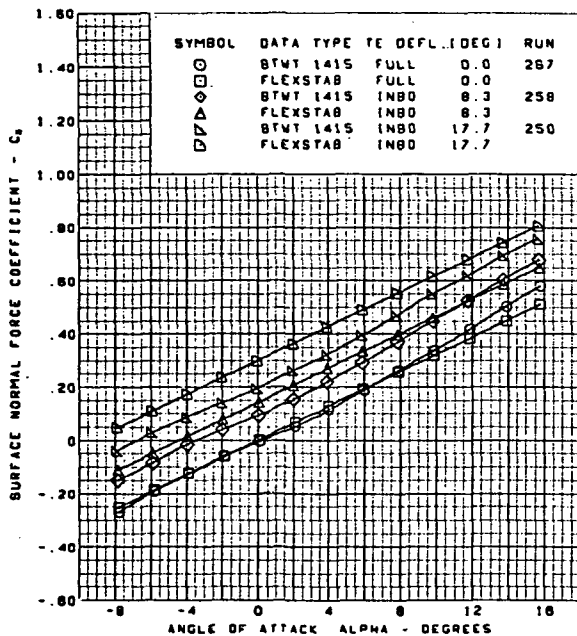


M = 0.85  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, outboard = 0.0°

(j) (Concluded)

Figure 36.-(Continued)

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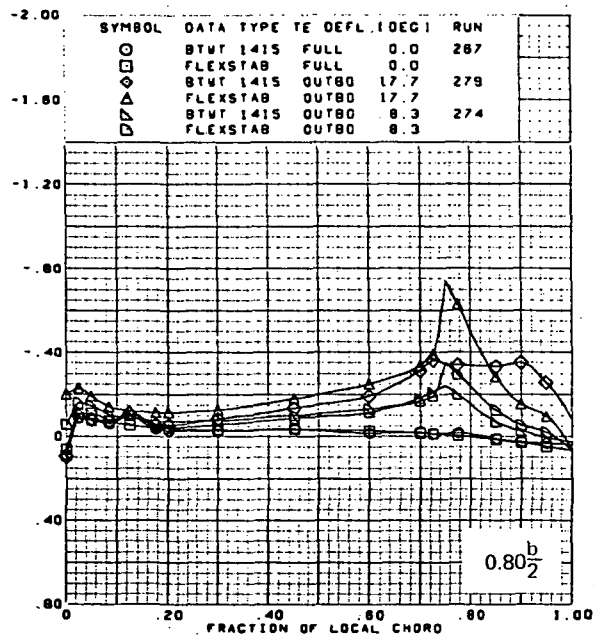
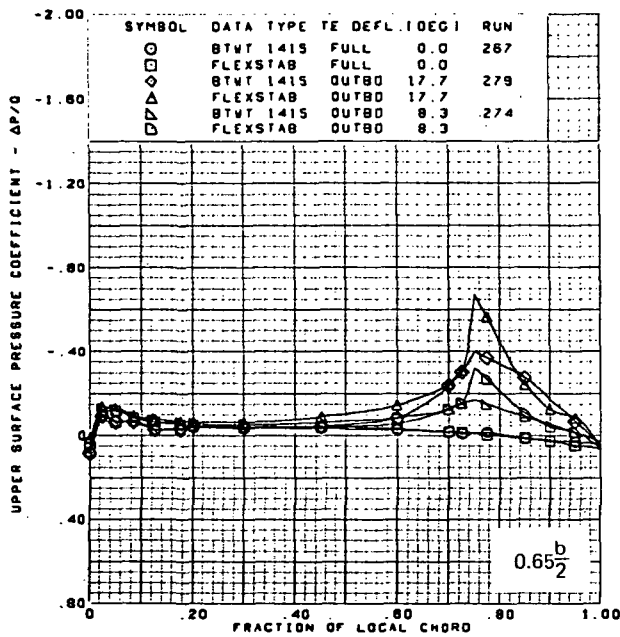
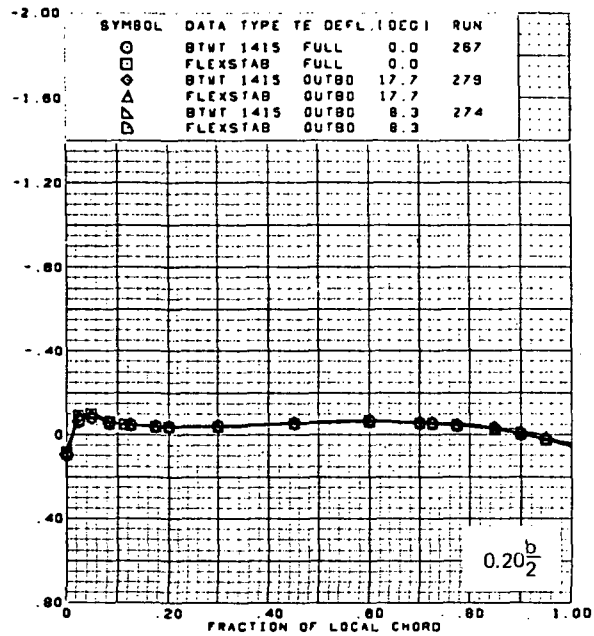
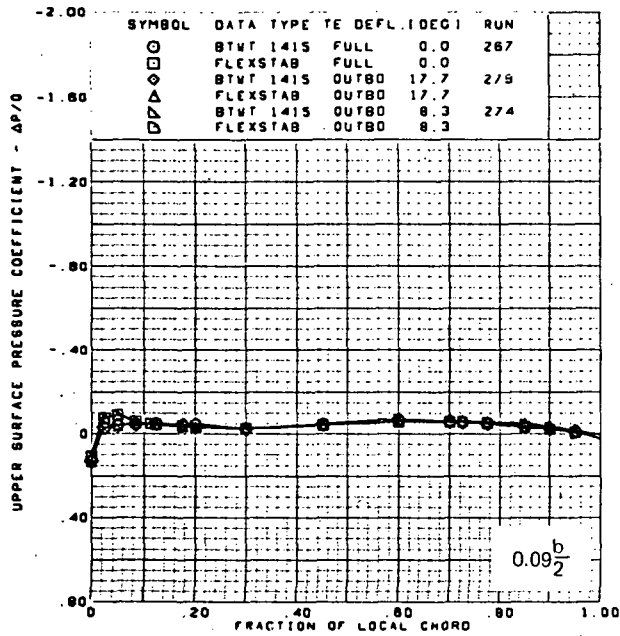


$M = 0.85$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, outboard =  $0.0^\circ$

(k) Wing Aerodynamic Coefficients

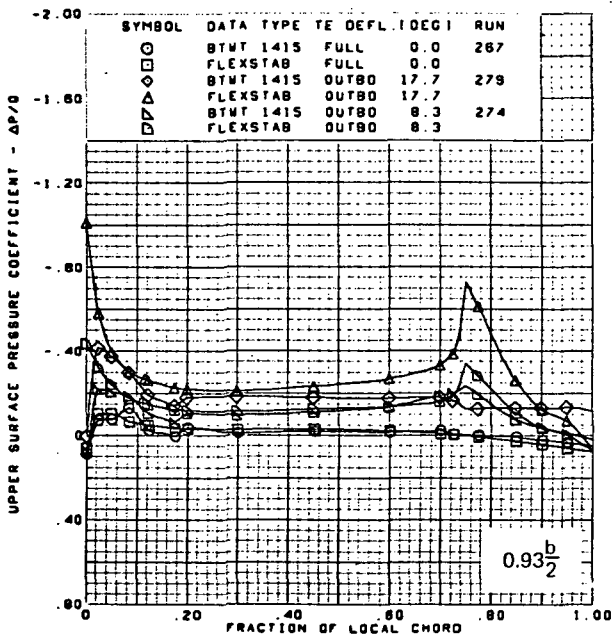
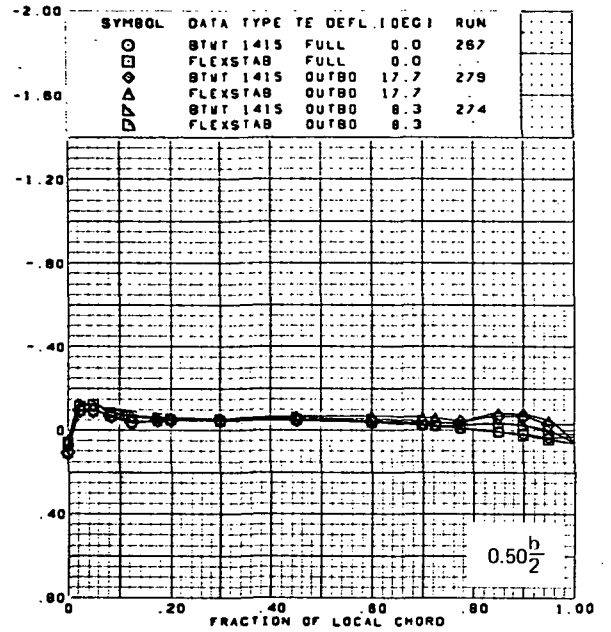
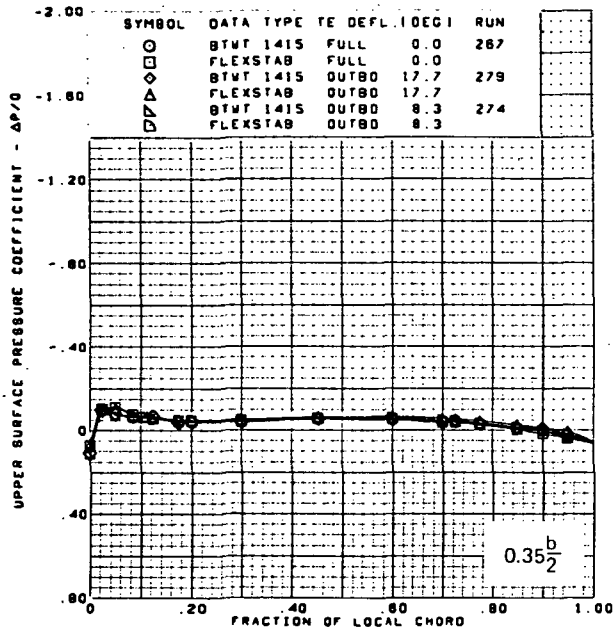
Figure 36.--(Concluded)





(a) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

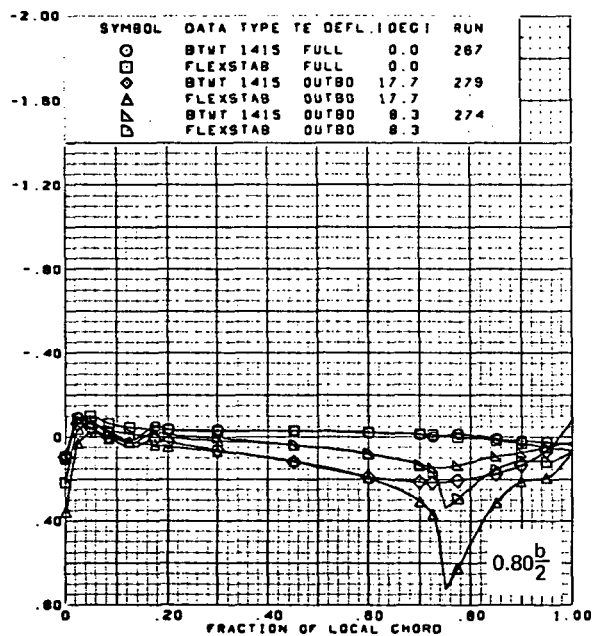
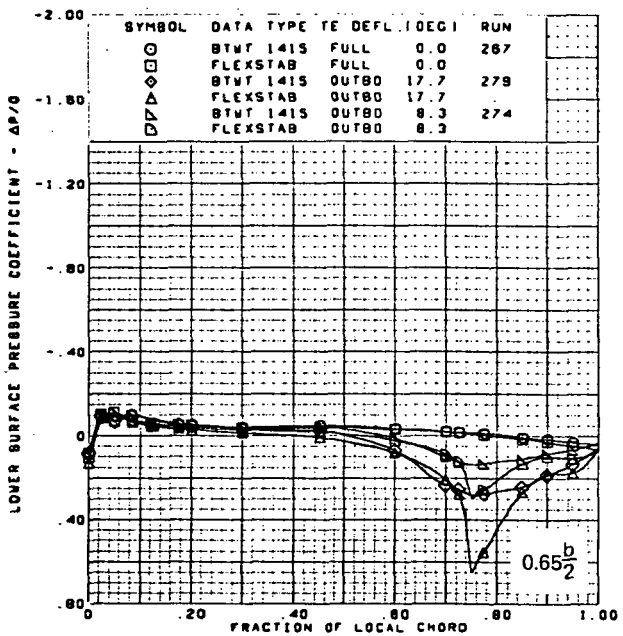
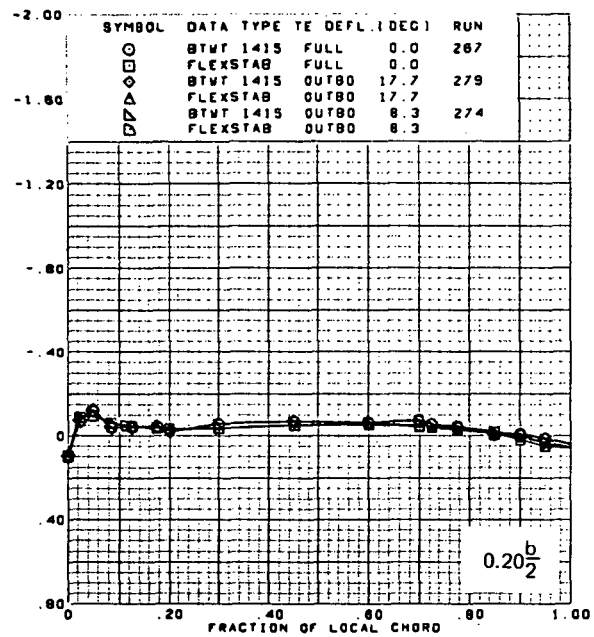
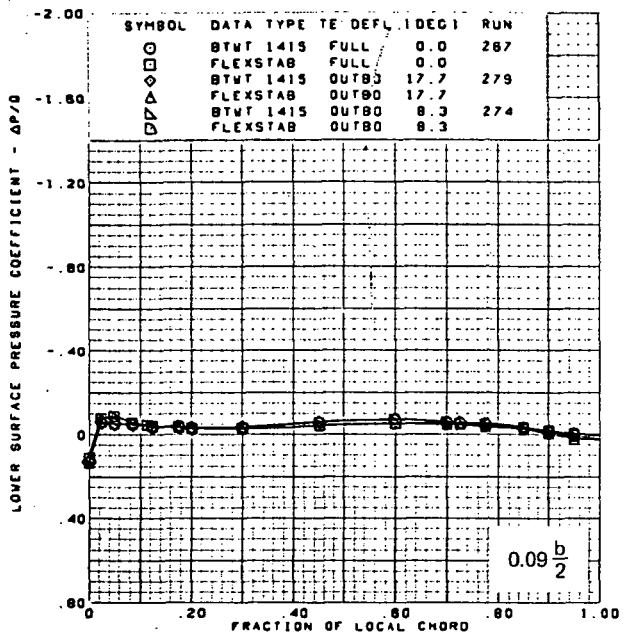
Figure 37.—Wing Theory-to-Experiment Comparison—Effect of Partial Span Outboard T.E. Deflection; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Inboard =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

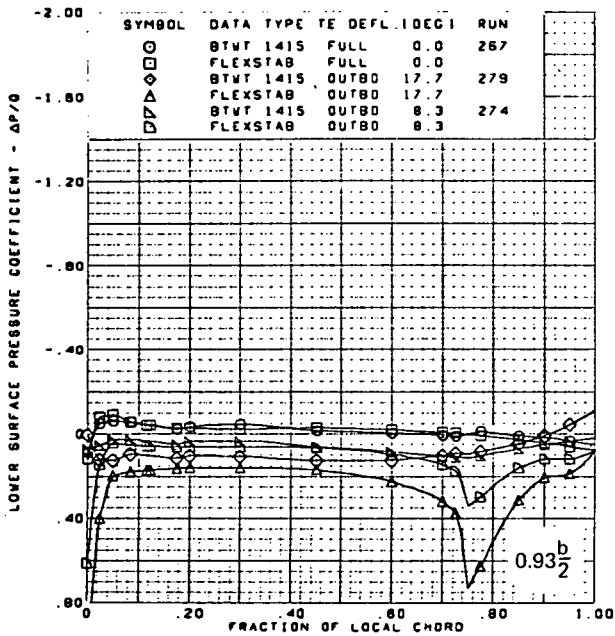
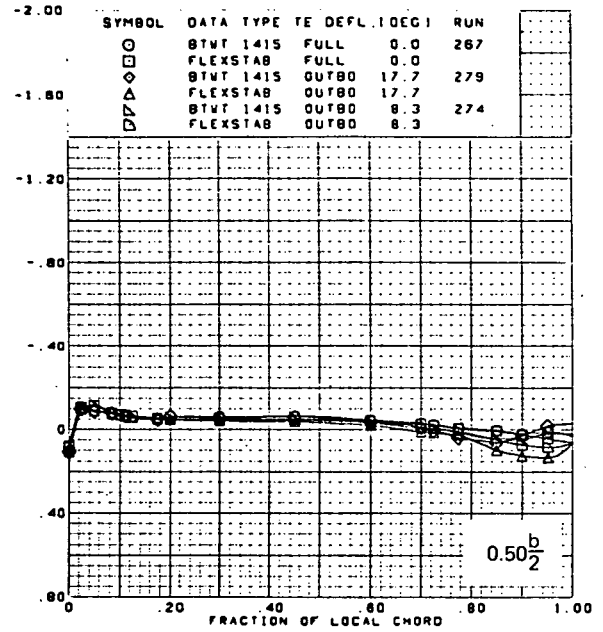
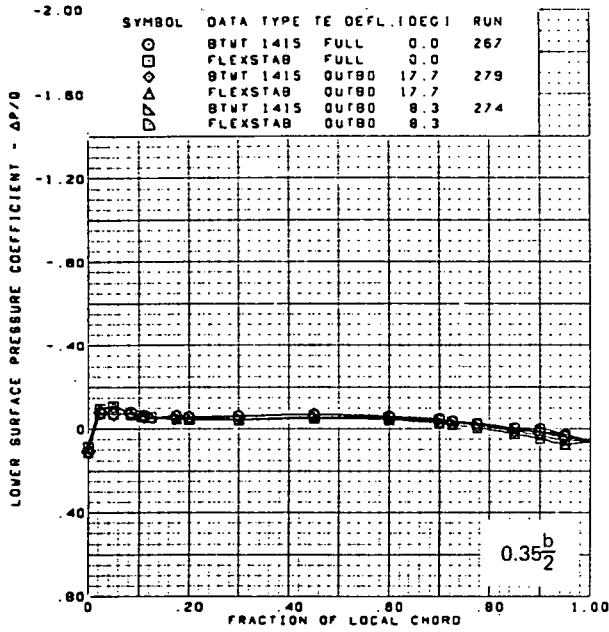
(a) (Concluded)

Figure 37.-(Continued)



(b) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

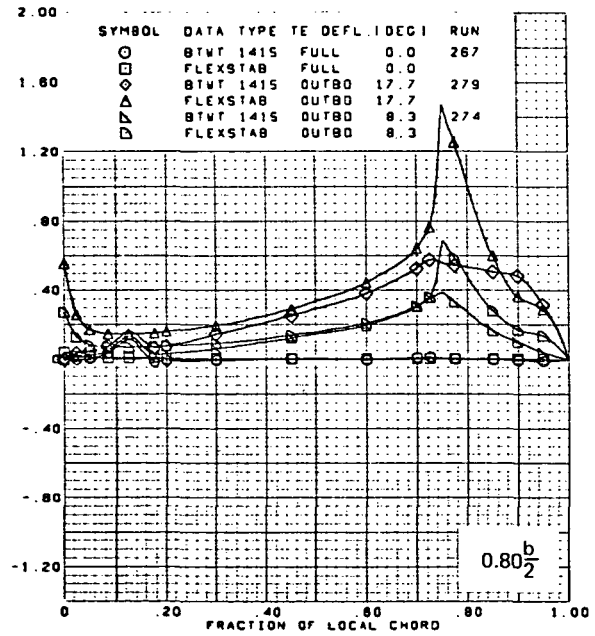
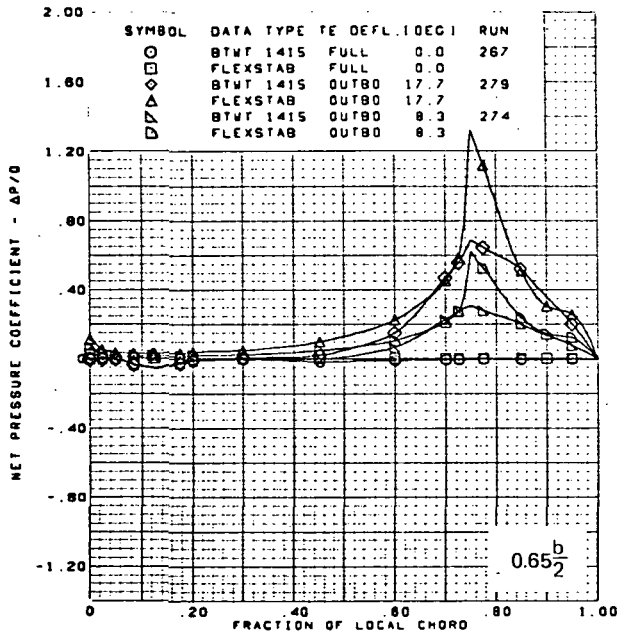
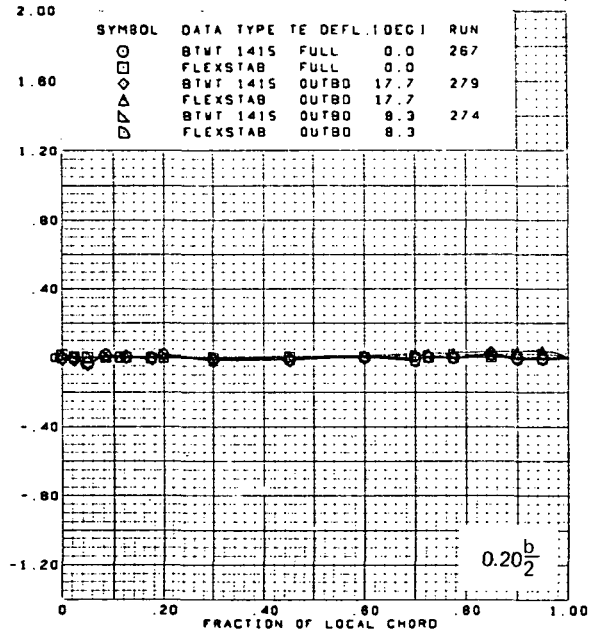
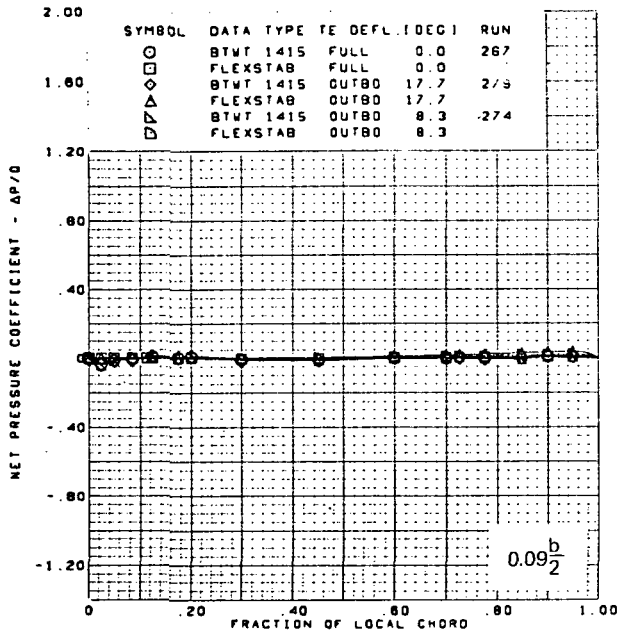
Figure 37.--(Continued)



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

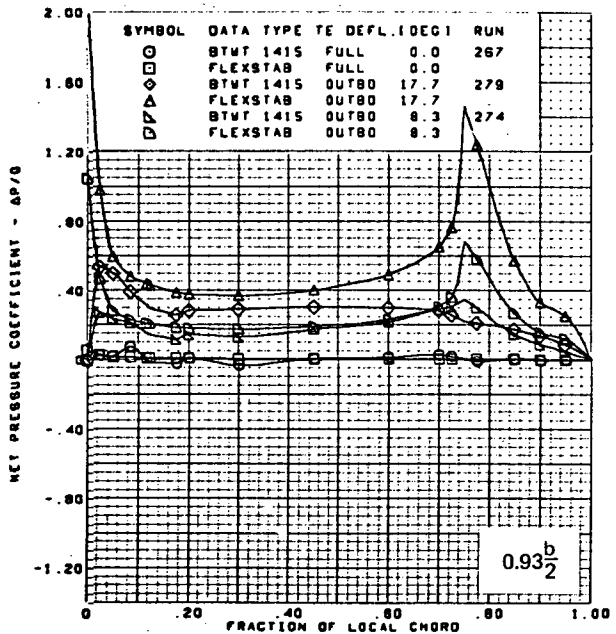
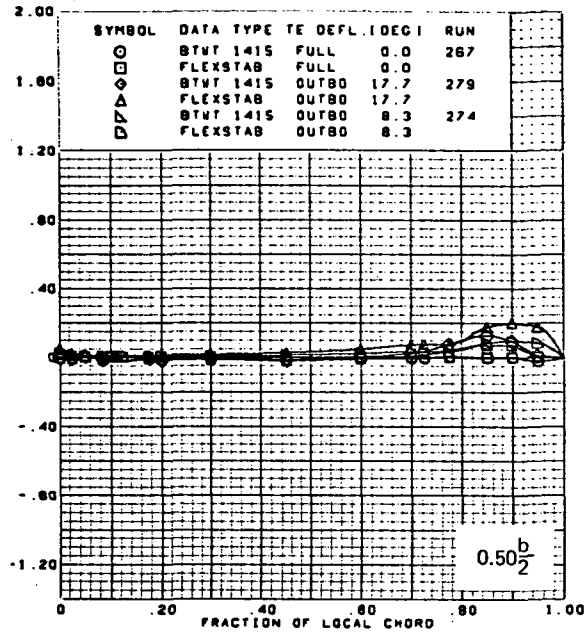
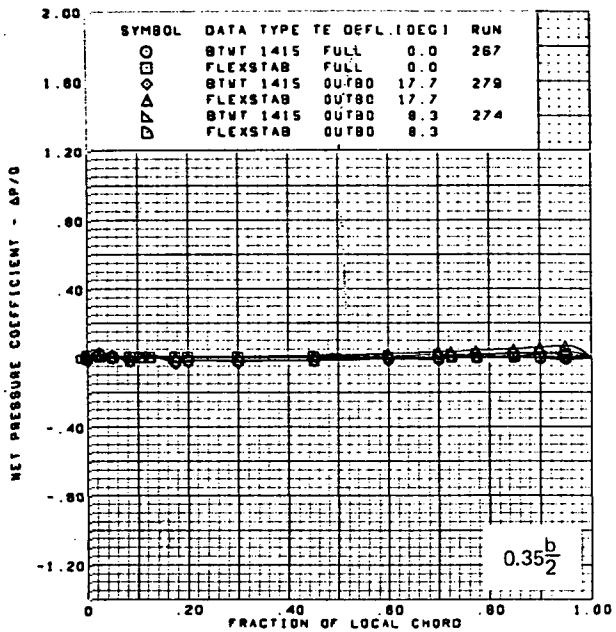
(b) (Concluded)

Figure 37.-(Continued)



(c) Net Chordwise Pressure Distributions,  $\alpha \approx 0.0^\circ$

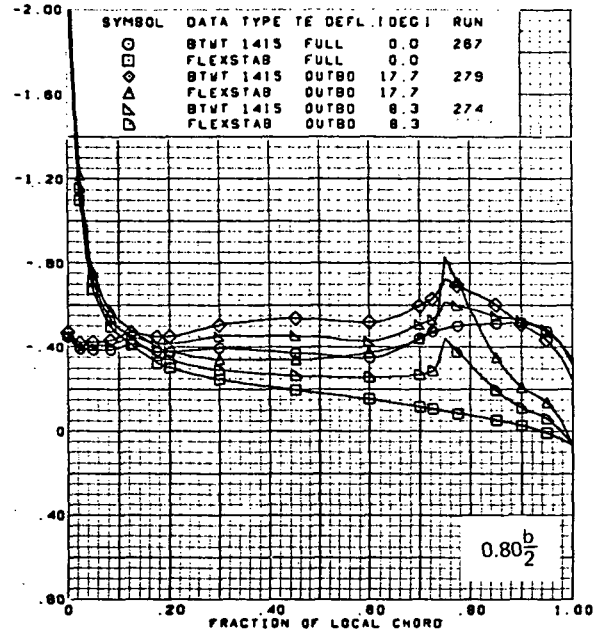
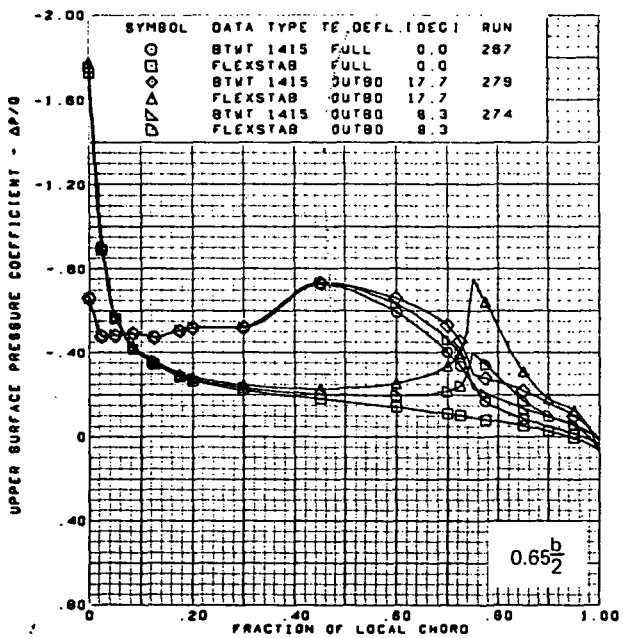
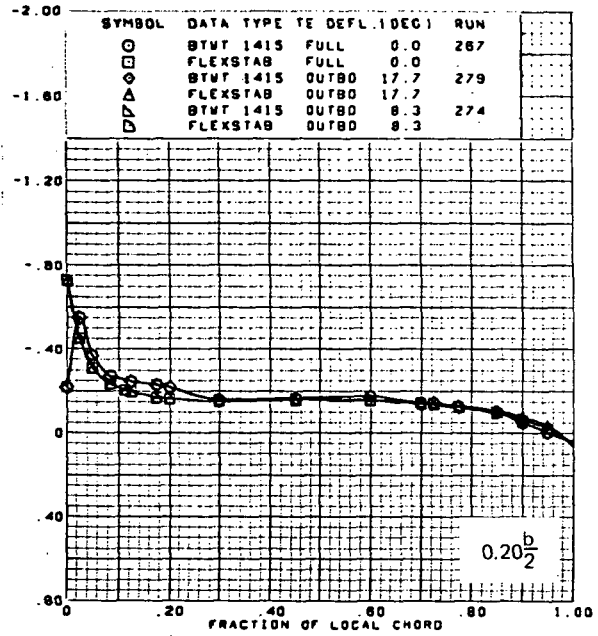
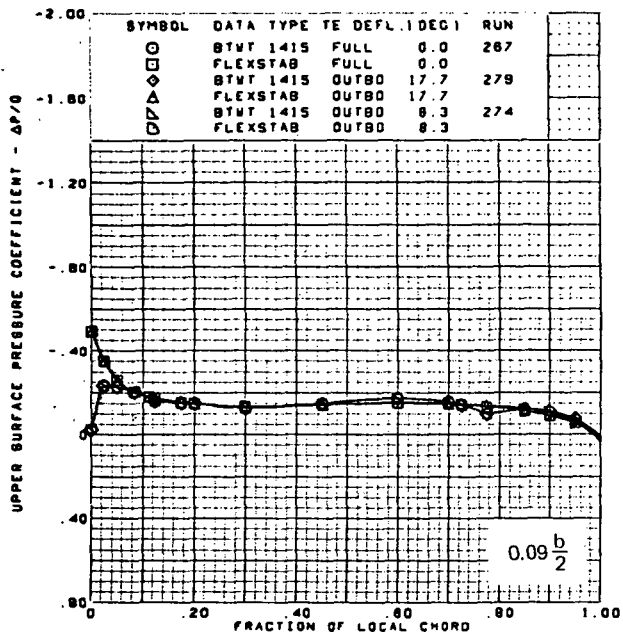
Figure 37.-(Continued)



$M = 0.85$   
 $\alpha \approx 0.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

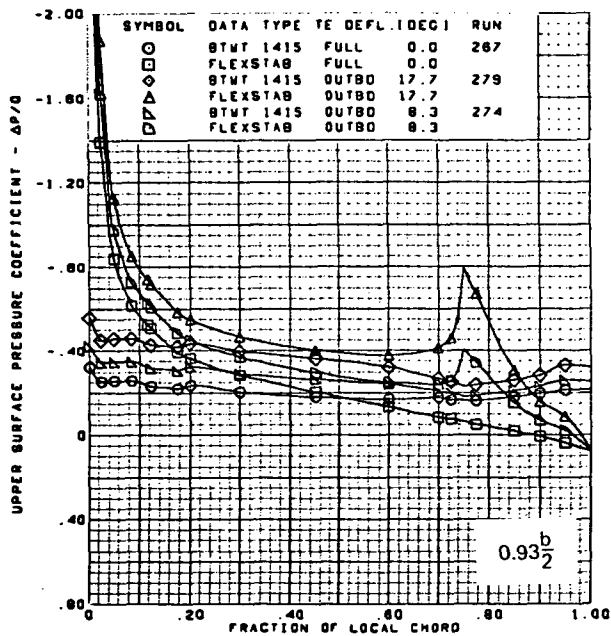
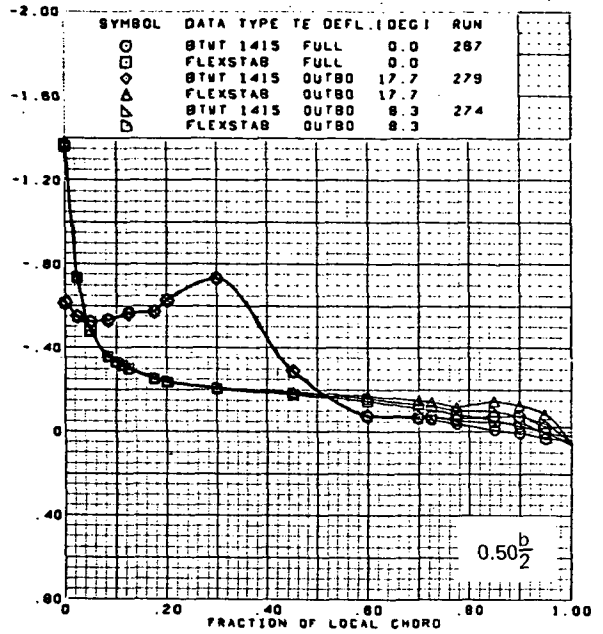
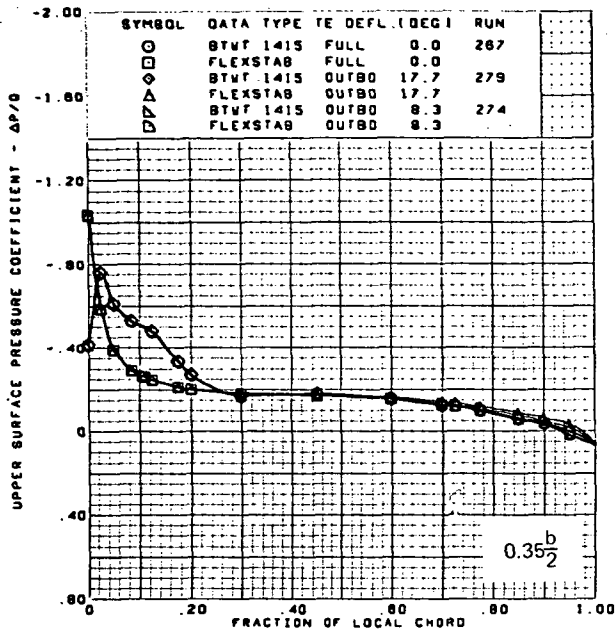
(c) (Concluded)

Figure 37.-(Continued)



(d) Upper Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

Figure 37.-(Continued)

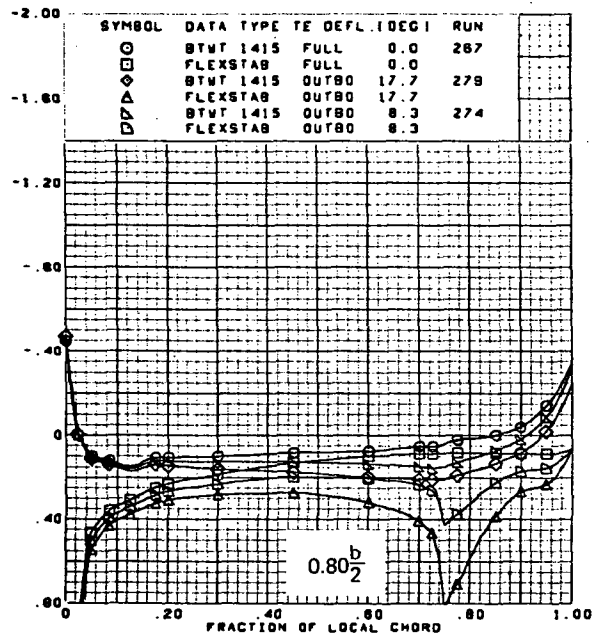
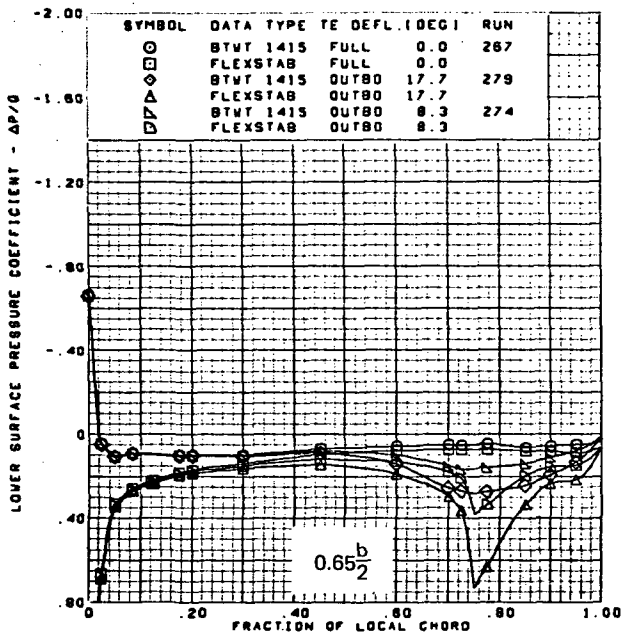
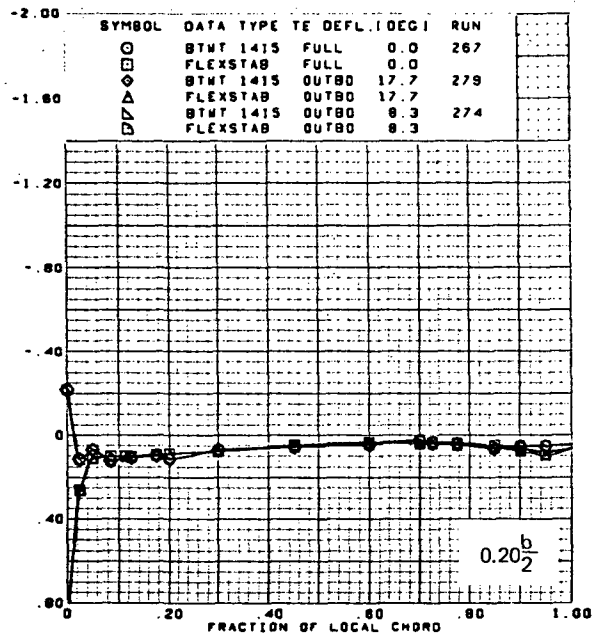
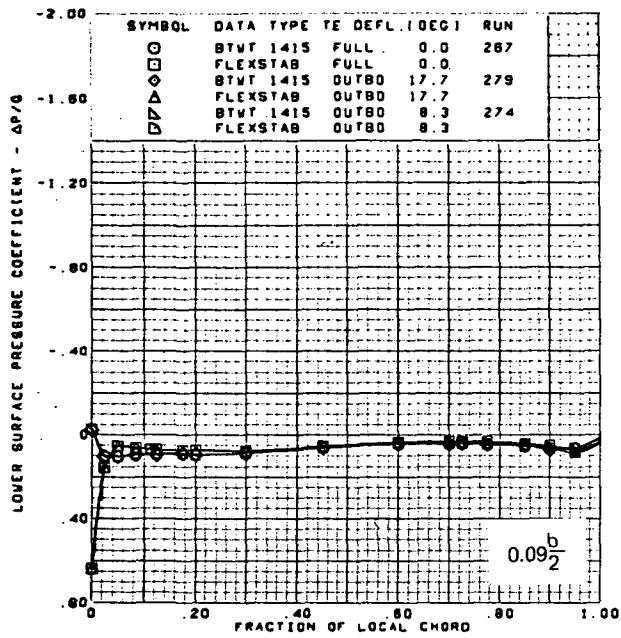


$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

(d) (Concluded)

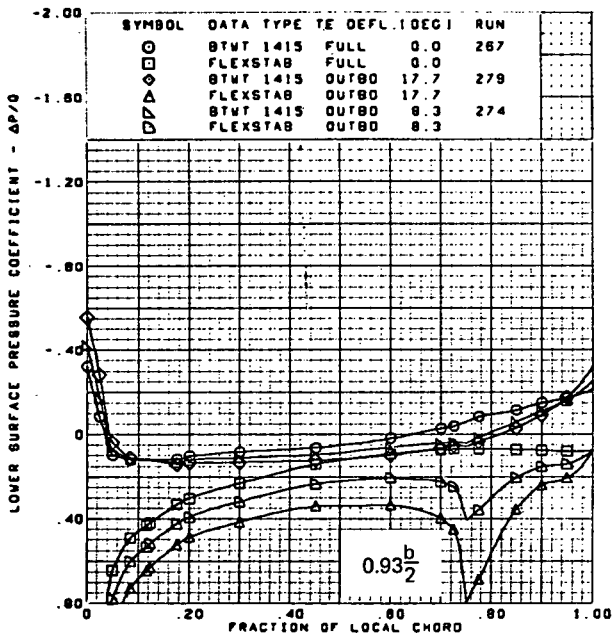
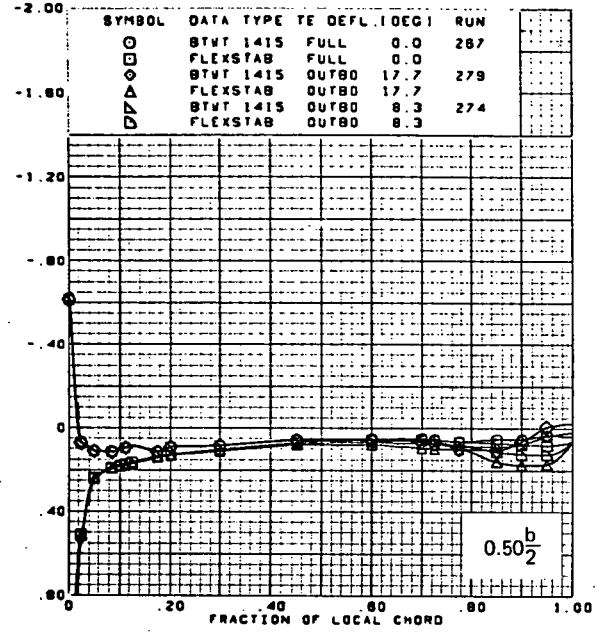
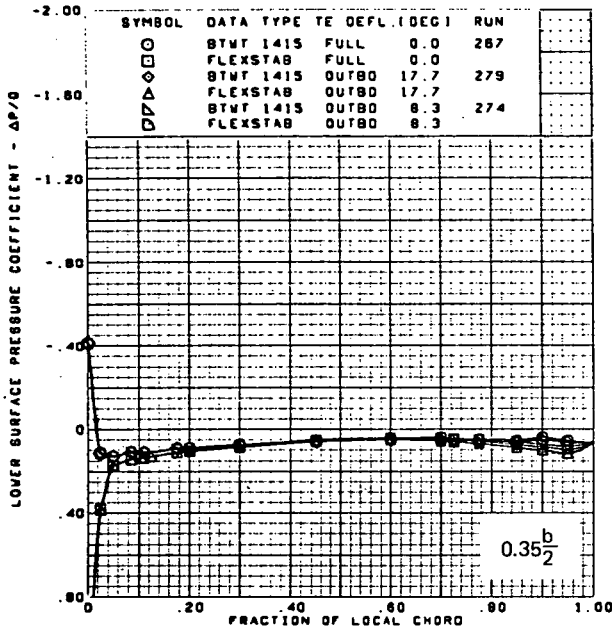
Figure 37.-(Continued)





(e) Lower Surface Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$

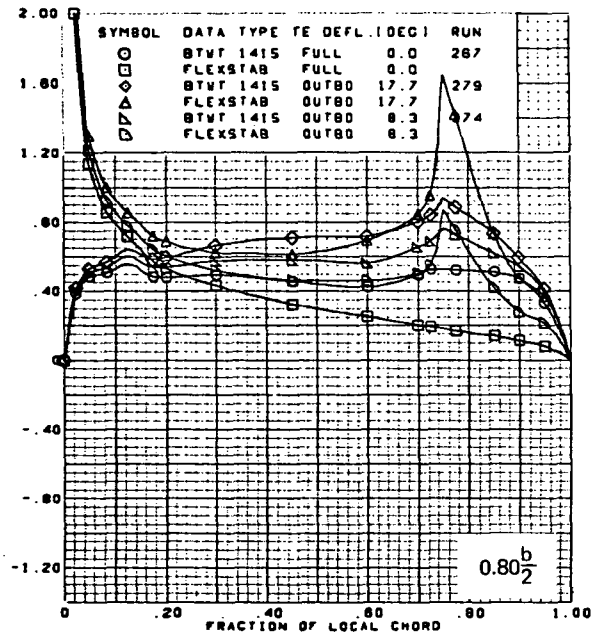
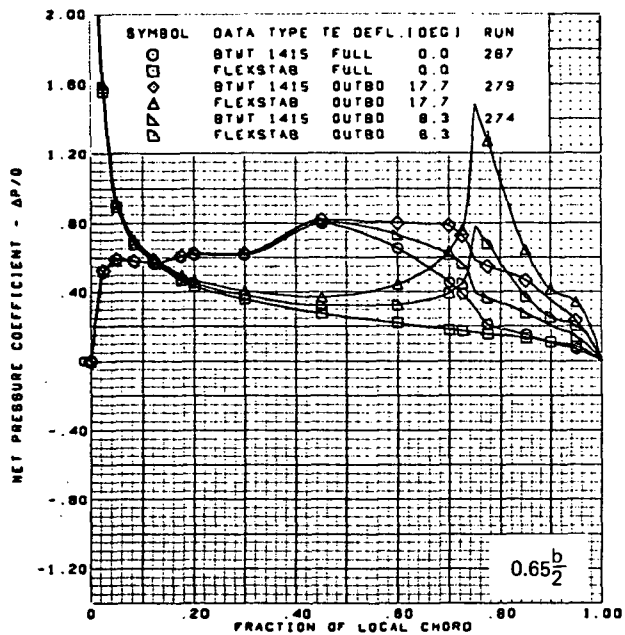
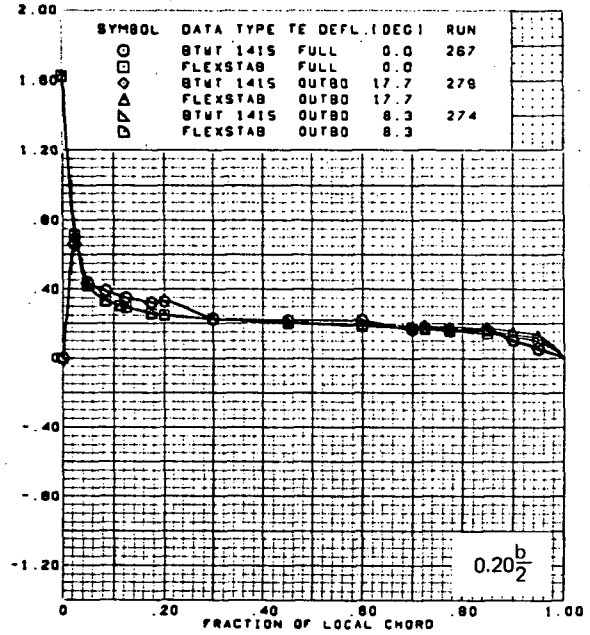
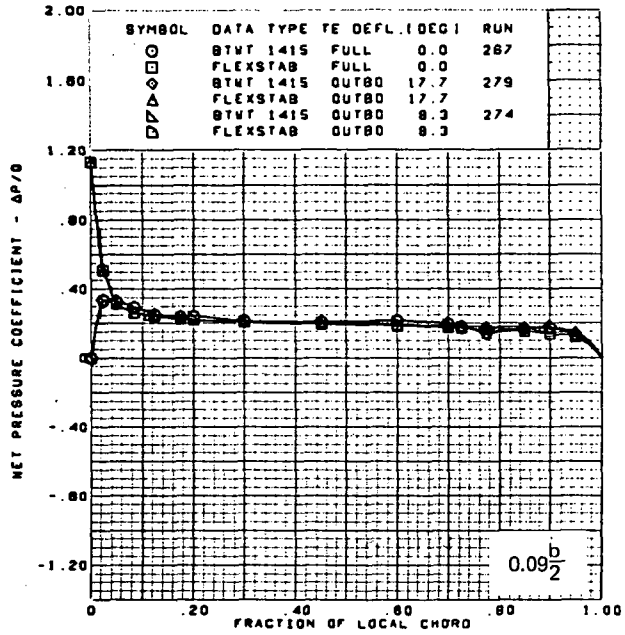
Figure 37.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

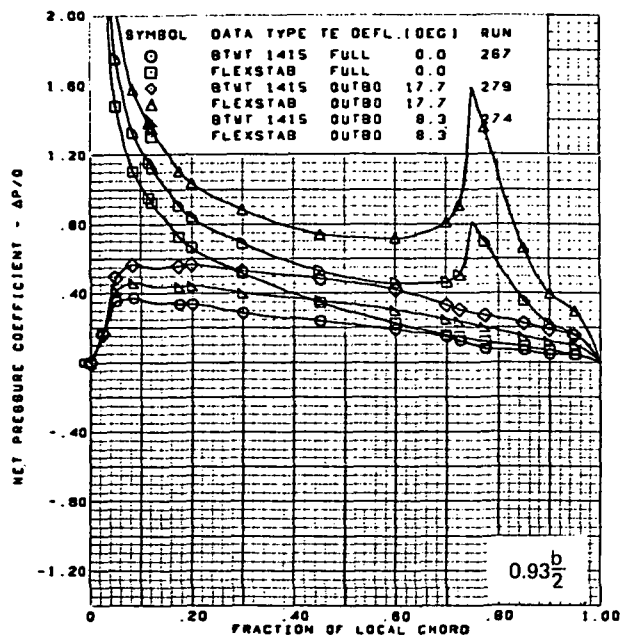
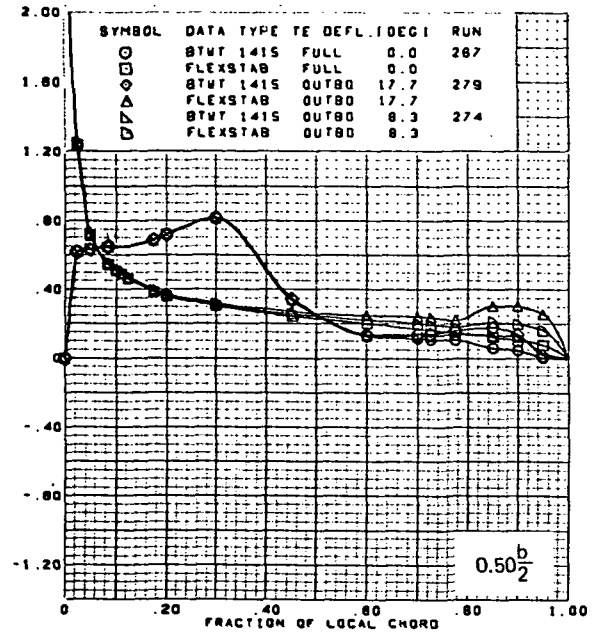
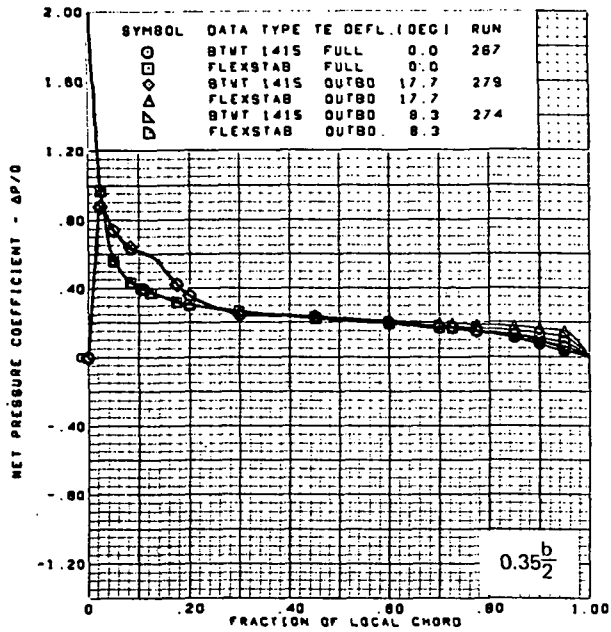
( e ) ( Concluded )

Figure 37.-(Continued)



(f) Net Chordwise Pressure Distributions,  $\alpha \approx 8.0^\circ$ .

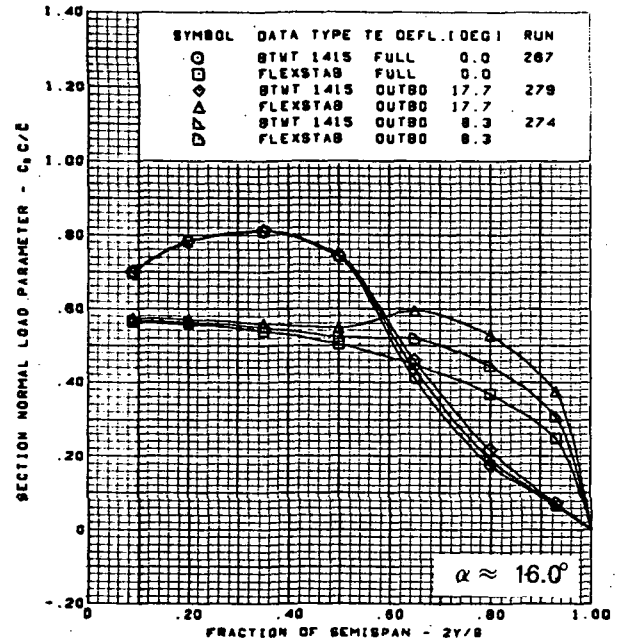
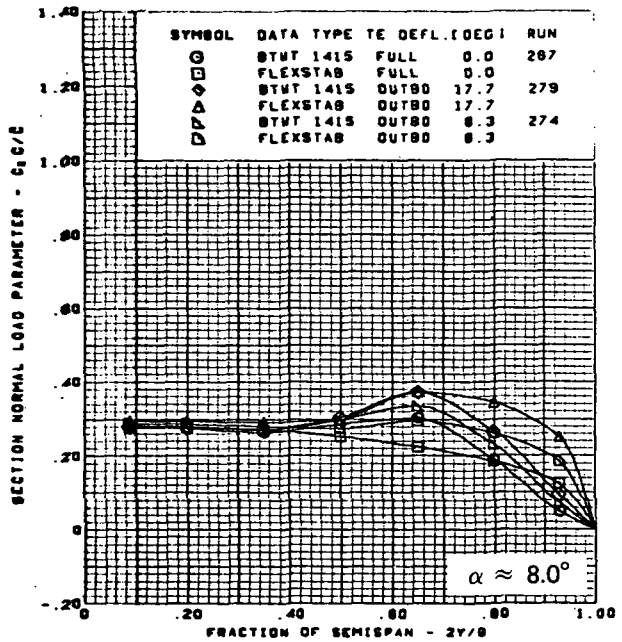
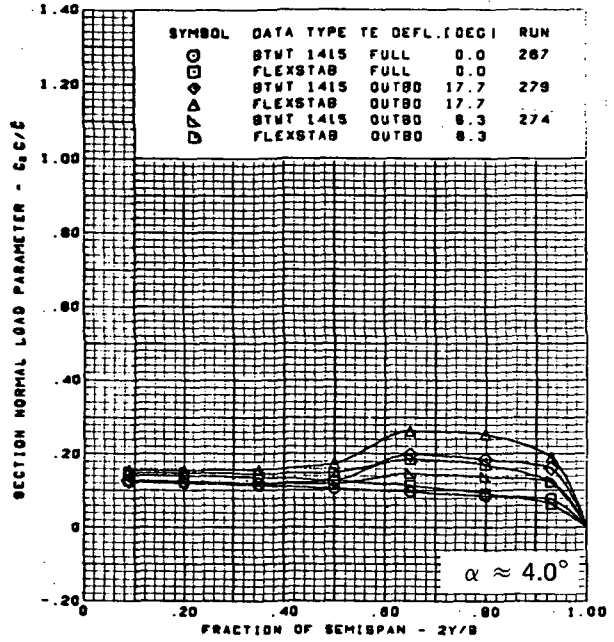
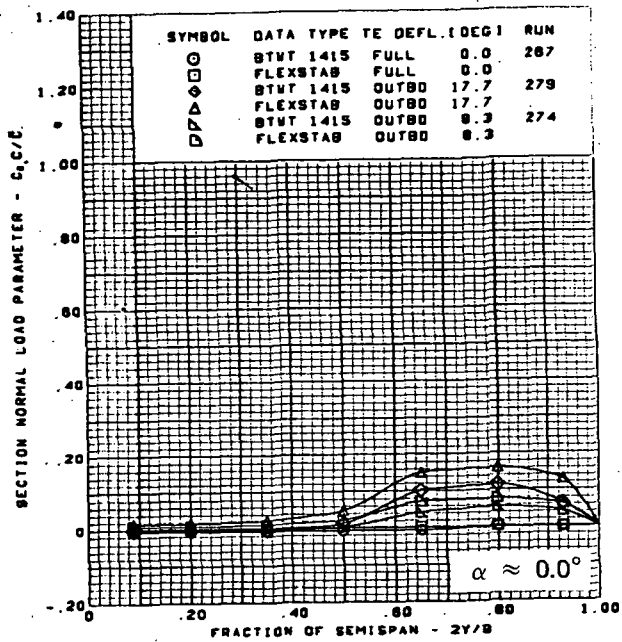
Figure 37.-(Continued)



$M = 0.85$   
 $\alpha \approx 8.0^\circ$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

(f) (Concluded)

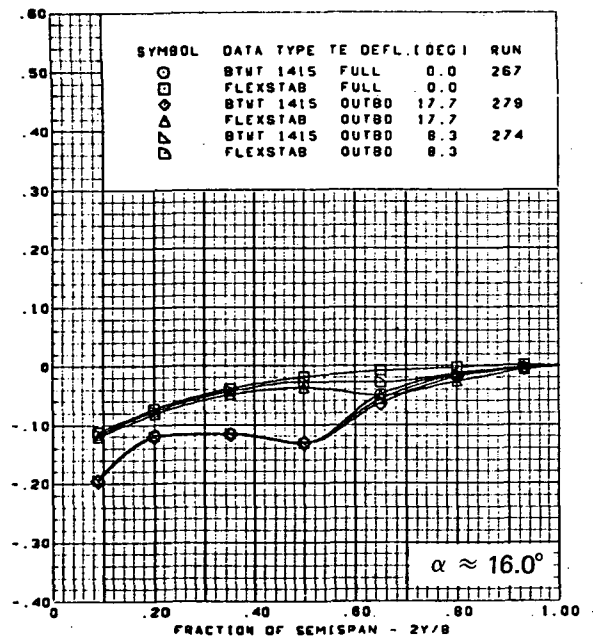
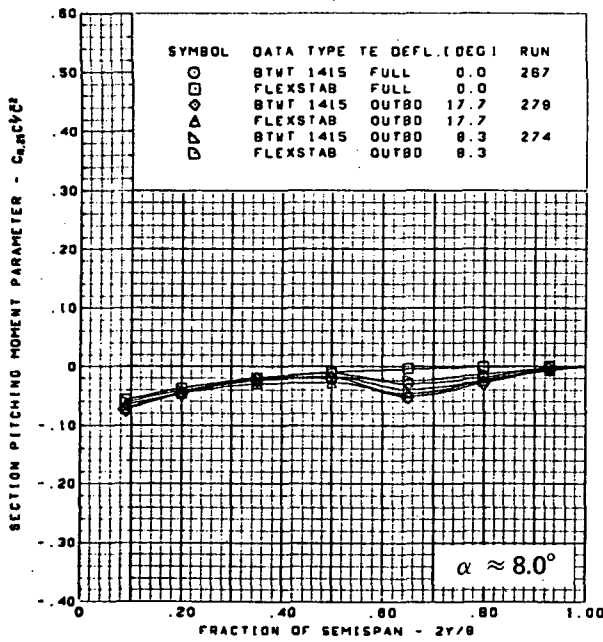
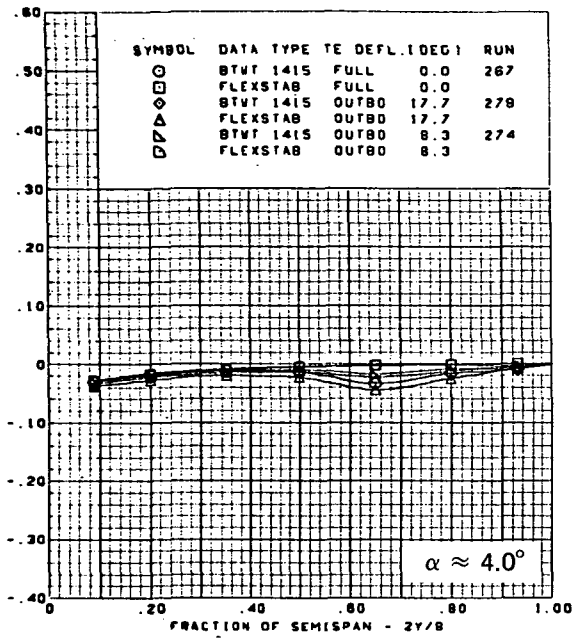
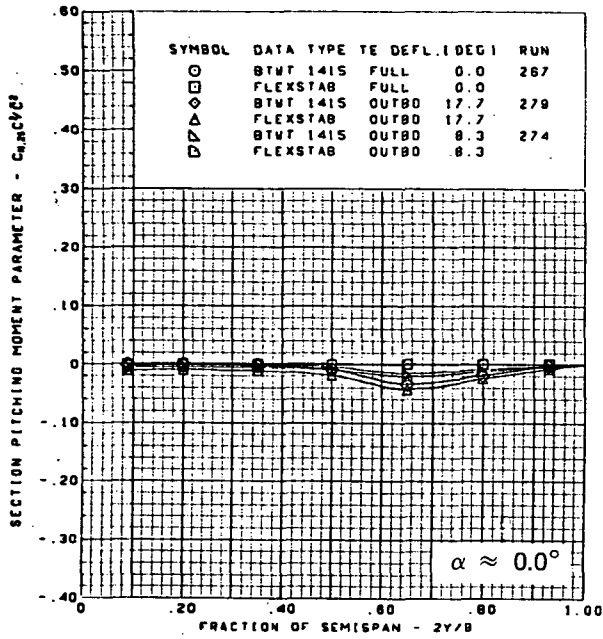
Figure 37.--(Continued)



M = 0.85  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, inboard = 0.0°

(g) Spanload Distributions—Normal Force

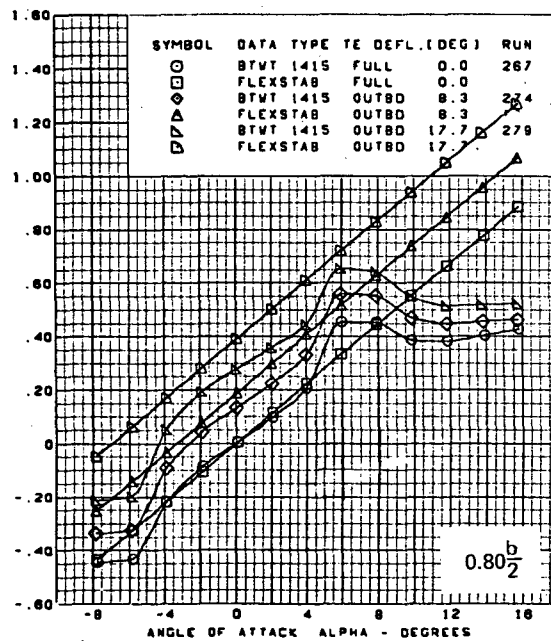
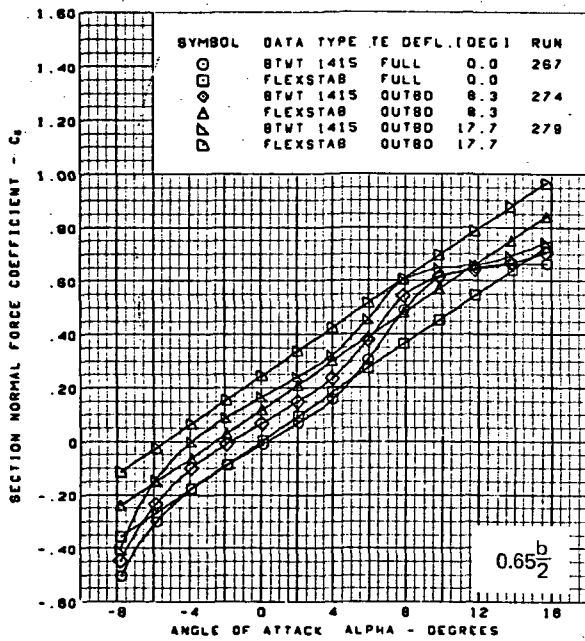
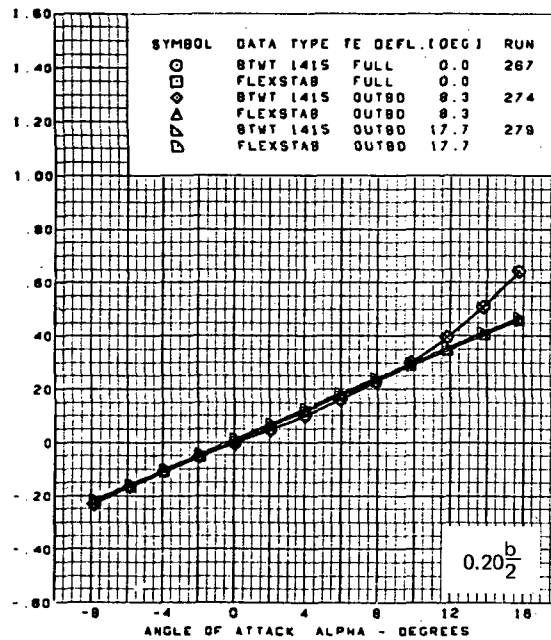
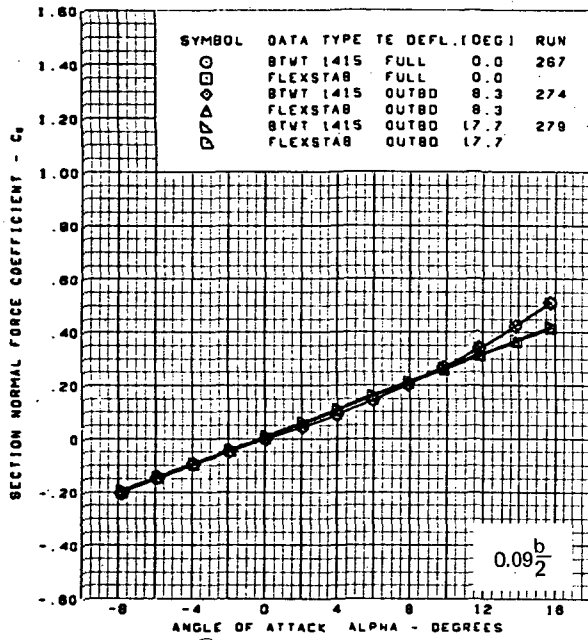
Figure 37.—(Continued)



$M = 0.85$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection inboard =  $0.0^\circ$

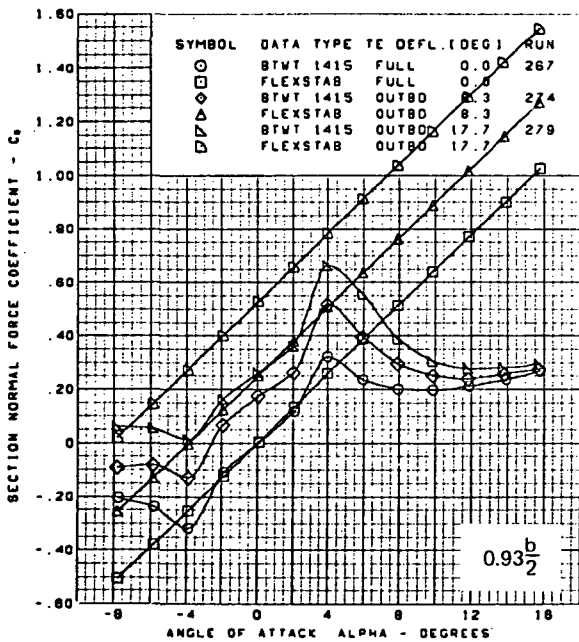
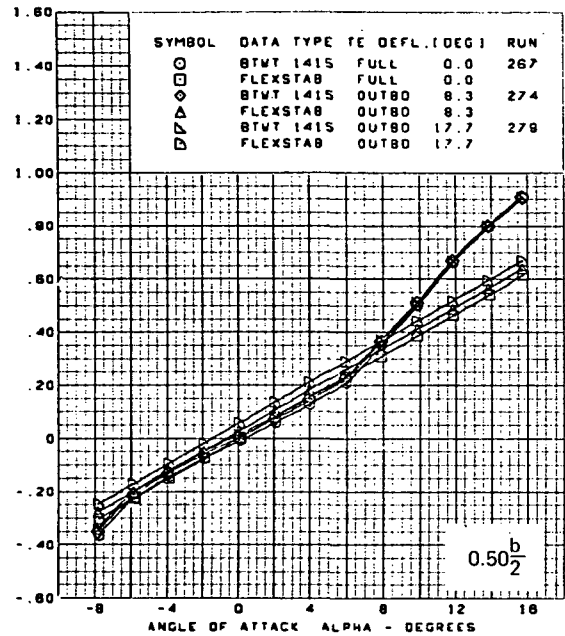
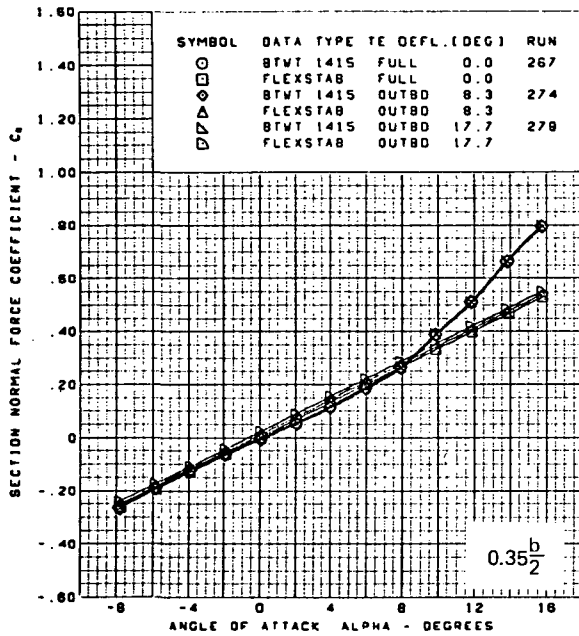
(h) Spanload Distributions—Pitching Moment

Figure 37.—(Continued)



(I) Section Aerodynamic Coefficients – Normal Force

Figure 37.-(Continued)

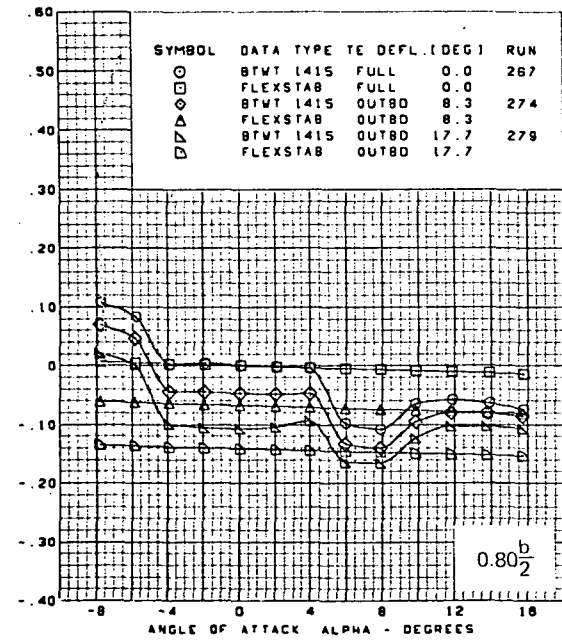
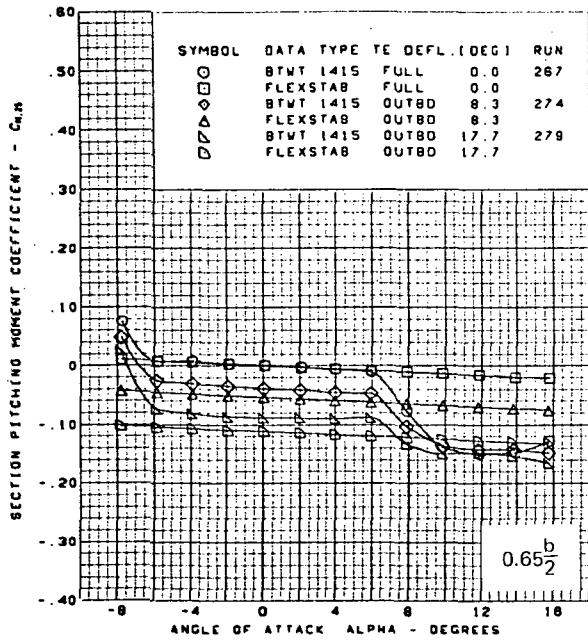
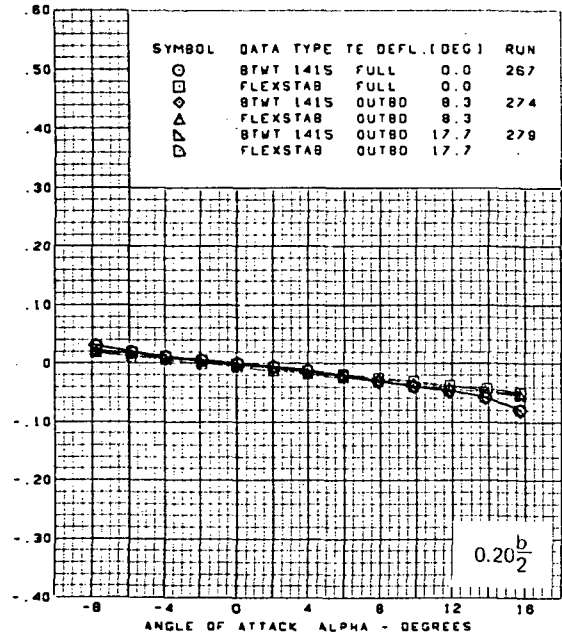
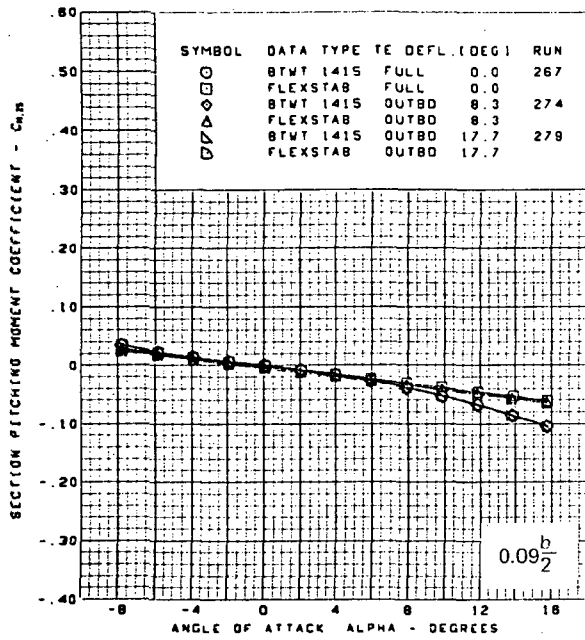


M = 0.85  
 Flat wing, round L.E.  
 L.E. deflection, full span = 0.0°  
 T.E. deflection, inboard = 0.0°

(i) (Concluded)

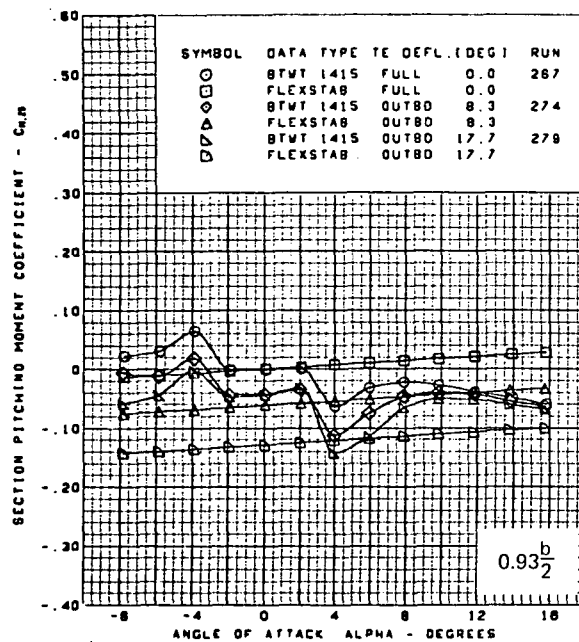
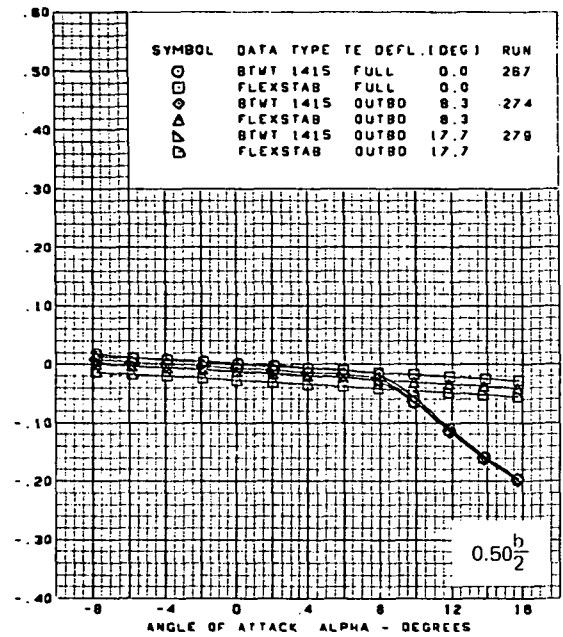
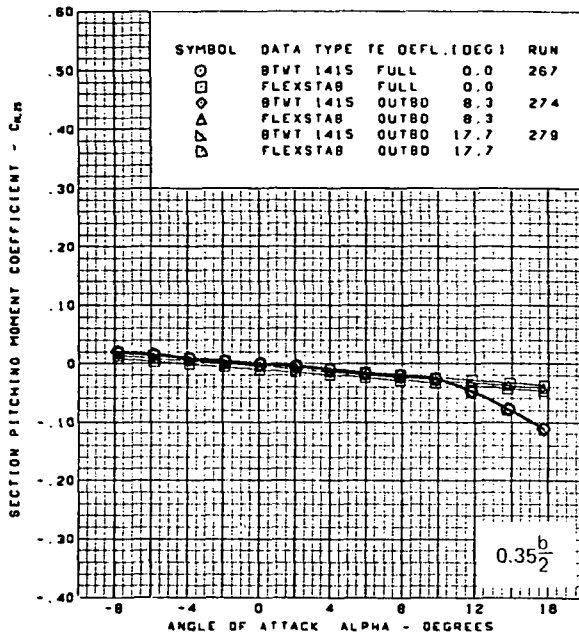
Figure 37.-(Continued)





(j) Section Aerodynamic Coefficients – Pitching Moment

Figure 37.-(Continued)

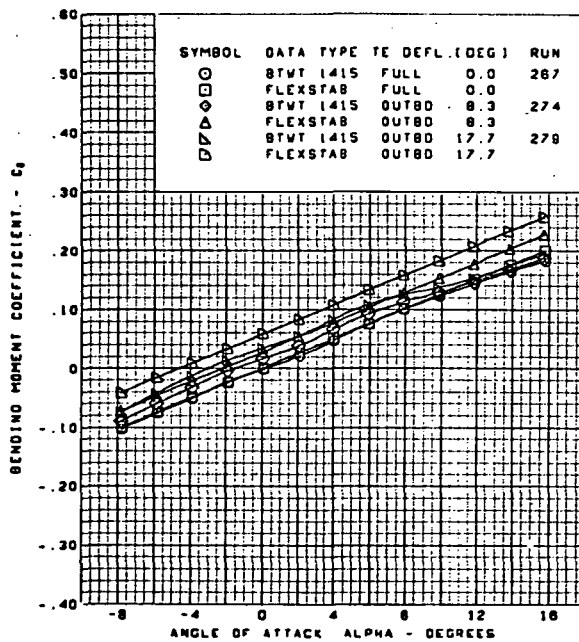
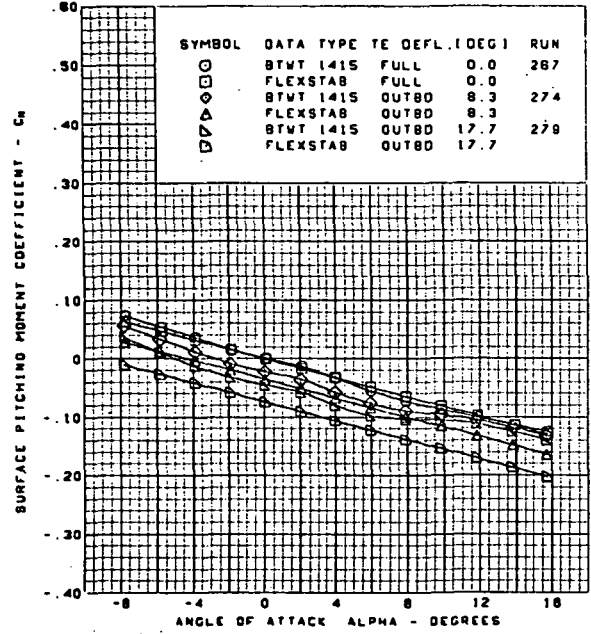
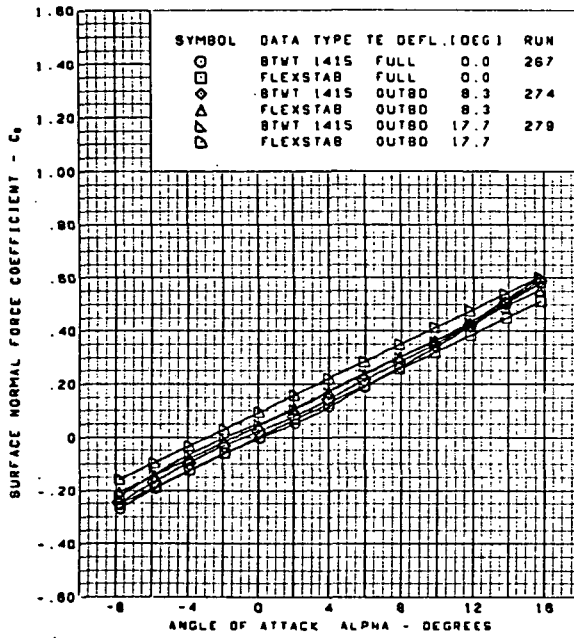


M = 0.85  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

(I) (Concluded)

Figure 37.-(Continued)

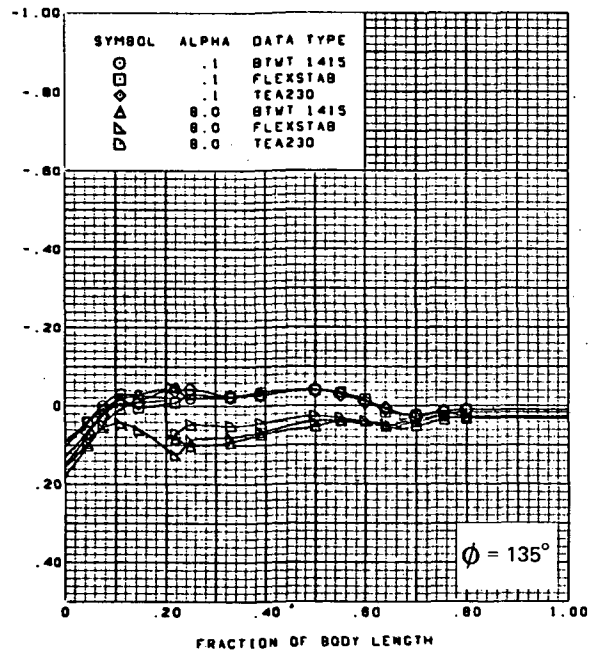
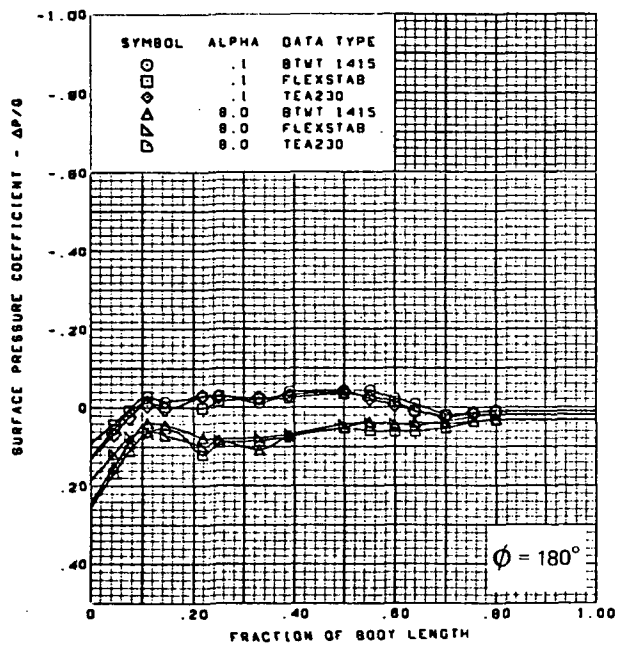
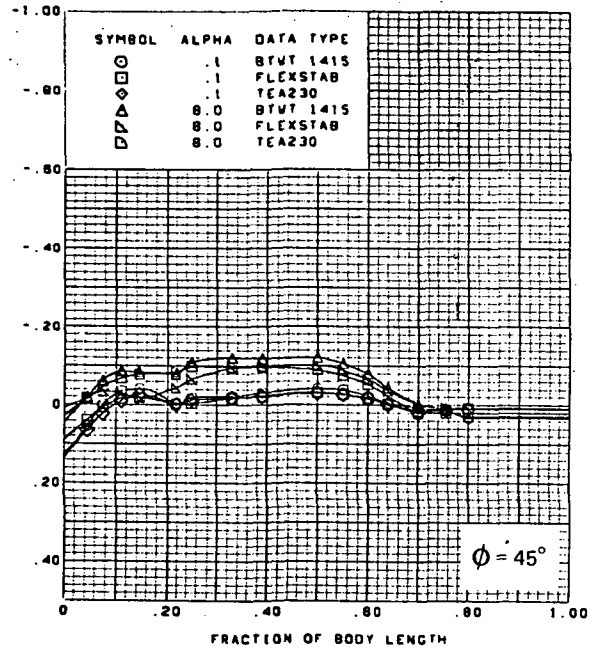
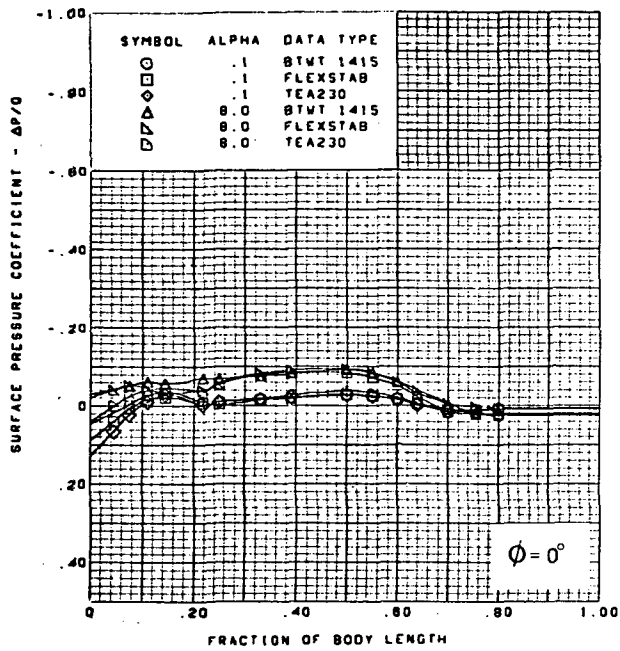
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$M = 0.85$   
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, inboard =  $0.0^\circ$

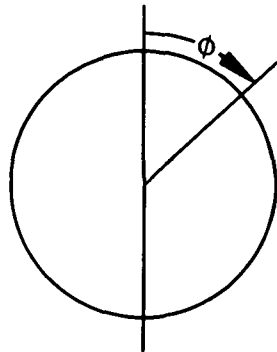
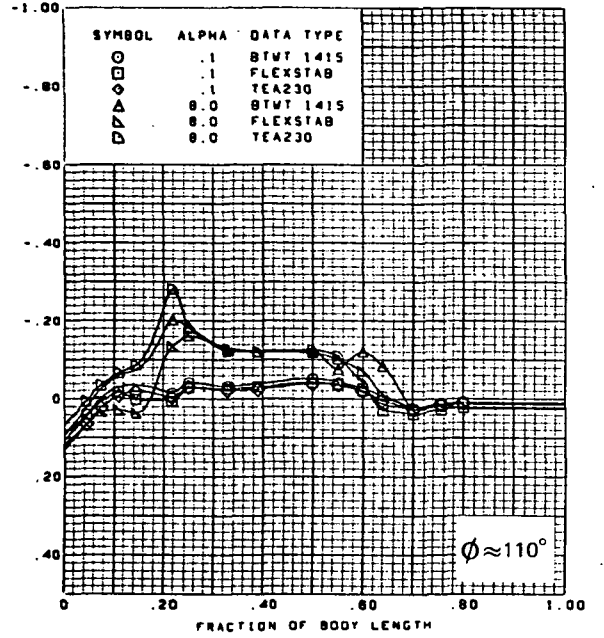
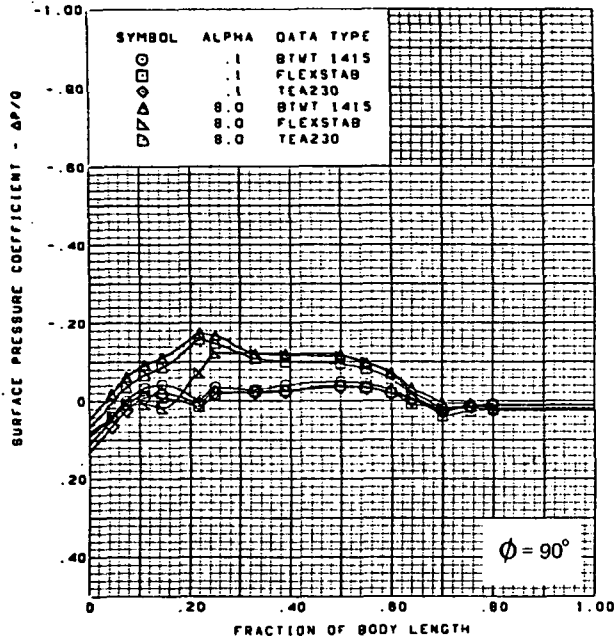
(k) Wing Aerodynamic Coefficients

Figure 37.--(Concluded)



(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.0^\circ$  and  $8.0^\circ$

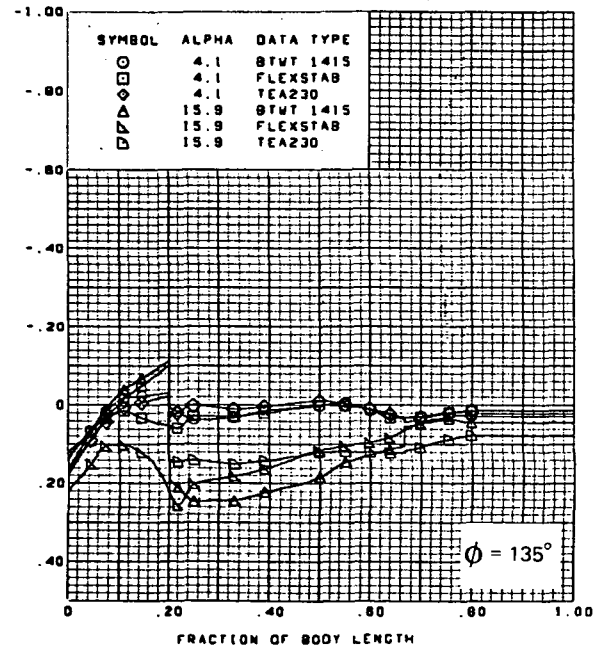
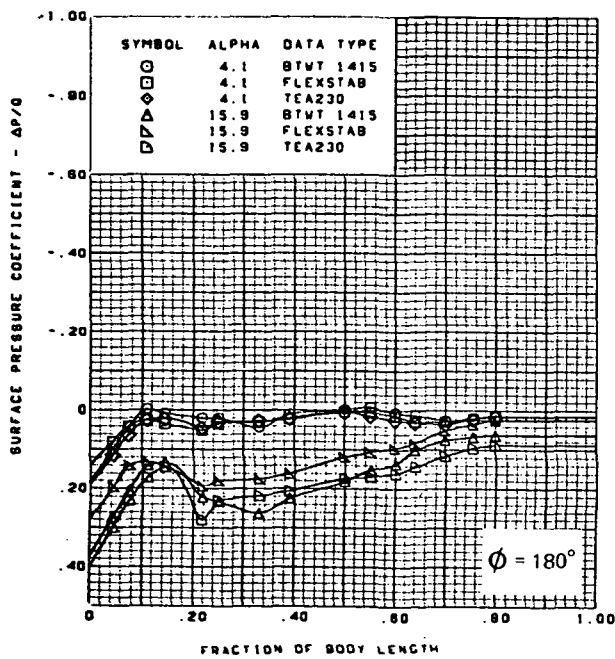
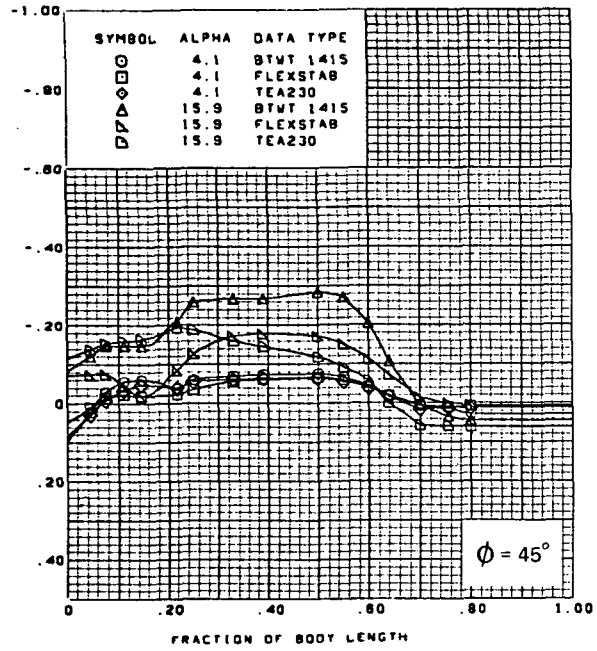
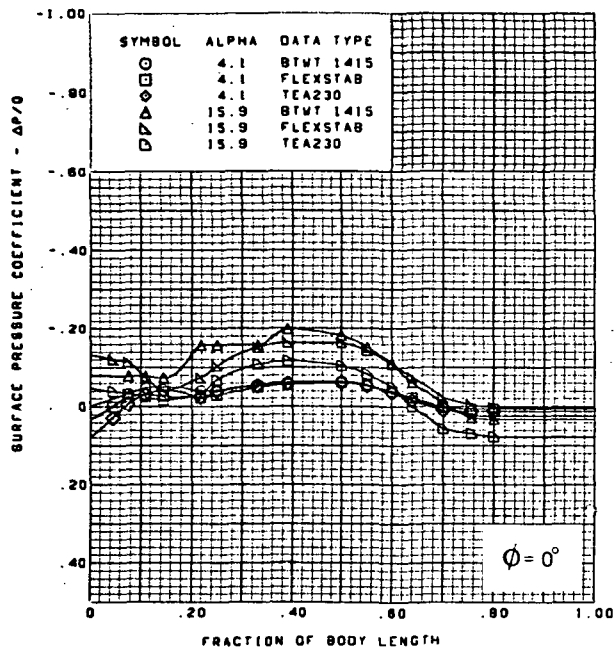
Figure 38.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



$M = 0.40$  (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

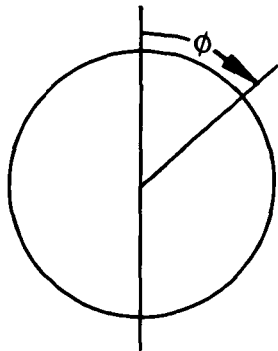
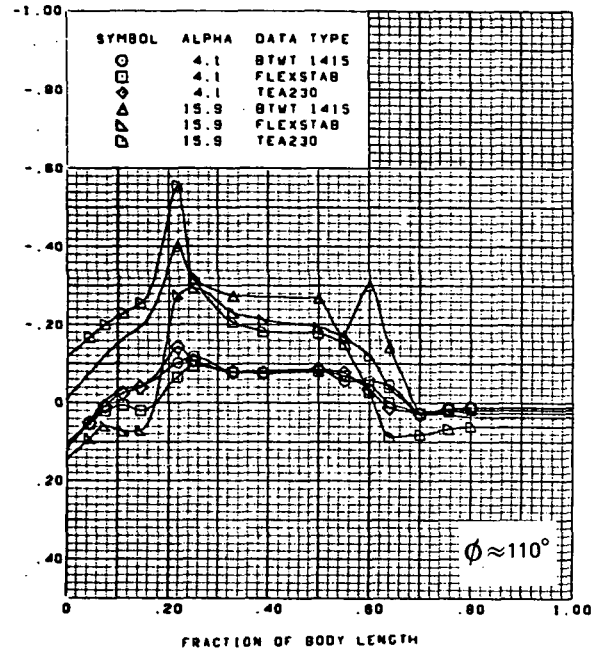
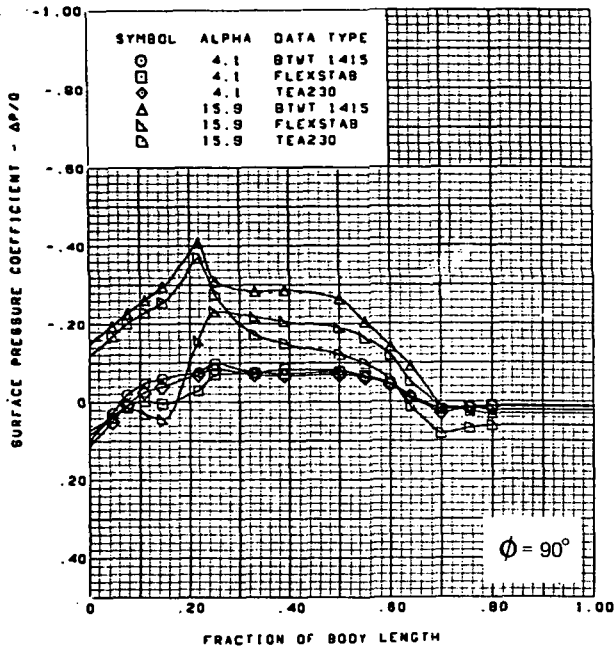
(a) (Concluded)

Figure 38.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.1^\circ$  and  $15.9^\circ$

Figure 38.-(Continued)

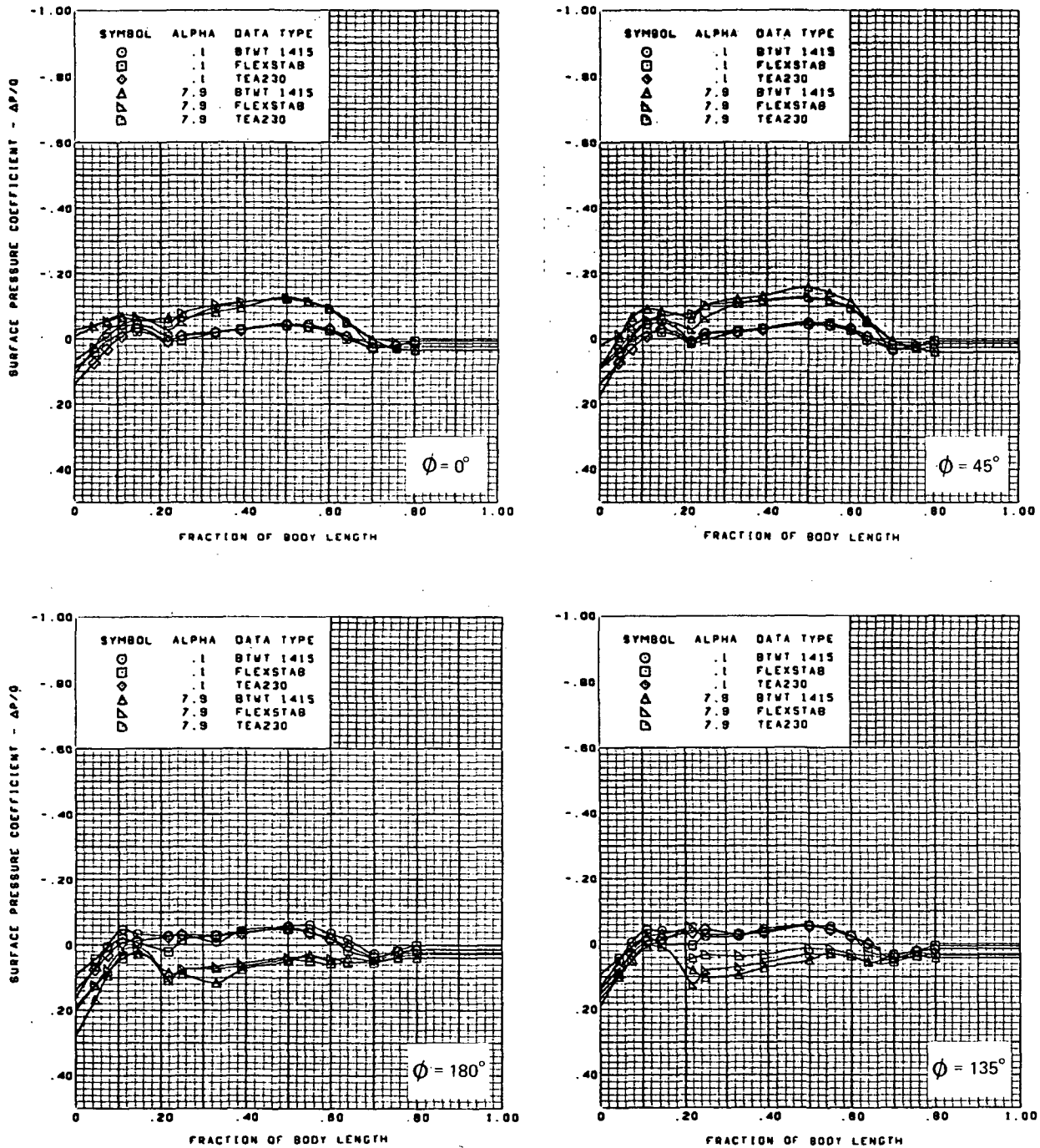


$M = 0.40$  (run 269)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

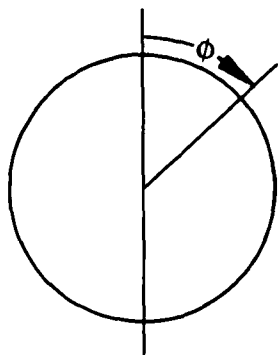
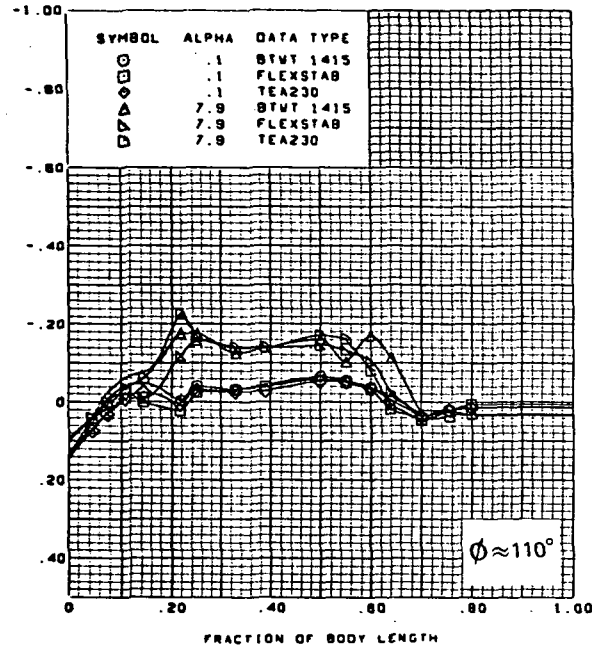
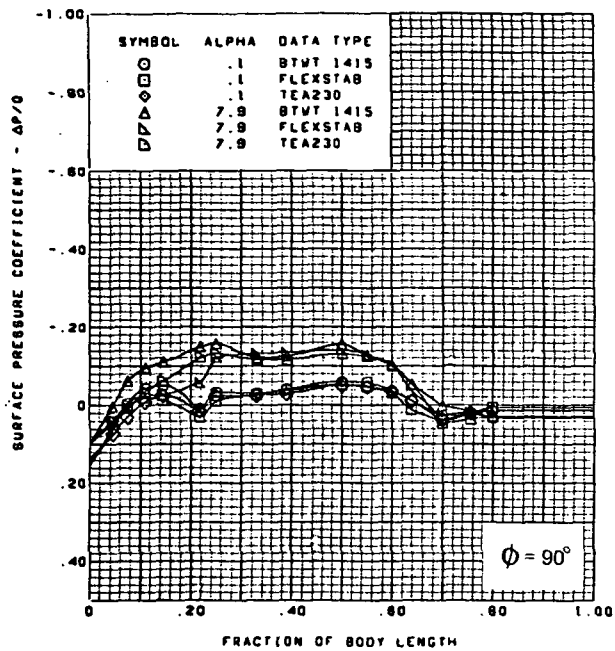
Figure 38.- (Concluded)





(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.1^\circ$  and  $7.9^\circ$

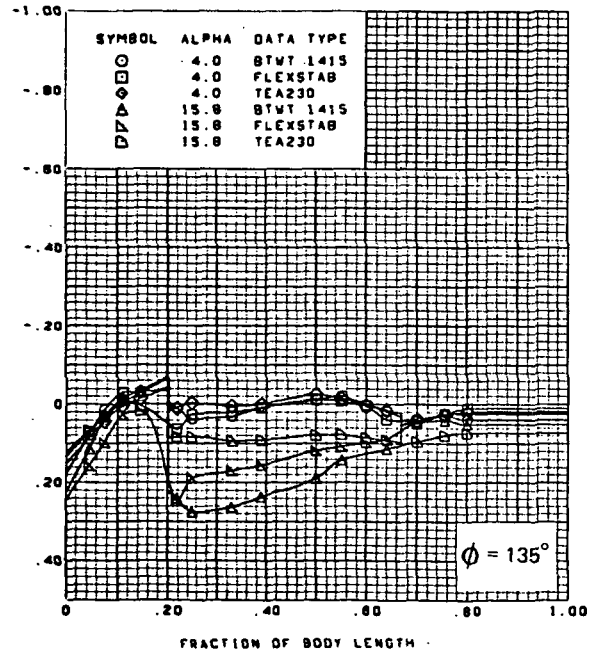
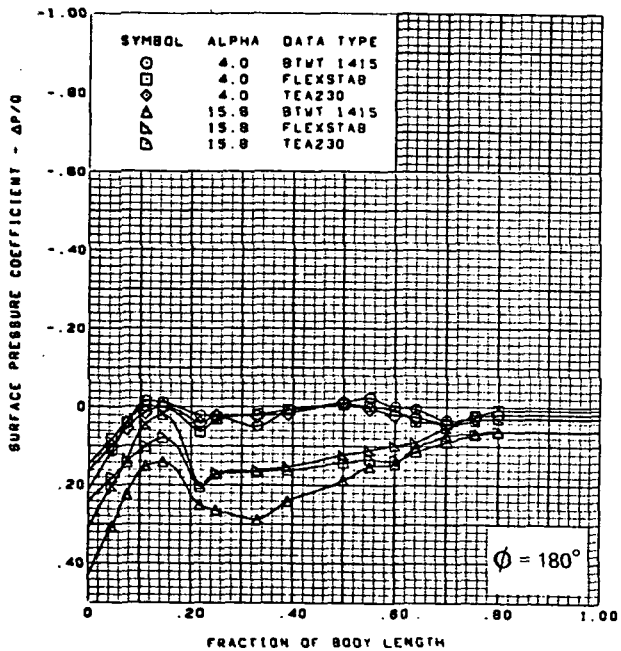
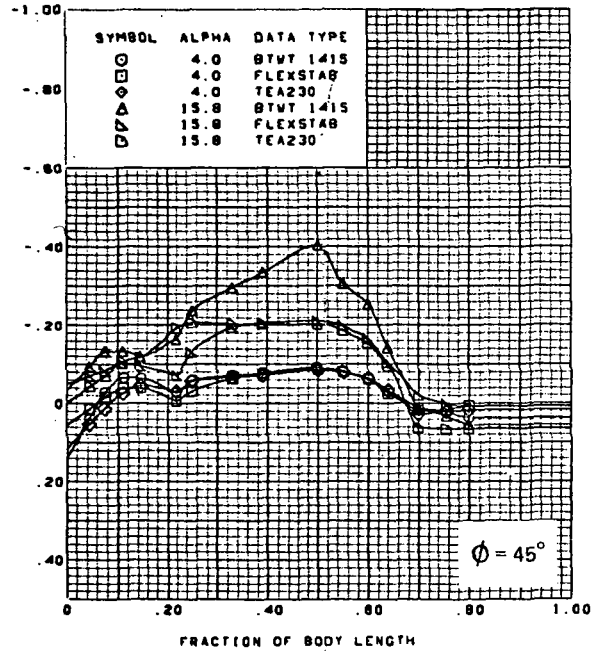
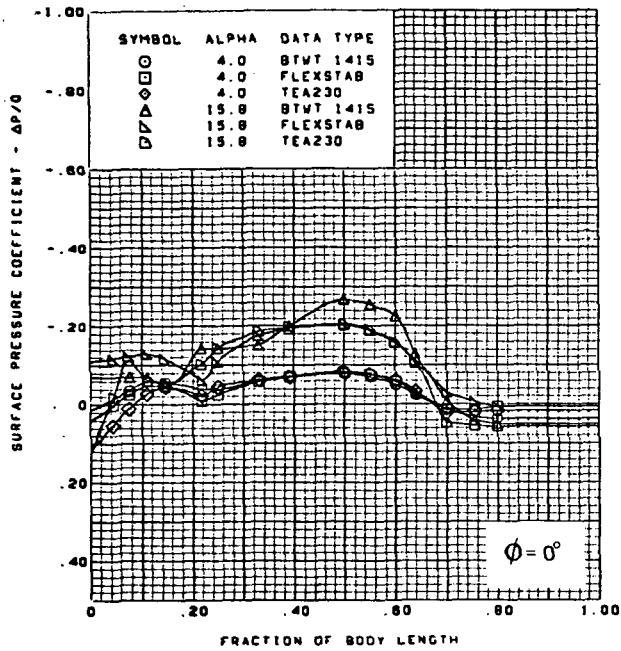
Figure 39.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$  (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

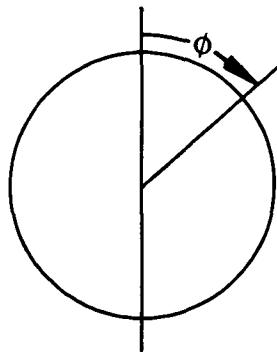
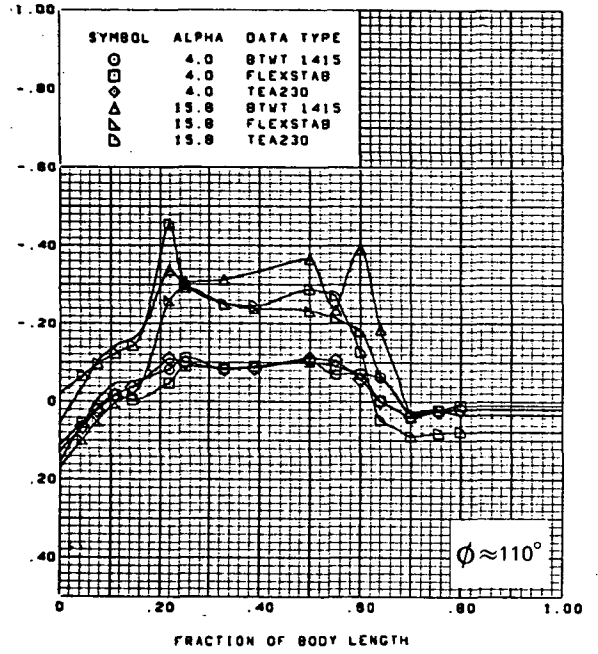
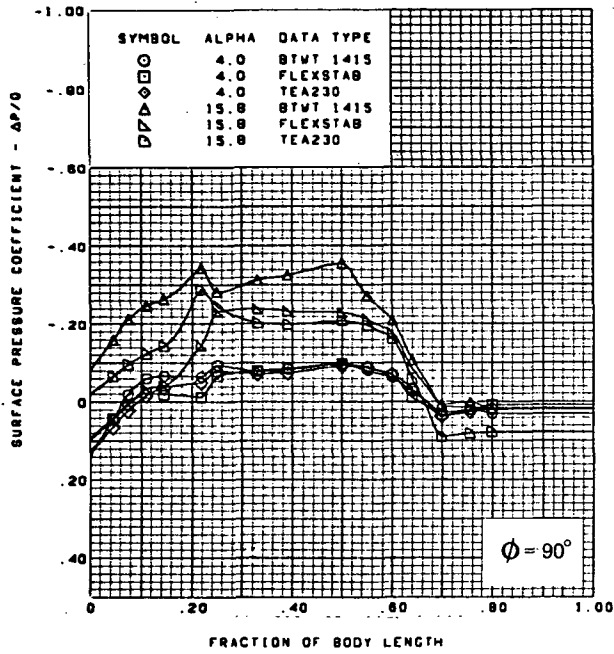
(a) (Concluded)

Figure 39.--(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

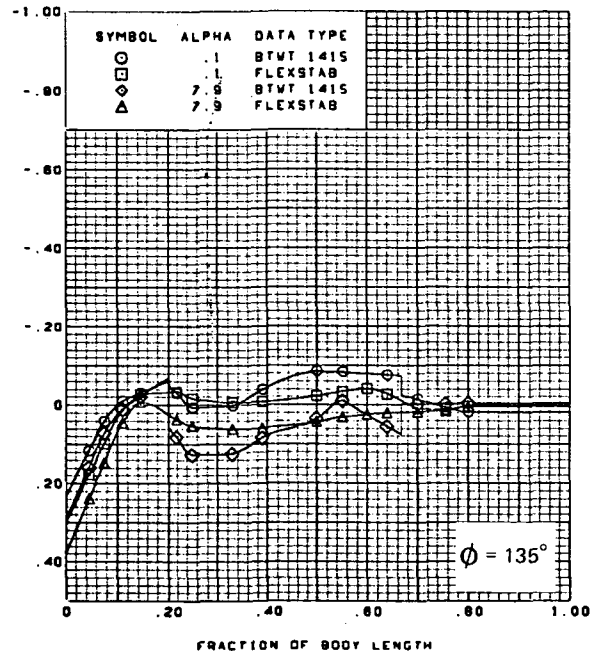
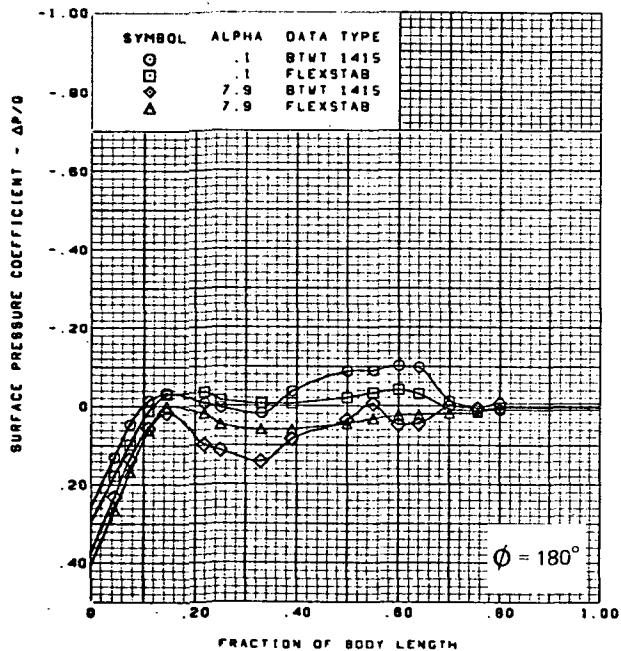
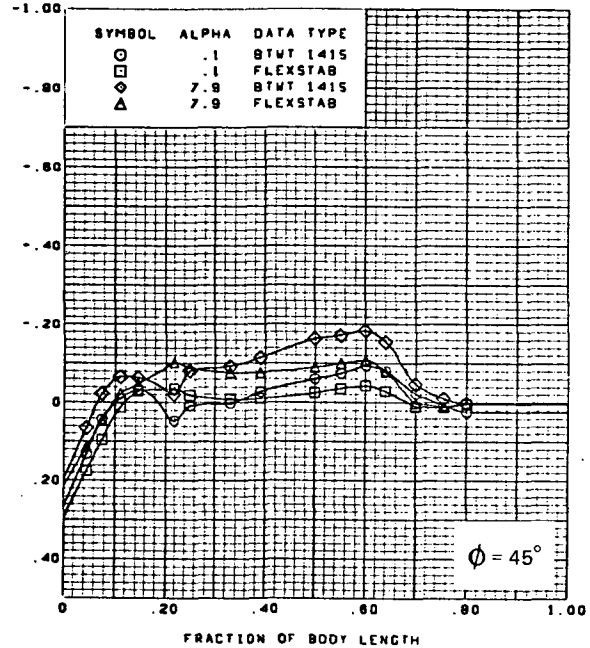
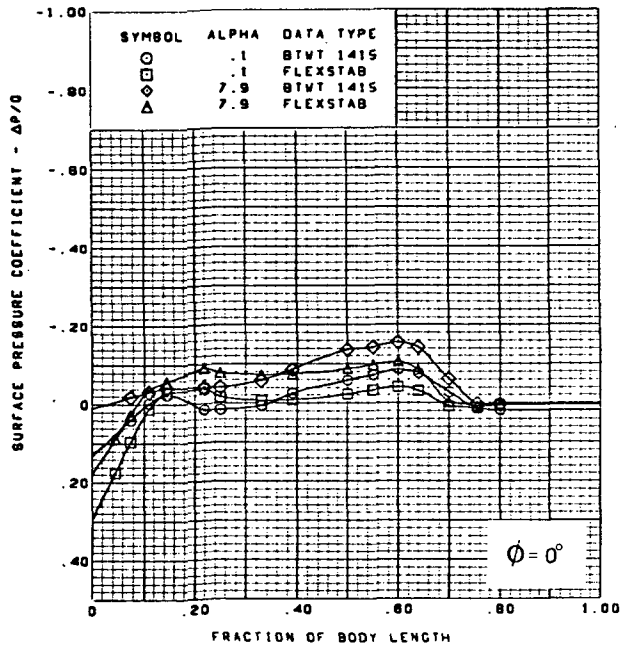
Figure 39.--(Continued)



$M = 0.85$  (run 267)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

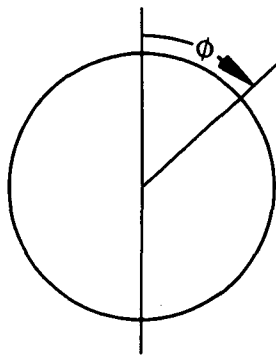
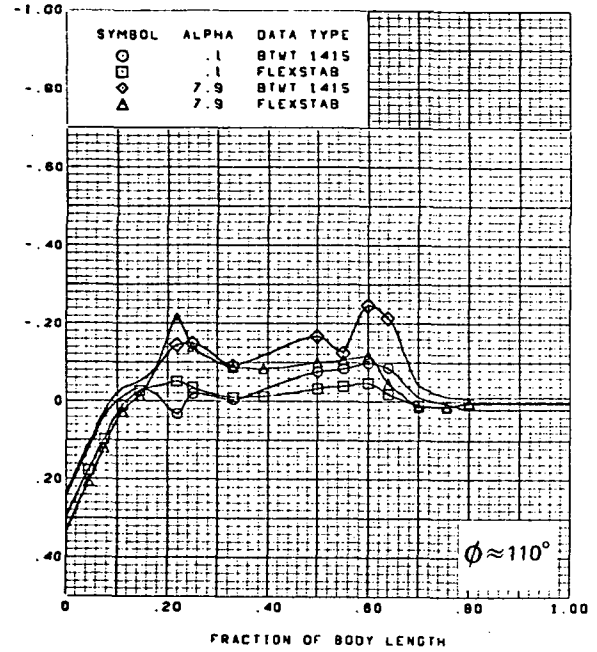
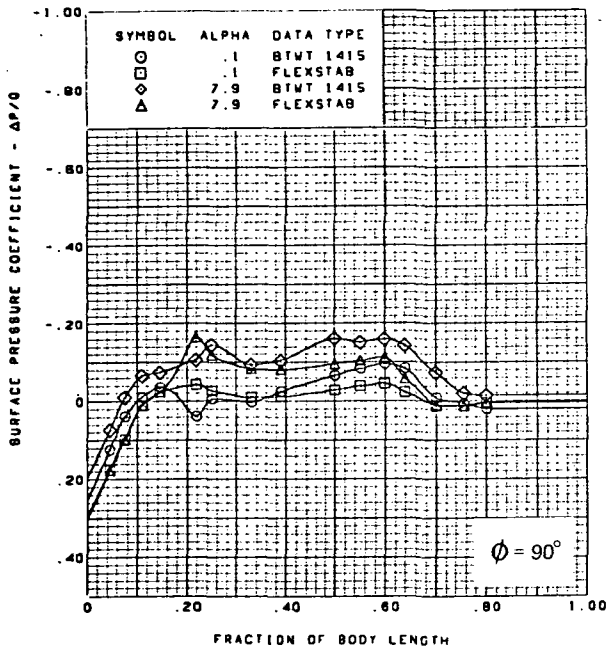
(b) (Concluded)

Figure 39.-(Concluded)



(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.1^\circ$  and  $7.9^\circ$

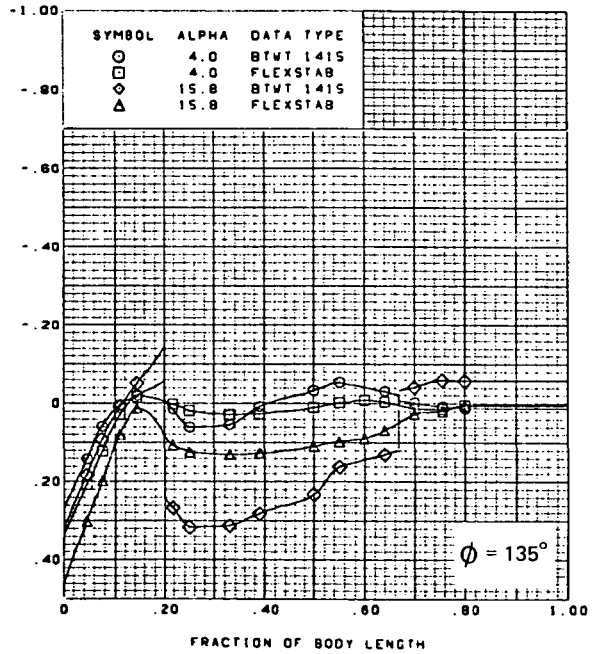
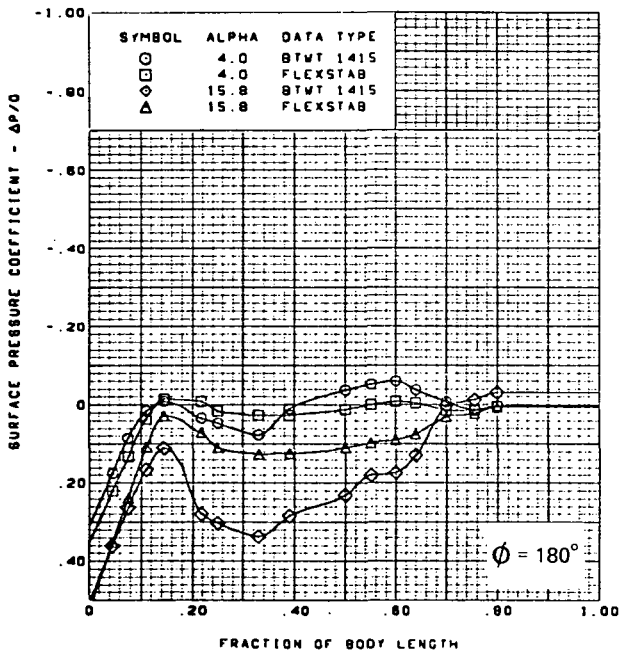
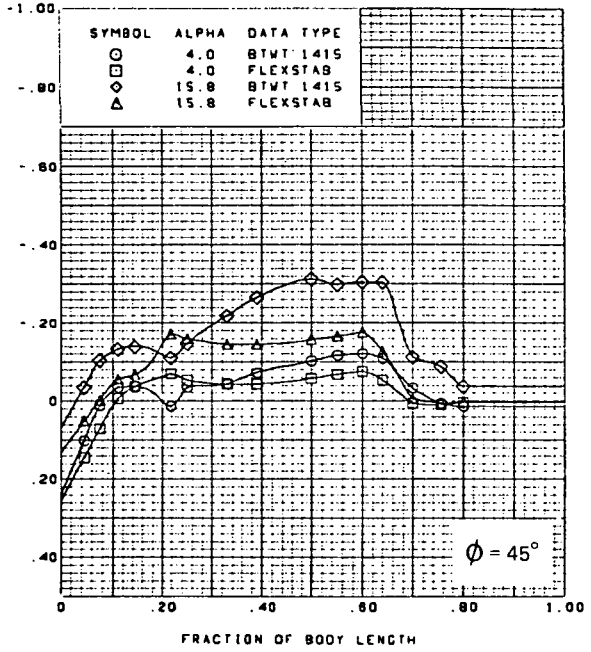
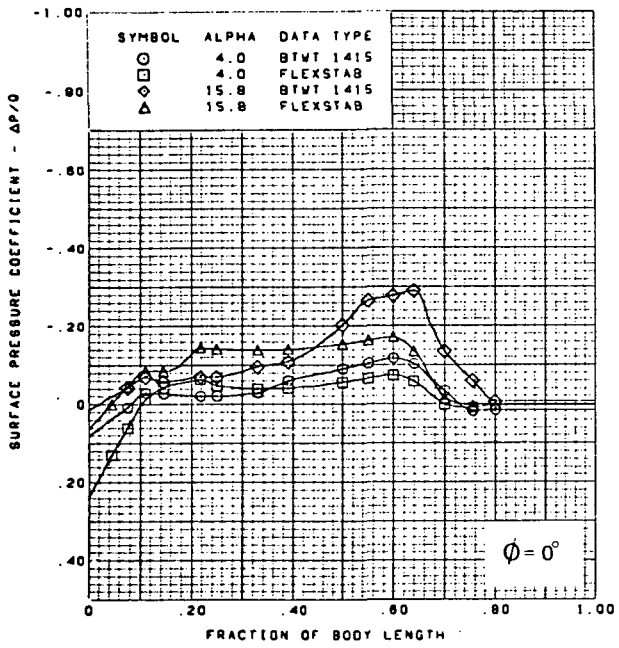
Figure 40.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



$M = 1.05$  (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

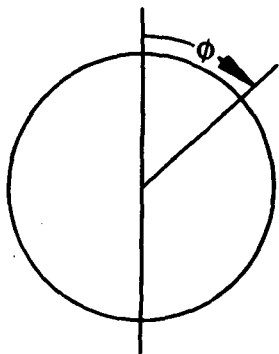
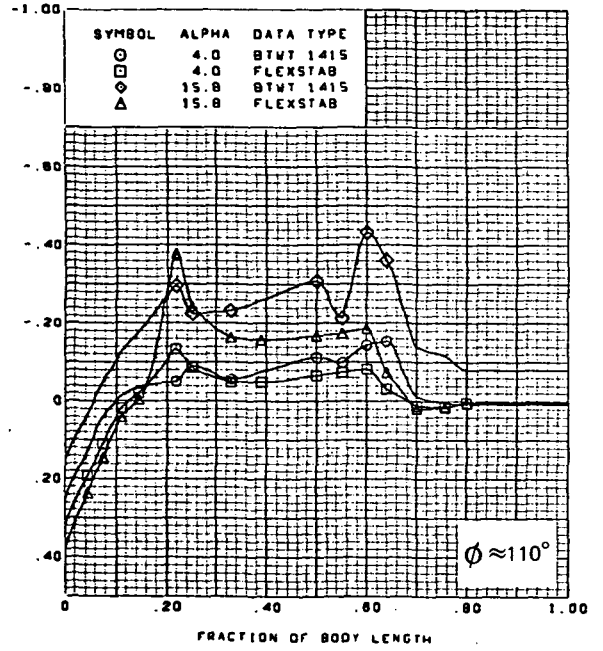
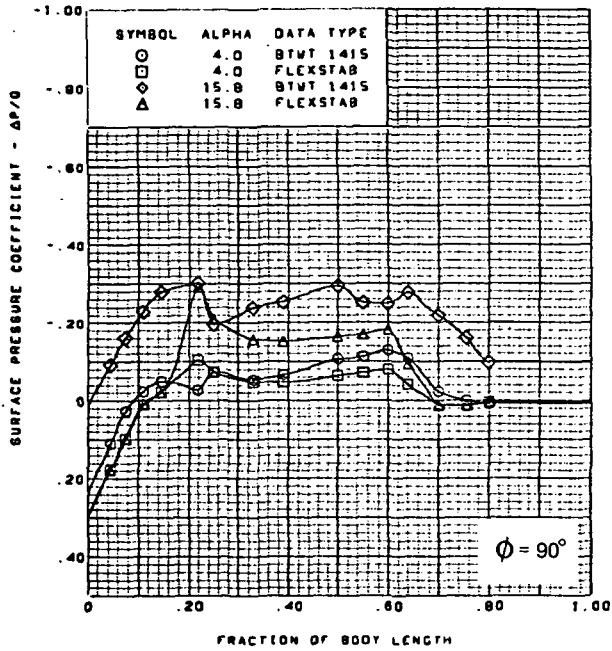
(a) (Concluded)

Figure 40.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

Figure 40.-(Continued)

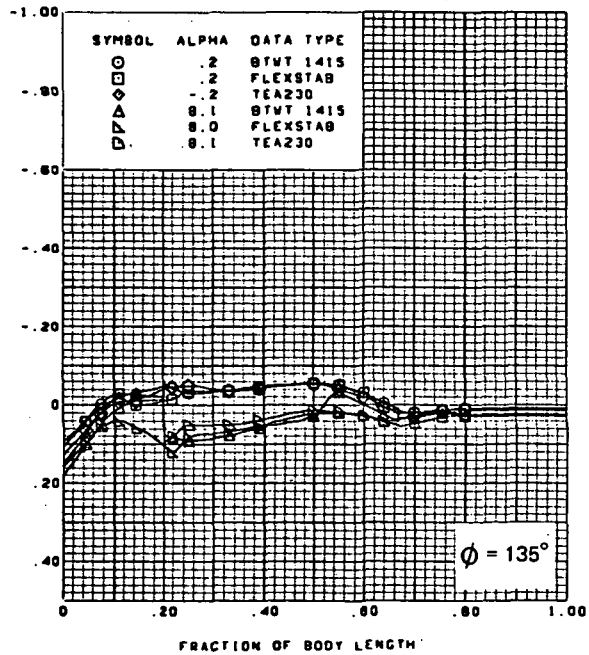
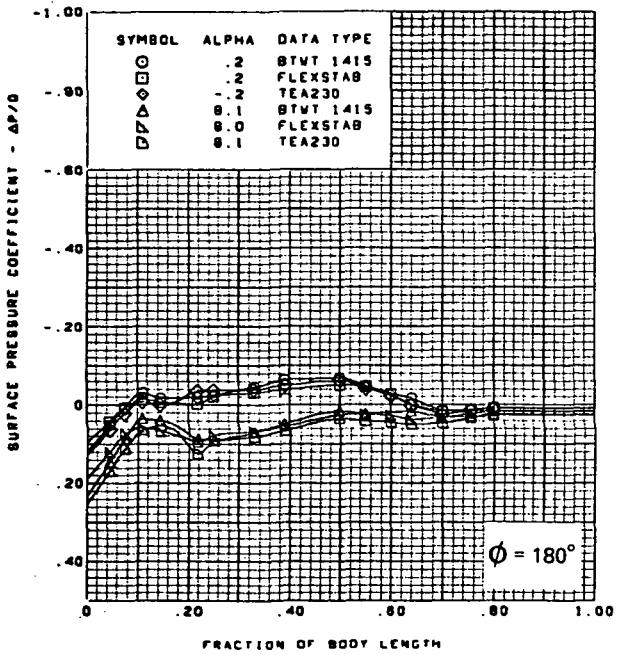
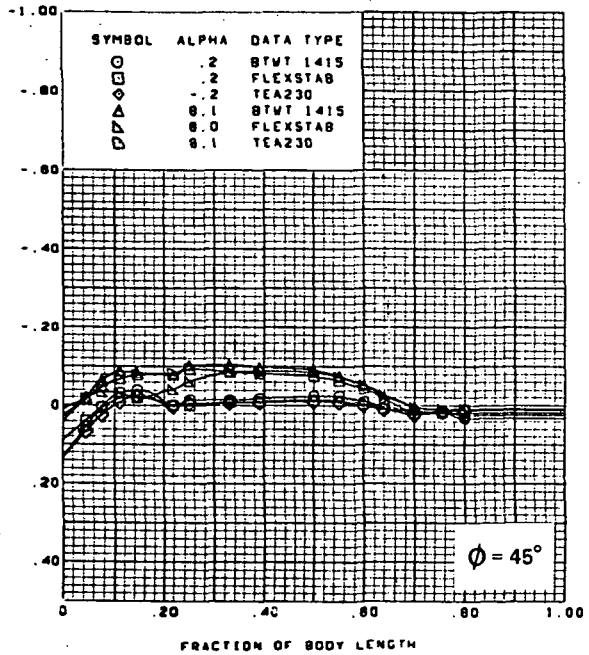
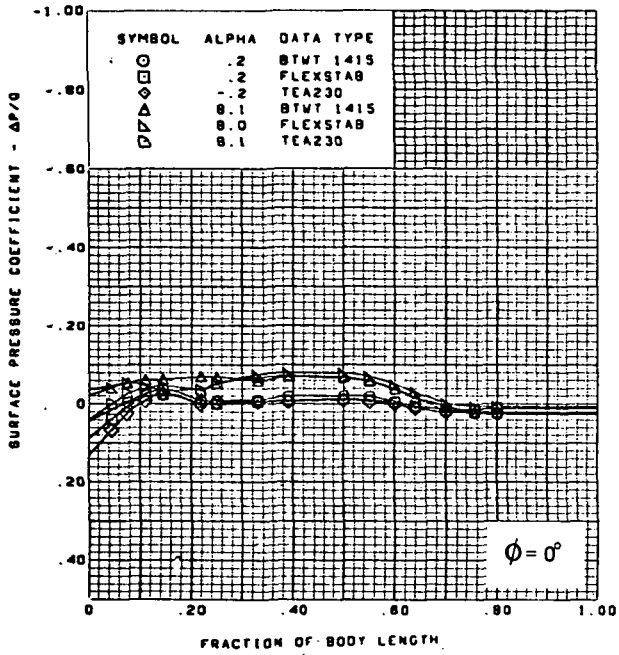


M = 1.05 (run 264)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

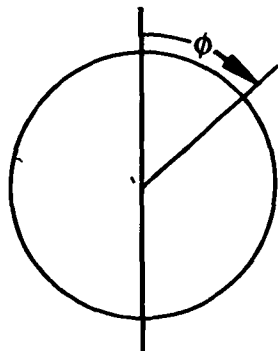
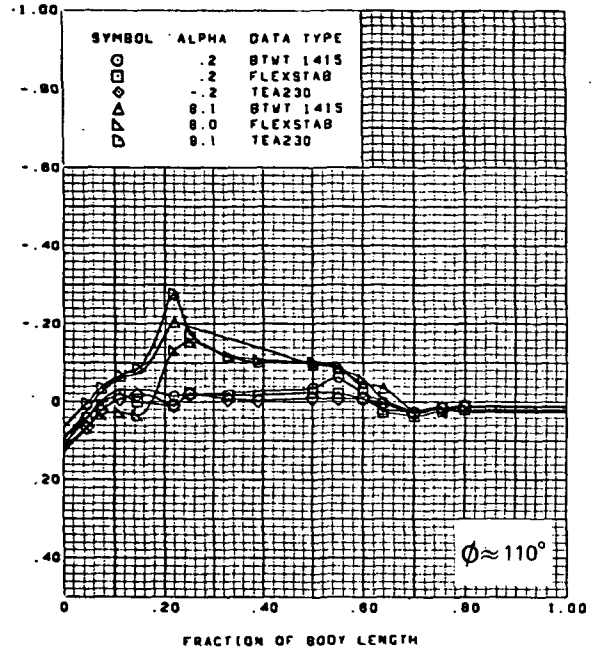
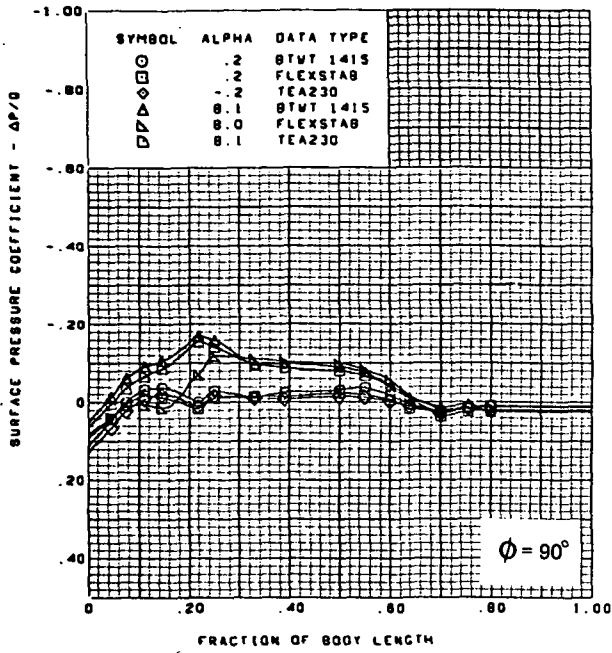
Figure 40.- (Concluded)





(a) | Surface Longitudinal Pressure Distributions,  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$

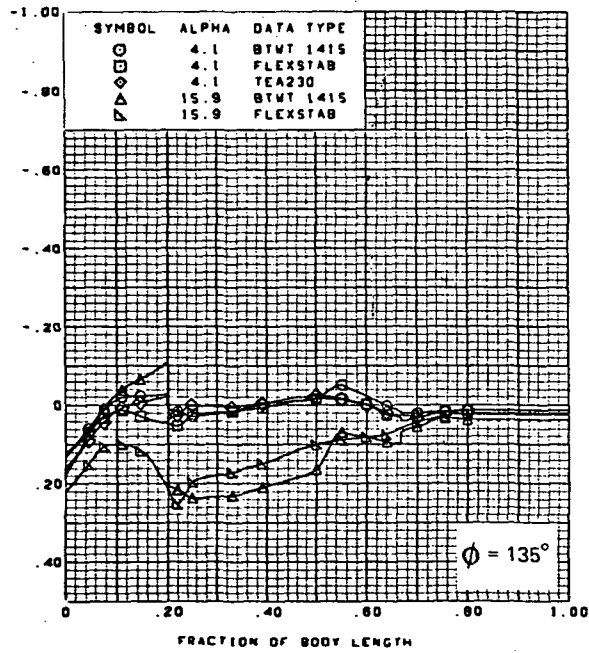
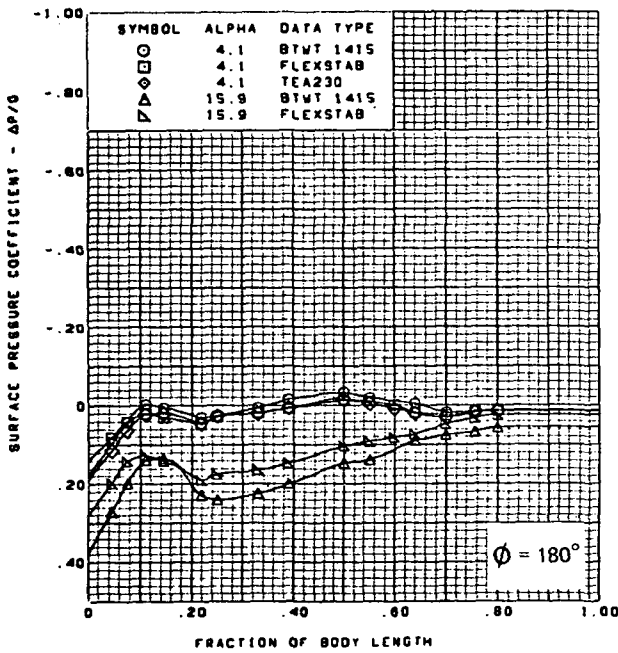
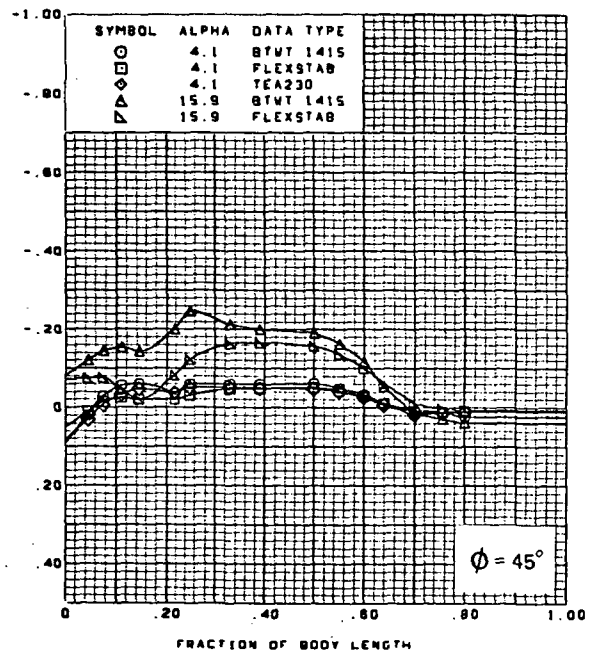
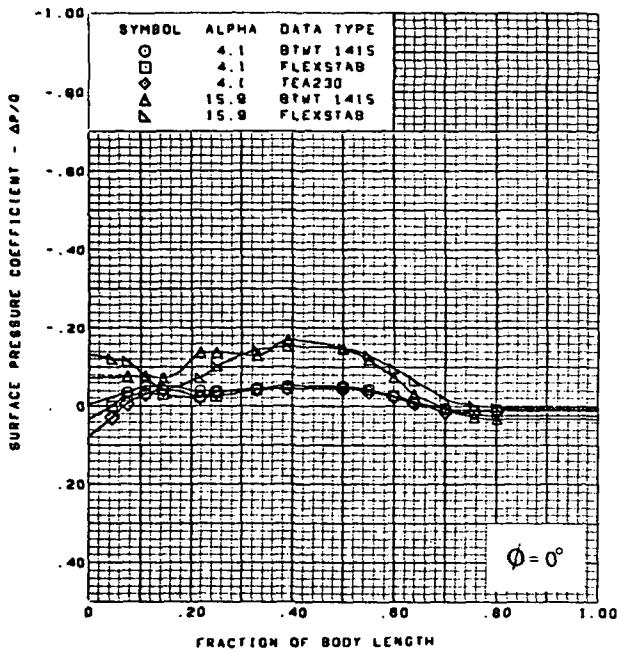
Figure 41.-Body Theory-to-Experiment Comparison; Twisted Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



$M = 0.40$  (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

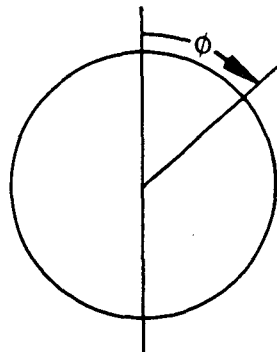
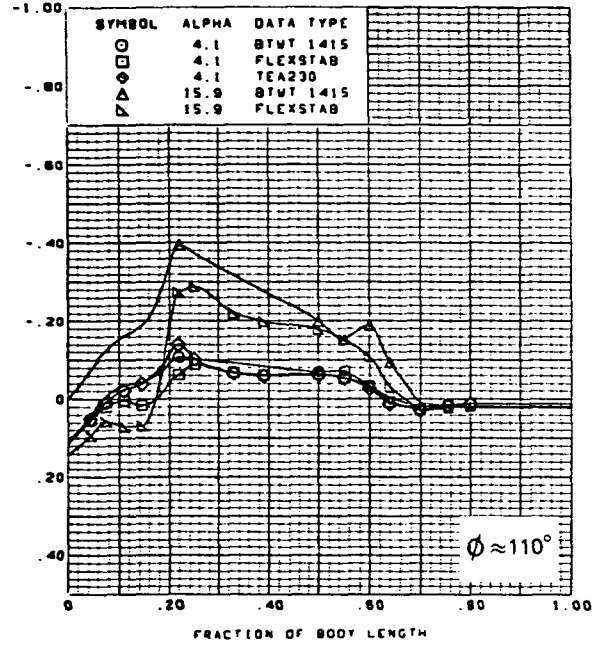
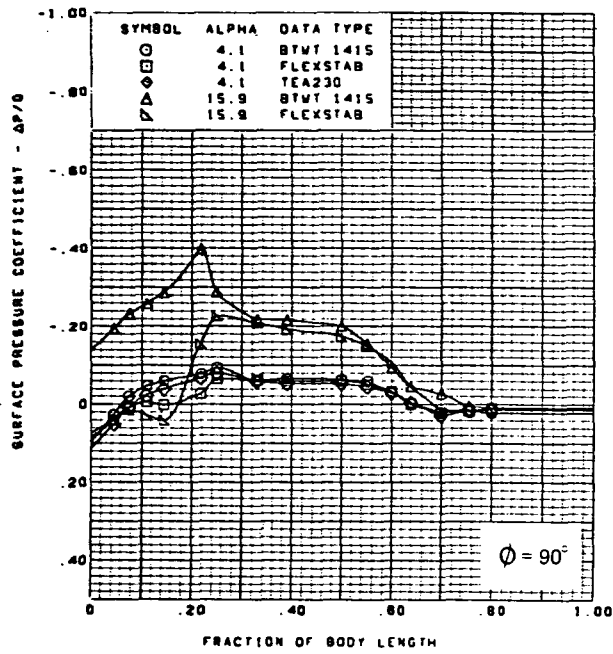
(a) (Concluded)

Figure 41.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.1^\circ$  and  $15.9^\circ$

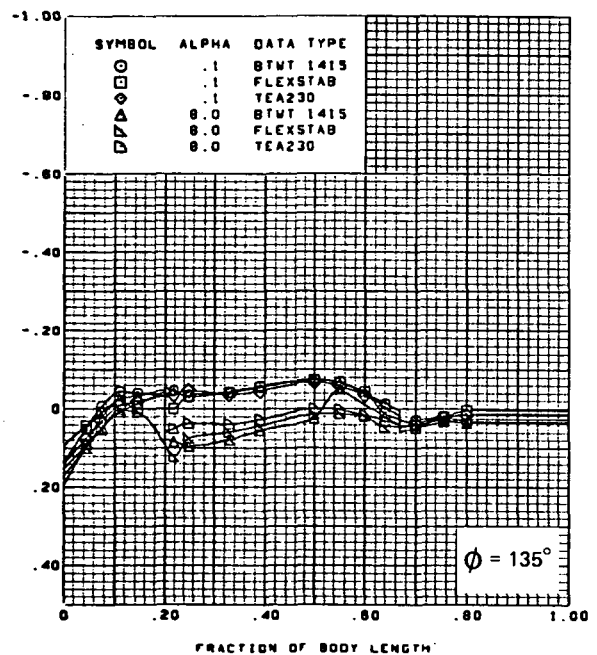
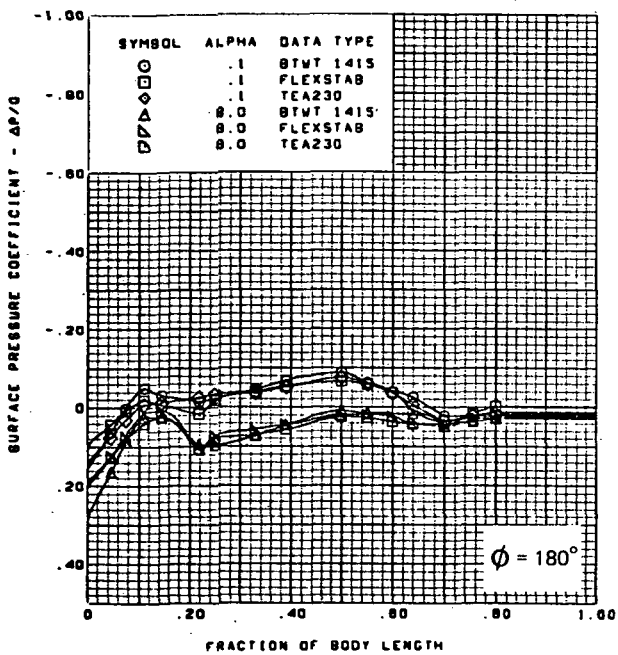
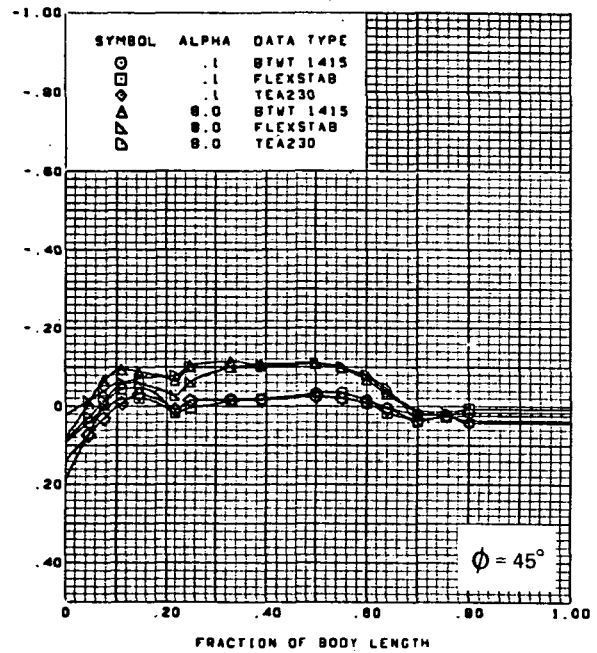
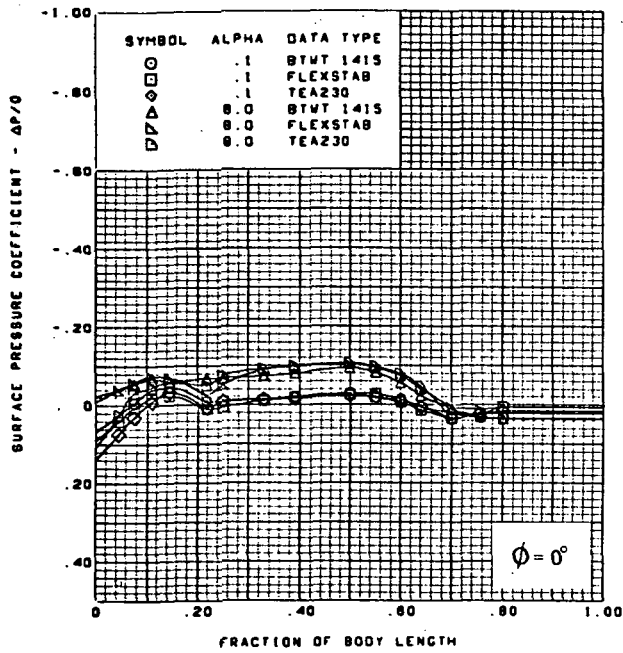
Figure 41.-(Continued)



M = 0.40 (run 450)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

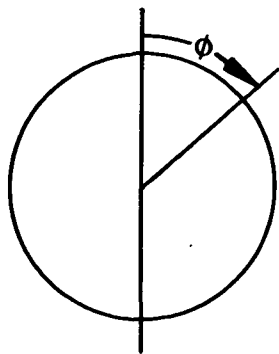
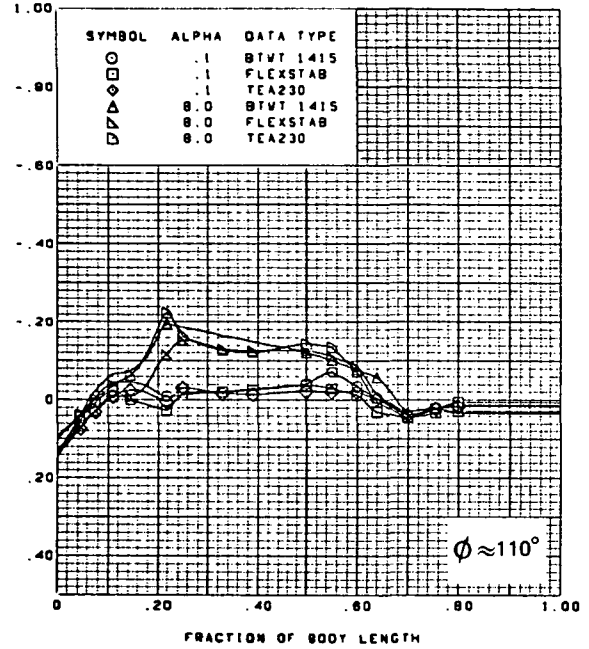
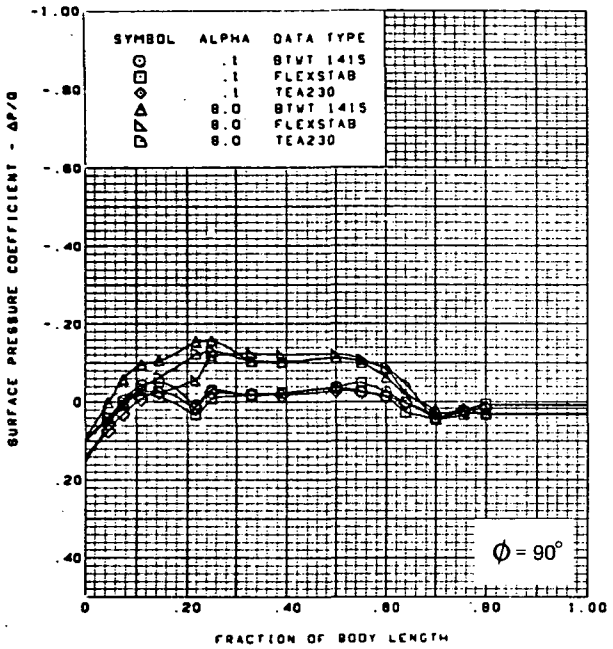
(b) (Concluded)

Figure 41.-(Concluded)



(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.1^\circ$  and  $8.0^\circ$

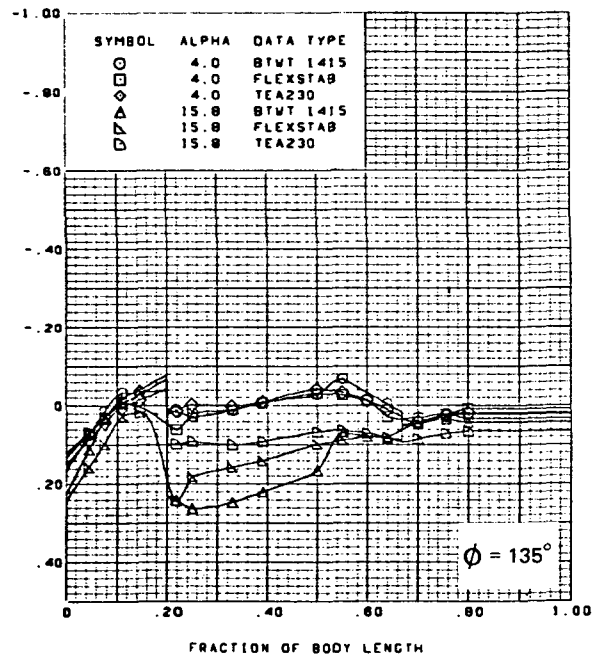
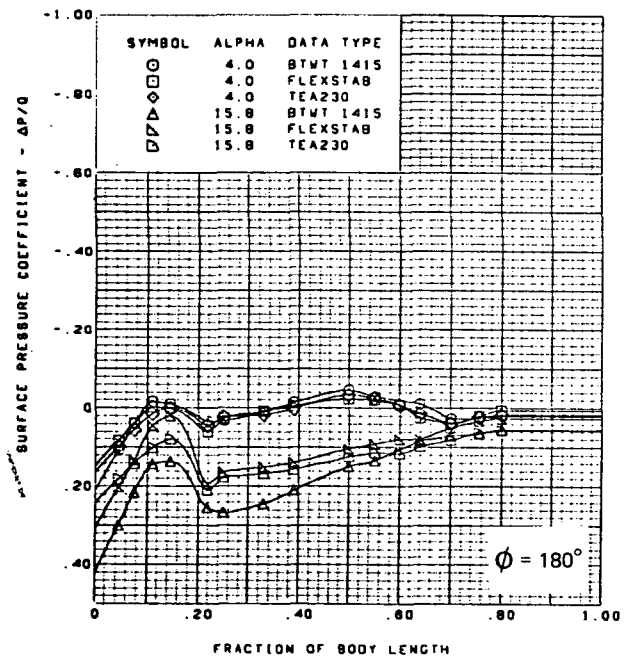
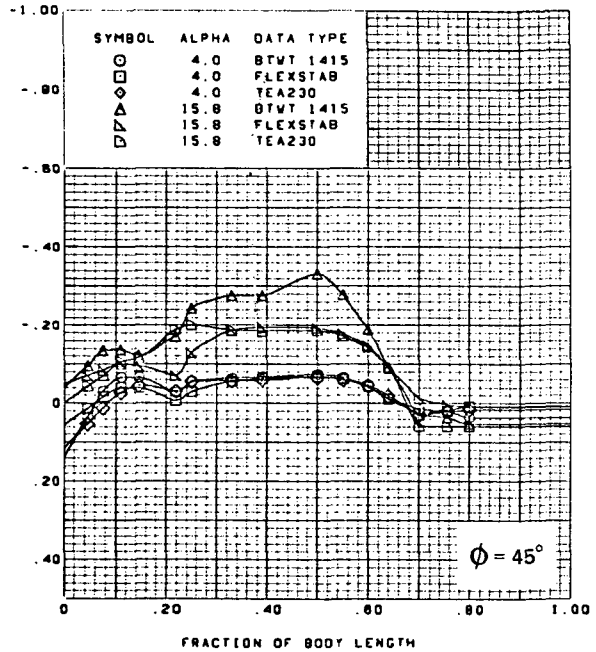
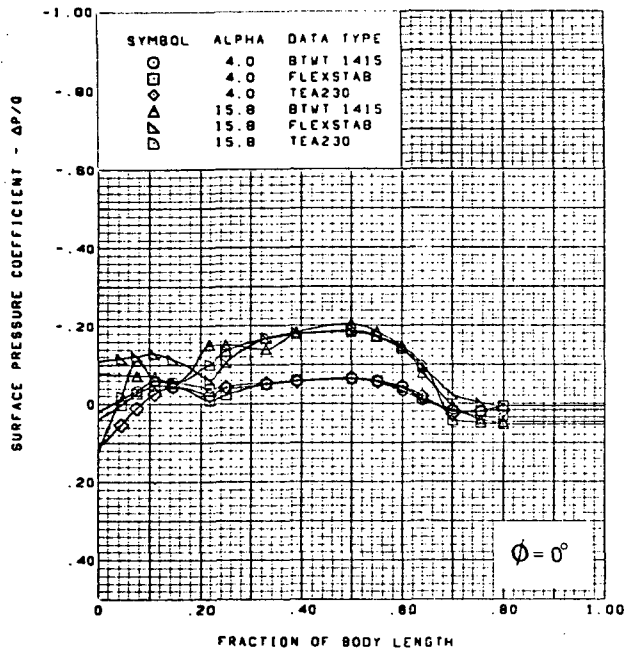
Figure 42.—Body Theory-to-Experiment Comparison; Twisted Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$  (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

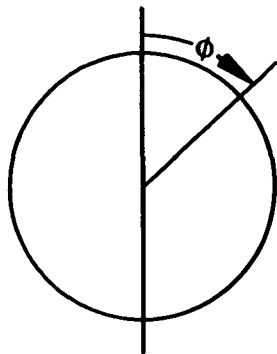
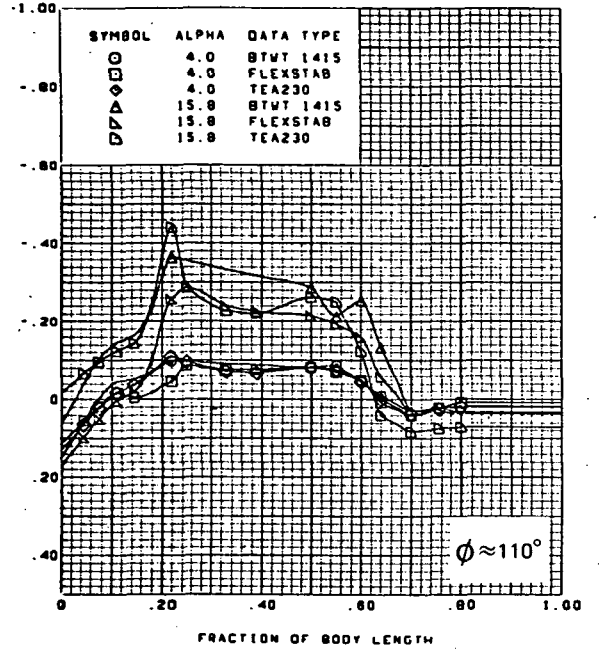
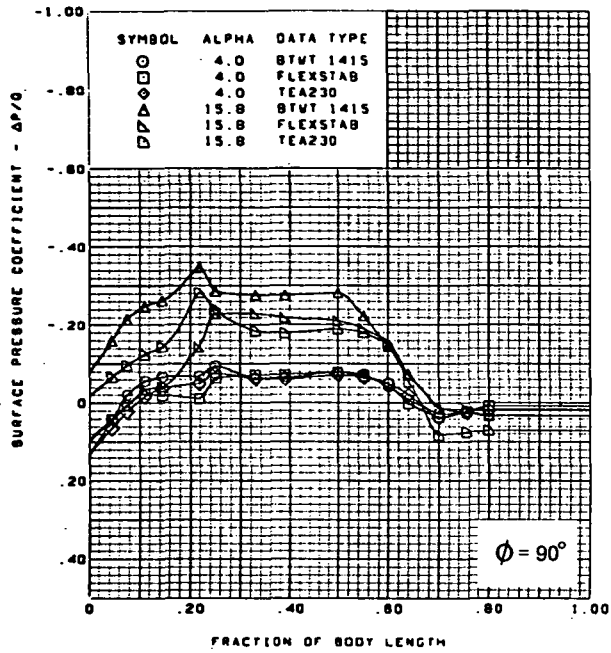
(a) (Concluded)

Figure 42.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

Figure 42.-(Continued)

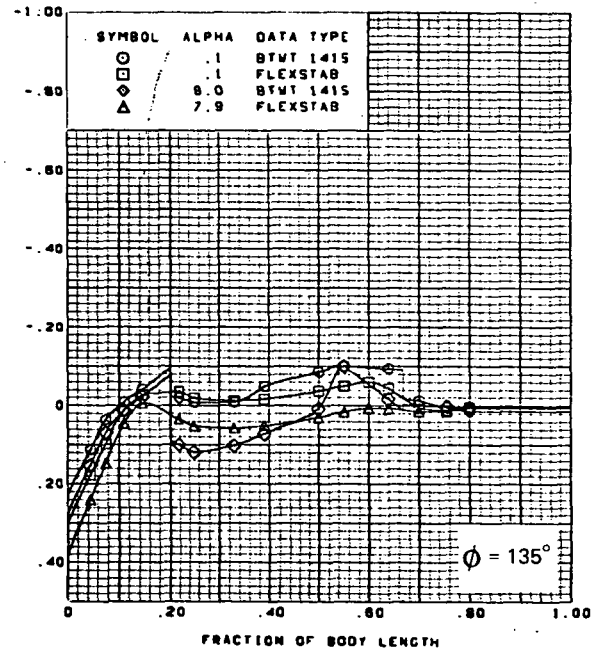
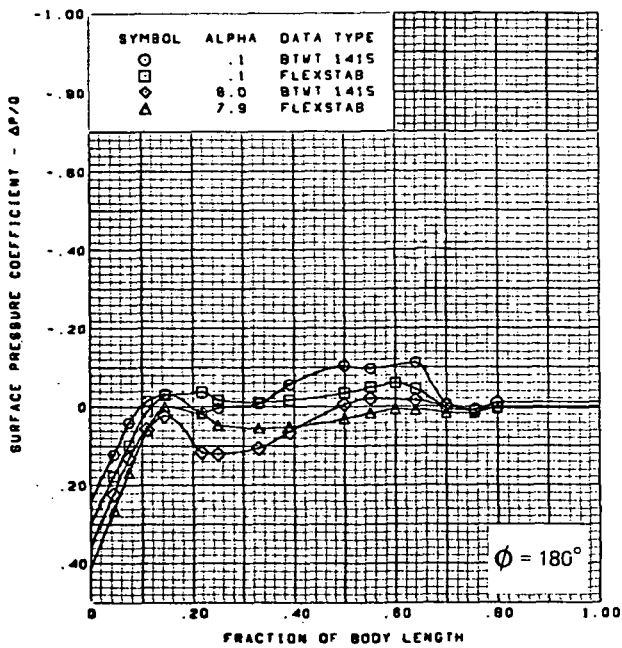
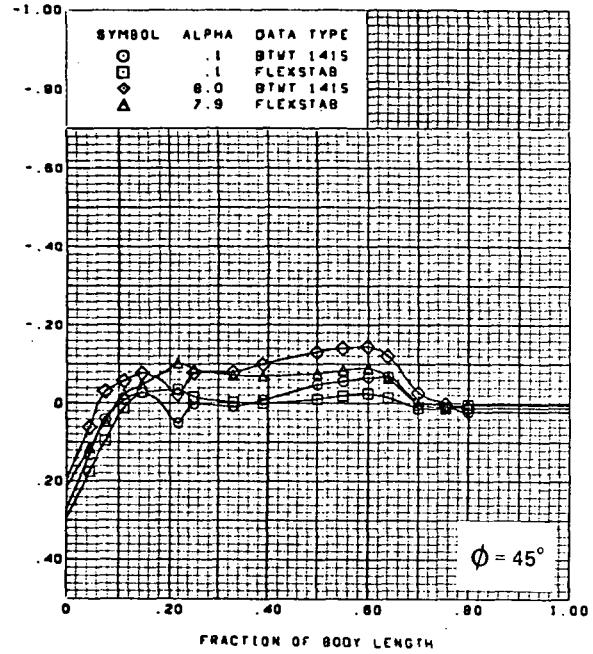
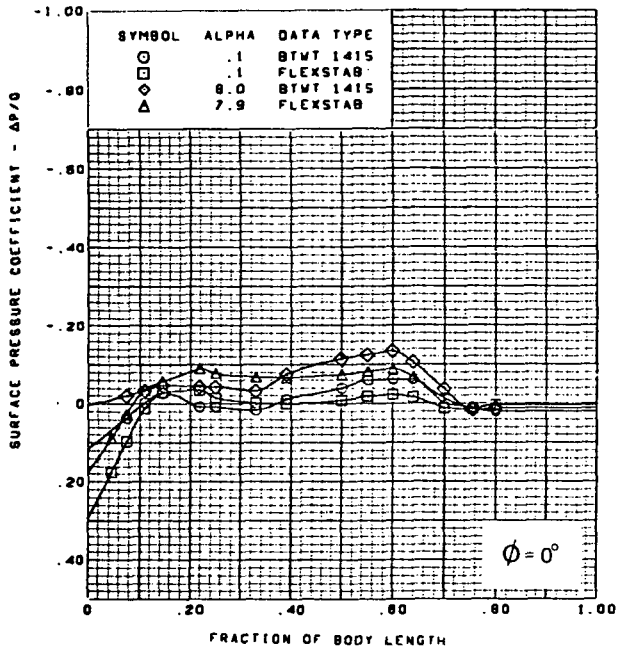


$M = 0.85$  (run 449)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b): (Concluded)

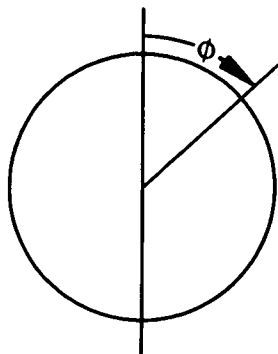
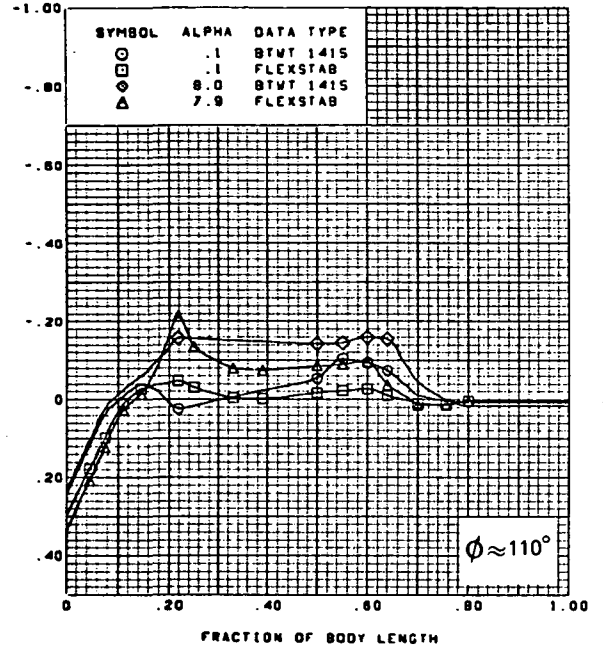
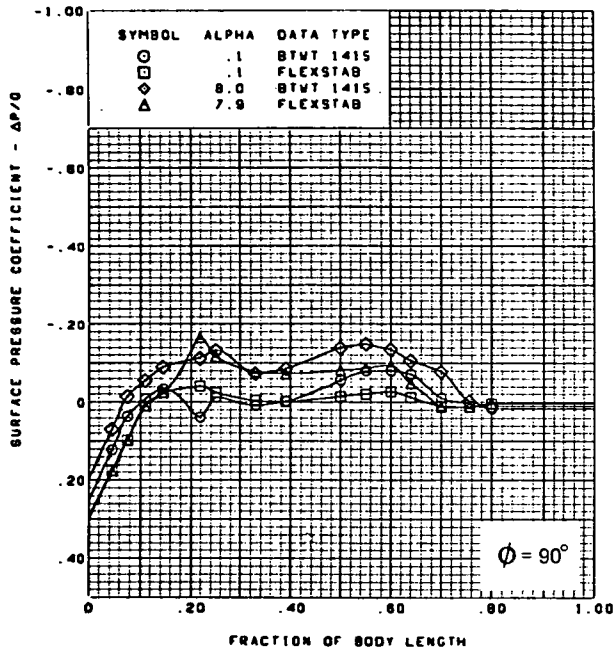
Figure 42.-(Concluded)





(a) Surface Longitudinal Pressure Distributions,  $\alpha \approx 0.1^\circ$  and  $8.0^\circ$

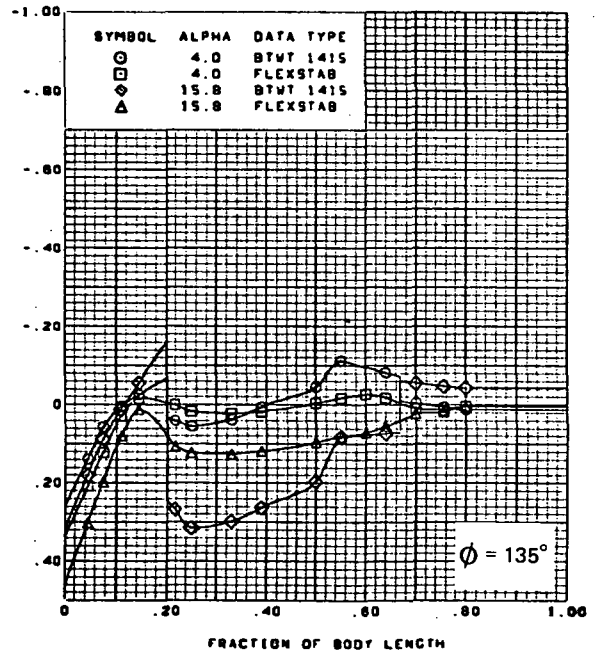
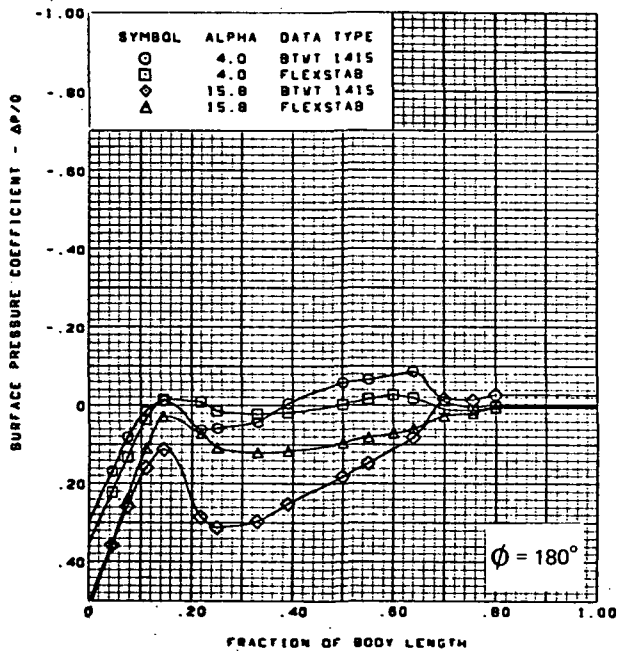
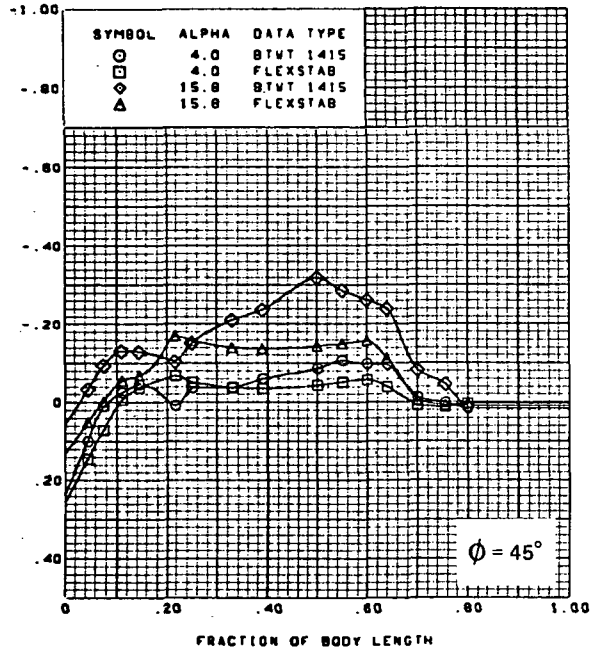
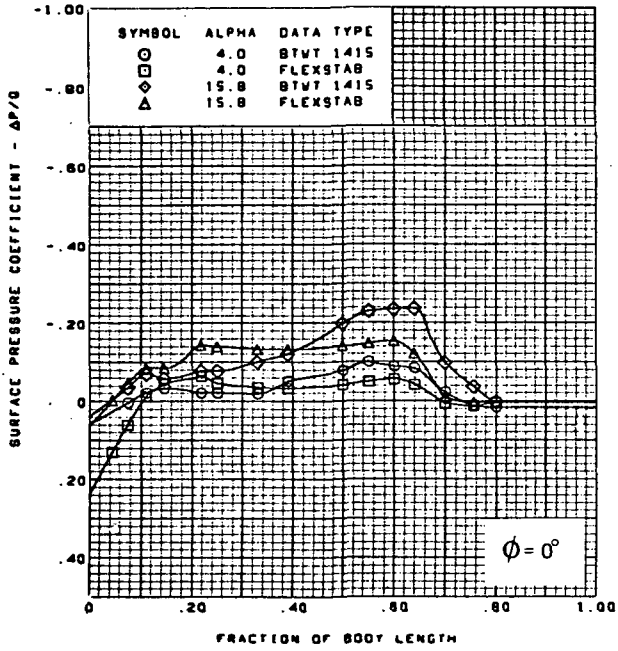
Figure 43.-Body Theory-to-Experiment Comparison; Twisted Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

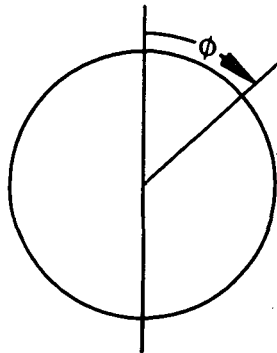
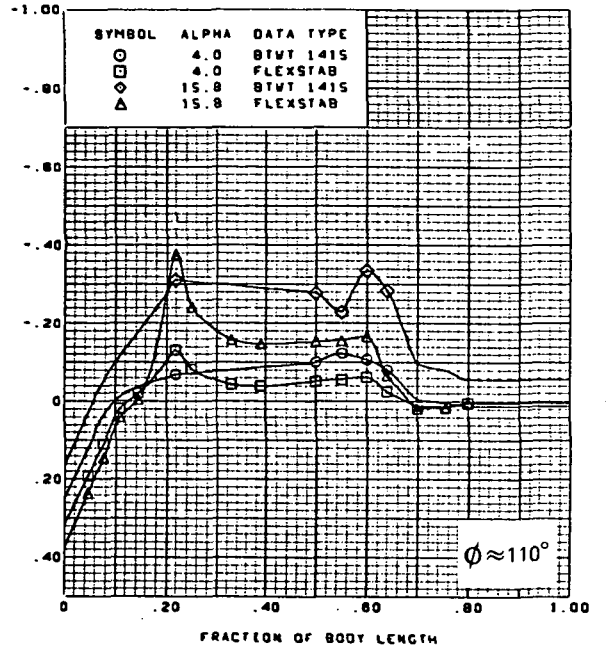
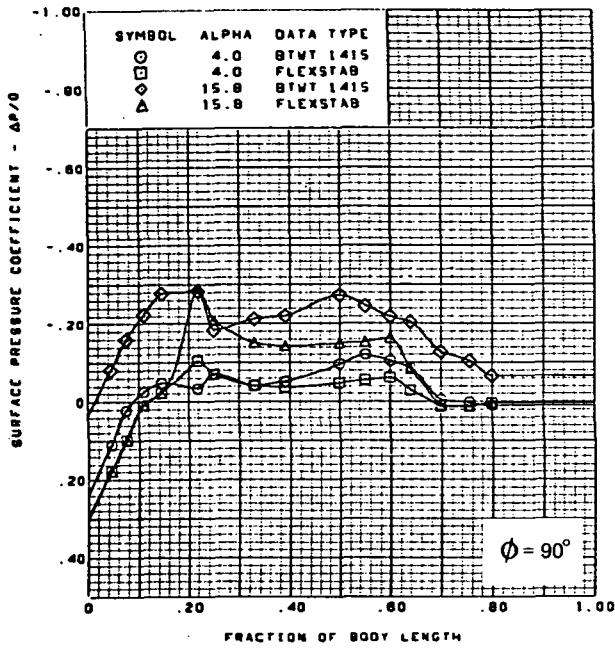
(a) (Concluded)

Figure 43.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

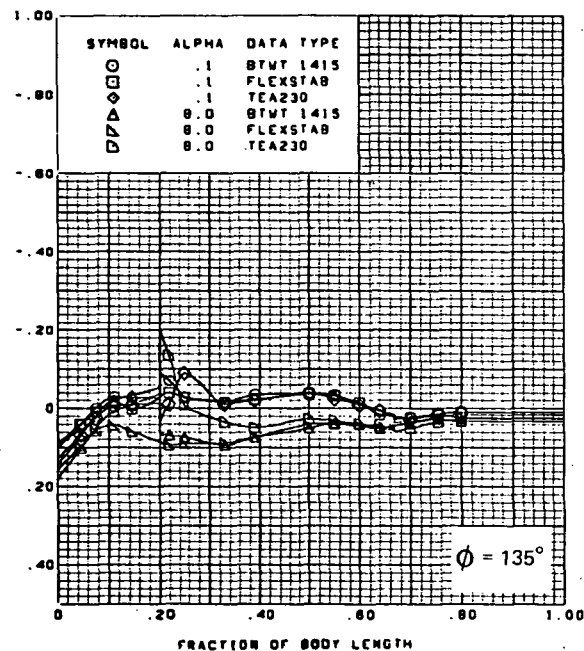
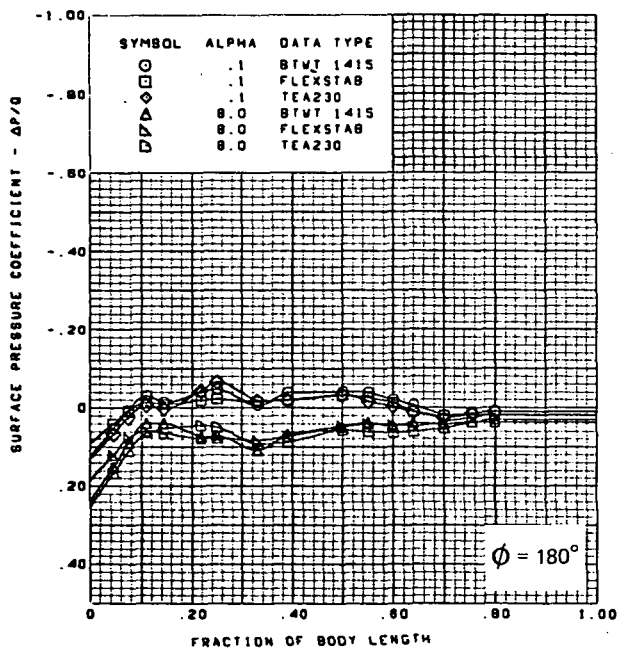
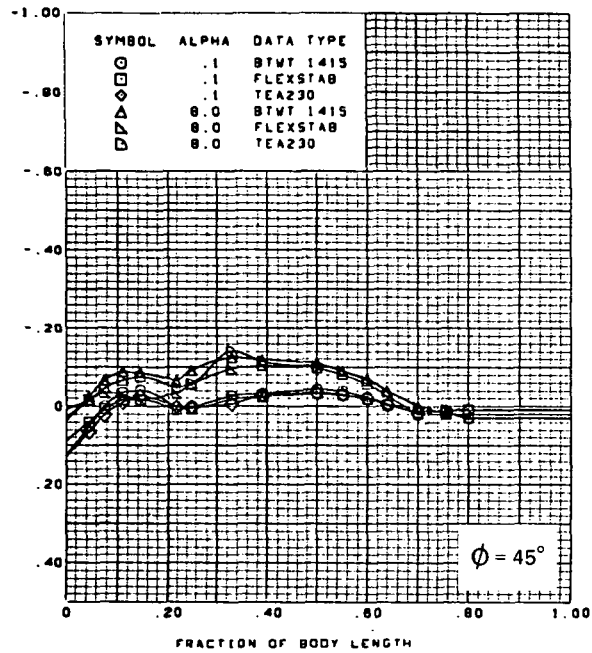
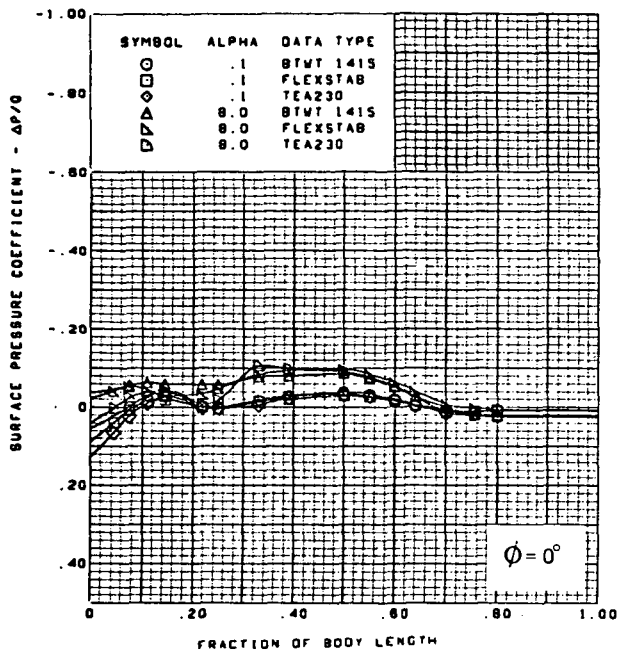
Figure 43.-(Continued)



$M = 1.05$  (run 446)  
 Twisted wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

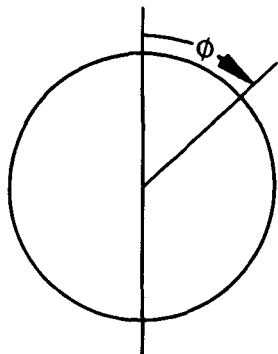
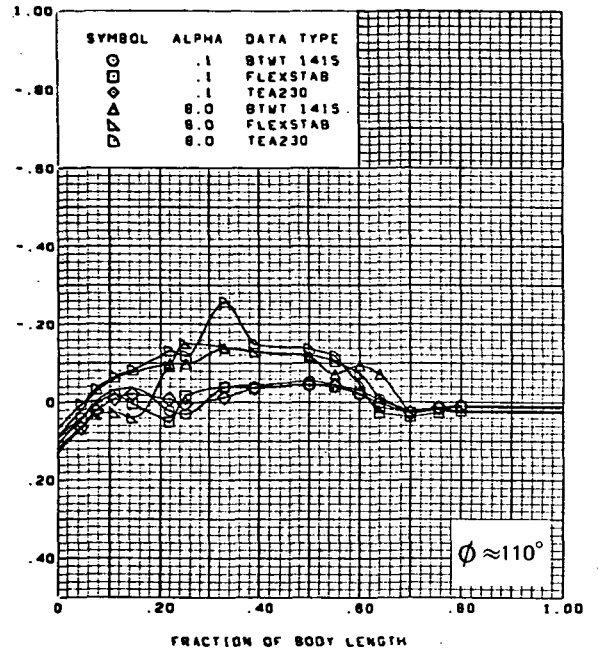
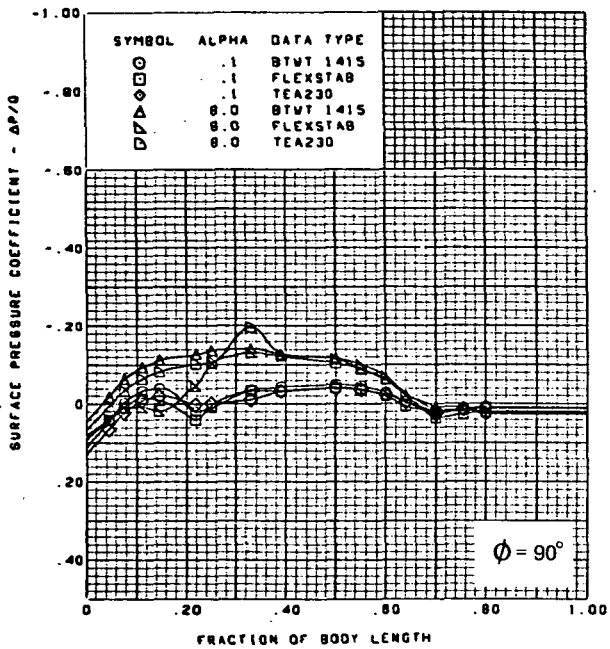
(b) (Concluded)

Figure 43.-(Concluded)



(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.1^\circ$  and  $8.0^\circ$

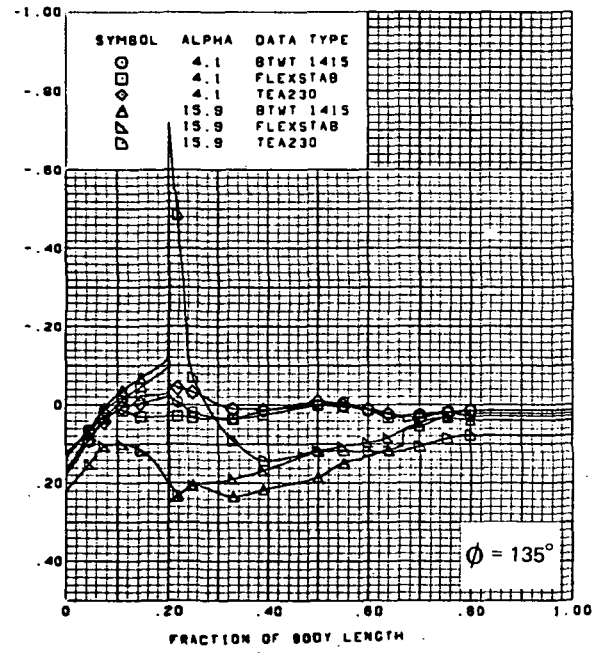
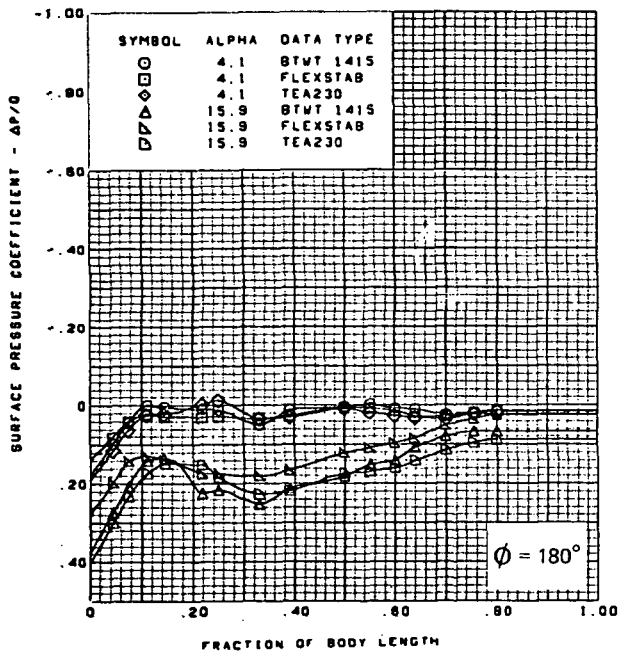
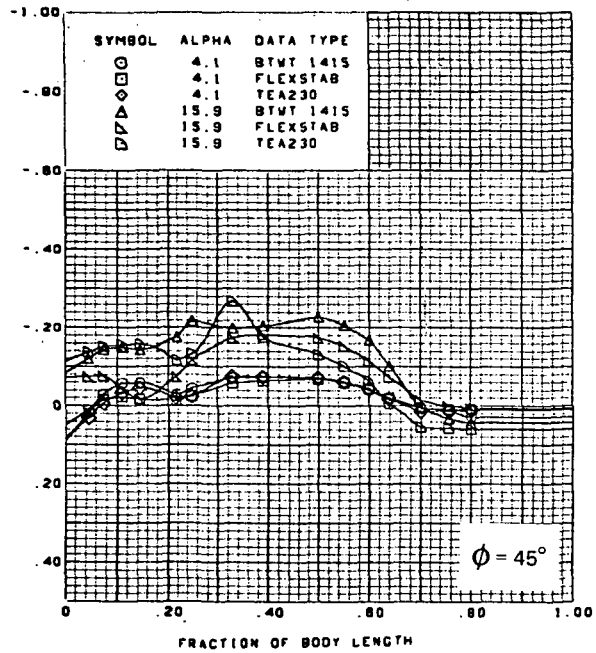
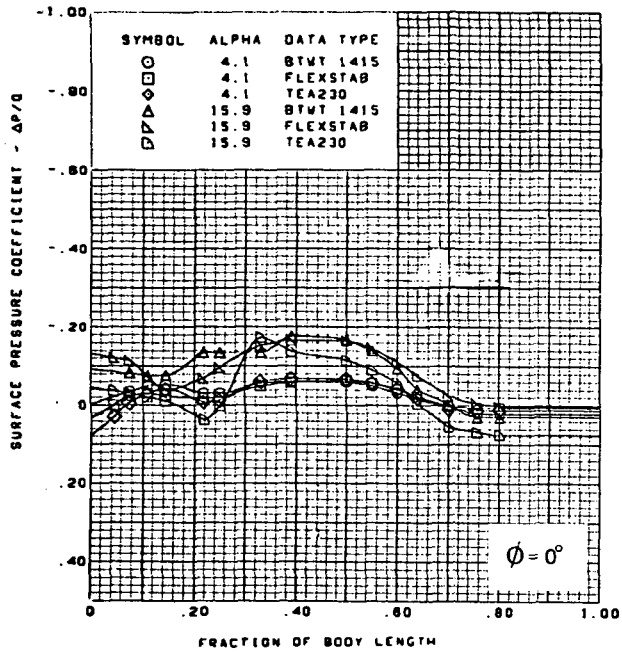
Figure 44.-Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $5.1^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



$M = 0.40$  (run 183)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

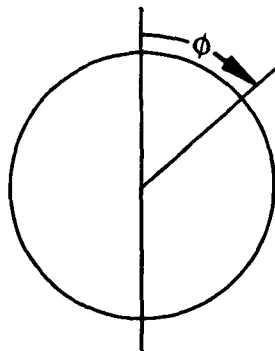
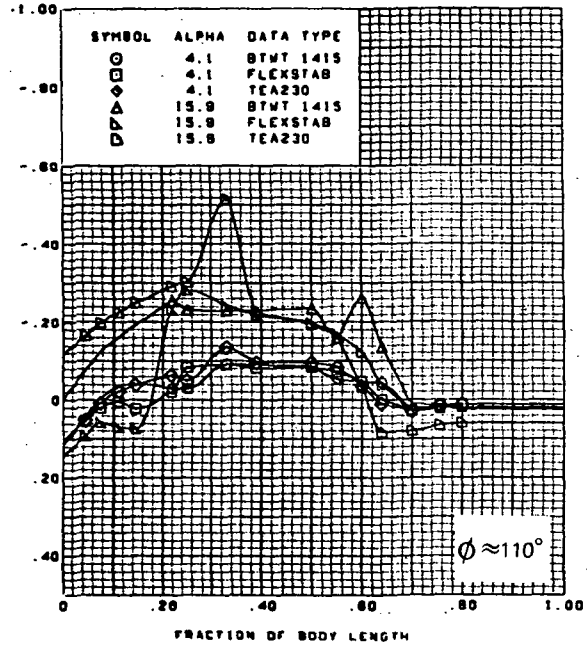
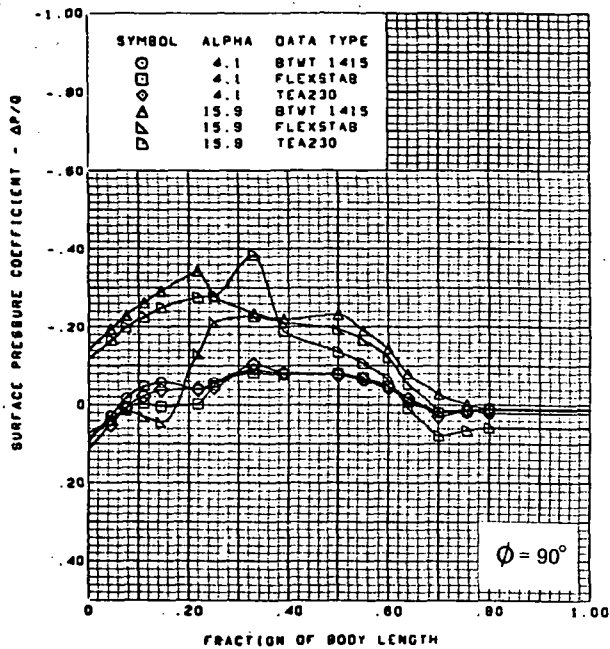
(a) (Concluded)

Figure 44.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.1^\circ$  and  $15.9^\circ$

Figure 44.-(Continued)

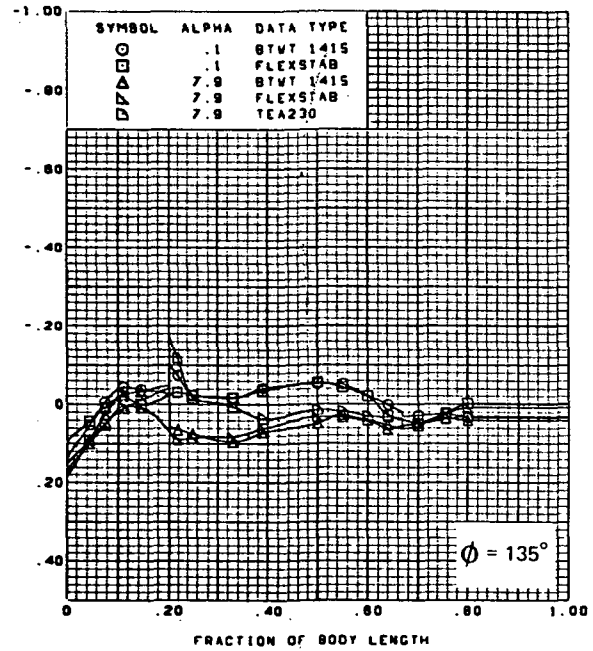
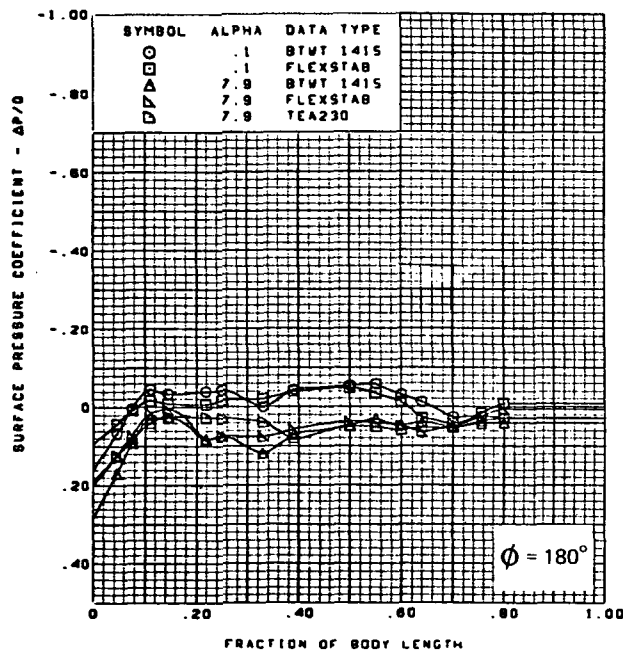
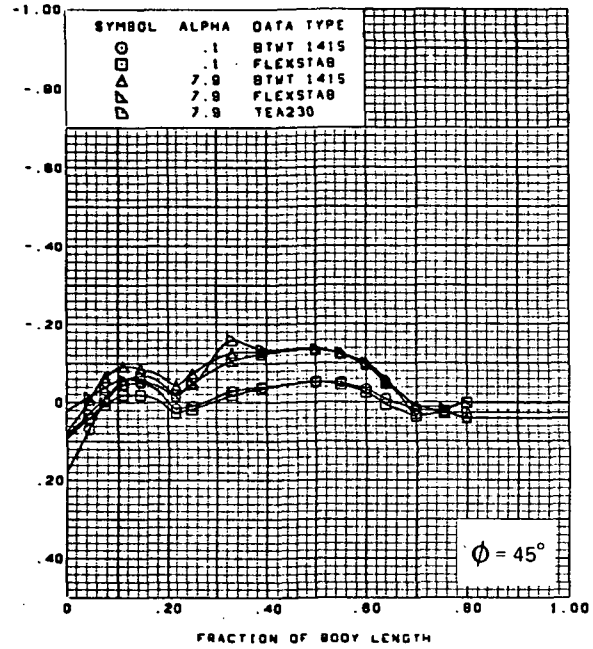
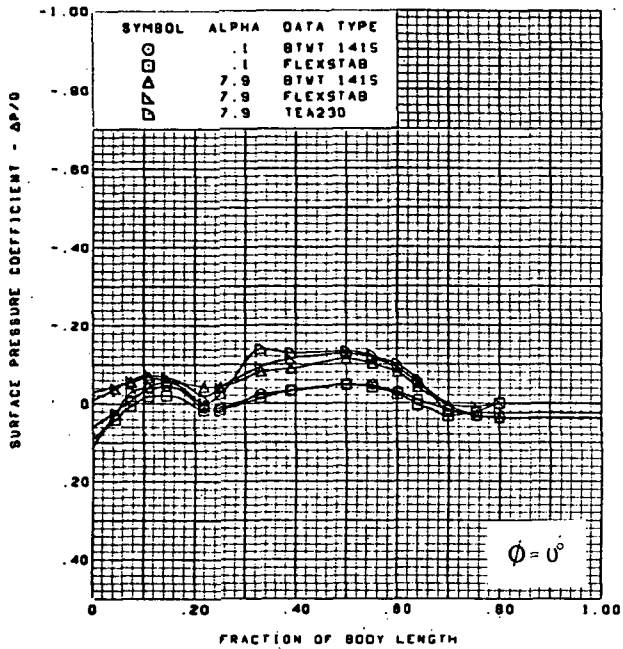


$M = 0.40$  (run 183)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

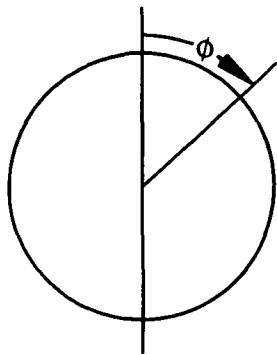
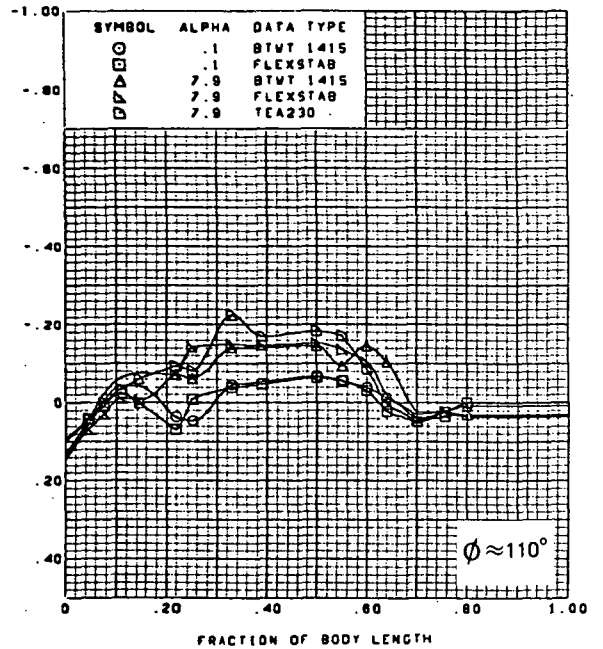
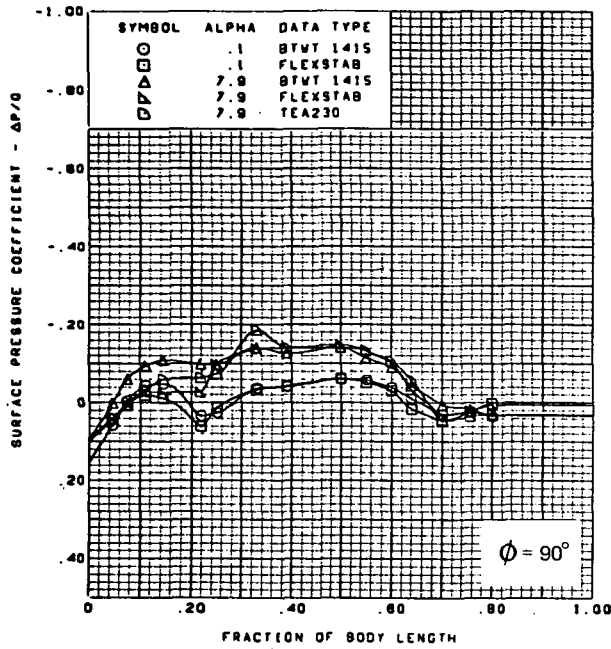
Figure 44.-(Concluded)





(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.1^\circ$  and  $7.9^\circ$

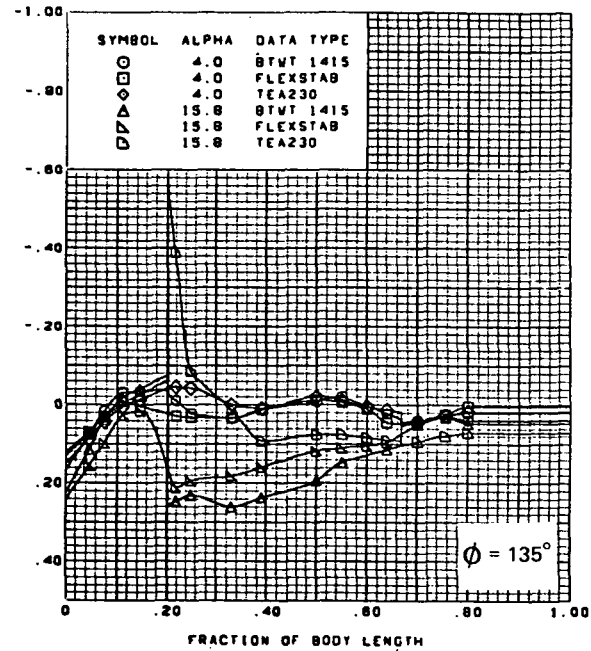
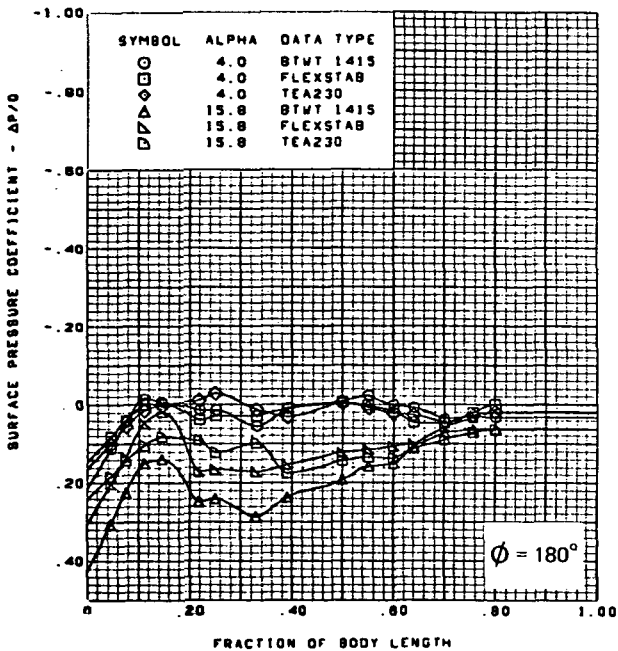
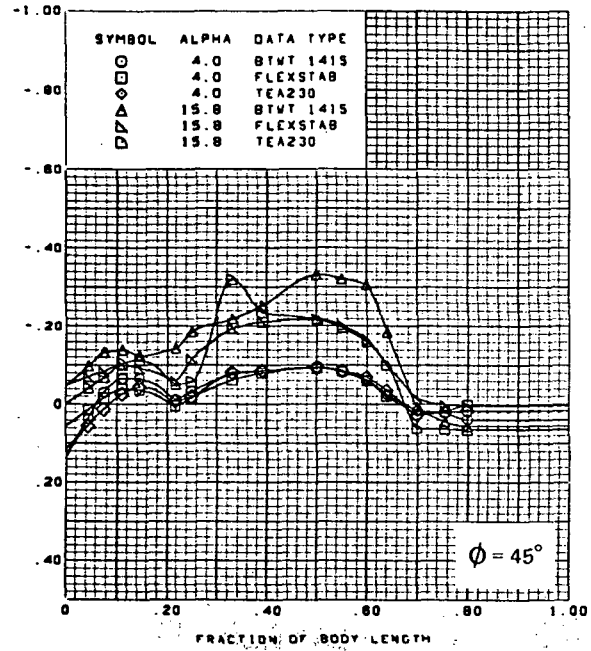
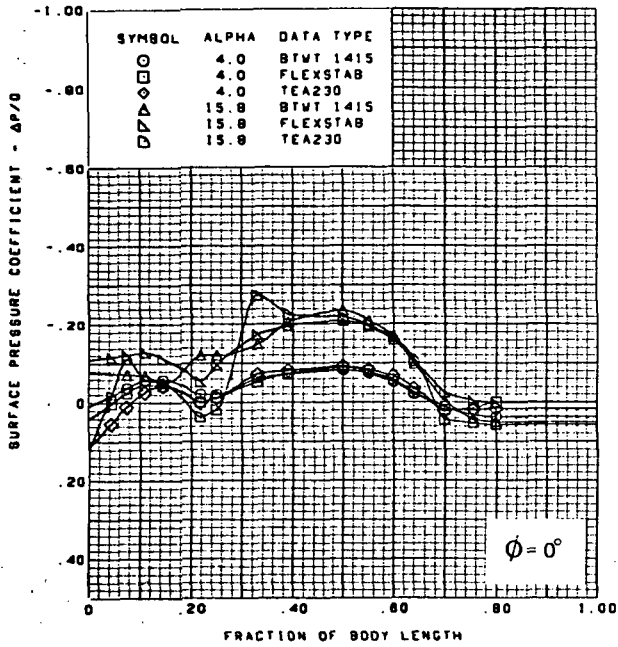
Figure 45.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $5.1^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$  (run 182)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

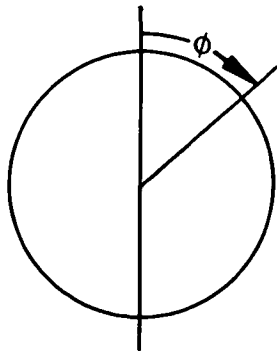
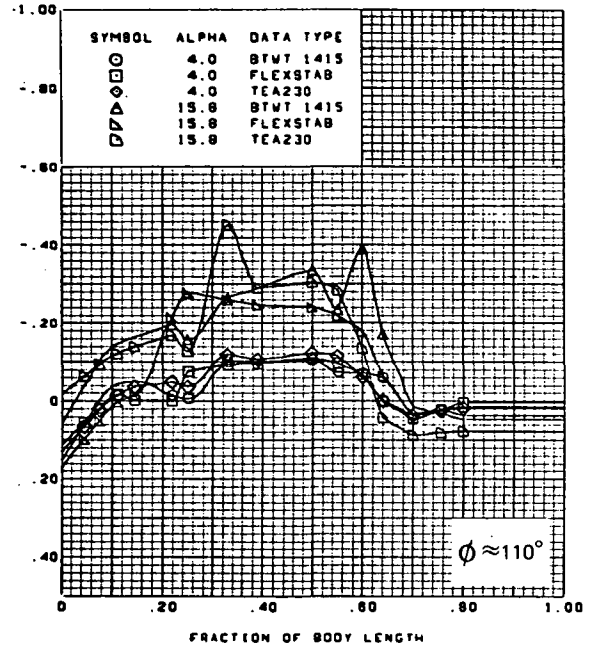
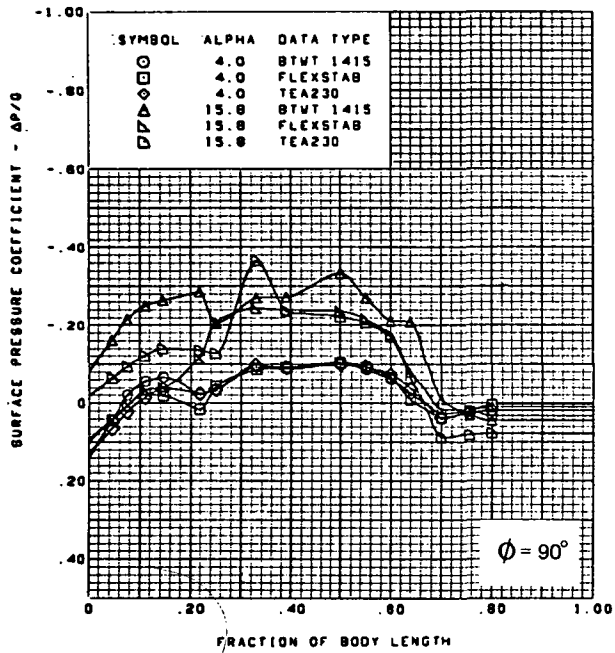
(a) (Concluded)

Figure 45.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

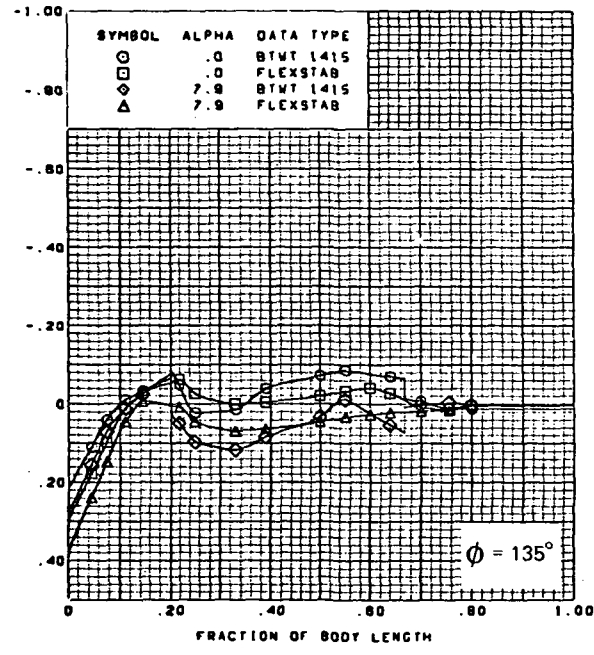
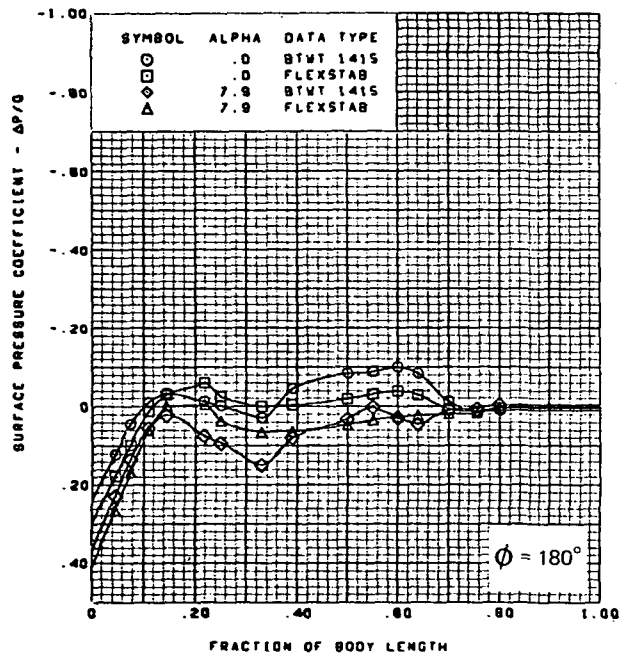
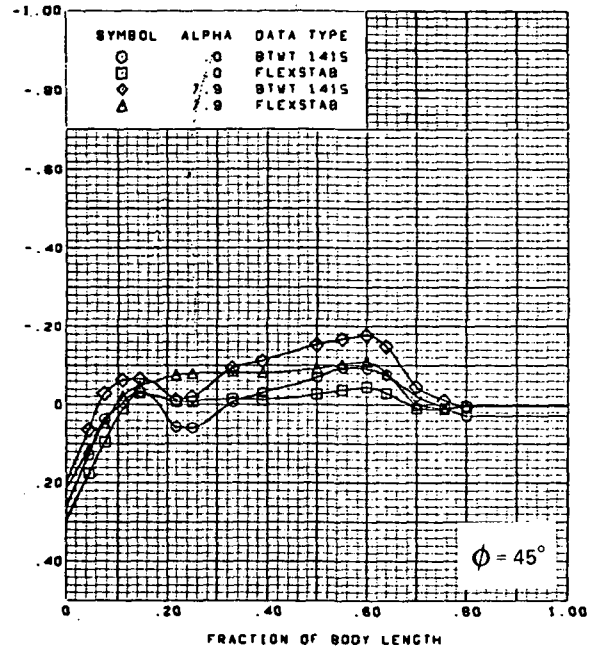
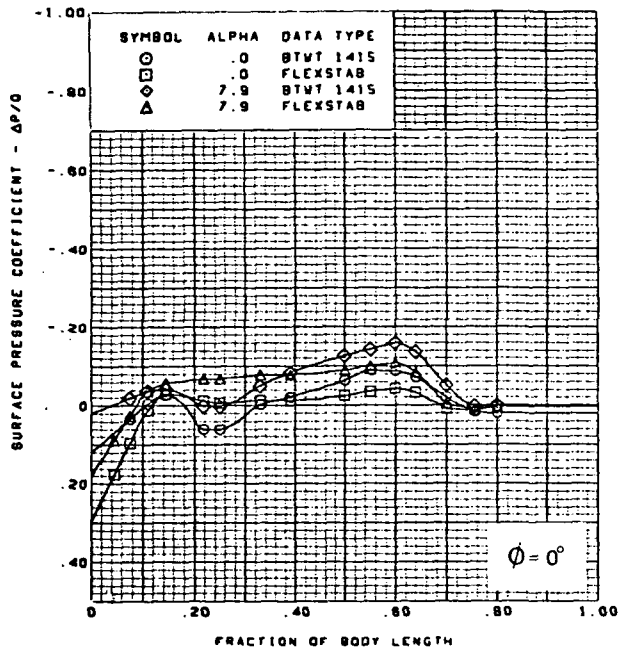
Figure 45.-(Continued)



$M = 0.85$  (run 182)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

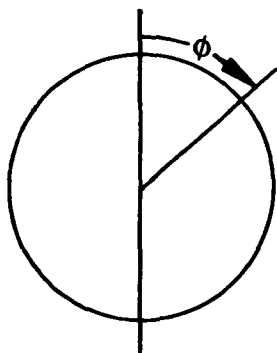
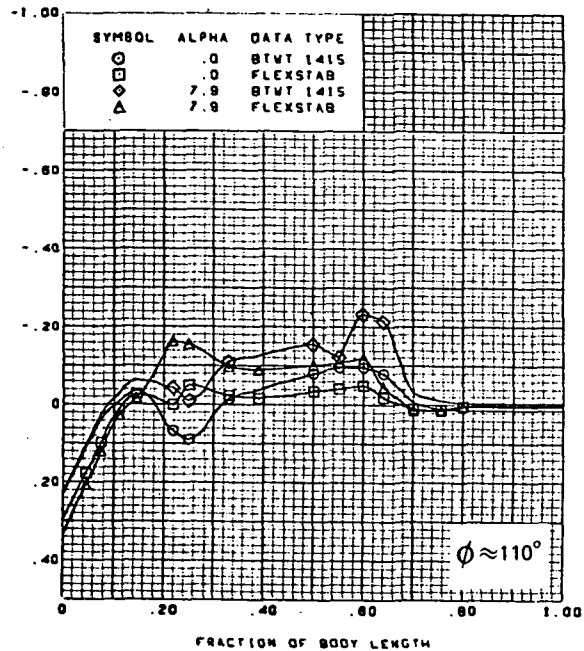
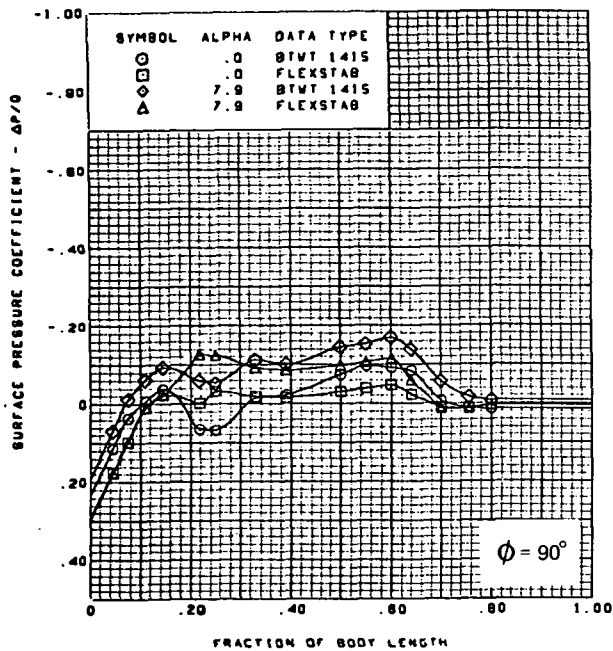
(b) (Concluded)

Figure 45.-(Concluded)



(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.0^\circ$  and  $7.9^\circ$

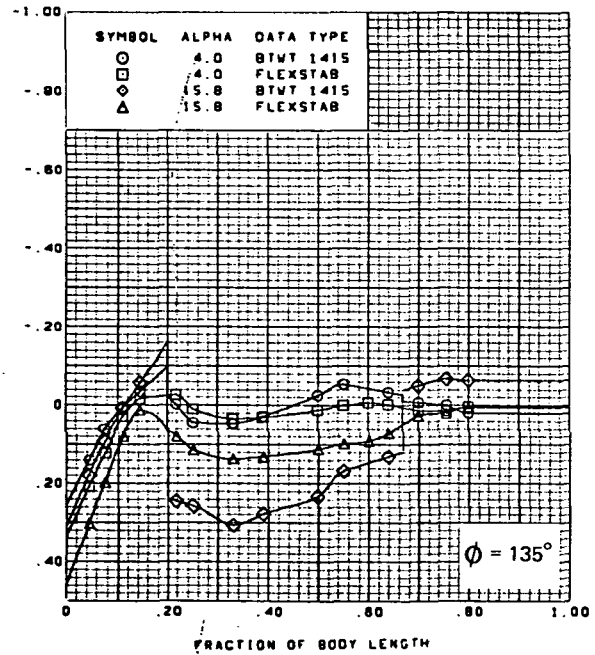
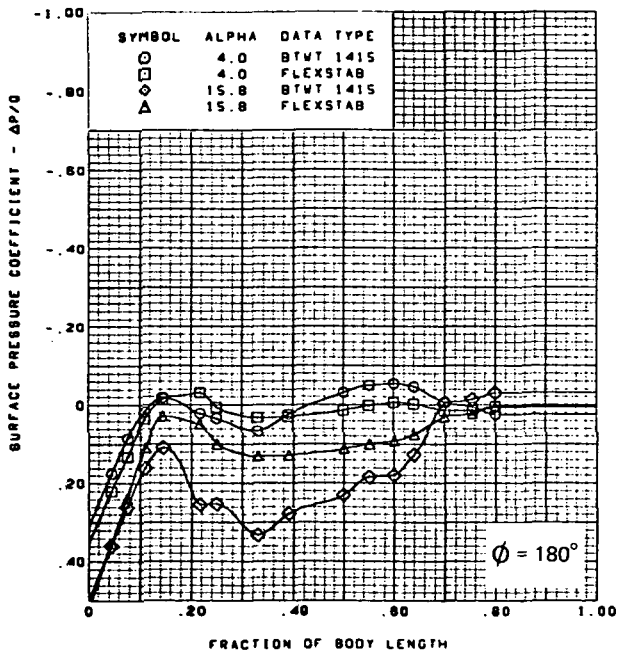
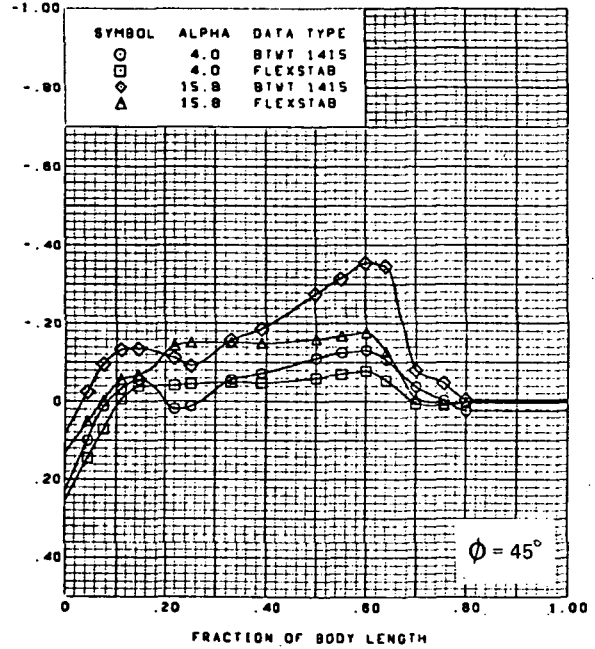
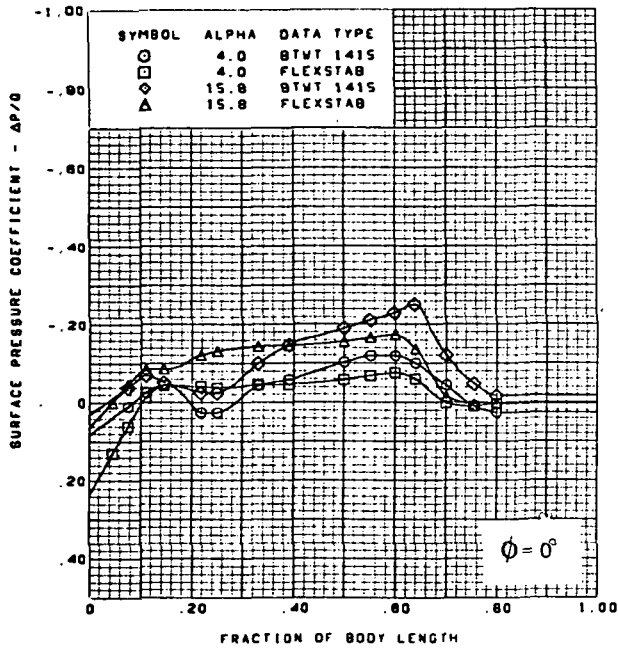
Figure 46.- Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $5.1^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



$M = 1.05$  (run 180)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

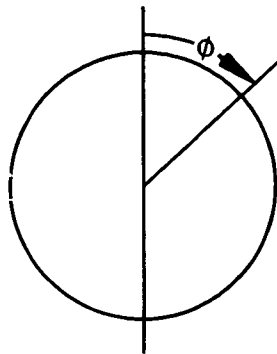
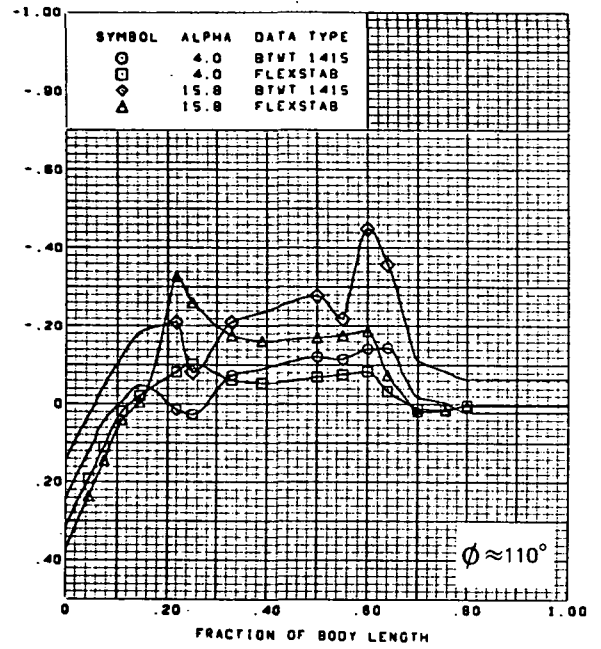
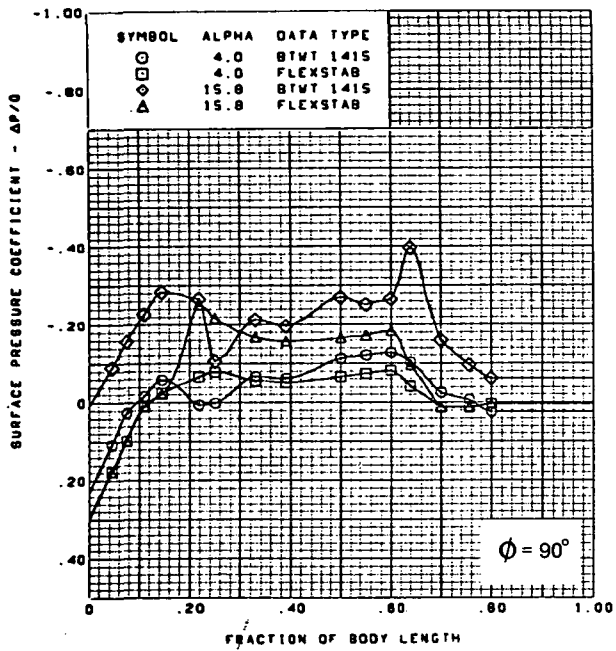
(a) (Concluded)

Figure 46.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

Figure 46.-(Continued)

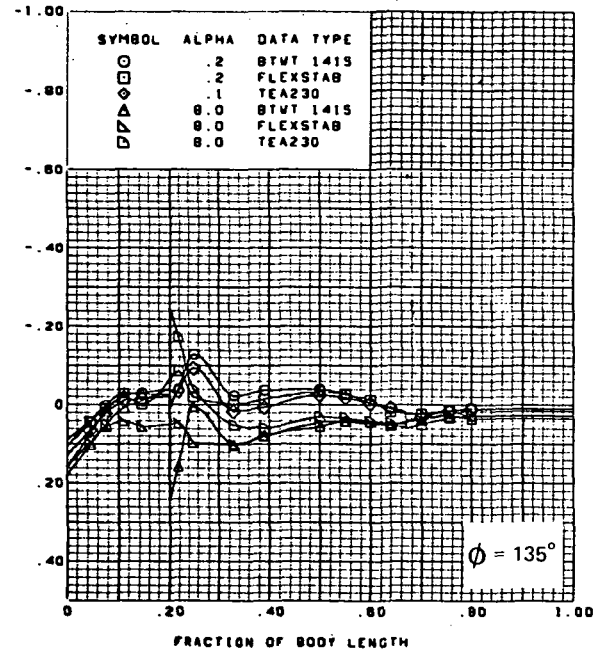
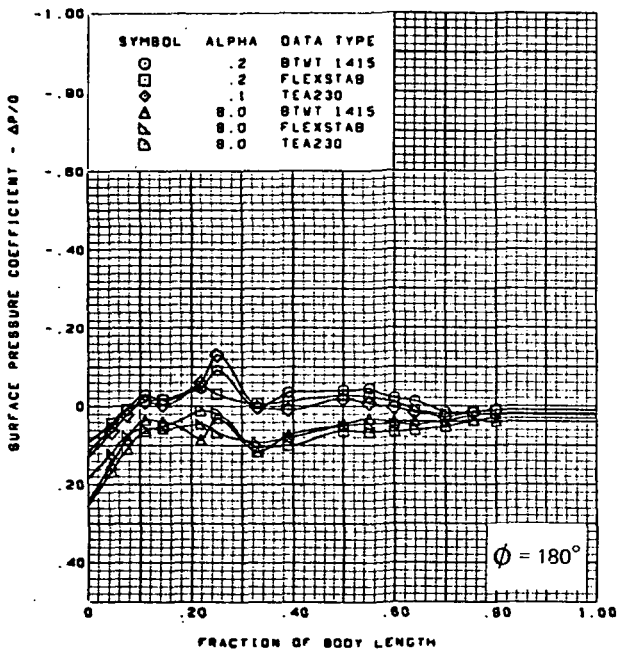
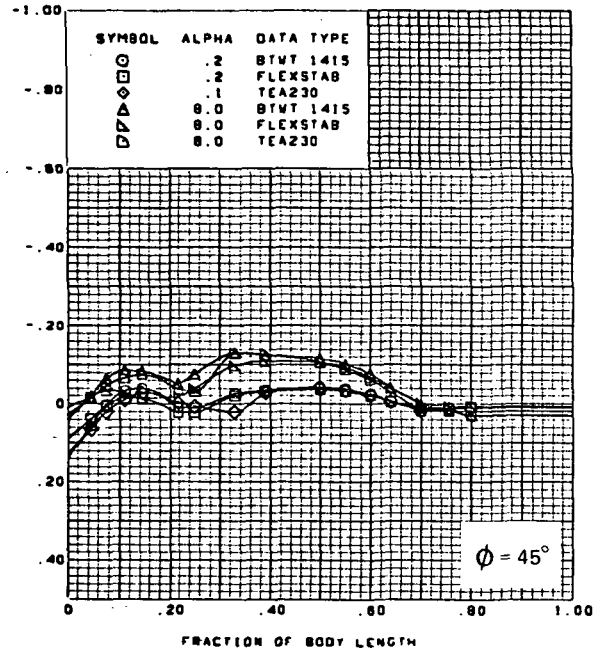
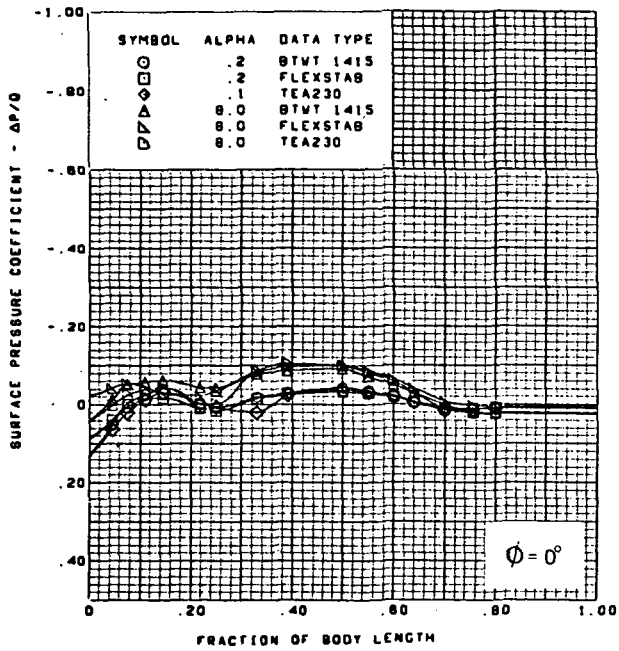


$M = 1.05$  (run180)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $5.1^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

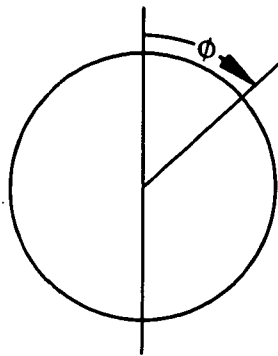
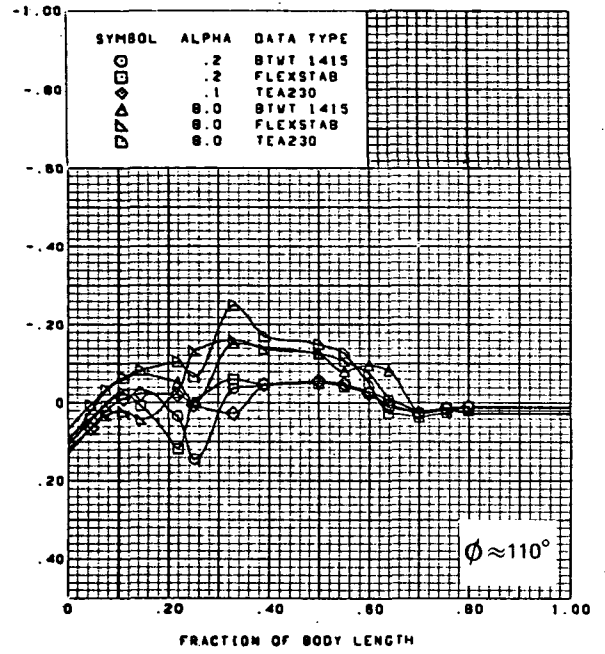
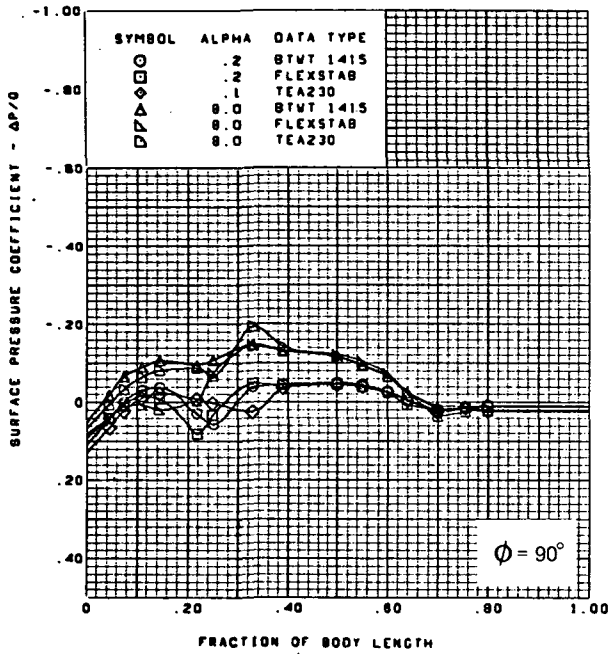
Figure 46.-(Concluded)





(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.2^\circ$  and  $8.0^\circ$

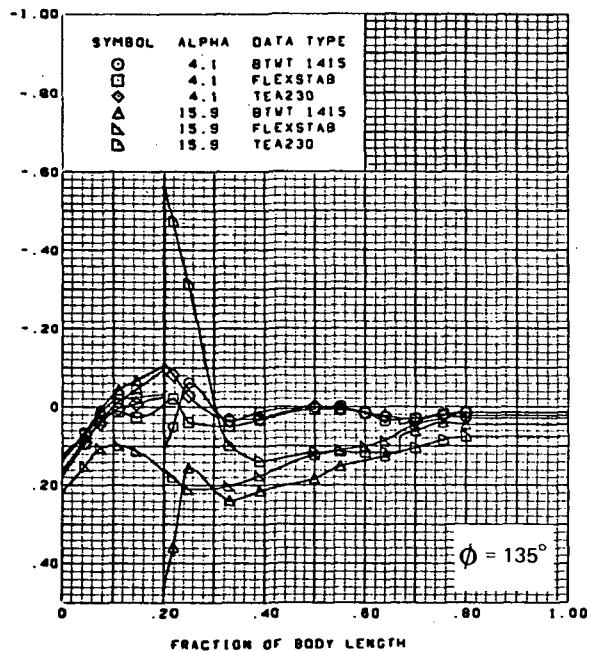
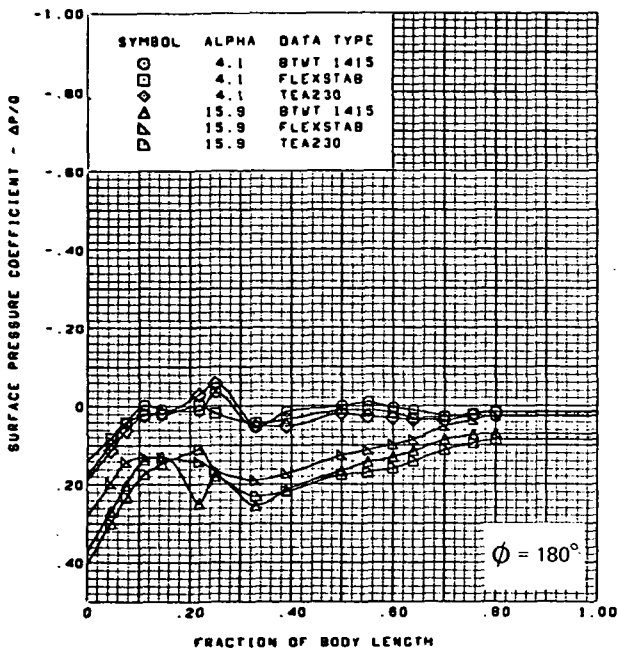
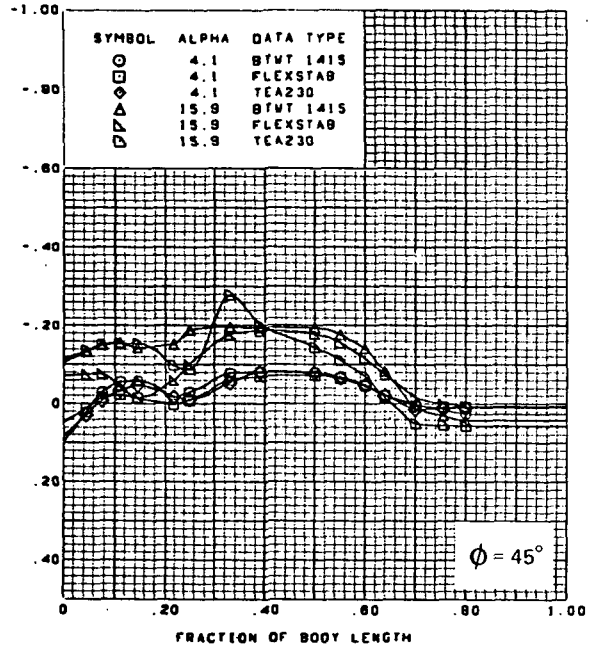
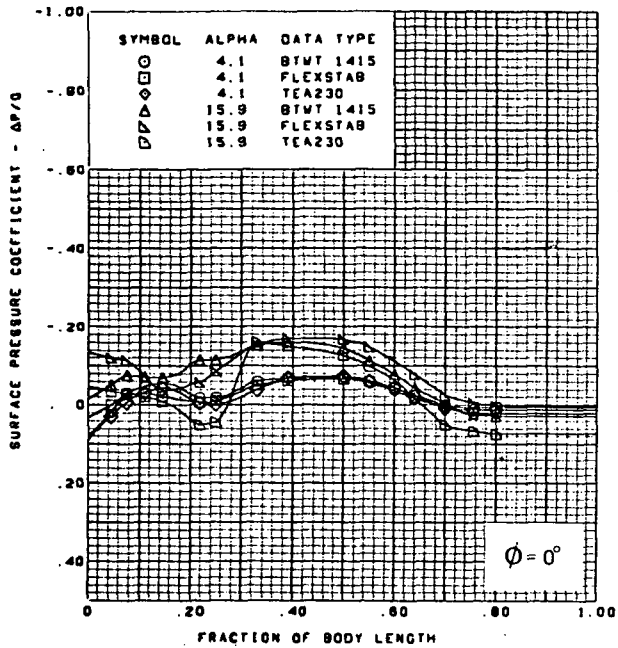
Figure 47.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $12.8^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.40$



$M = 0.40$  (run 98)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $12.8^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

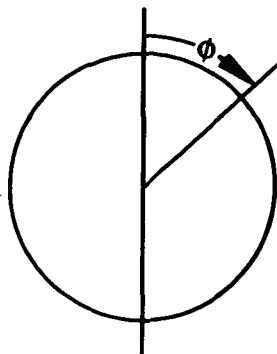
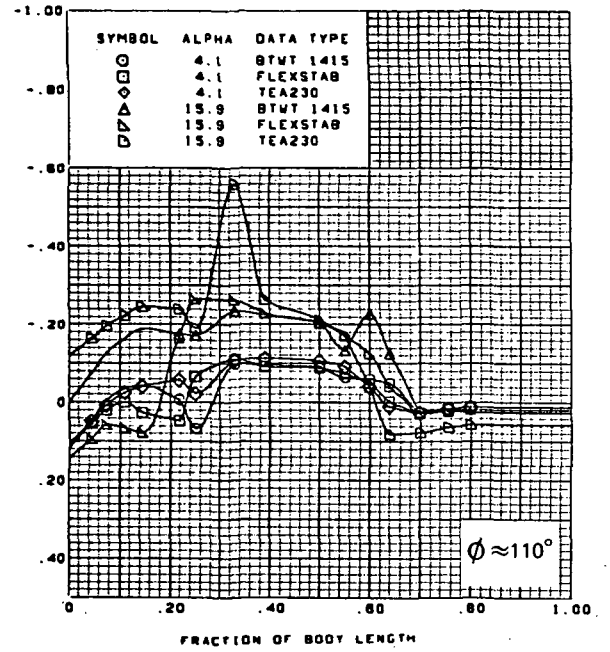
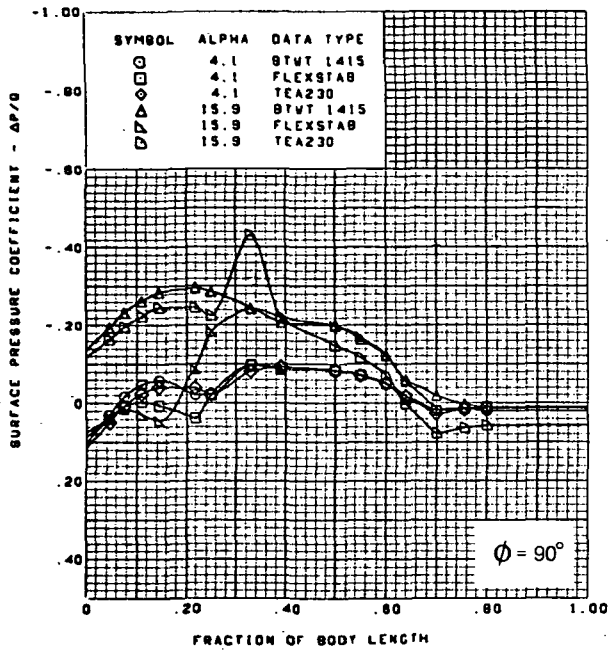
(a) (Concluded)

Figure 47.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.1^\circ$  and  $15.9^\circ$

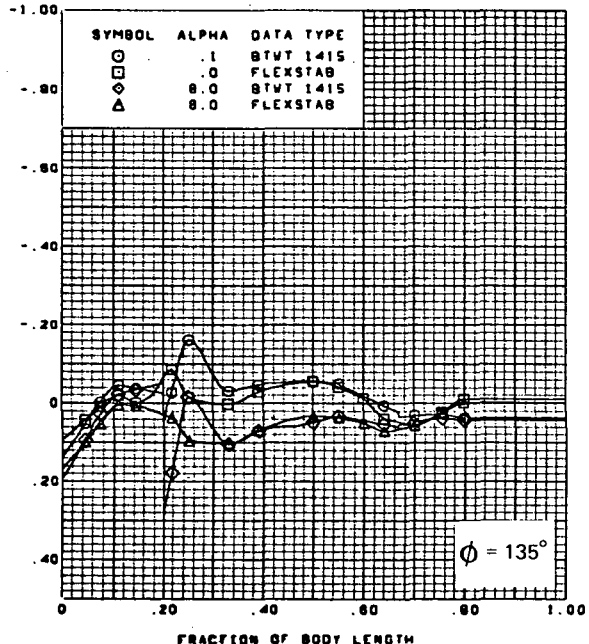
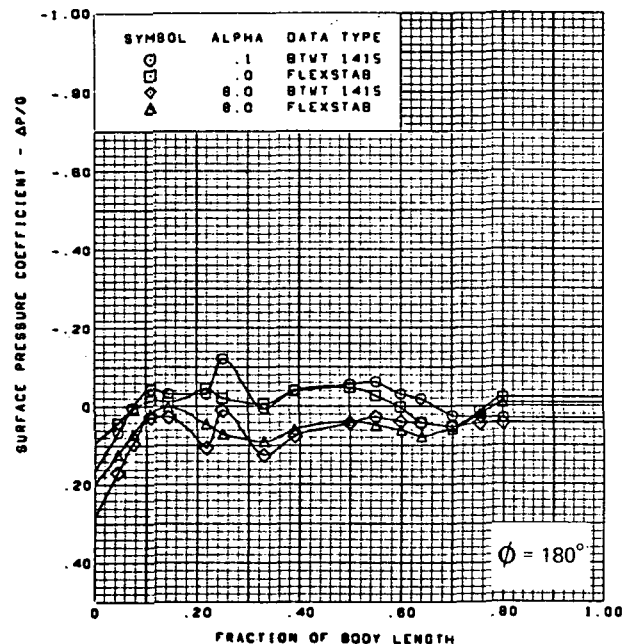
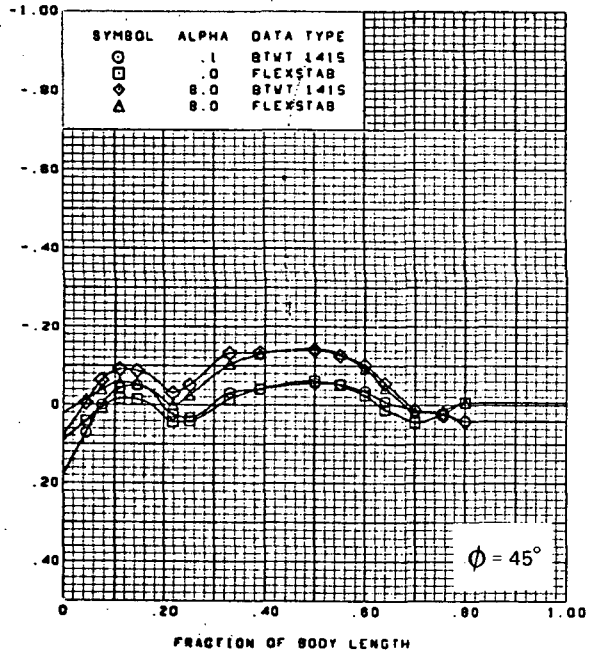
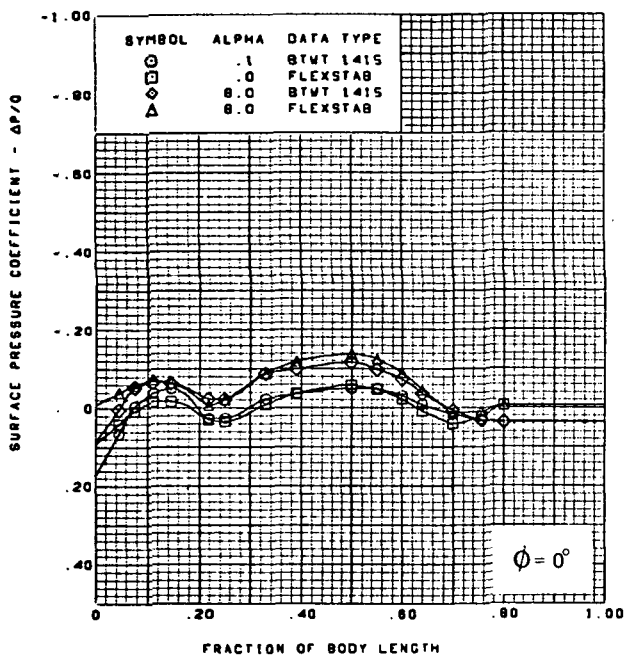
Figure 47.-(Continued)



$M = 0.40$  (run 98)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $12.8^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

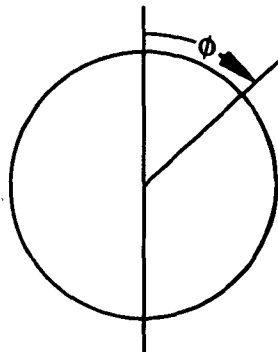
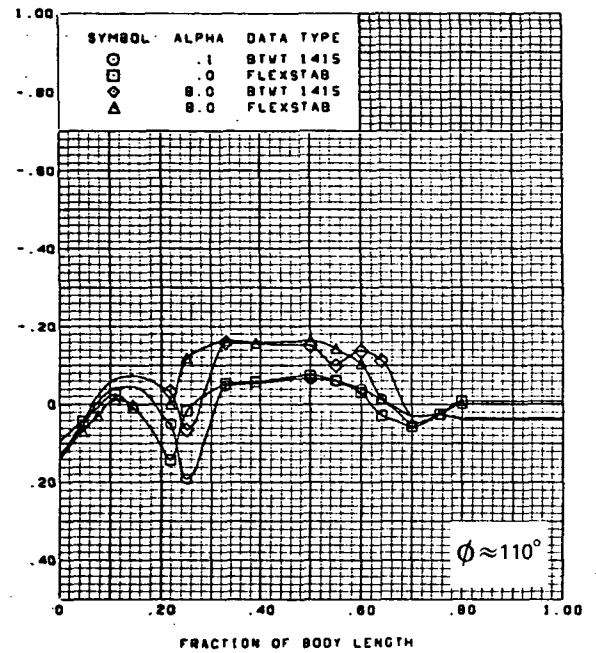
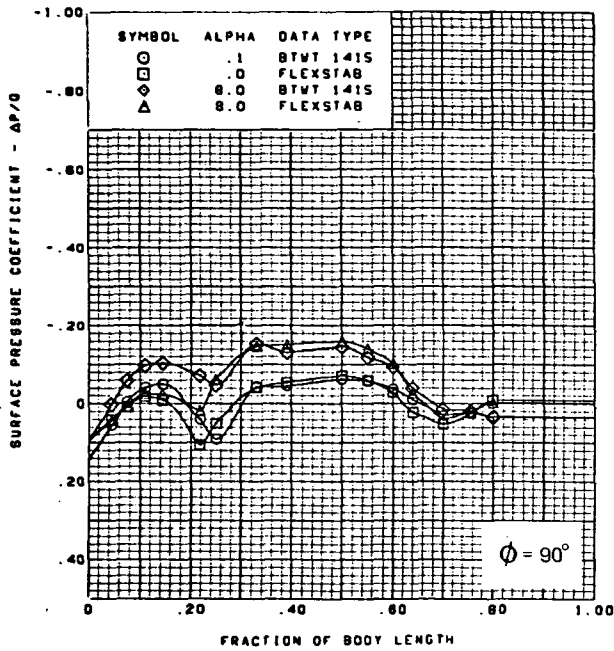
(b) (Concluded)

Figure 47.-(Concluded)



(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.1^\circ$  and  $8.0^\circ$

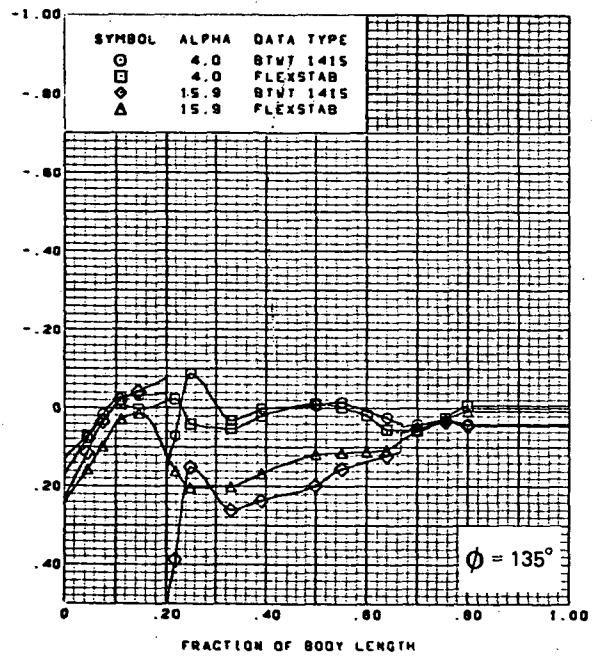
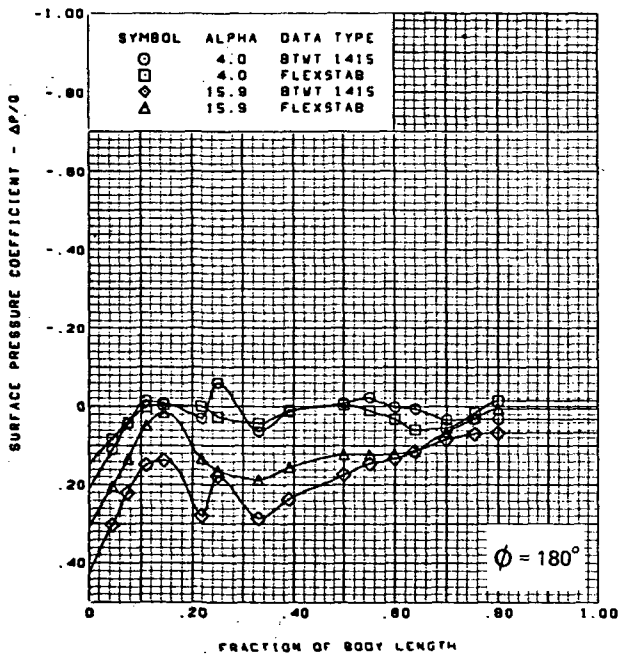
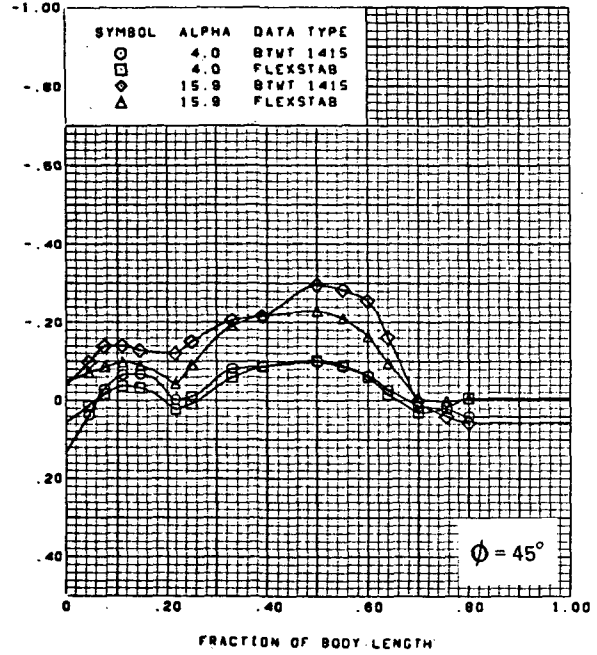
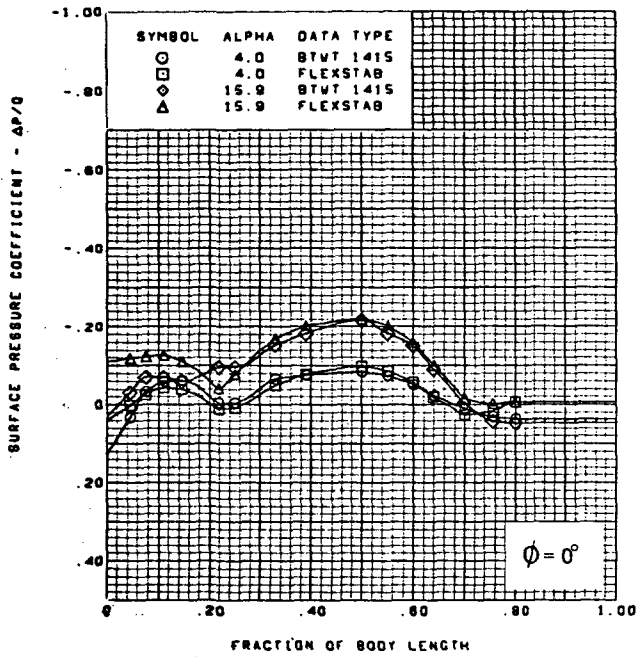
Figure 48.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $12.8^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 0.85$



$M = 0.85$  (run 102)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $12.8^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

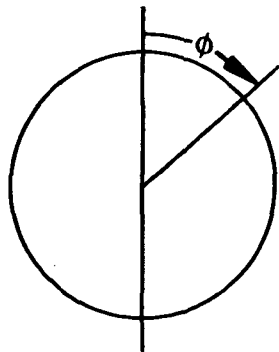
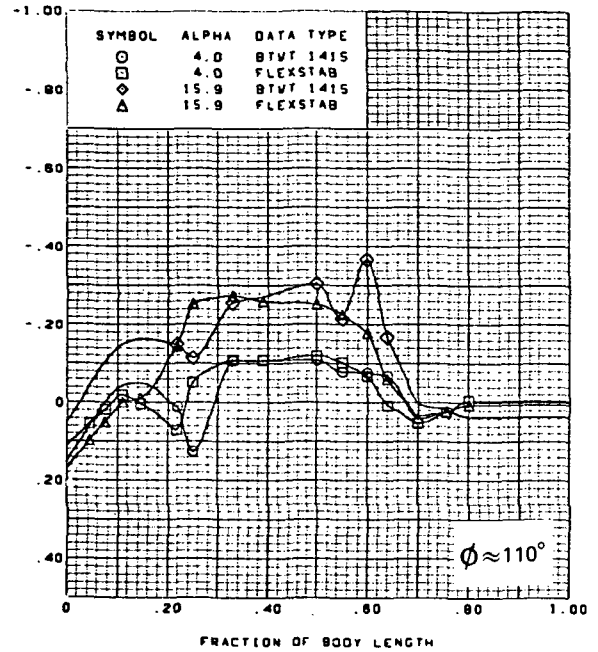
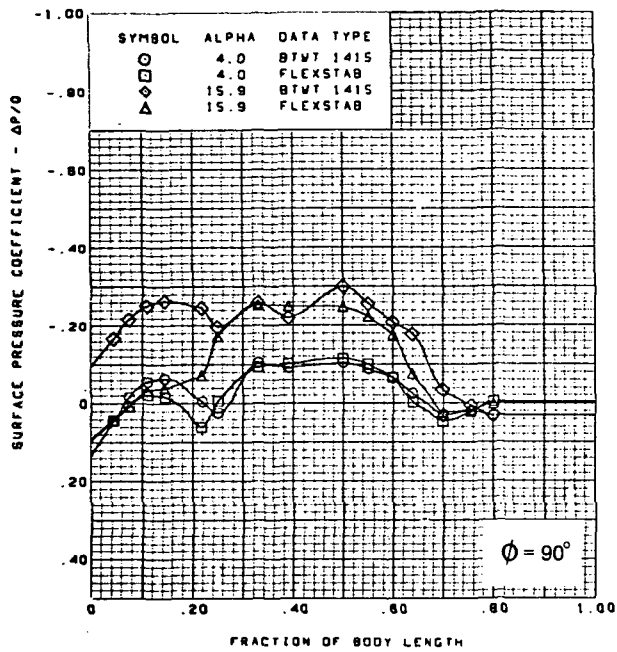
(a) (Concluded)

Figure 48.—(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.9^\circ$

Figure 48.—(Continued)

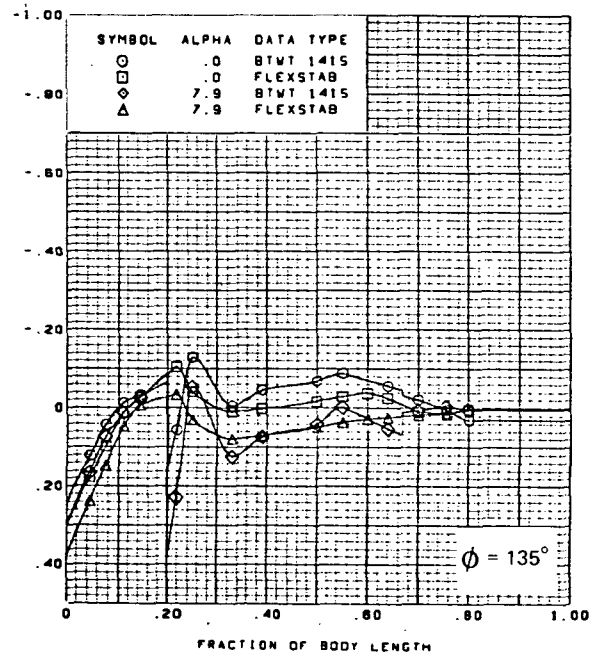
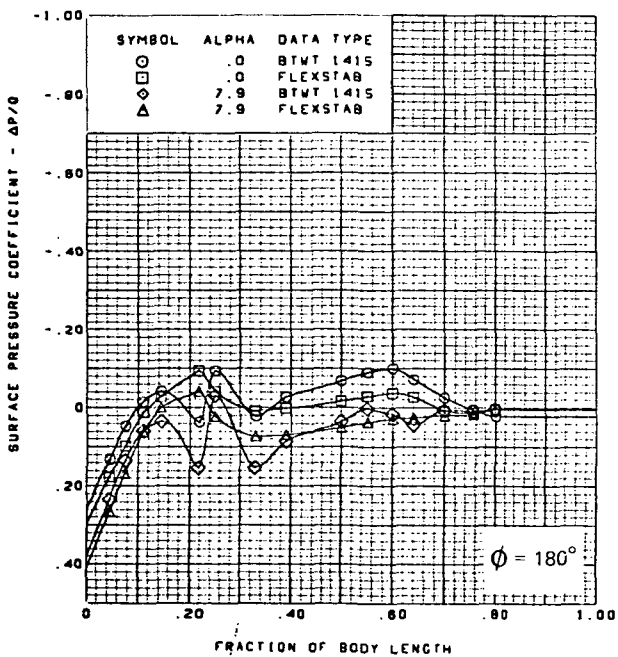
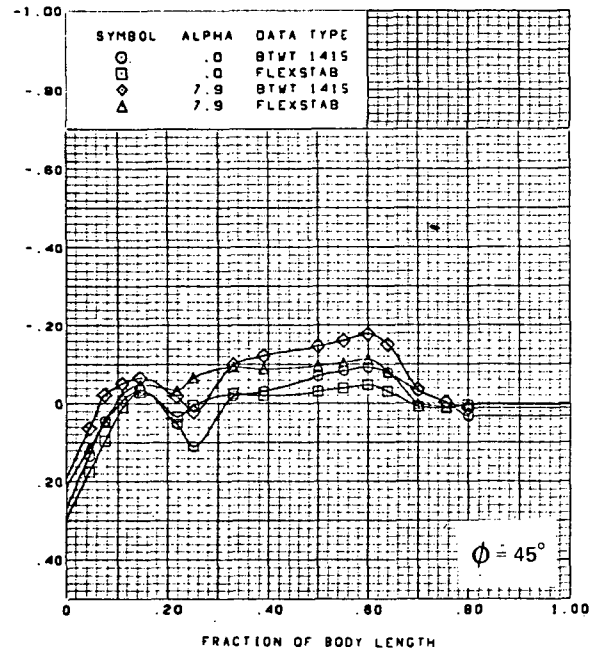
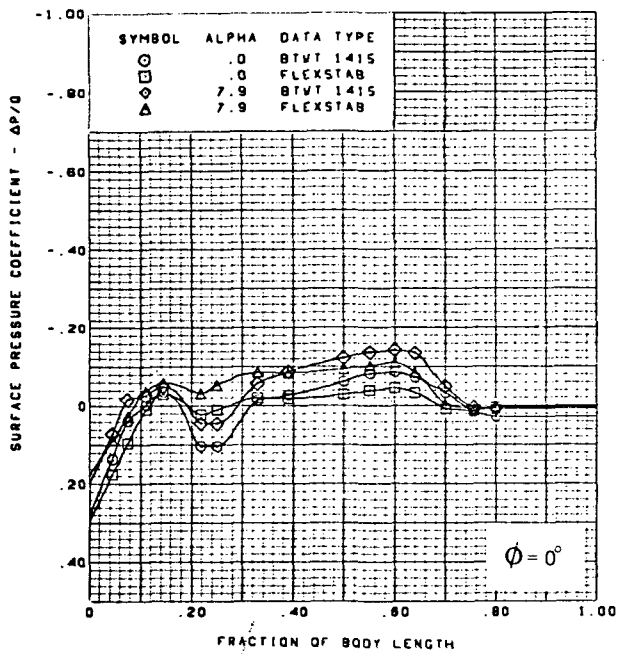


$M = 0.85$  (run 102)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $12.8^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

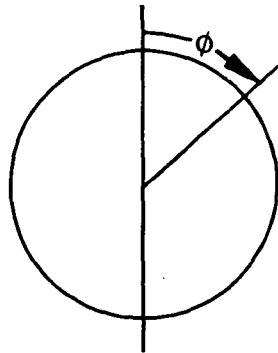
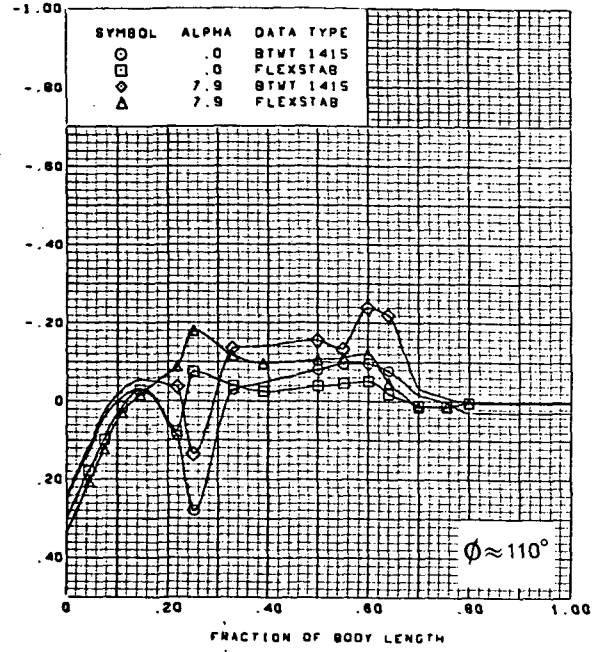
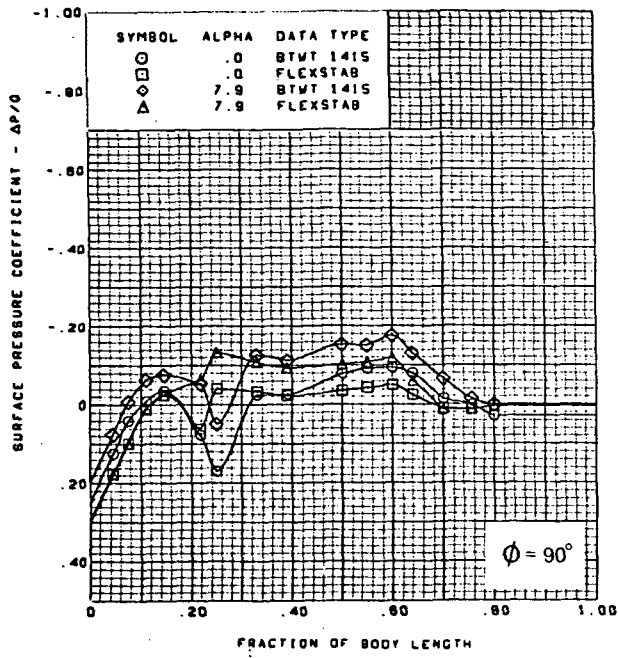
Figure 48.-(Concluded)





(a) Surface Longitudinal Pressure Distributions,  $\alpha = 0.0^\circ$  and  $7.9^\circ$

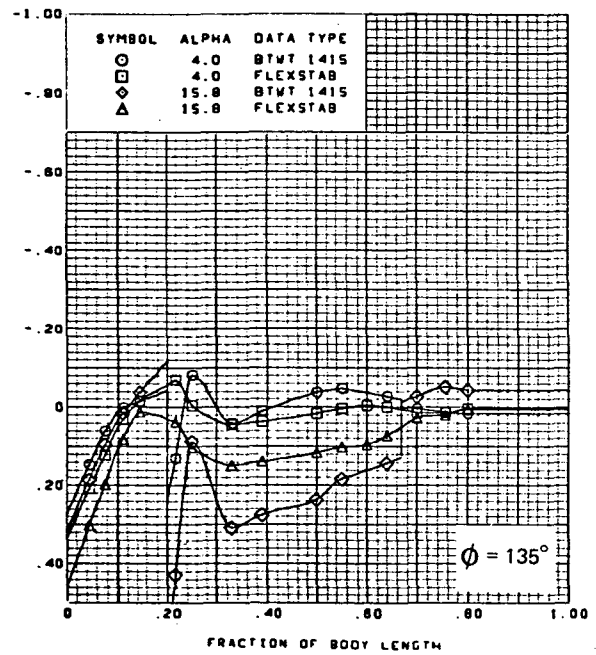
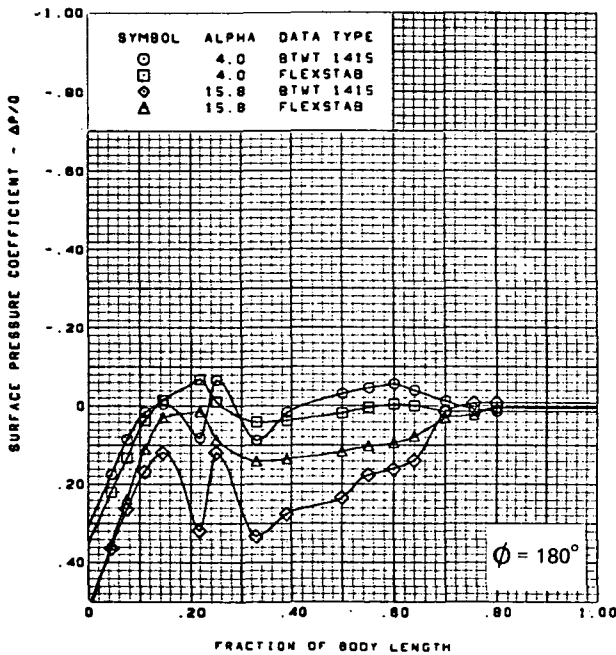
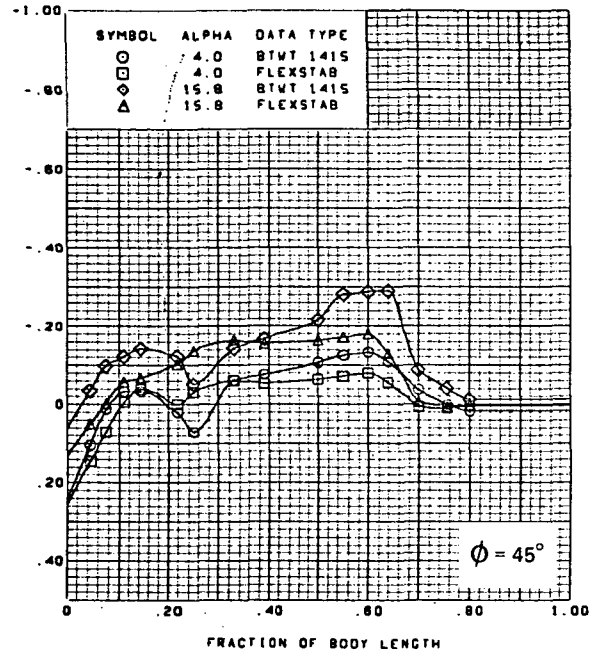
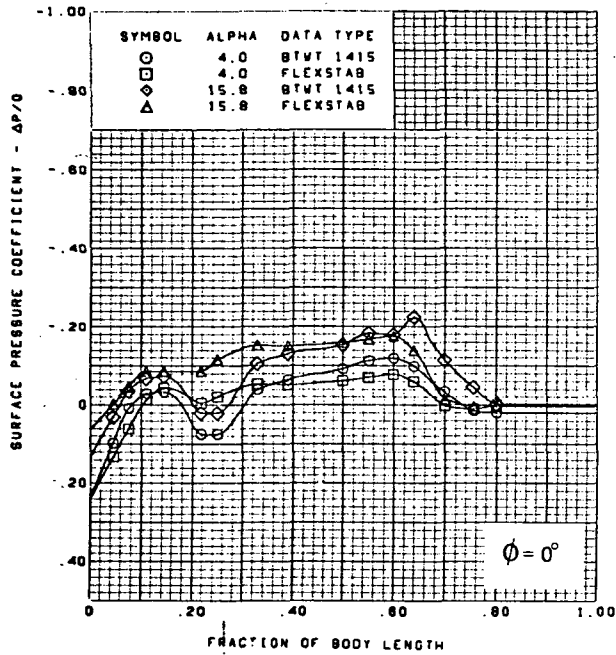
Figure 49.—Body Theory-to-Experiment Comparison; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $12.8^\circ$ ; T.E. Deflection, Full Span =  $0.0^\circ$ ;  $M = 1.05$



$M = 1.05$  (run 99)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $12.8^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

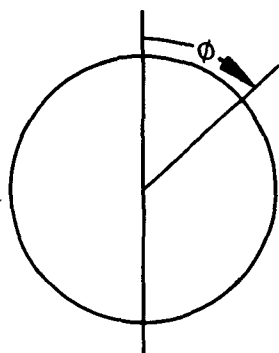
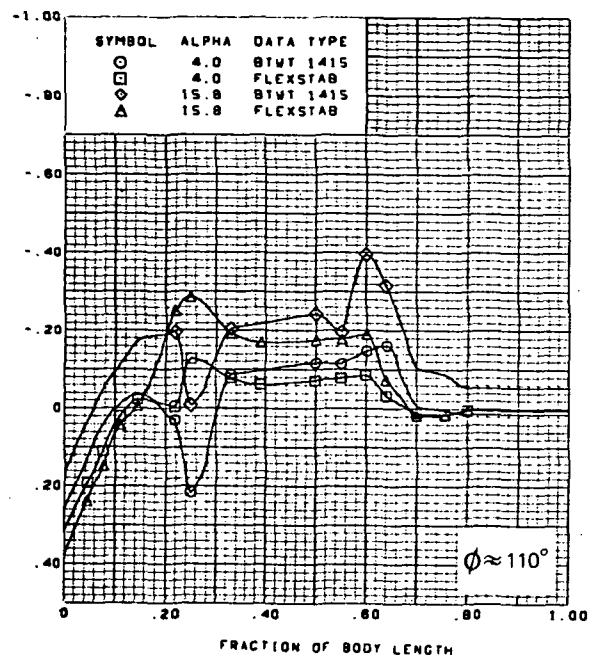
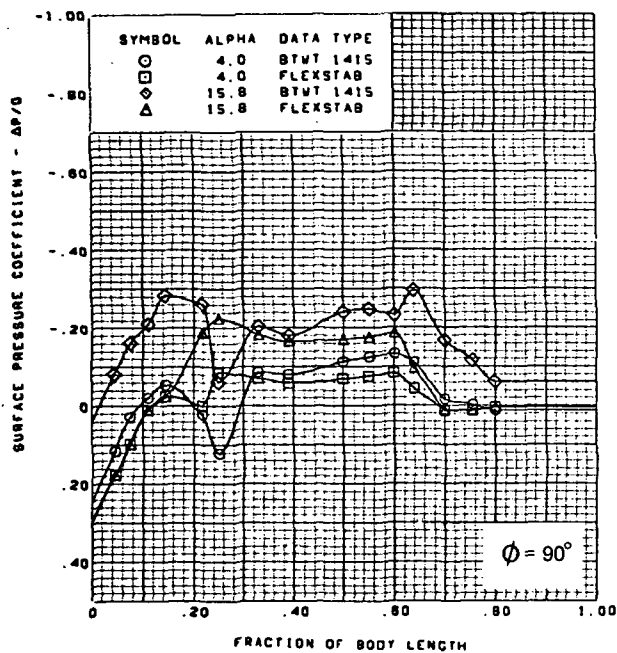
(a) (Concluded)

Figure 49.-(Continued)



(b) Surface Longitudinal Pressure Distributions,  $\alpha = 4.0^\circ$  and  $15.8^\circ$

Figure 49.—(Continued)



$M = 1.05$  (run 99)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $12.8^\circ$   
 T.E. deflection, full span =  $0.0^\circ$

(b) (Concluded)

Figure 49.-(Concluded)

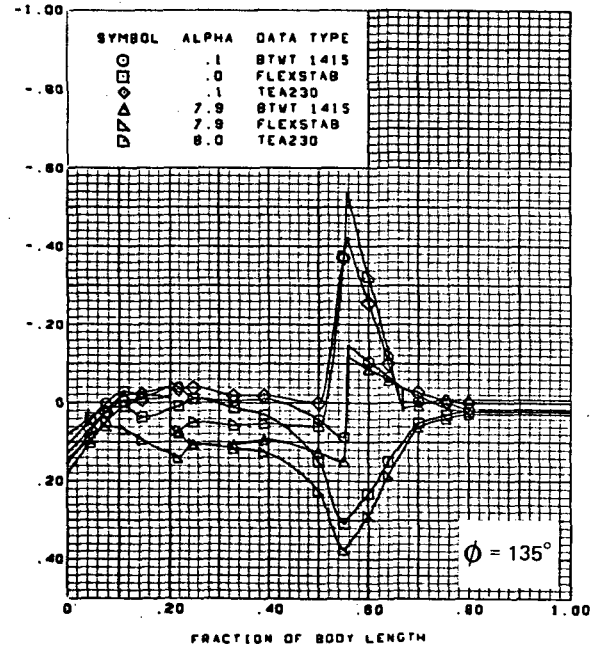
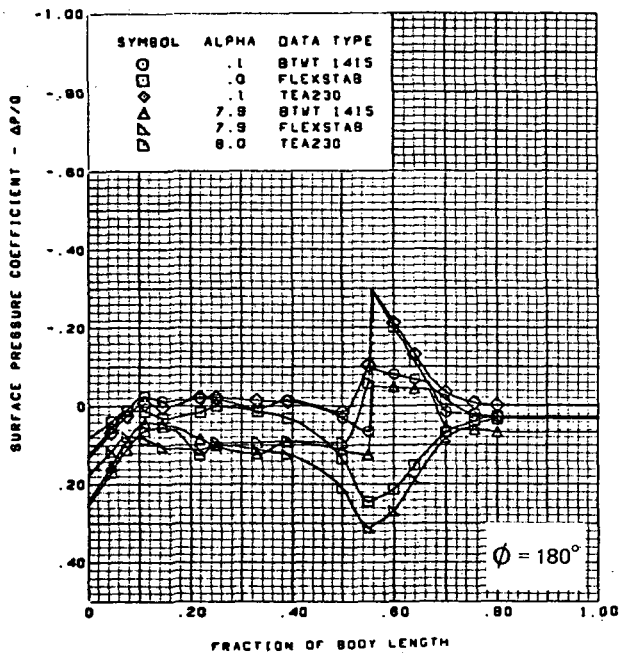
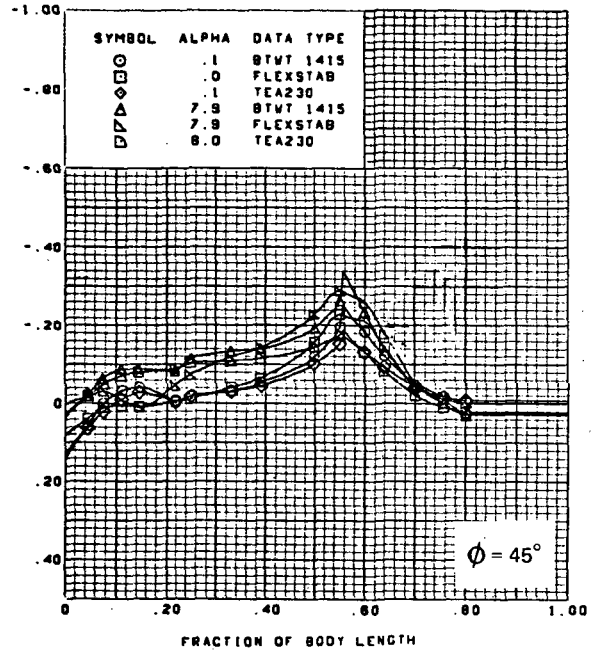
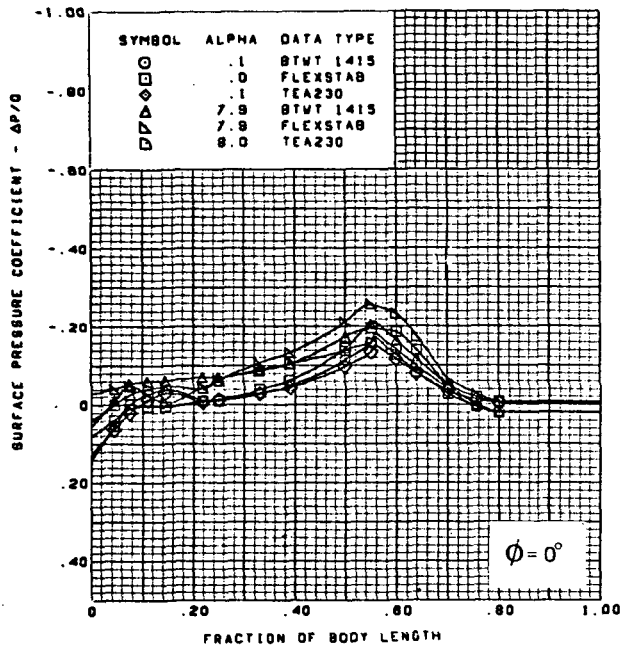
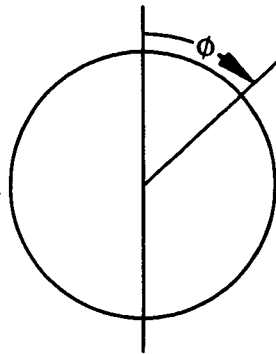
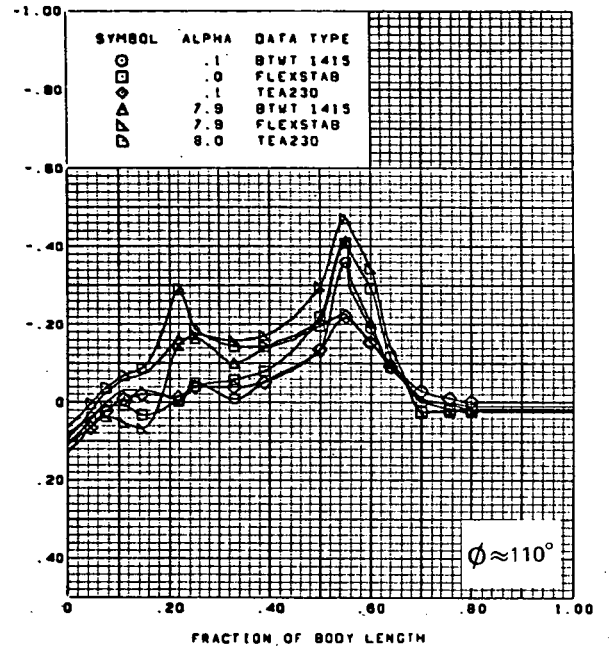
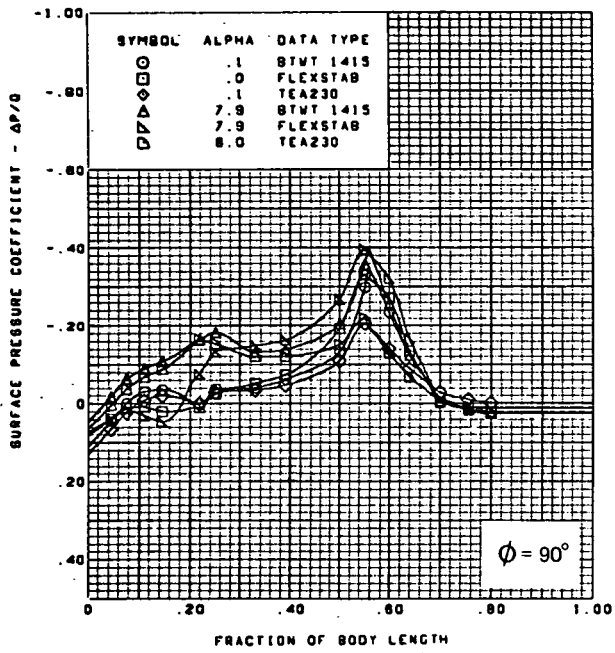


Figure 50.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $17.7^\circ$ ;  $M = 0.40$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 0.40$  (run 32)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

Figure 50.—(Concluded)

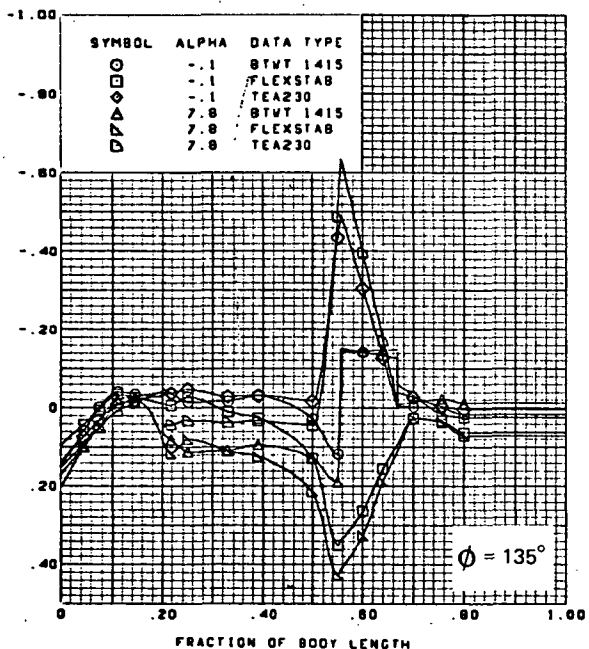
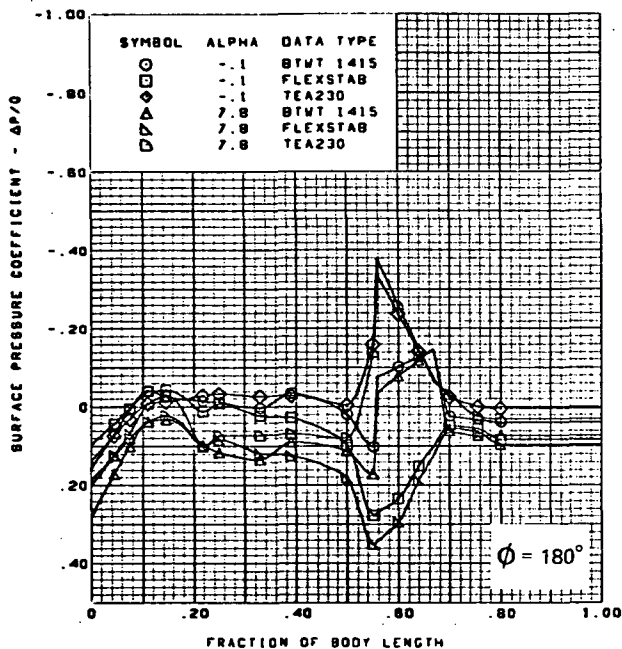
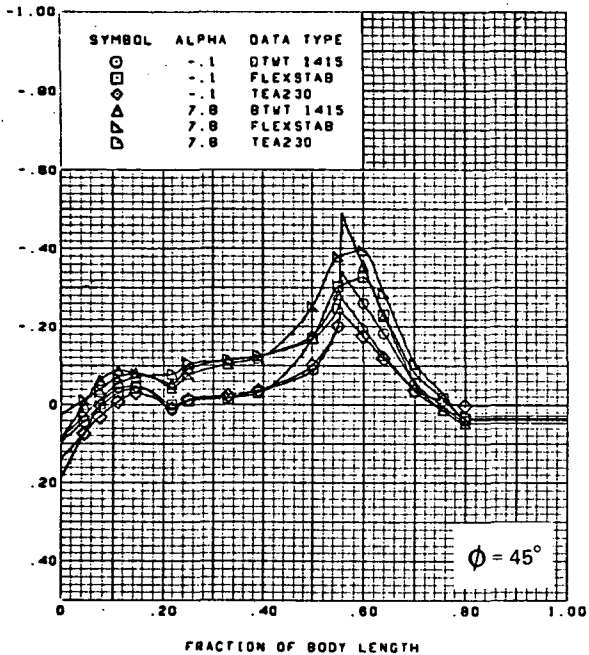
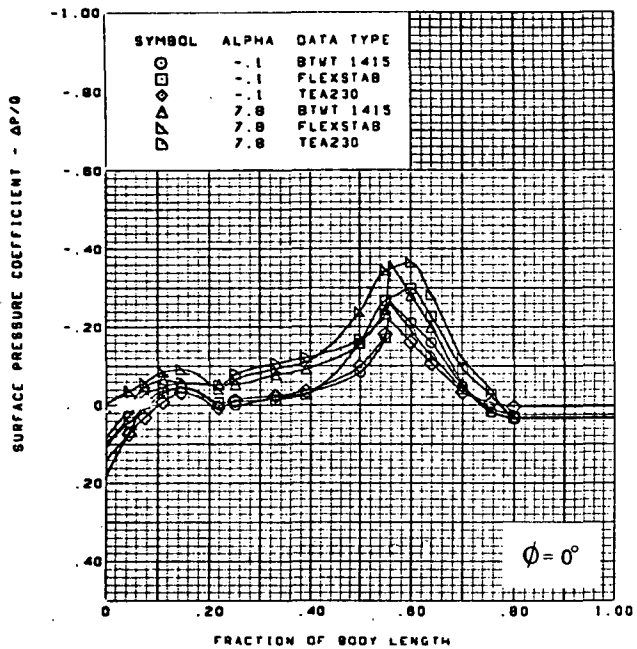
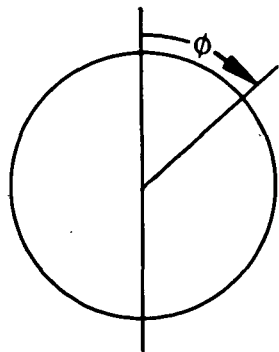
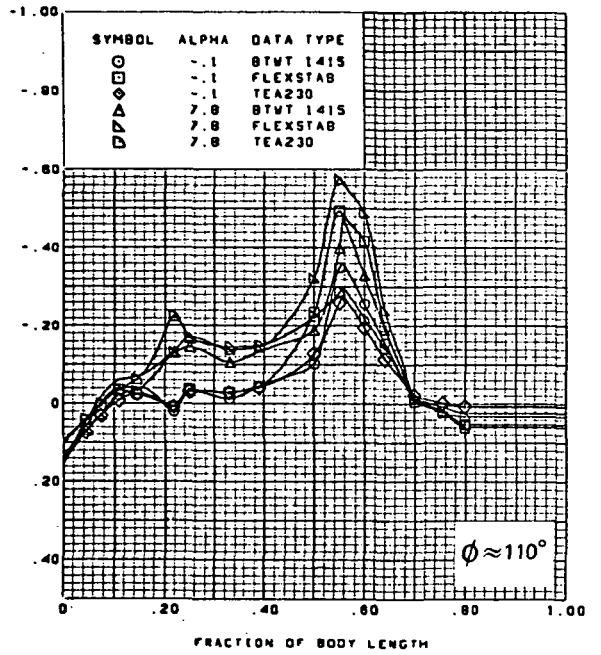
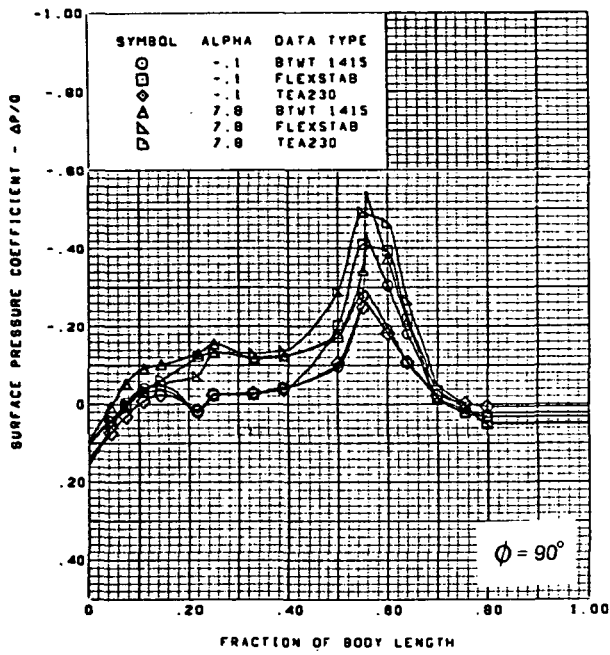


Figure 51.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $17.7^\circ$ ;  $M = 0.85$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 0.85$  (run 31)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

Figure 51.—(Concluded)



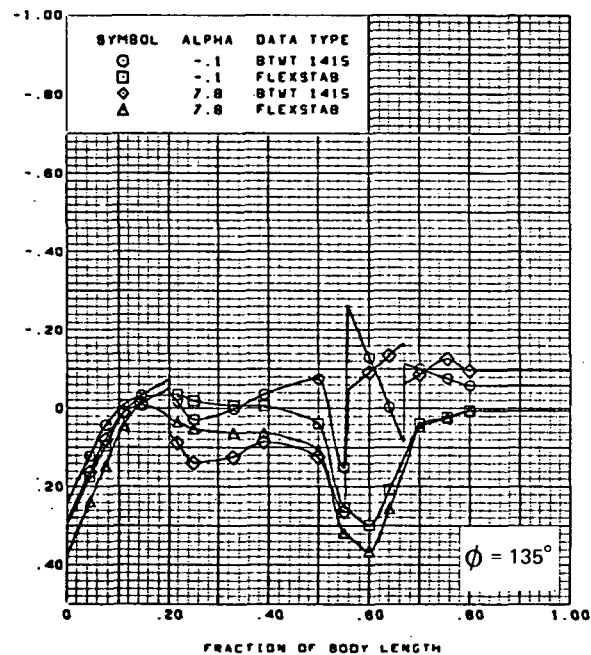
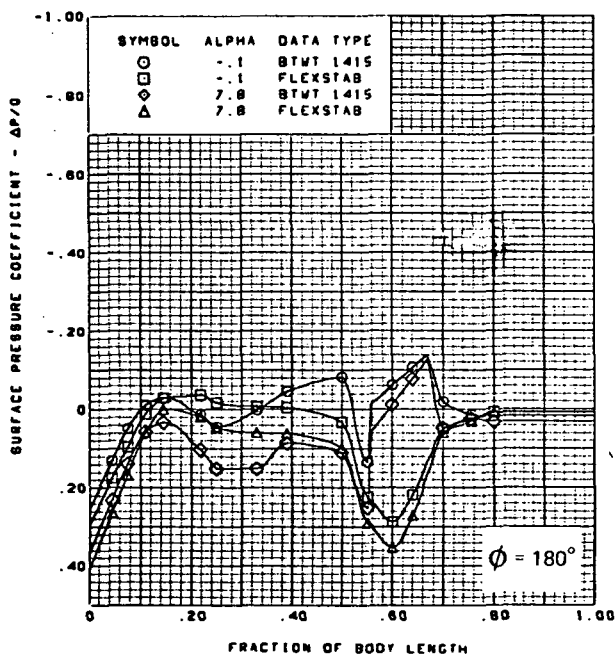
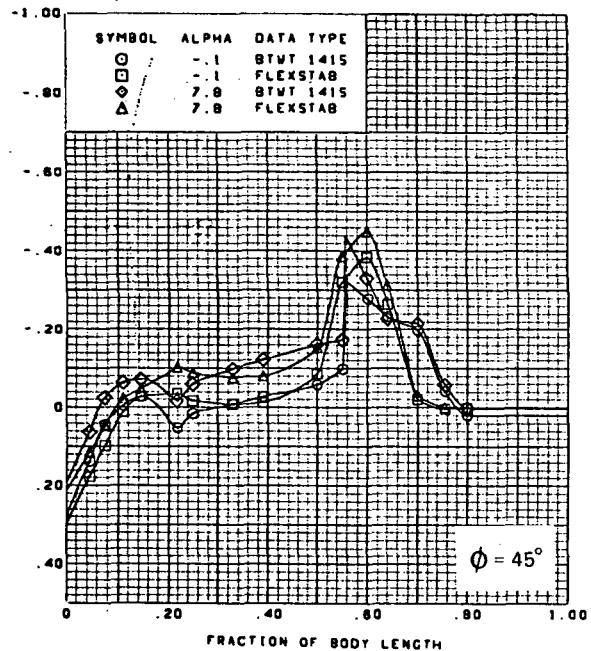
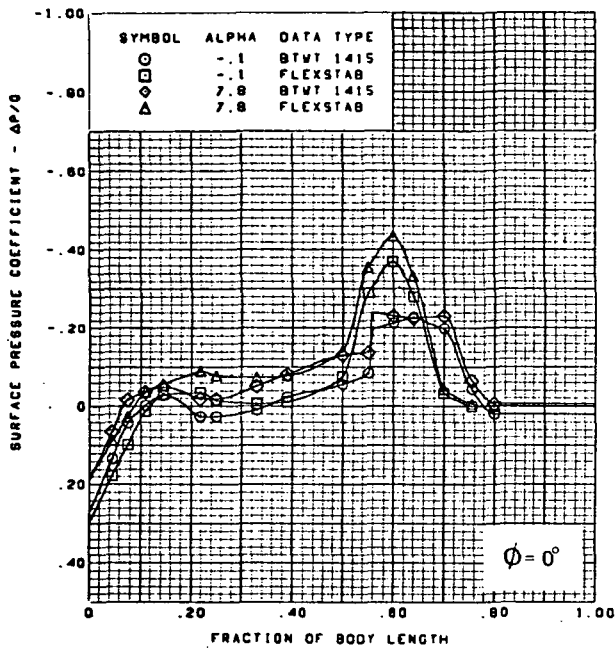
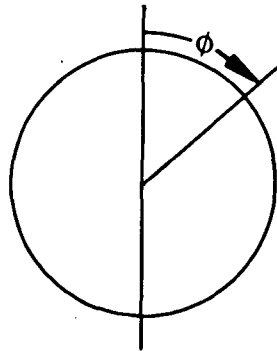
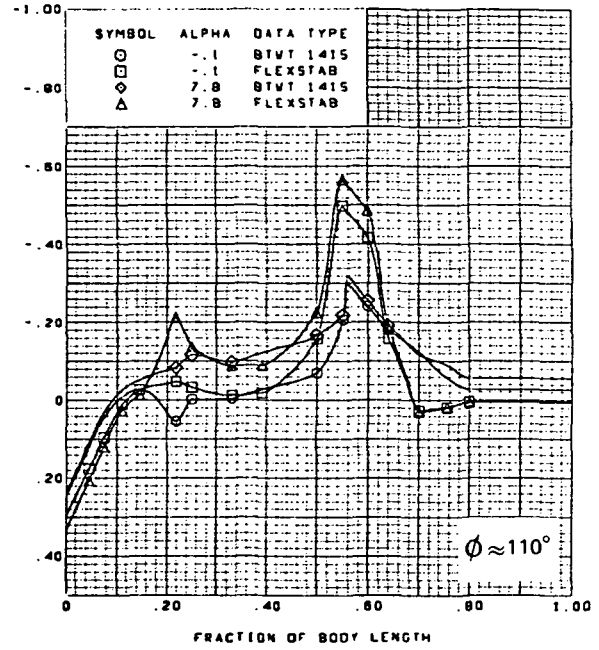
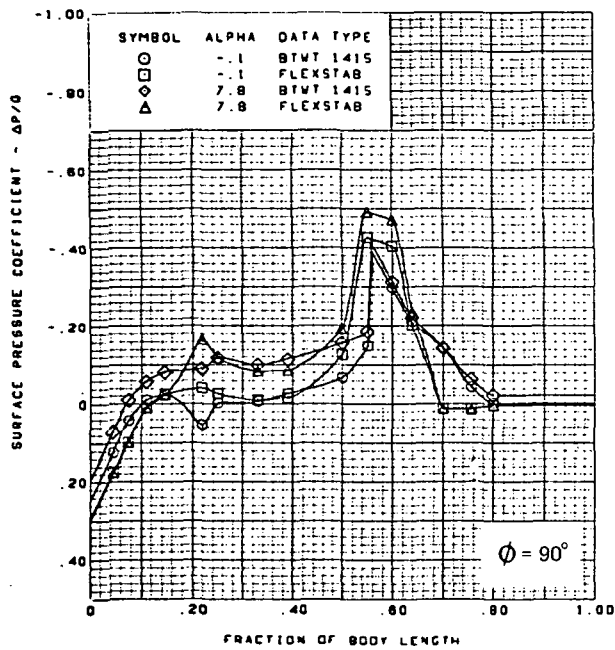


Figure 52.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $17.7^\circ$ ;  $M = 1.05$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 1.05$  (run 28)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $17.7^\circ$

Figure 52.- (Concluded)

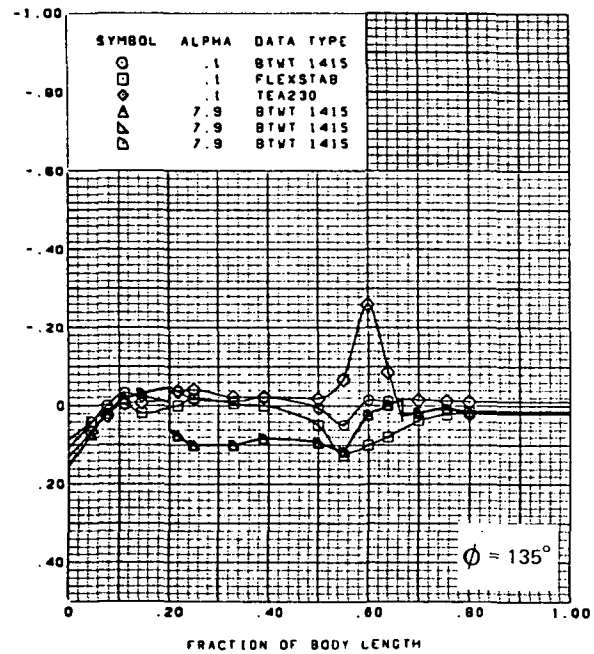
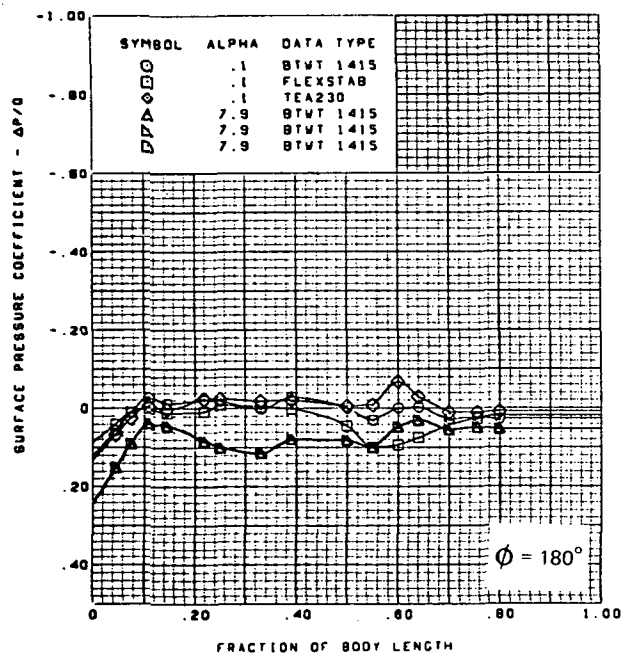
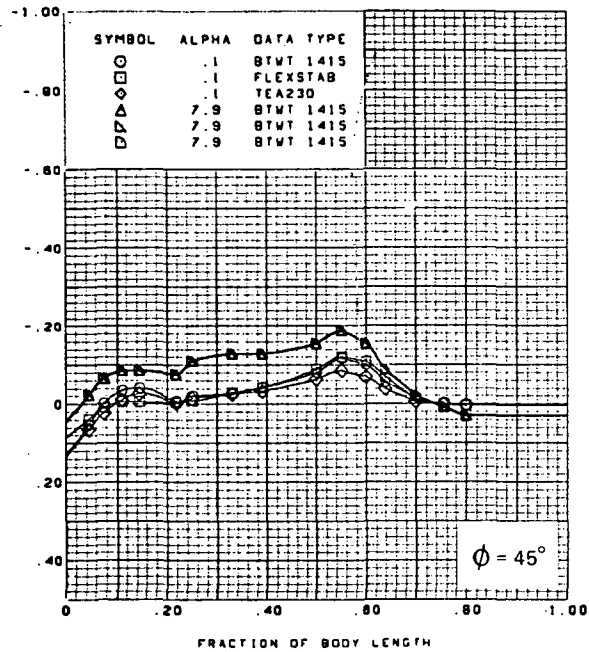
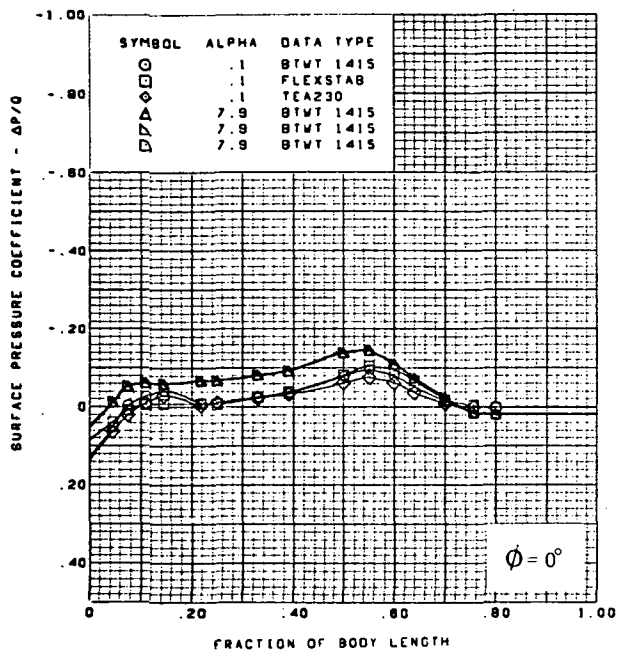
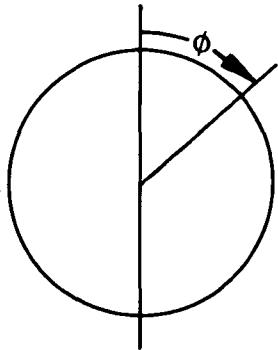
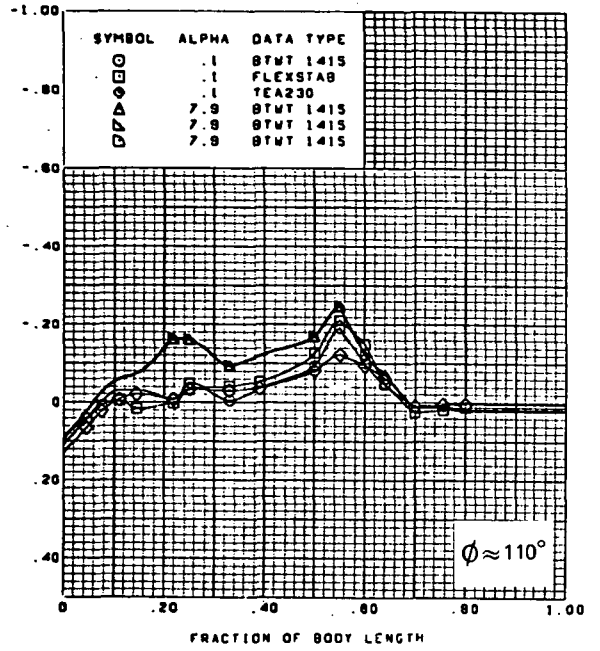
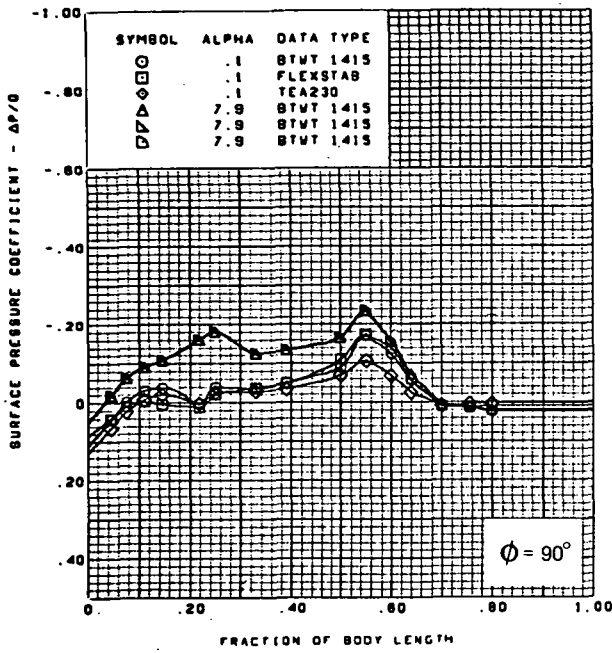


Figure 53.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$ ;  $M = 0.40$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 0.40$  (run 46)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

Figure 53.--(Concluded)

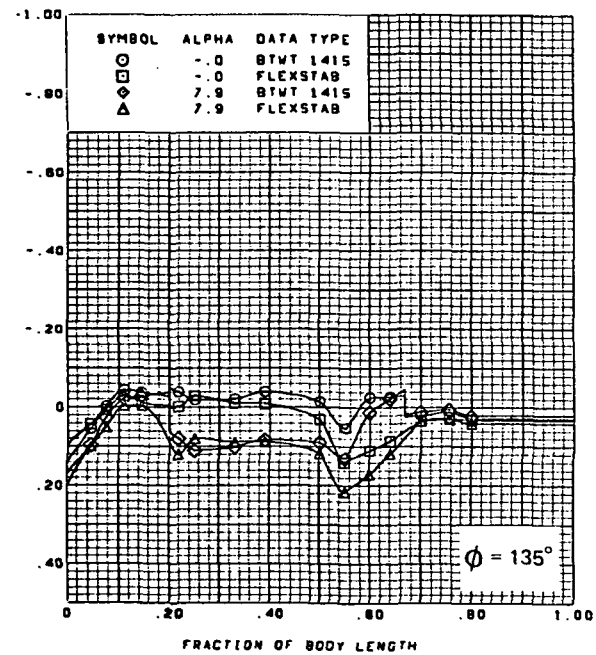
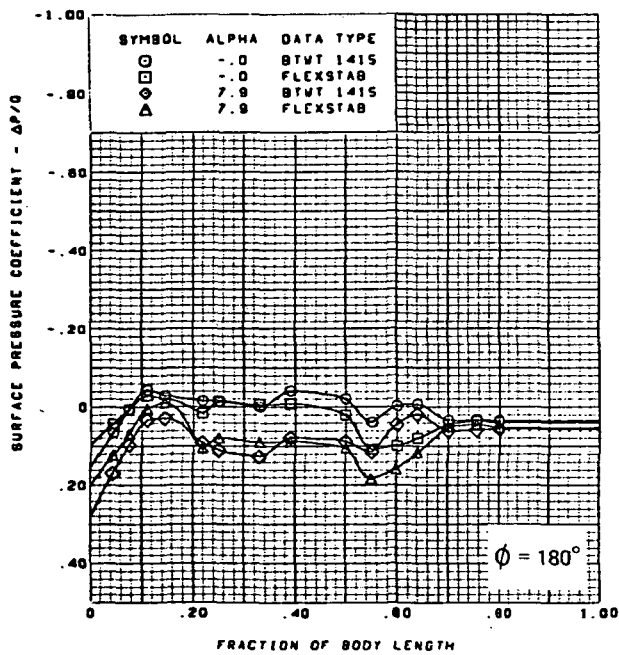
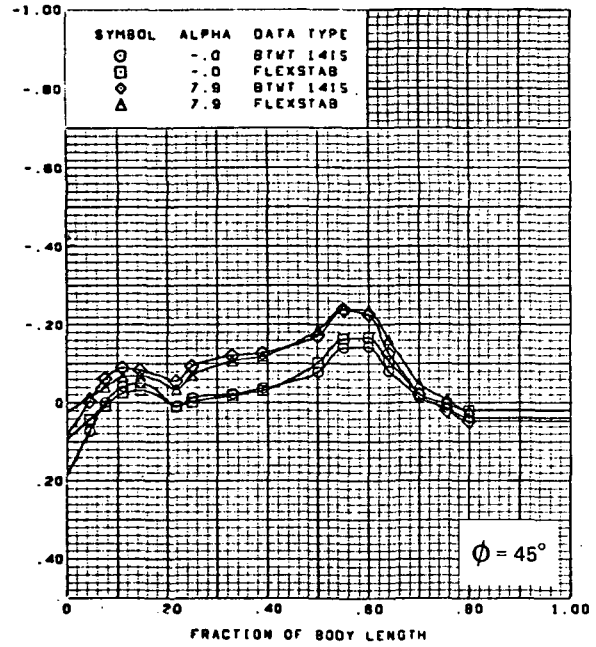
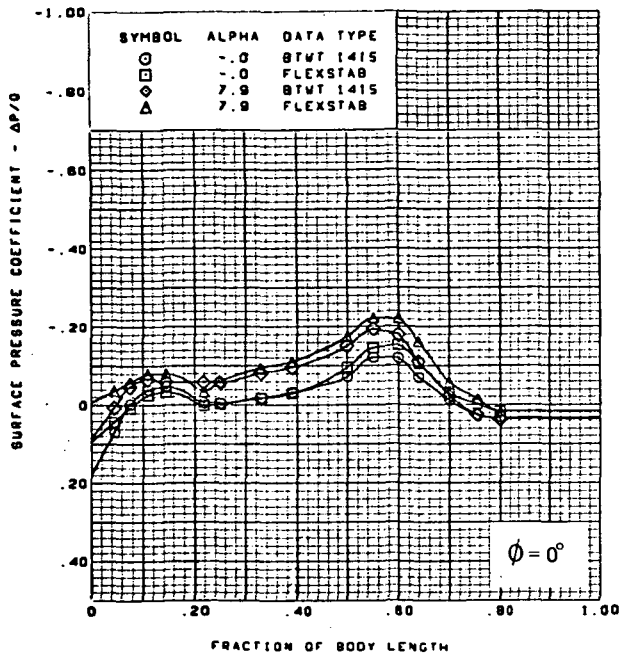
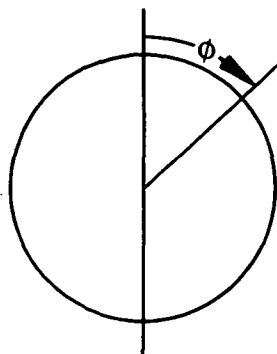
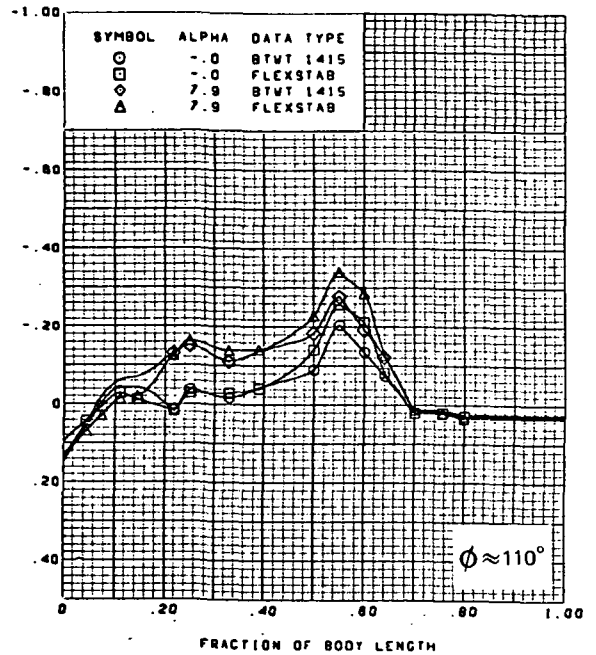
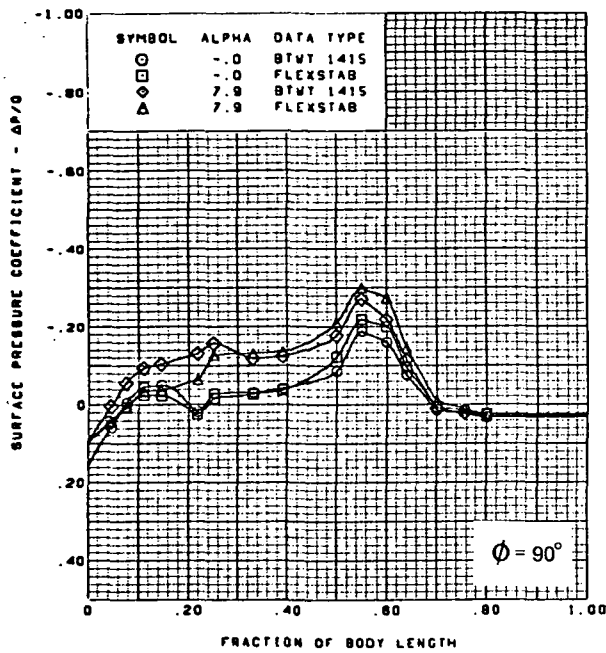


Figure 54.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$ ;  $M = 0.85$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 0.85$  (run 45)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

Figure 54.--(Concluded)

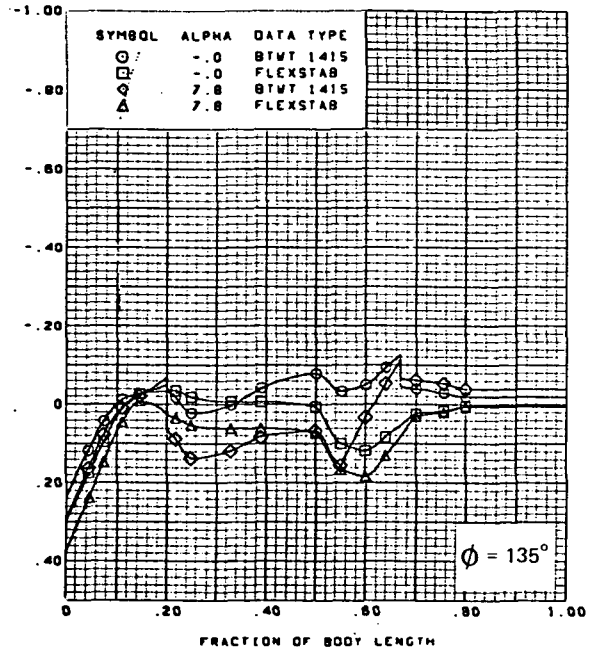
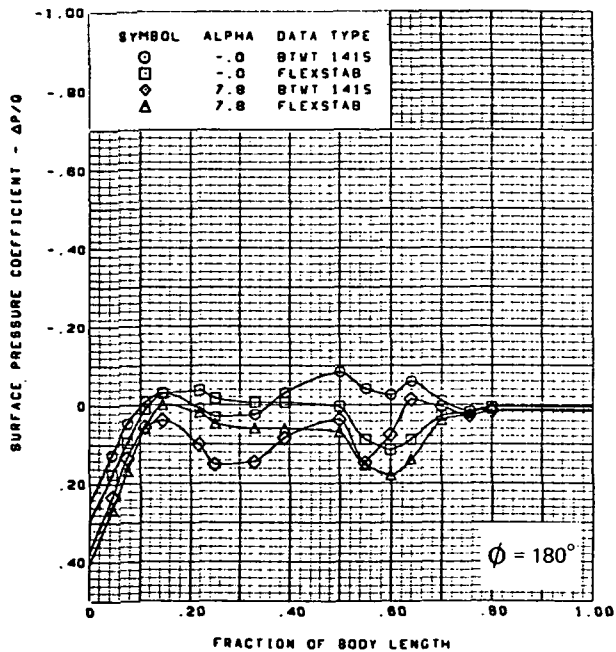
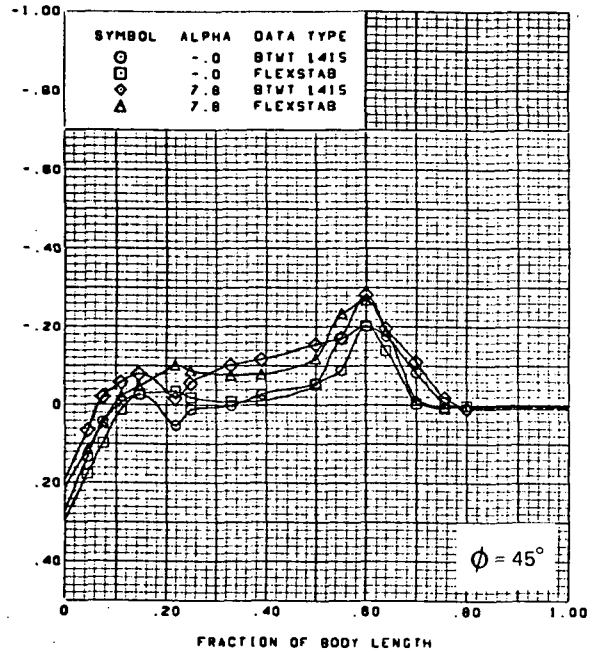
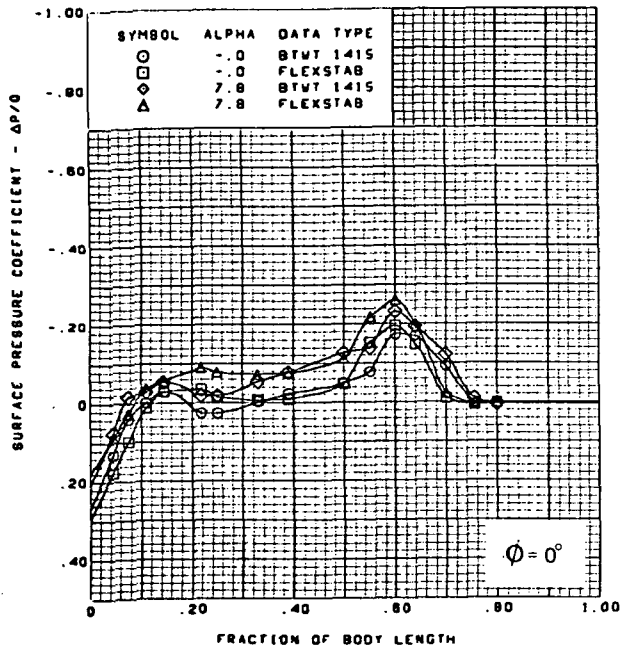
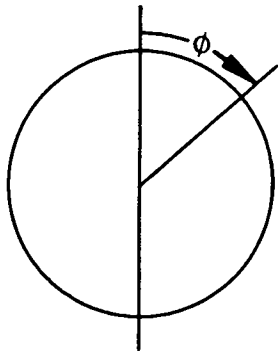
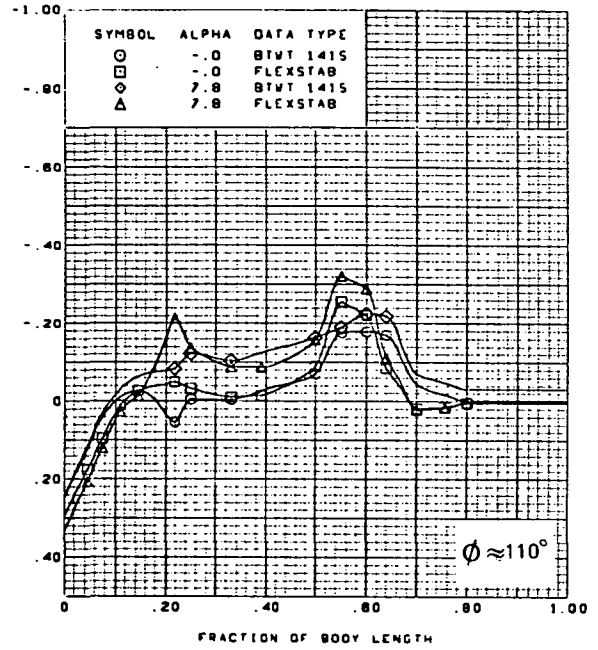
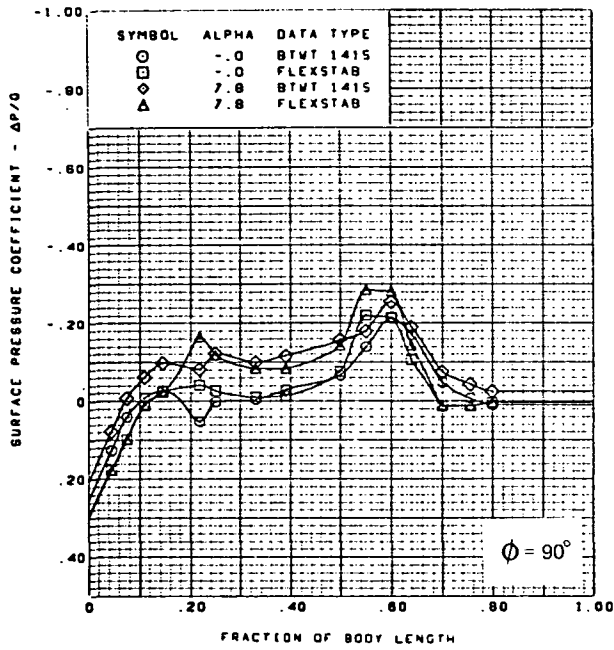


Figure 55.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $8.3^\circ$ ;  $M = 1.05$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 1.05$  (run 42)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $8.3^\circ$

Figure 55.—(Concluded)



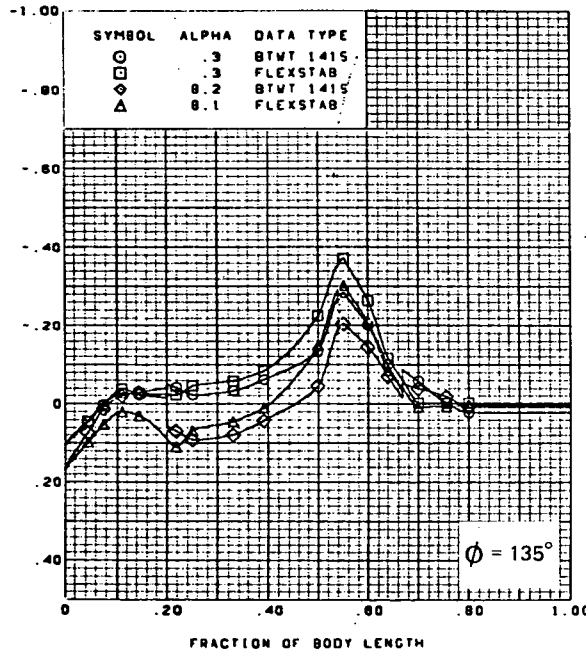
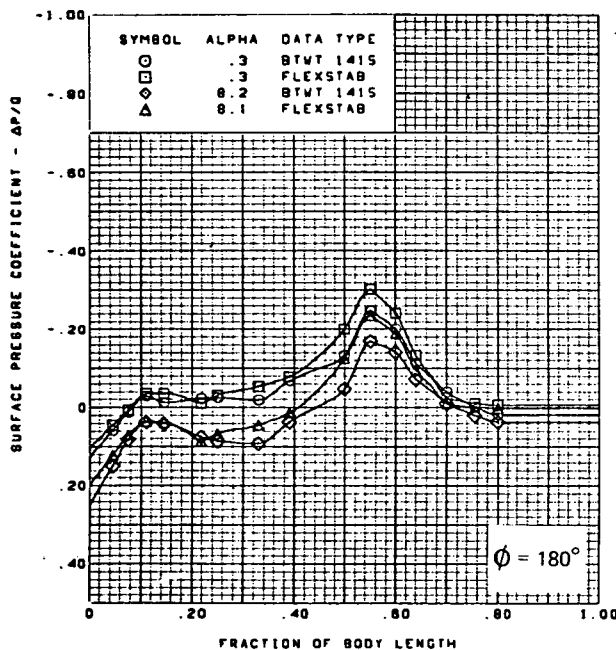
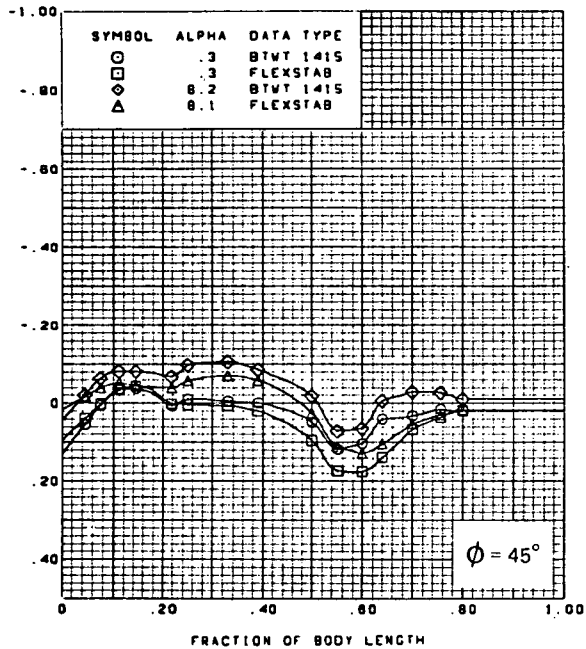
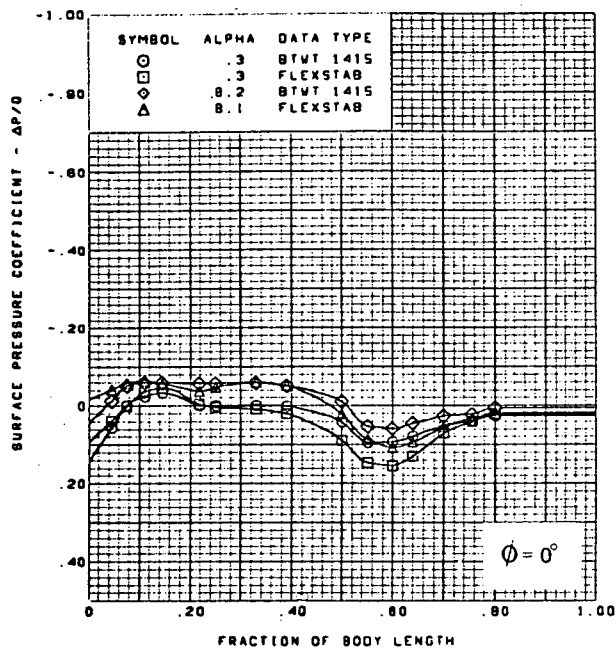
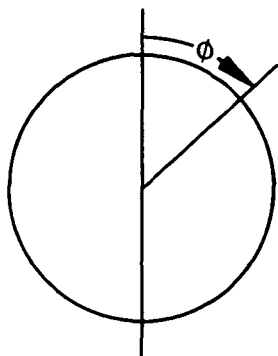
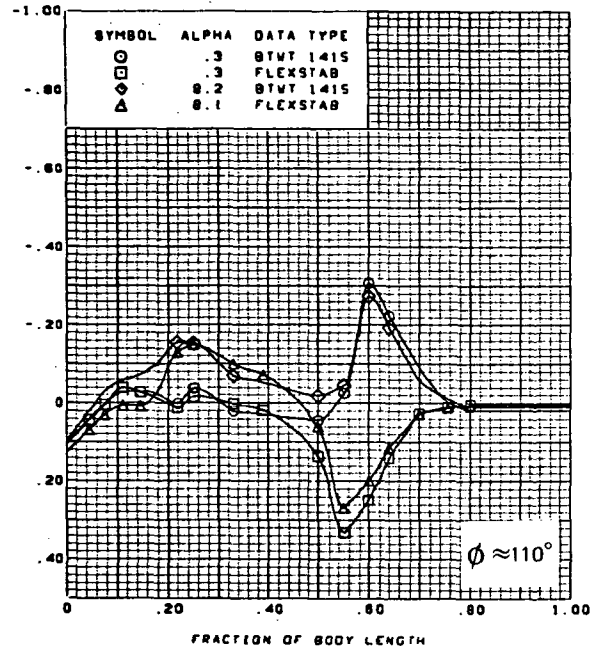
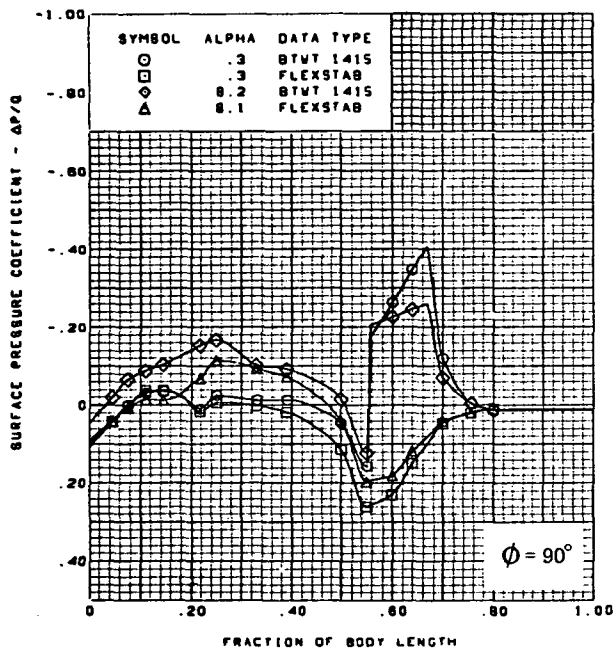


Figure 56.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $-17.7^\circ$ ;  $M = 0.40$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 0.40$  (run 66)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $-17.7^\circ$

Figure 56.-(Concluded)

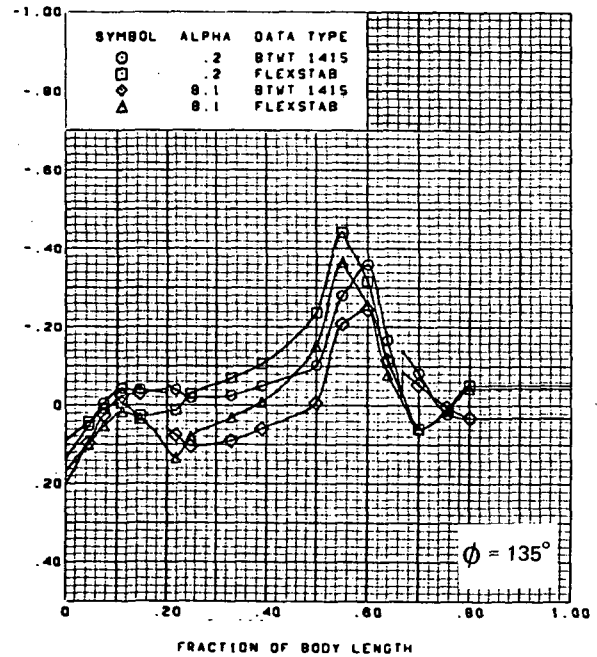
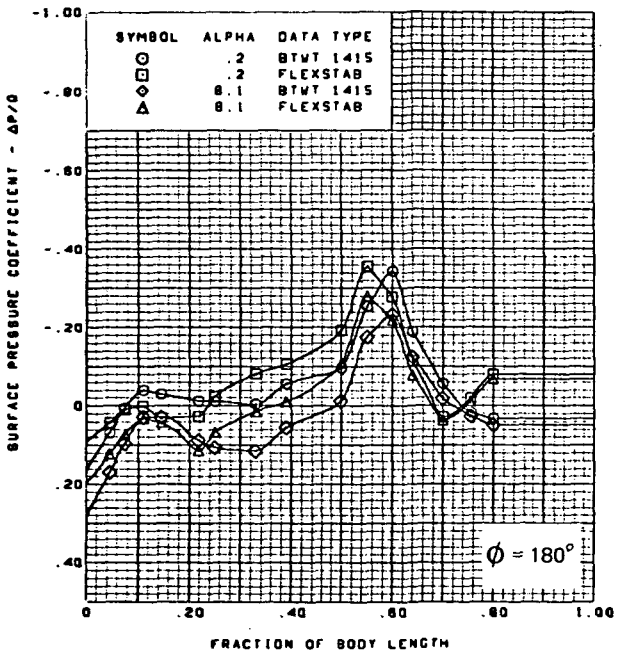
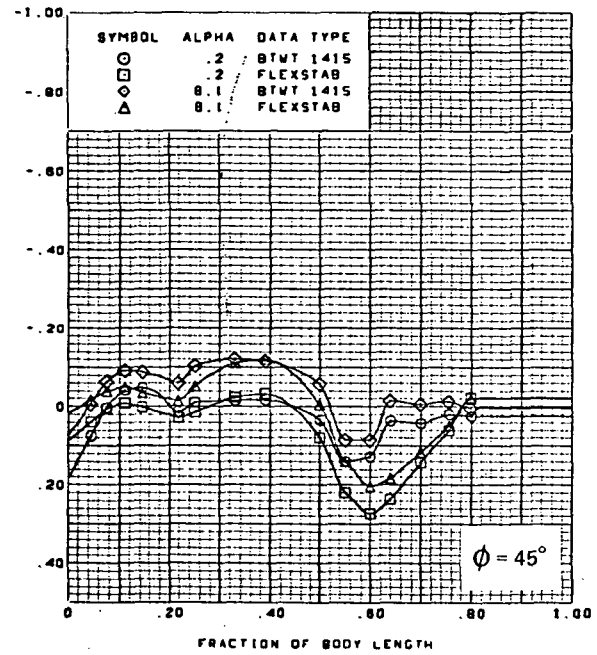
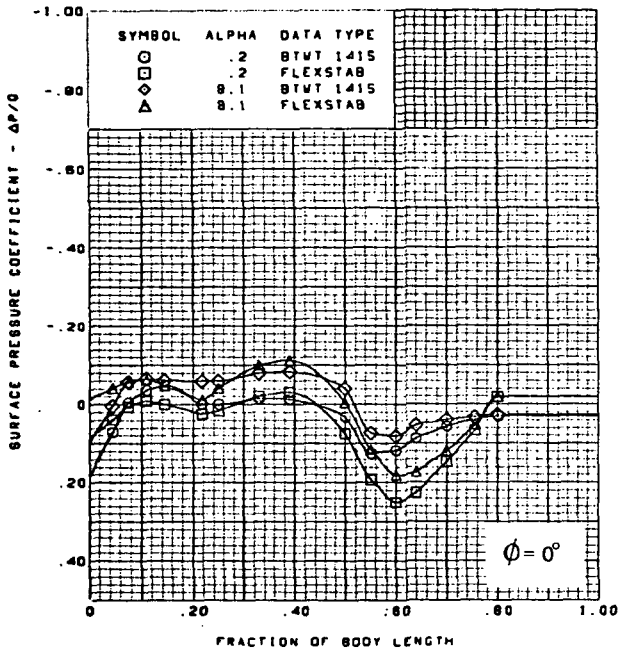
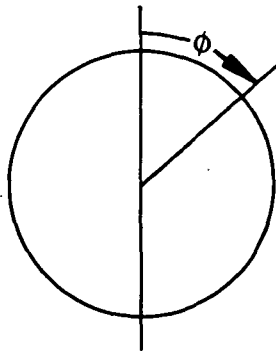
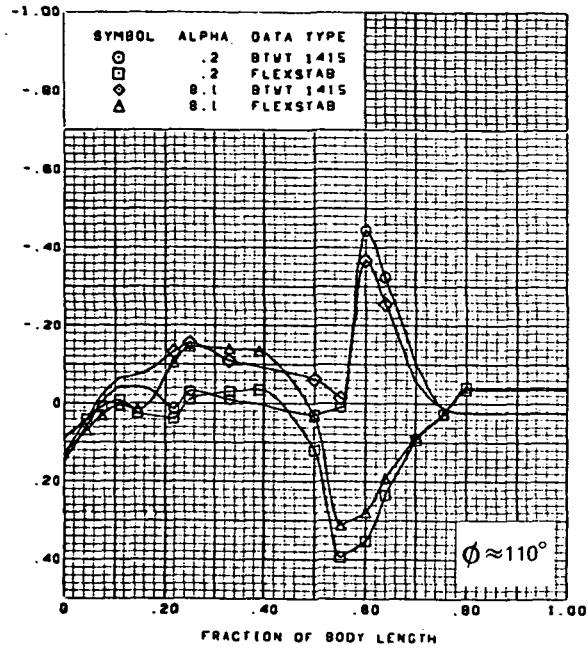
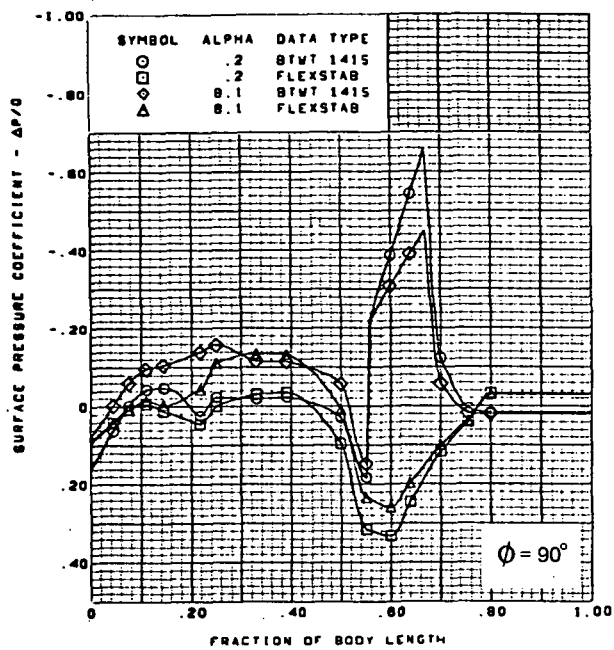


Figure 57.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $-17.7^\circ$ ;  $M = 0.85$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 0.85$  (run 65)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $-17.7^\circ$

Figure 57.-(Concluded)

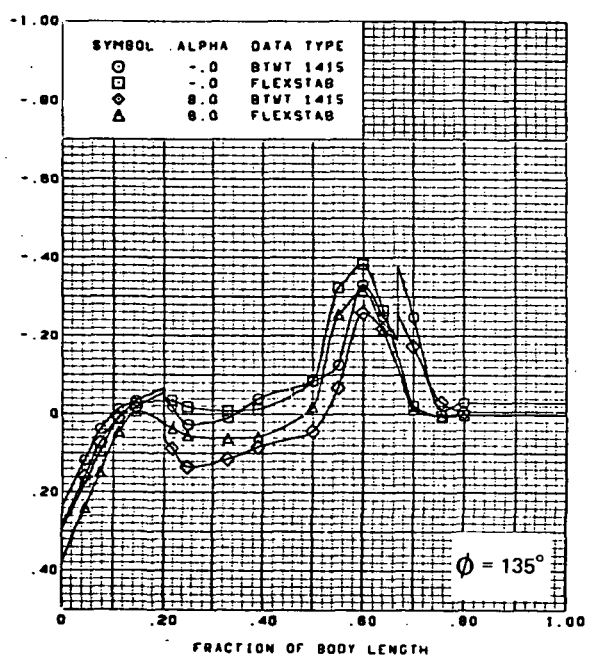
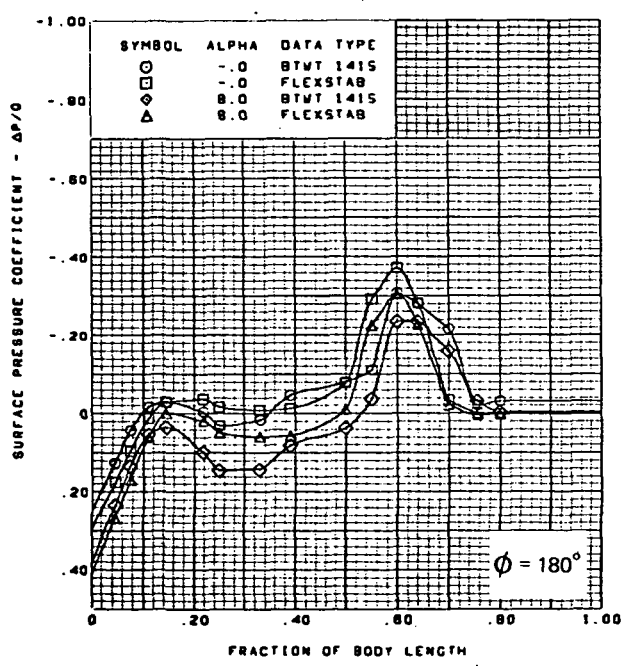
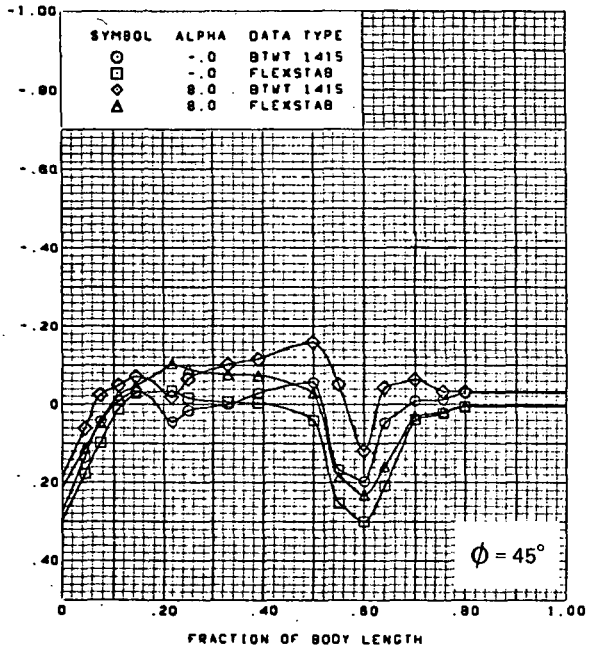
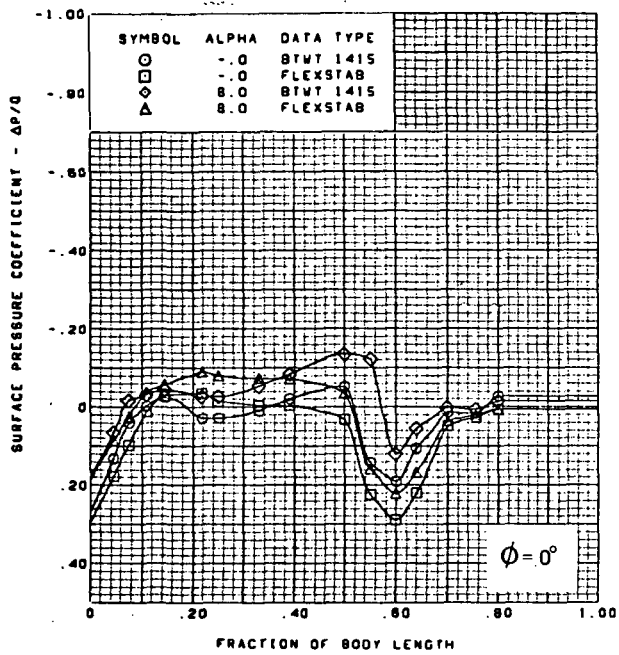
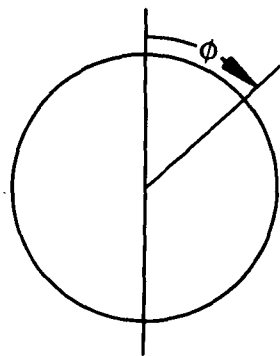
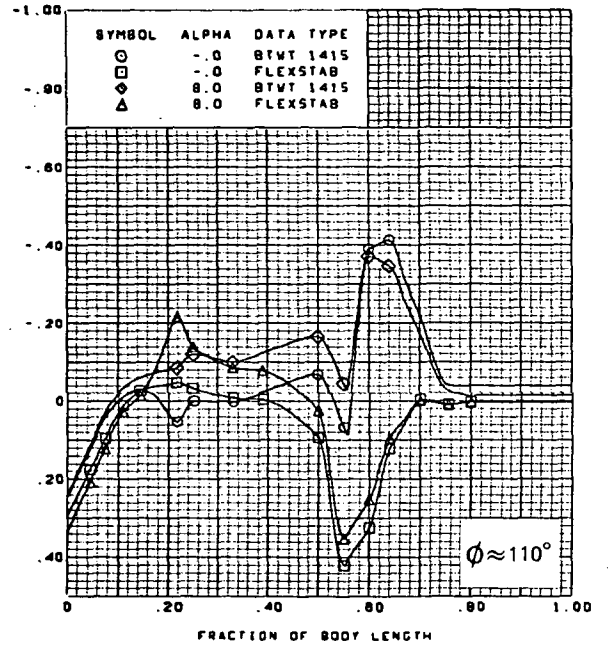
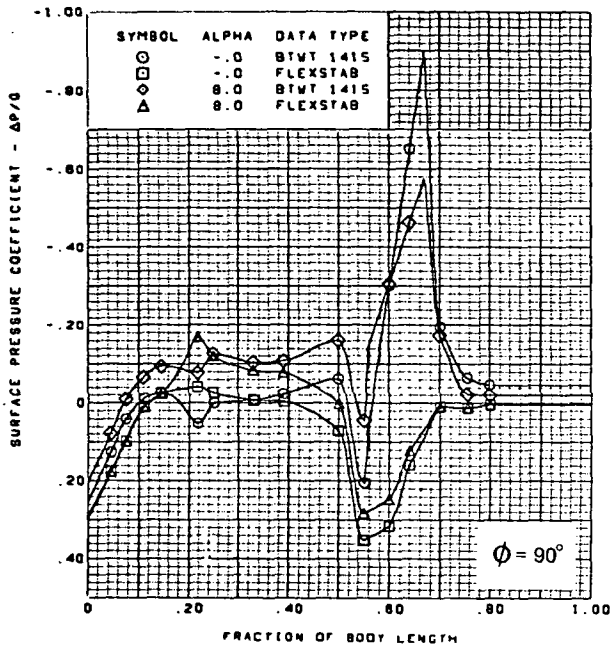


Figure 58.—Body Theory-to-Experiment Comparison—Surface Longitudinal Pressure Distributions; Flat Wing; Round L.E.; L.E. Deflection, Full Span =  $0.0^\circ$ ; T.E. Deflection, Full Span =  $-17.7^\circ$ ;  $M = 1.05$ ;  $\alpha \approx 0.0^\circ$  and  $8.0^\circ$



$M = 1.05$  (run 62)  
 Flat wing, round L.E.  
 L.E. deflection, full span =  $0.0^\circ$   
 T.E. deflection, full span =  $-17.7^\circ$

Figure 58.—(Concluded)