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TECHNICAL REPORT

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LITTLE AMERICA V MICROMETEOROLOGY PROGRAM

DATA AND ANALYSIS

by

Heinz H. Lettau

Sarah H. Wollaston

Paul C. Dalrymple

January 1967

UNITED STATES ARMY
NATICK LABORATORIES
Natick, Massachusetts

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INSTITUTE OF POLAR STUDIES

OHIO STATE UNIVERSITY, COLUMBUS, OHIO

Earth Sciences Division

ES-29

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U.S. Army Materiel Command
U.S. ARMY NATICK LABORATORIES
Natick, Massachusetts

FOREWORD

During the International Geophysical Year (IGY), the Quartermaster Research and Engineering Center (now the U.S. Army Natick Laboratories) conducted the micrometeorological programs at Little America V in 1957 and at the South Pole in 1958. These programs were part of the United States National Committee-IGY glaciology program. The observations at the South Pole, made by Dr. Paul C. Dalrymple, were published in 1961; their analysis was published in 1963. The present report analyzes his observations at Little America V, and the data are appended in the form of tables of hourly raw data and means. The analysis has been directed toward determining the energy exchanges at the snow-air interface at Little America V. The exchanges have been computed by a systematic analysis of all available Little America V micrometeorological data. Additional climatic analysis of a less specialized character is included as background for the micrometeorological observations. Since the field program was discontinued in 1957, this study contains the analysis of the whole body of data obtained in the Quartermaster micrometeorological program at Little America V.

The study of the environment in the Antarctic at Little America V and at the South Pole has provided vital data and information on two contrasting climates from the least-known continent on earth. The knowledge gained has been added to allied studies in micrometeorology which have been made at various sites in the Northern Hemisphere. Information obtained from such studies can be applied to other polar regions. Little America V lies in the same latitude as Northern Greenland and the northern islands of the Canadian Archipelago. Little America V was perhaps a better place than anywhere in the Arctic to initiate such micrometeorological research, as it is located on the world's largest floating ice shelf where local terrain features are simplified compared to arctic sites. However, the strong marine-continental effects complicated the analyses and indicated how complex nature can be in a coastal polar environment. These studies have provided much needed information on the lower layer of the atmosphere. At the same time, they have made a substantial addition to basic research and constitute a valuable contribution by Department of Army scientists to the whole scientific community.

The late Dr. Richard C. Hubley served as coordinator for the Little America micrometeorological program and is responsible for drafting of the original program. Dr. Donald Portman, University of Michigan, served as consultant in 1958-9 and was responsible for the initial planning of the data reduction and analysis program. Messrs. Morton Rubin, William Weyant, Kirby Hanson, and Edwin Flowers of ESSA and Dr. Herfried Hoinkes, University of Innsbruck, Austria, all cooperated in making radiation and

allied climatic data available for these analyses. The data reduction program was sponsored in part by a National Science Foundation grant administered by The Ohio State University Research Foundation. Misses Dorothy DesRoches and Barbara O'Neill, Mrs. Joseph Kundla and Mrs. Henry Bullard reduced over half a mile of strip chart data onto usable punch cards so that Mr. James J. Dillon, Management Division, could program the cards through the Data Analysis Office.

L. W. TRUEBLOOD, Ph.D.
Chief
Earth Sciences Division

APPROVED:

DALE H. SIELING, Ph.D.
Scientific Director

W. M. MANTZ
Brigadier General, USA
Commanding

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CONTENTS (Continued)

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SYMBOLS

Section 2

g = acceleration of gravity (982.3 cm/sec^2)

z = height (cm)

θ = potential temperature (deg)[/] Kelvin

T = temperature (deg)[/]

V = wind speed (cm/sec)

Section 3

U = wind speed (USWB observations)

S = dimensional stability coefficient (°F/kt^2)

β = Deacon number

z_o = aerodynamic roughness length (cm)

d = zero displacement (cm)

D = zero displacement parameter (cm) = $d + z_o$

τ_o = surface stress (dynes/cm^2)

k = Kármán constant

Section 4

α = profile contour number

Section 5

ρ = air density (g/cm^3)

Q = eddy heat flux (ly/time where ly = langley = cal/cm^2)

c_p = specific heat of dry air at constant pressure (cal g^{-1}deg^{-1})

[/] The abbreviation "deg" stands for degree centigrade while "Deg" is used for degrees of an arc.

SYMBOLS (continued)

Section 5 (Continued)

K_Q eddy diffusivity for heat (cm^2/sec)

K_M = eddy diffusivity for horizontal momentum (cm^2/sec)

γ = K_Q/K_M

λ = dimensionless momentum transfer coefficient

ϕ = dimensionless heat transfer coefficient

Section 6

S_o = vertical heat flux in the snow at the interface (ly/time)
(Note: Differs from usage in Section 3)

n = frequency

A = amplitude of the harmonic wave of temperature (deg)[†]

α = phase lag of the harmonic wave of temperature (Deg[†] or radians)
(Note: Differs from usage in Section 4)

t = time

K = thermal diffusivity of the snow (cm^2/sec)

λ = heat conductivity (ly $time^{-1}$/deg m^{-1})
(Note: Differs from usage in Section 5)

ρ = snow density (g/cm^3)

C = heat capacity (cal $deg^{-1}cm^{-3}$)

c_i = specific heat of ice (cal $g^{-1}deg^{-1}$)

F = flux of heat (ly/time)

T' = vertical temperature gradient, i.e., partial differentiation of temperature with respect to depth

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[†] The abbreviation "deg" stands for degree centigrade while "Deg" is used for degrees of an arc.

SYMBOLS (Continued)

Section 7

R_o = net radiation at the interface (ly/time)

Section 8

E_o = flux of latent heat at the interface (ly/time)

LIST OF FIGURES

LIST OF FIGURES (Continued)

LIST OF TABLES

ABSTRACT

At Little America V, the temperature range of each of the 9 coldest months is large, as is the annual range. Minima are controlled by advection of cold air from the interior and maxima by advection of warmer air from the Ross Sea area. The winter lacks a distinct temperature minimum, and mid-winter reversals of temperature trend occur.

Micrometeorological wind and temperature profiles in the lowest 8 m of the atmosphere were recorded at Little America V in 1957, and hourly means of temperature for about 3,000 hours and wind speed for about 500 hours are published as Appendix B of this report. Procedures used to analyze the 1958 micrometeorological data from the South Pole Station are followed in this analysis and results compared with the less complex relationships at the South Pole.

The curvature characteristics of wind and air temperature profiles (as measured by Deacon numbers) are analyzed in great detail, employing Richardson number computation (which takes into account wind shear as well as temperature lapse rate) to express stability and its change with height. The structure of the observed profiles is difficult to interpret in detail. Attempts to do so, by considering such diverse factors as wind fetch, sky cover, advection or katabatic effects, were not entirely satisfactory. Stable conditions predominated, and cases of maximum stability were more extreme than at the South Pole. The maximum inversion in the lowest 8 m amounted to 18.8 C°. Variations of wind speed and temperature with stability were similar to those at the South Pole, but solar radiation from sun and sky can contribute to instability at Little America V, while overcast skies indicate that instability at the South Pole can be caused by long-wave radiation from the base of stratus cloud. The seasonal shift toward less stable conditions, as well as the rise in temperature, was delayed until October.

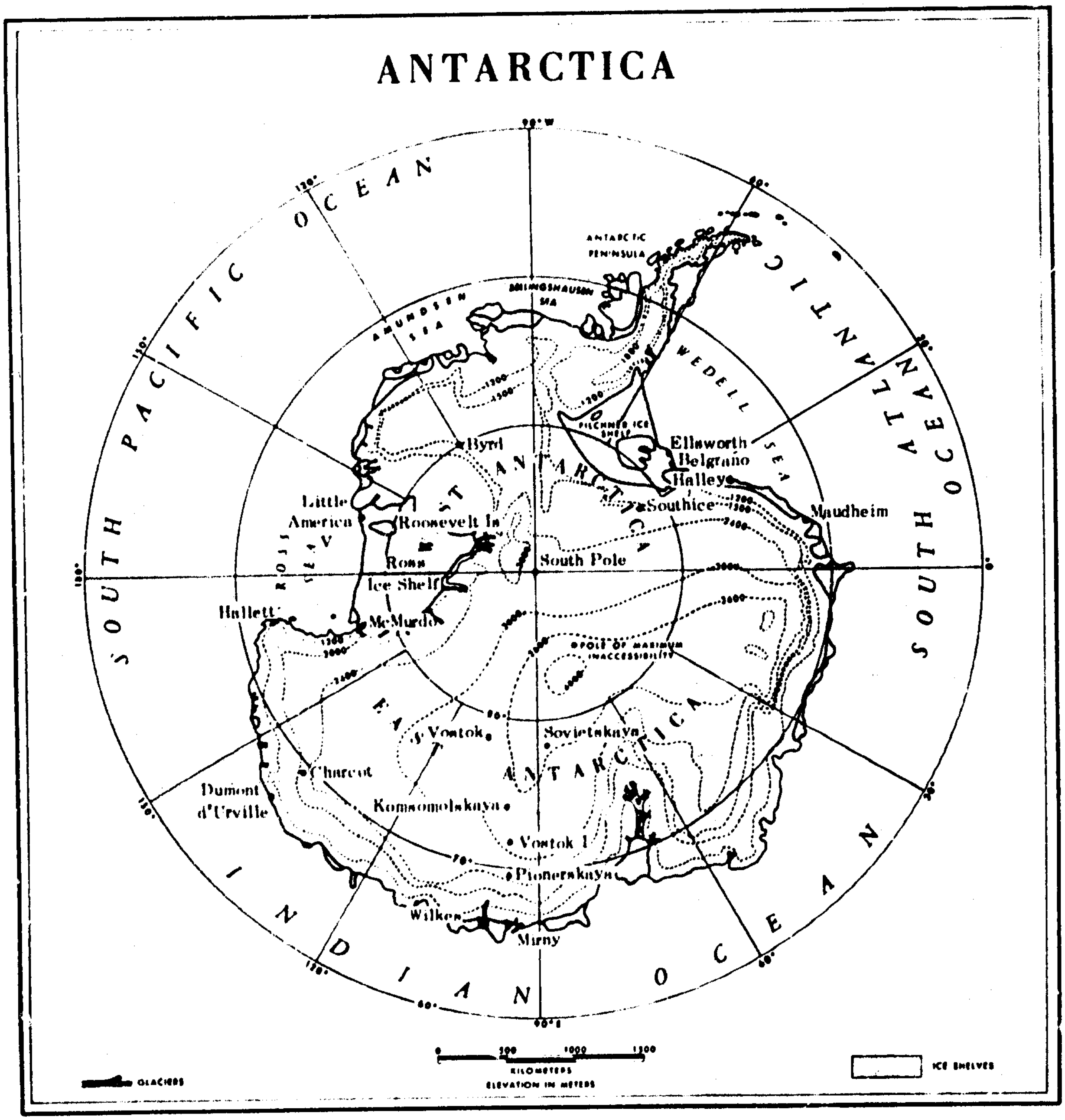
Air temperature profile data during winter frequently showed that the minimum temperature occurred at the 6 or 12 cm level, producing an "anomalous" profile. A study of this phenomenon, by Dr. H. H. Lettau, is included as Appendix A.

Values of the roughness length were small and erratic. Wind profile structure also was distinctly less regular than at the South Pole. In spite of this, Richardson numbers changed quite systematically with height below 4 m, suggesting a tendency for compensation. Conditions indicate that a common surface layer for momentum and heat transfer, if it existed, was often so shallow that the levels of profile observations were above it.

Eddy heat flux was computed for the hours of profile data on the basis of a similarity assumption using both estimated surface stress (with

Kármán's constant equal to 0.428, and Deacon-number-corrected wind shear) and vertical differences of temperature and wind speed in the lowest layers. To obtain representative climatological means of eddy heat flux, a statistical relationship was established between Quartermaster observations (concerning profile structure versus bulk stability) and regular synoptic or standard observations supplied by the U. S. Weather Bureau. It is shown that it is permissible to employ constant coefficients of transfer of momentum and heat at Little America V, since variation of individual coefficients with stability was quite erratic because of the complicated profile structure. Average eddy heat flux varied from zero near neutral stability to -0.0693 ly/min at extreme stability, and average surface stress from 1.6 dynes/cm^2 to 0.4. Averages for 5-day periods show peaks of surface stress accompanying the passage of low pressure areas at this coastal station, in contrast with a lower average and smaller range at the continental South Pole Station.

The annual variation of heat flux at 2 m depth was computed by Fourier analysis, using once-a-day subsurface temperature observations by Chappell. The surface heat flux was obtained by adding the heat exchange between 2 m and the surface, computed by layer-by-layer integration of day-to-day temperature changes, to the heat flux at 2 m. The energy budget at the snow-air interface is discussed. Computations were based on hourly values of net radiation supplied by Hoinkes and heat fluxes into air and snow as described above. The latent heat flux, obtained as a remainder, indicates deposition in the 6-month period in 1957 equivalent to condensation of about 40 mm of water, 1.2 times as much as that reported for Maudheim during corresponding months in 1950 and 1951. Increased deposition in the milder winter months may be due to an accompanying increase in available moisture.



Station Locations

LITTLE AMERICA V MICROMETEOROLOGY PROGRAM

DATA ANALYSIS

1. Introduction

The Quartermaster Corps Research and Development Command (currently the U. S. Army Natick Laboratories*) initiated and maintained the collection of micrometeorological data at Little America V in 1957 as a part of the U.S.N.C.-IGY (U.S. National Committee for the International Geophysical Year) Antarctic glaciological program. The reduction of these data (at the Quartermaster Research and Engineering Center at Natick) was supported partly by National Science Foundation grants which were administered by the Ohio State University Research Foundation.

Data from a similar program conducted by the Quartermaster Corps at the South Pole Station in 1958 have been presented and analyzed in technical reports ES-2, "South Pole Micrometeorology Program, Part I: Data Presentation," and ES-7, "South Pole Micrometeorology Program, Part II: Data Analysis."

Technical Report ES-7, and the following reports have been accepted for the first volume of Antarctic Meteorology, a publication of the American Geophysical Union for the National Academy of Science:

A Regional Climatology of the Antarctic Plateau

A Case Study of Katabatic Flow on the Antarctic Plateau Surrounding the South Pole

For bibliographical detail see [1-4] of the list of references. In addition, the South Pole micrometeorological observations are discussed in relation to theoretical models in [5].

The objectives of the programs and plan of analysis were outlined in the South Pole Data Analysis [2], and primarily were to determine the interrelationships between low-level wind and temperature profiles and the general meteorological and glaciological conditions of the energy budget at the interface, and to analyze temperature profile data to determine a climatology of the air temperature distribution in the lowest 8 meters of the atmosphere, which includes the environmental layer for human surface activities.

*Abbreviation "QM" will be used since program was conducted under the Quartermaster Corps.

Study of the Little America V microclimatic data (1957) has been sponsored by the U. S. Army Natick Laboratories and the results are being reported in this publication. A brief climatological summary (1957 and 1958) and comparison with the results obtained at earlier "Little America" sites and several other stations in the coastal region of the Antarctic continent, are included. A discussion of the "elevated minimum" found in the inversional temperature profiles is discussed in Appendix A, and the micrometeorological data are presented in Appendix B.

2. Climatic and Microclimatic Summary

2.1 General character of the area and of the climatic data

2.1.1 The Ross Ice Shelf. Little America V was located at 78°12'S and 162°11'W on the Ross Ice Shelf, 4 km south of Kainan Bay. The shelf is floating except for a few such places as Roosevelt Island (see Crary [6]); it has an area of approximately 525,000 km^2 (203,000 sq. statute mi.), or about 4% of Antarctica; surface elevation ranges generally from about 25 to 110 m above sea level; ice thickness varies from about 22 to 771 m and is quite uniformly between 350 and 450 m in the central and western parts of the Ross Ice Shelf. At the Little America V location, SIPRE* (currently CRREL) found an ice thickness of 257 m (see Crary [7, p 27]). Roosevelt Island [6], south of the station, has an area of 8720 km (3365 sq. statute mi.) with maximum elevation estimated to be 640 m. The ice is flowing northward at a rate estimated at 0.2 to 1.5 km/yr [6], or at Little America V about 1 m/day [8]. The sun remained below the horizon from late April until late August and was continuously above the horizon from late October to late February. Little America V was operational during the IGY, but was closed in January 1959.

Monthly mean temperatures from February 1957 to October 1958, as reported in the U. S. Weather Bureau's Local Climatological Summaries for Little America V, are illustrated in Figure 1. Also shown are the 6-year averages of monthly means (1911, 1929, 1934, 1940, 1956, 1957) for various "Little America" locations, on the Ross Ice Shelf, as computed by H. Wexler [9, Fig. 2, p. 579] .

2.1.2 The "kernlose" or "coreless" winter. Monthly mean temperatures that show, when plotted, no central core of minimum temperatures have been found to be characteristic of polar latitudes. Such a "coreless" winter (with mid-winter reversals of the temperature trend) is evident at Little America V. In his study of observations from the French Antarctic

*SIPRE, Snow, Ice and Permafrost Research Establishment
CRREL, Cold Regions Research and Engineering Laboratory

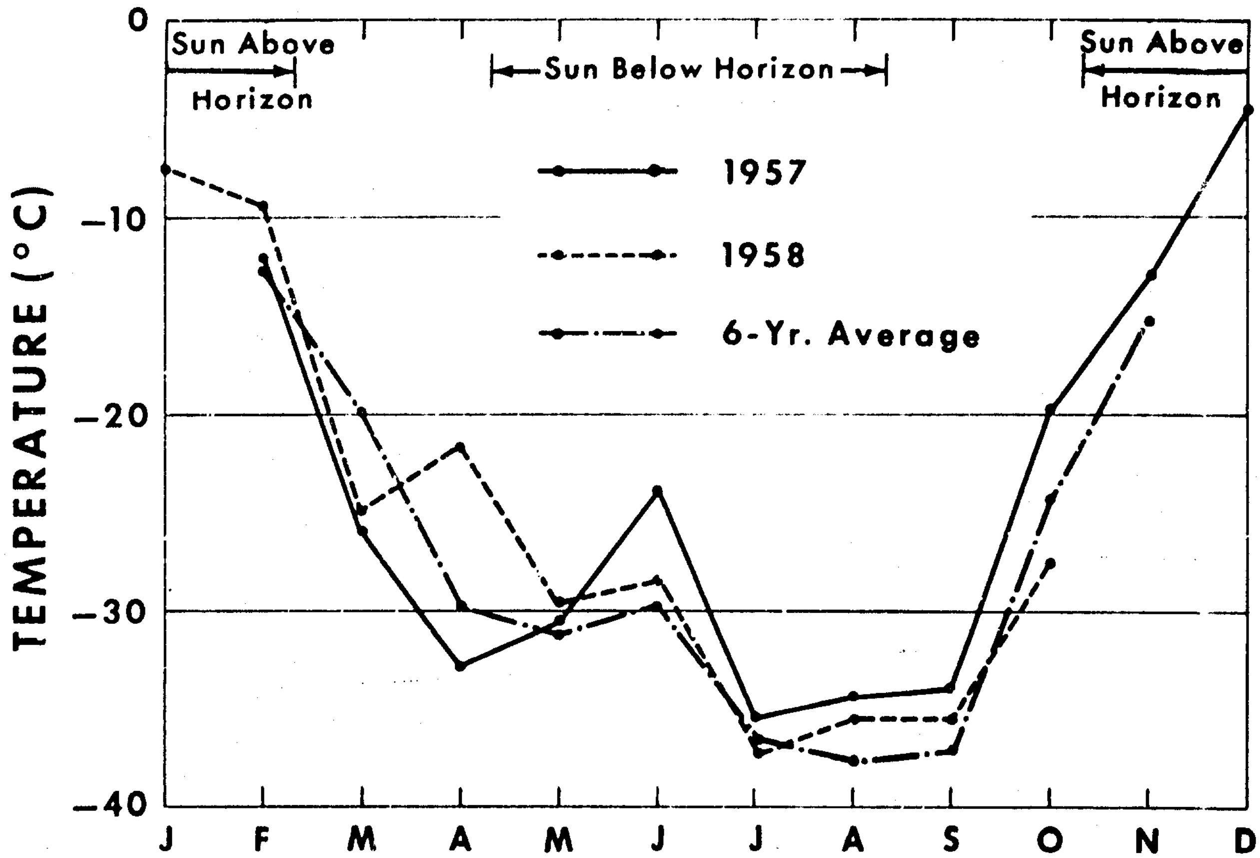


Figure 1. Monthly mean temperatures: Little America V, 1957 and '58 from USWB Local Climatological Summaries, and averages for 6 years (1911, '29, '34, '40, '56, '57) for various "Little America" locations, computed by Wexler [9].

stations, Laroque [10] describes the characteristics of the polar winter as: a large temperature range, no important month-to-month temperature variation, or a winter "lacking a center," and a brief spring and autumn. He shows that the same characteristics are illustrated by the course of solar radiation at high latitudes, and that the course of the monthly minimum temperature follows the course of the solar radiation very closely, particularly at the highest latitude, the South Pole Station. The monthly maxima, on the other hand, show the polar characteristics of insolation to only a slight degree. This suggests that the maximum temperatures are controlled primarily by advection, the warm air occasionally being carried even to the South Pole, if not at the surface, then aloft, where it later is brought down by turbulence. Vowinckel [11] also relates the "flat temperature minimum" in winter and the rapid temperature rise in spring to the course of radiation.

Monthly extremes of temperature at Little America V, from February 1957 through October 1958, are plotted in Figure 2 in order to show the seasonal course of the maximum and minimum temperatures and the temperature range for each month. Both the South Pole [10] and Little America V (Fig. 2) have large ranges, those of the South Pole apparently due to latitude and those of Little America V to its location on the Ross Sea, exposed to alternation of maritime and continental influences; both have the brief spring and autumn. The maximum temperature, February 1957 through October 1958, was +2°C (35°F), recorded in January 1958. The widest range between extremes, 52 C° (94 F°), occurred in May 1957. Winter minima were -53°C (-63°F) in May 1957 and -58°C (-73°F) in September 1958. It can be seen from Figure 2 that the monthly maxima as late in the autumn as May can be very close to the sea temperature.

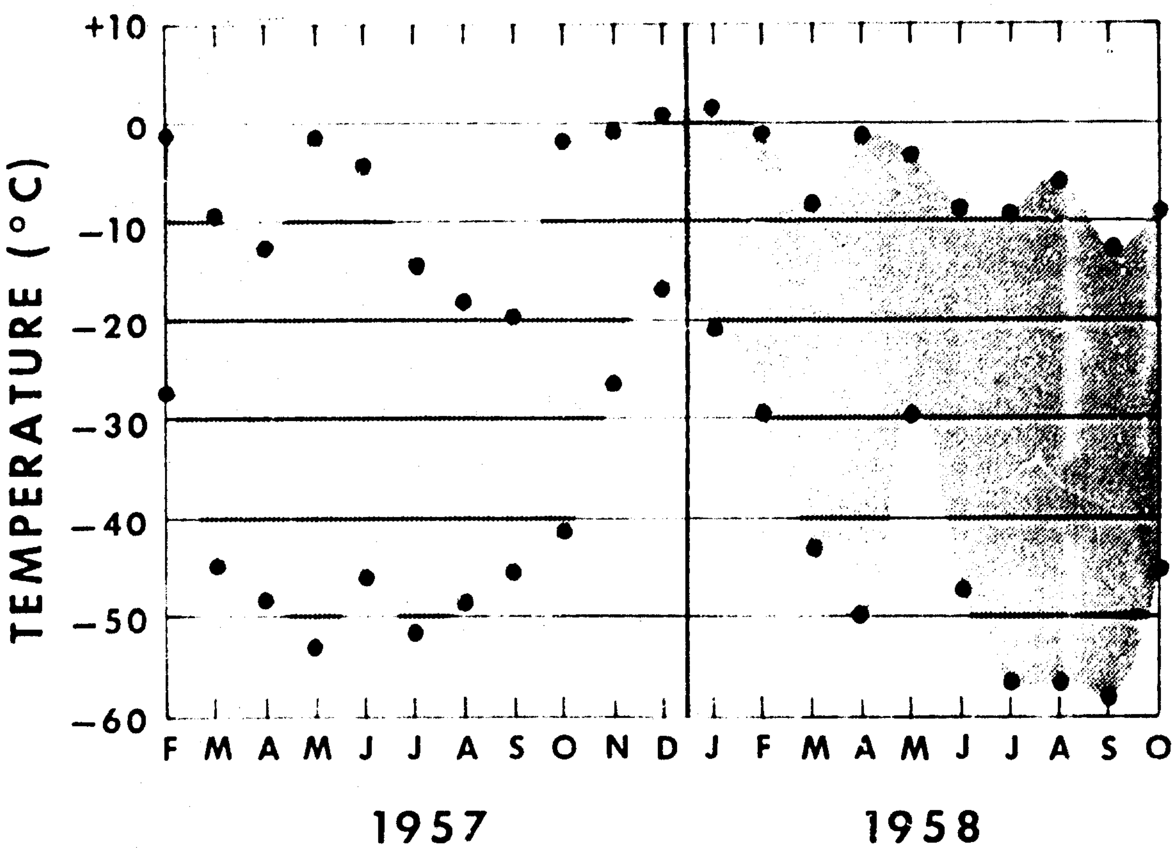


Figure 2. Range of monthly temperature extremes at Little America V.

It is estimated that Laroque's characteristics of the polar winter would be well illustrated by temperatures summarized for a number of years. There is, however, considerable variation in both monthly means and extremes from year to year, particularly in early winter. This is most apparent when comparing the monthly means in April in Figure 1 (-33°C in 1957, -22°C in 1958), and the minima in May in Figure 2 (-53°C in 1957, -30°C in 1958.

In Antarctica, stations at higher elevation are also, in general, at higher latitude. Increases of both elevation and latitude, along with permanent snow cover, result in decrease in the lag of the maximum. However, the month with highest mean maximum shows no lag at Little America V, in spite of low elevation, although the lowest mean maximum tends to be retarded at both the South Pole and Little America V. This lag is greater at the coastal station, Little America V, because winter temperature variations are very large and advection frequently results in maxima equal to the sea temperature in early winter.

The annual course of temperature is described by Wexler [9]: "As the sun sets, the temperature drops rapidly over the continent but less so over the surrounding oceans which are only partly ice-covered. The increasing meridional temperature gradient brings about the release of baroclinic instability in the troposphere which initiates the formation of numerous intense cyclones. These cyclones move vast quantities of warm marine air southward, effectively 'ventilating' large portions of Antarctica above a thin surface layer of cold air and preventing a continous decline in surface temperature. As winter proceeds, a thicker and wider ice pack extends hundreds of miles to the north of Antarctica and materially lowers the temperature of the southward-moving air masses, thus encouraging a second drop of temperature, near the surface and aloft, so that the lowest temperatures are usually found well after the winter solstice, even as late as September." It does appear, however, that the ice pack extends many hundreds of miles off shore at Little America V by June, possibly as far as in September. This was true in other years (see Herdman [12]), but its location in June 1957 is not known. Nevertheless, the temperature in June 1957 rose to a maximum of -4°C at Little America V.

The range of monthly mean temperature in 1957 was 31.2 C° (56.1F°) from -4.4°C (24.1°F) in December to -35.6°C (-32.0°F) in July. The monthly mean temperatures fell rapidly through April and then rose to the anomalous secondary maximum in June. However, in April and June of 1958 there were less pronounced interruptions of the seasonal cooling. While July was the coldest month in both years, temperatures did remain low in August and September, i.e., for a certain period after reappearance of the sun.

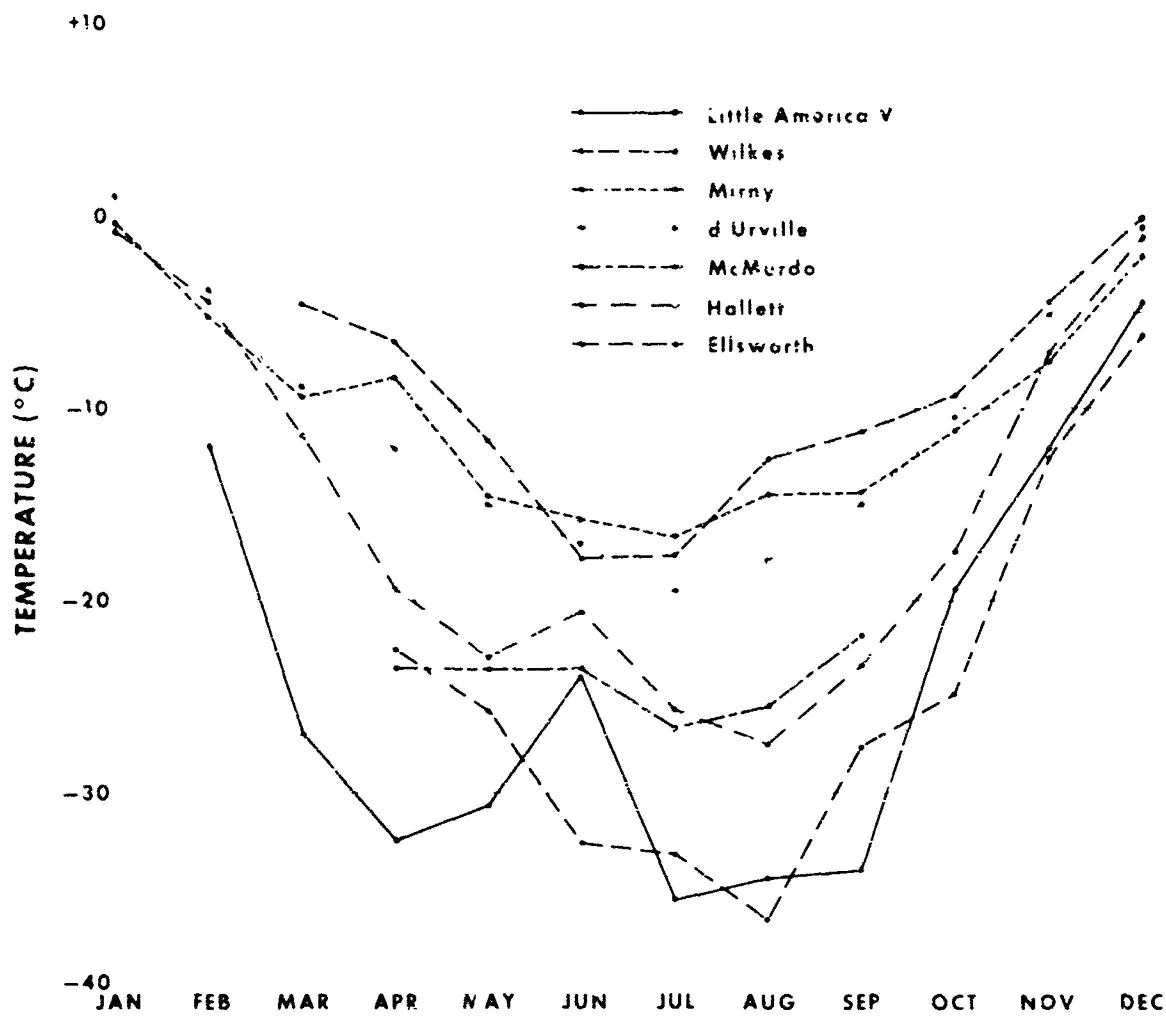


Figure 3. Monthly mean temperatur s during the year 1957 for indicated coastal stations of the Antarctic continent.

Apparently, in the year 1957, cyclonic activity in the Ross Sea area became most effective in June, advecting warm air and raising or holding steady the monthly mean temperature at Little America V, Hallett and McMurdo, while at d'Urville, Mirny and Wilkes, farther west along the coast, and Ellsworth, on the Weddell Sea, temperatures continued to fall in June. The coldest monthly mean temperature at Wilkes occurred in June, at Little America V, McMurdo, Mirny and d'Urville, in July, and at Hallett and Ellsworth in August (see frontispiece). (The course of temperature in 1957 at Halley Bay and Belgrano, according to Wexler [9, Fig. 5] , was similar to that at nearby Ellsworth (Fig. 3), but although observations from 1955 and 1956 show the "kernlose" winter type with temperature reversals, the minimum occurred in September in 1955, in May in 1956, and in August in 1957 in that area.) Ellsworth shows, in 1957, the lowest monthly minimum (-36.9°C in August) of all the coastal stations cited in Figure 3. Although temperature trends did not reverse in early winter at Ellsworth (in contrast to the stations in the Ross Sea area), the annual mean was very close to that at Little America V, as might be expected from similarities in latitude, elevation, and ice shelf exposure. In 1957, d'Urville was slightly warmer than Mirny in summer (October through March) and slightly colder in winter (April through September).

The data used for the construction of Figure 3 and for curves for Little America V in Figure 1 are summarized in Table 2.1.2.1.

In conclusion, the winter is "coreless" at both coastal and inland stations of Antarctica. In addition to one or more reversals of the seasonal trend of temperature, usually in early winter, there is considerable month-to-month variation. The primary control of the minimum temperature is the annual course of solar radiation, while the winter maximum is controlled by advection. The "coreless" winter and, in particular, the reversals in the temperature course are least evident at those stations most subject to katabatic winds. While "coreless" winter and temperature reversals are evident at inland stations, they are more pronounced at the coastal stations, particularly those on the Ross Sea. It is estimated from Figure 2 and observations for 1957 and 1958 at Little America V that, due to the reversals in the seasonal course of temperature, both the winter mean minimum and absolute minimum in a particular year may occur in any month from April to September, although occurrence in April would be most unlikely except at the highest latitude.

It is difficult to assess the effect of the extent of the ice pack on the seasonal course of temperatures at the coastal stations since it may extend as far off shore in the Ross Sea area in June as in September; however, the contrast in temperature between the open water and air from interior Antarctica is undoubtedly an important factor in the cyclonic activity which advects warm air over the Antarctic continent, controlling the time of occurrence of the annual minimum and influencing the mean monthly temperature through the magnitude of the monthly mean maximum.

Table 2.1.2.1 MONTHLY MEAN TEMPERATURE (°C) AT SEVEN COASTAL STATIONS OF THE ANTARCTIC CONTINENT

	1957							1958
	Mirny	d'Urville*	Wilkes	Ellsworth	Hallett	McMurdo	Little America V	Little America V
Jan	- 0.6	+ 1.0			- 0.8			- 7.7
Feb	- 5.1	- 4.0			- 4.3		-12.1	- 9.4
Mar	- 9.4	- 9.0	- 4.6		-11.3		-25.9	-24.8
Apr	- 8.4	-12.0	- 6.4	-22.8	-19.3	-23.6	-32.8	-21.6
May	-14.6	-15.0	-11.8	-25.6	-23.0	-23.7	-30.8	-29.4
Jun	-15.9	-17.0	-17.6	-32.8	-20.7	-23.7	-23.9	-28.4
Jul	-16.9	-19.5	-17.5	-33.0	-25.9	-26.7	-35.6	-37.2
Aug	-14.3	-18.0	-12.5	-36.9	-27.3	-25.6	-34.5	-35.7
Sep	-14.3	-15.0	-11.2	-27.7	-23.3	-21.9	-34.1	-35.3
Oct	-11.1	-10.5	- 9.4	-24.9	-17.4		-19.6	-27.1
Nov	- 7.6	- 5.0	- 4.6	-12.7	- 7.4		-12.6	
Dec	- 2.1	- 0.5	- 0.1	- 6.2	- 1.0		- 4.4	

*Read to 0.5°C from graph in [9]

2.1.3 Monthly temperature and wind speed at Little America V, 1957. The monthly mean wind speed varied from 4.2 m/sec in February to 7.9 m/sec in October, with a maximum gust of 33 m/sec recorded in August. Frequency distributions of hourly temperatures and hourly wind speeds (USWB data) for 9 months (February through October, 1957) are shown in Tables 2.1.3.1 and 2.1.3.2.

2.2 General character of microclimatic data

2.2.1 Temperature differences and their relation to wind speed and wind direction (USWB data). Temperature differences between 15 m and the surface ($T_{15} - T_0$), obtained from USWB measurements by electrical resistance thermometers called "thermohms" (Leeds and Northrup Company trade name), were tabulated by Hoinkes* for the sunless months at Little America V. The surface to 15 m inversion was > 2 C°, 50% of the time, > 7 C°, 18% of the time, >11 C°, 10% of the time, while lapse conditions (decrease of temperature with height) existed for 16% of the time. A frequency distribution, based on the number of hours of occurrence of vertical differences by 1 C° class intervals, is shown in Figure 4.

Temperature differences between 15 m and the surface, according to wind speed, and the frequency of wind speeds are shown for the sunless period by the 2 curves in Figure 5. The figure illustrates the dependency of intensity of average temperature differences on wind speed. ($T_{15} - T_0$) averages 5.6 C° with speeds less than 2 m/sec, decreases strongly as the speed increases from 2 to 9 m/sec, and fluctuates around 0.5 C° with speeds greater than 9 m/sec.

Temperature differences between 15 m and the surface, according to wind direction, were also tabulated by Hoinkes. Figure 6, based on this tabulation, shows the frequency of occurrence of the 16 standard wind directions and the mean intensity of surface inversions for the directions during the sunless months at Little America V. The length of the radii is proportional to the average temperature difference ($T_{15} - T_0$). The strongest inversions (longest radii) occurred with wind directions from west through north to east, for which advection of relatively warm air from the Ross Sea is to be expected. Winds blew from this 180-degree sector only 25% of the time. NNW winds, though infrequent (1.9%), were accompanied by the largest average temperature difference with height ($T_{15} - T_0 = 6.8$ C°). Air flow was from SE and SSE in 40% of all hours during the sunless winter months. With winds from these directions, the temperature inversions between the surface and 15 m were usually very small, averaging about 1 C°.

---

*Chairman of Department of Meteorology and Geophysics, University of Innsbruck, Austria.

Table 2.1.3.1 NUMBER OF HOURS WHEN AMBIENT AIR TEMPERATURE WAS BETWEEN INDICATED LIMITS (°C) AND RELATIVE FREQUENCY (percent per month, in parentheses)

	Air temperature (°C) between:									
	-1.5 to -6.9	-7.0 to -12.4	-12.5 to -17.9	-18.0 to -23.4	-23.5 to -28.9	-29.0 to -34.4	-34.5 to -39.9	-40.0 to -45.4	-45.5 to -50.9	-51.0 to -56.4
Feb*	- (22)	- (25)	- (40)	- (13)	- (0)					
Mar		12 (2)	50 (7)	213 (28)	228 (30)	162 (22)	71 (10)	8 (1)		
Apr			56 (8)	45 (6)	71 (10)	210 (29)	162 (22)	148 (21)	28 (4)	
May	37 (5)	35 (5)	82 (11)	97 (13)	49 (6)	84 (11)	120 (16)	116 (16)	116 (16)	8 (1)
Jun	16 (2)	110 (15)	103 (14)	108 (15)	86 (12)	165 (23)	104 (15)	26 (4)	2 (0)	
Jul			26 (4)	69 (9)	92 (12)	118 (16)	185 (25)	159 (21)	94 (13)	1 (0)
Aug			1 (0)	20 (3)	145 (20)	223 (30)	181 (24)	134 (18)	40 (5)	
Sep				38 (5)	150 (21)	133 (18)	235 (33)	159 (22)	5 (1)	
Oct	51 (7)	97 (13)	155 (21)	188 (25)	151 (20)	66 (9)	35 (5)	1 (0)		

* From 3-hourly observations

Table 2.1.3.2 NUMBER OF HOURS WHEN WIND SPEED MEASURED BY AEROVANE (30-foot level) WAS BETWEEN INDICATED LIMITS (m/sec) AND RELATIVE FREQUENCY (percent per month, in parentheses)

		Wind speed (m/sec) between:							
	Calm#	0.3 to 3.3	3.4 to 6.4	6.5 to 9.5	9.6 to 12.6	12.7 to 15.7	15.8 to 18.8	18.9 to 21.9	22.0 to 25.0	25.1 to 28.1
Feb*	- (10)	- (36)	- (34)	- (16)	- (4)					
Mar [1]**	14 (2)	127 (17)	343 (46)	155 (21)	87 (12)	17 (2)				
Apr	41 (6)	139 (19)	346 (48)	125 (18)	53 (7)	10 (1)	6 (1)			
May	66 (9)	89 (12)	255 (34)	157 (21)	98 (13)	30 (4)	27 (3)	12 (2)	4 (1)	6 (1)
Jun	39 (5)	65 (9)	183 (26)	225 (31)	119 (17)	43 (6)	31 (4)	15 (2)		
Jul [1]	22 (3)	114 (15)	253 (34)	231 (31)	86 (12)	35 (5)	2 (0)			
Aug [2]	28 (4)	80 (11)	278 (37)	192 (26)	91 (12)	31 (4)	10 (1)	13 (2)	13 (2)	6 (1)
Sep	30 (4)	83 (12)	392 (54)	202 (28)	12 (2)	1 (0)				
Oct	19 (3)	76 (10)	212 (28)	228 (31)	121 (16)	50 (7)	23 (3)	12 (2)	3 (0)	

#Calms are relatively frequent, since the Aerovane did not respond to winds below 0.3 m/sec.
*From 3-hourly observations
**Numbers in brackets indicate number of missing observations

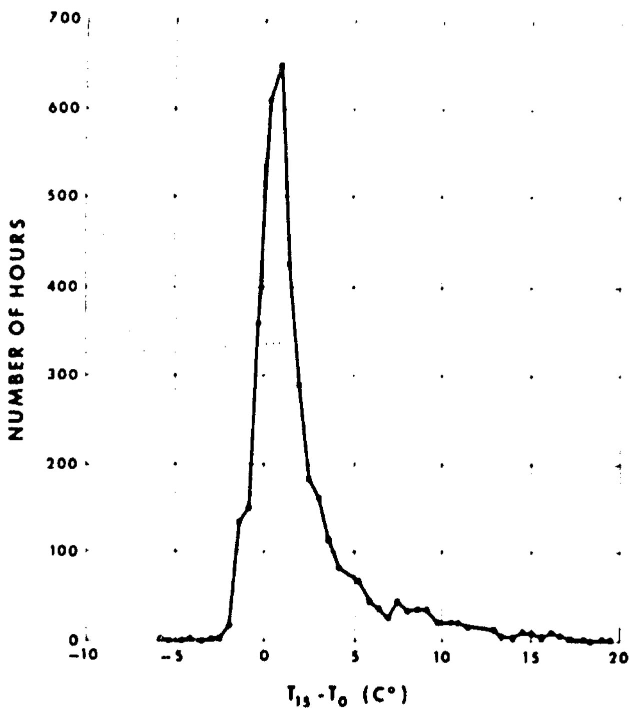


Figure 4. Little America V, 1957. Frequency distribution of average vertical temperature difference between 15 m and surface, April through August. (From USWB data tabulated by Hoinkes.)

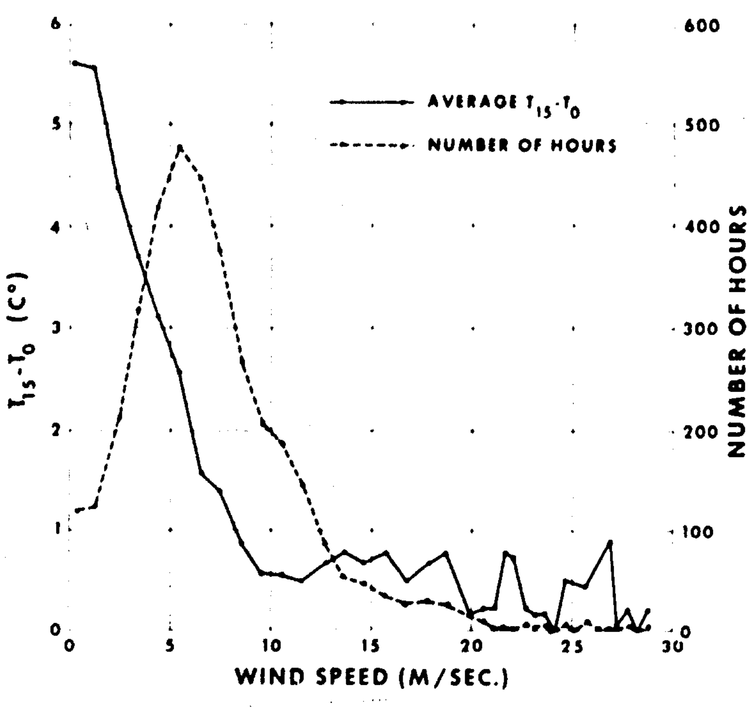


Figure 5. Little America V, 1957. Wind speed frequency (dashed line) and relation to average vertical temperature difference between 15 m and surface (solid line), April through August. (From USWB data tabulated by Hoinkes.)

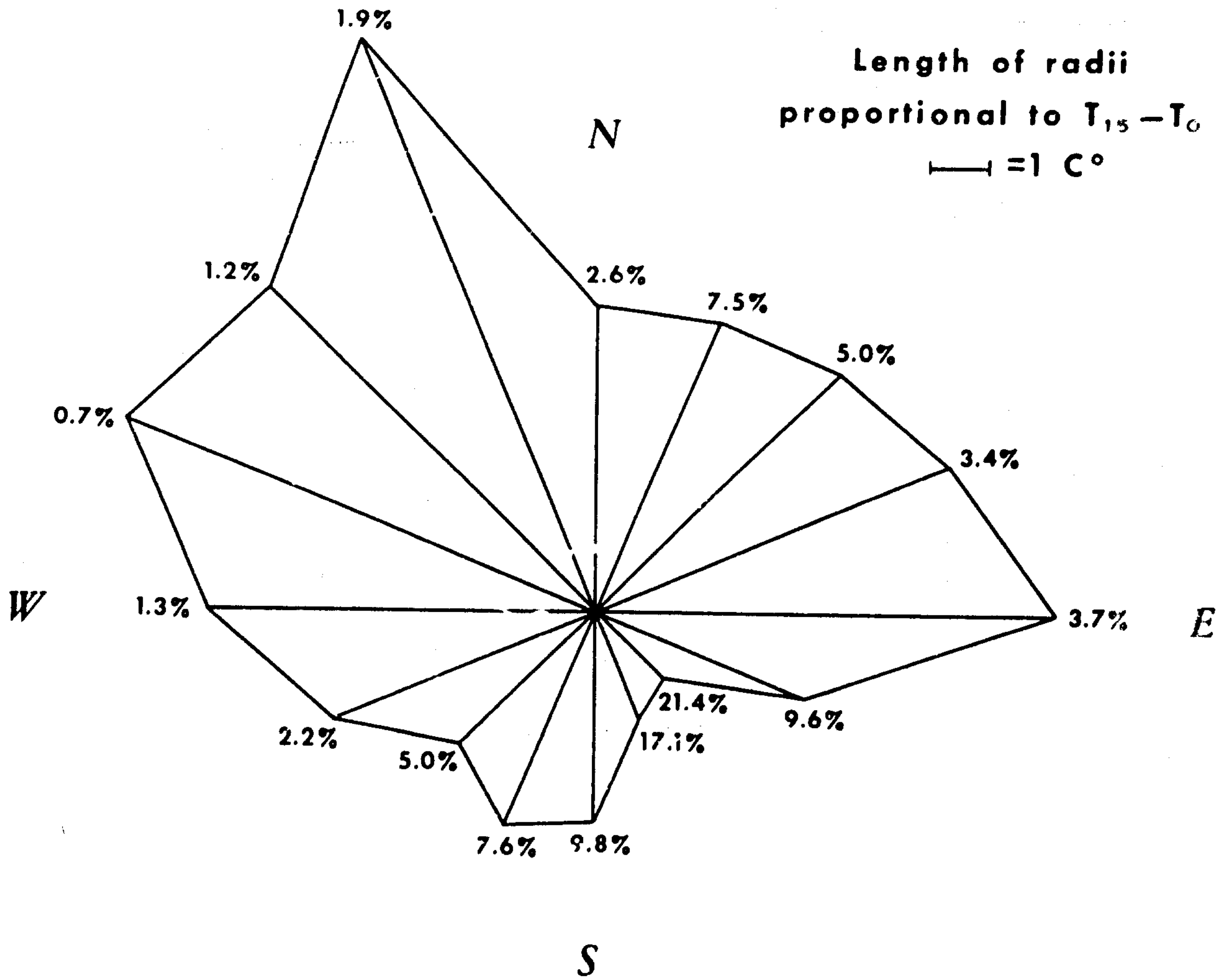


Figure 6. Little America V, 1957. Average vertical temperature difference between 15 m and surface (T_{15} - T_0), April through August, in relation to wind direction and relative frequency of 16 standard wind directions. (Temperature inversions from USWB data, tabulated by Hoinkes.)

2.2.2 Comparison of surface inversions at South Pole and Little America V (QM data). In addition to the continuous temperature profile observations made by the USWB with thermohms, detailed micrometeorological profile observations were obtained by the Quartermaster Command, using fine-gauge copper-constantan thermocouples at 9 levels between the surface and 8 m. Similar equipment was employed in 1958 at the South Pole Station; reference is made to [1].

Surface inversions, as measured by this equipment, were generally larger at Little America V than at the South Pole. In the seasonal course, the maximum 3-minute temperature difference between 8 m and the surface ($T_8 - T_0$) occured at Little America V approximately 6 weeks after final sunset, and amounted to 18.8 C°; between 2 m and the surface ($T_2 - T_0$), the maximum was 15.0 C°. Most of the extreme inversions occurred during the period of darkness, but, occasionally, inversions of 10 C° between the surface and 8 m were experienced when the sun was above the horizon. The duration of individual periods with an inversion greater than 10 C° was usually several hours, although sometimes the inversion would persist for more than 24 hours. The vertical structure of the typical inversional stratification within the lowest 8 m at Little America V was relatively uniform with temperature differences of at least 1 C° existing between all instrument levels. This was in contrast to the conditions at the South Pole where the major contribution to the total inversion was from layers above the one-meter level.

2.2.3 Occurrence of the minimum temperature at the 6 or 12 cm level, the "elevated minimum" (QM data). Also, in striking contrast to conditions at the South Pole, the minimum value of the vertical temperature profiles during the winter months at Little America V frequently occurred at the 6 or 12 cm level rather than at the snow/air interface. Statistical results from hourly temperature profile values for the two stations are summarized in Table 2.2.3.1. This interesting phenomenon of an "elevated minimum" in inversional temperature profiles has been observed at various micrometeorological field sites For an outline of the previous history, and a summary of possible theoretical explanations, see Appendix A.

2.3 Wind and temperature (air and snow) profile data reduction (QM data). At Little America V, 1145 hourly wind profiles (based on 5 anemometer levels) were measured on 157 days, and air temperature profiles (based on 9 thermocouple levels between the surface and 8 m) were recorded for approximately 3000 hours on 150 days. Snow temperature measurements at 4 depths, and a surface temperature value were also obtained. All temperatures have been transformed from millivolt-readings on strip charts to degrees C on punch cards. The sampling rate was 18 per hour at each level. The data reduction was accomplished through an automatic read-out system especially designed for the project by Dillon and Arbarchuk [13]. Data reduction was reproducible to ±0.1 C for 99 per cent

Table 2.2.3.1 MONTHLY MEAN STATION TEMPERATURE, T_m, NUMBER OF DAYS WITH TEMPERATURE INVERSION, N, AND NUMBER OF DAYS OF OCCURRENCE OF MEAN MINIMUM AT INDICATED LEVELS, SOUTH POLE, 1958, AND LITTLE AMERICA V, 1957 (number of days of occurrence with sun above horizon is noted in parentheses)

				Number of Days of Occurrence of Mean Minimum at:						
Station	Month	T_m (°C)	N	12 cm	12 & 6 cm	6 cm	6 & 3 cm	Sfc & 6 cm	3 cm	Sfc
South Pole 1958	Mar	-54.0	30	-	-	3 (3)	-	-	1 (1)	26 (16)
	Apr	-62.1	26	-	-	-	-	-	1	25
	May	-56.9	27	-	-	-	-	-	-	27
	Jun	-61.1	27	-	-	-	-	-	-	27
	Jul	-55.1	25	-	-	-	-	-	1	24
	Aug	-61.7	26	-	-	-	-	-	-	26
	Sep	-56.2	26	-	-	1	-	-	2	23 (6)
Little America V 1957	Mar	-25.9	1	-	-	-	-	-	1 (1)	-
	Apr	-32.8	22	-	-	3 (3)	-	4 (2)	-	15 (13)
	May	-30.8	14	-	-	10	2	2	-	-
	Jun	-23.9	16	1	-	7	-	2	1	5
	Jul	-35.6	28	1	1	21	1	3	-	1
	Aug	-34.5	30	-	-	14 (5)	2	3	-	11 (4)
	Sep	-34.1	28	-	-	9 (9)	3 (3)	1 (1)	-	15 (15)

of all cases. Tabulations of these data (105,080 IBM cards of Little America V profile data) were critically reviewed and edited, and summary and mean cards were transcribed for each hour and day. Hourly averages of wind speed at 5 heights (geometrically spaced from 0.5 to 8.0 m) were expressed in centimeters per second and were punched onto IBM cards (517 cards).

2.4 Computation of Richardson numbers

2.4.1 Method of computation. Richardson-number profiles were computed for all periods when both wind and temperature profiles were available, providing 580 profiles. Using wind and temperature measurements for the simultaneous observation periods at the common levels of 800, 400, 200, 100 and 50 cm, gradient Richardson numbers, Ri, at 400, 200 and 100 cm were calculated from

$$Ri = g \Delta z \Delta \theta / T_m (\Delta V)^2, \qquad (1)$$

employing for the delta's values from the three over-lapping quadruple heights (800 and 200, 400 and 100, 200 and 50 cm),

where g = acceleration of gravity (982.3 cm/sec^2)
Δz = height difference (cm)
$\Delta \theta$ = potential temperature difference (deg Kelvin)
T_m = layer-mean temperature (deg Kelvin) obtained by averaging the temperatures at the 5 levels
ΔV = wind speed difference (cm/sec)

2.4.2 Correction of temperatures at 4 m level. An inspection of the thermocouple data showed that temperatures appeared consistently too low at the 4 m level throughout the year in spite of the various interchanges of leads, etc., that were made from time to time. It was concluded, therefore, that an unknown effect produced a systematic error. In order to obtain a correction term, the temperature and wind speed differences between 800 and 200, and 200 and 50 cm were used to interpolate Ri at 200 cm; this result was compared with Ri computed at 200 m, using the temperatures and wind speeds at 400 and 100 cm. The difference between the interpolated and computed Ri increased with stability in such a regular fashion that the correction to the 4 m temperature at neutral stability could be determined, by interpolation, as +0.27°C. The adjustment by 0.27°C of all 4 m temperature readings produced non-linear curves of Ri versus height at greater stability, which were similar to those found at the South Pole.

3. Analysis of Profile Structure

3.1 Grouping of profiles by stability, as measured by bulk Richardson number, Ri'

3.1.1 Computation of bulk Richardson numbers. Bulk Richardson numbers, Ri', provide a measure of the general stability of the air layer under consideration. Values were obtained by summing the Ri values computed for 400 and 100 cm and dividing the result by the sum of the heights. Hourly profiles were arranged in order of Ri', and collected into 10-run and 30-run groups. The method is essentially the same as that used in the "South Pole Data Analysis" except that Ri' at Little America V was obtained from Ri at 2 levels instead of 3 because of the systematic error of temperature measurement at 400 cm. Originally, the method was introduced by H. Lettau [14, Section 7.4, p. 328] in the micrometeorological analysis of the O'Neill, Nebraska, data. In view of the existing near-to-linear shape of individual Ri-profiles, it is found that, to a fair approximation, $Ri = z \cdot Ri'$; specifically, Ri' given in 10^{-3}/m can conveniently be taken as $10^{-3}\ Ri_{100\ cm}$ which sometimes has been used as a stability parameter.

3.1.2 Range of grouped bulk Richardson numbers. After averaging wind and temperature data, local Richardson numbers, Ri, were computed for the group averages. A total of fifteen 30-run averages were selected from the 580 profiles available, by excluding approximately 60 which appeared to have a low-level wind profile maximum and others where it appeared that spurious voltages had been generated in the thermocouple wires by high winds.

The group values of Ri' ranged from -26 to +728. As might be expected in view of higher sun angles, the number of groups with negative Ri' (lapse conditions) was large at Little America V, relative to the number at the South Pole, in spite of the fact that the micrometeorological program at the South Pole covered 10 months (from February to November, 1958), while that at Little America V covered only 7 months (from April to October, 1957). Stable conditions (Ri' positive) were in the majority, however, and cases of maximum stability were more extreme at Little America V than at the Pole. The intense inversions at the lower levels, which contributed heavily to these high bulk-Richardson numbers, however, were probably due to physical conditions rare or not present at the Pole, namely katabatic winds and warm air advection from open water. As at the Pole, cases of negative Ri', indicating lapse rate conditions, occurred most frequently during the polar day, but were occasionally observed during the period without sun.

3.2 Relationship of wind profile types to external parameters

3.2.1 Irregularity of wind profiles. The variation of the wind gradient with height in the lowest 8 m was distinctly less systematic or regular at Little America V than at the South Pole [2]. Consequently, efforts were made to relate the type of height distribution of the wind gradient to some external parameter. Since the nature and topography of the snow surface showed distinct changes on the Ross Ice Shelf, it seemed that wind blowing over different types of terrain might result in variation of wind profile type with wind direction and fetch. Using a map of the vicinity of Little America V, a division into 5 sectors (see Fig. 7) was suggested by local particularities. Concerning descriptive classification of profile structure, the following method was adopted.

3.2.2 Classification of wind profiles into 4 types. Wind profiles of the 450 grouped cases have been classified into 4 types: "expected," "inverted," "expected irregular," "inverted irregular."

In fully developed flow, not only the wind speed but the wind speed difference, ΔV, between any pairs of geometrically spaced levels should increase with height when conditions are stable (Ri' positive); when conditions are unstable (Ri' negative), the increase of wind speed with height should occur with height-decreasing ΔV. Such distributions of the 3 overlapping values of ΔV, available from the wind speed measurements at 5 levels, are classified as "expected."

If the stable case shows a decrease of ΔV with height, or the unstable an increase of ΔV with height, the wind profile is classified as "inverted."

If the type of profile is "expected," based on a higher ΔV at 4 m than at 1 m, but the magnitude of ΔV at 2 m is not intermediate between the two, the profile is classified as "expected irregular."

Similarly, if the type of profile is "inverted," based on a lower ΔV at 4 m than at 1 m, but the magnitude of ΔV at 2 m is not intermediate between the two, the profile is classified as "inverted irregular."

3.2.3 Wind profile types in relation to wind direction. At the South Pole, more than 75% of the selected profiles were of the "expected" type, while, at Little America V, it was possible to obtain only 7 such 30-run groups (i.e., 210 profiles out of 450, or less than 50%). Winds from each of the five sectors shown in Figure 7 were tallied according to the 4 profile types, and the results are summarized in Table 3.2.3.1.

NOTE: Details of methods of analysis are idented in this report.

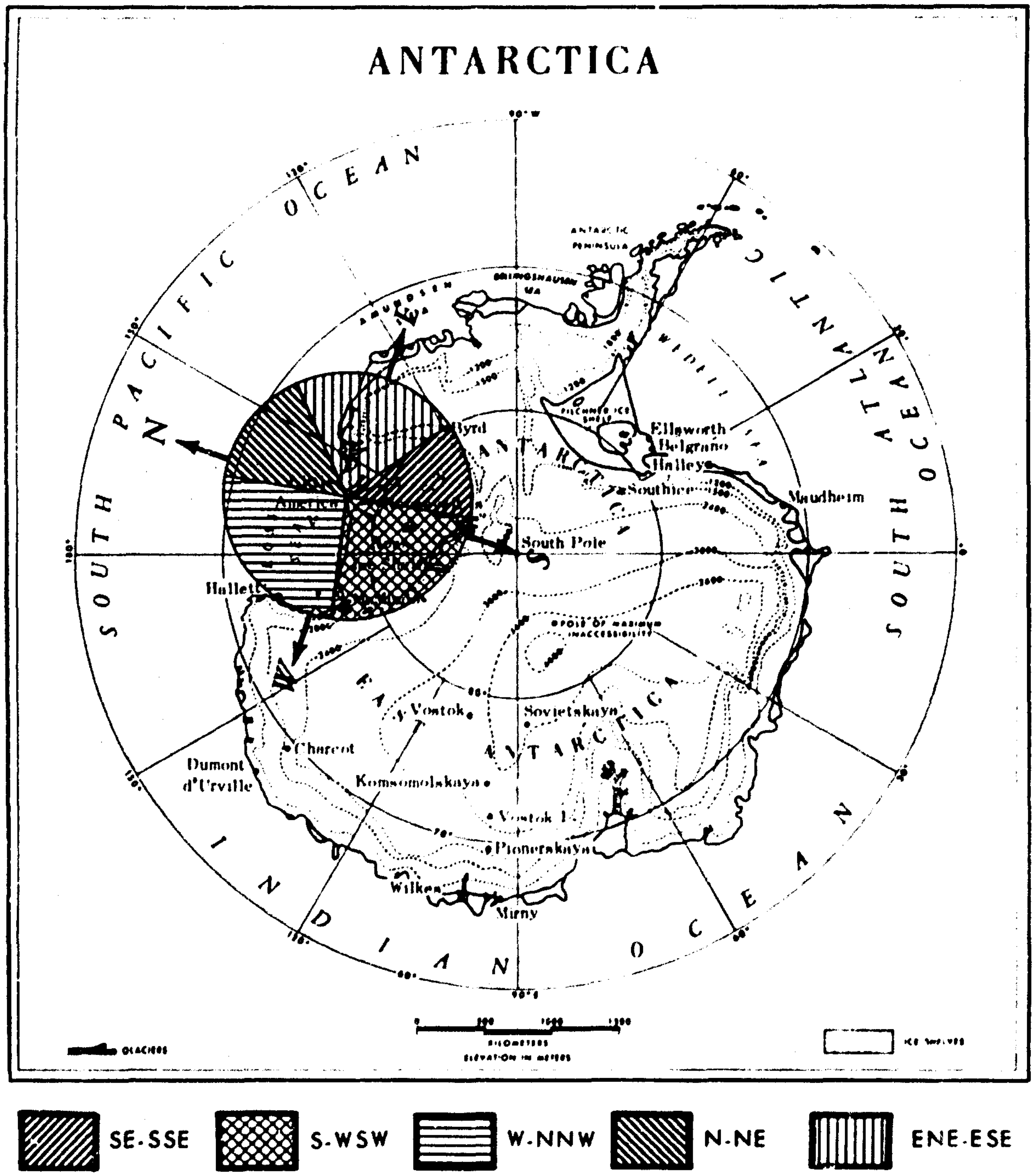


Figure 7. Five sectors of wind direction used in wind profile distribution study at Little America V, 1957.

Table 3.2.3.1 RELATIVE DISTRIBUTION (percent of time) OF FIVE SECTORS OF WIND DIRECTION, AND FREQUENCY (%) OF WIND PROFILE TYPES FOR EACH WIND DIRECTION SECTOR

Wind Direction Sector		Frequency (% of time) of indicated profile type for each wind direction sector			
Limits	Frequency(%)	Expected	Expected Irregular	Inverted	Inverted Irregular
SE-SSE	46.4	42	27	16	15
S-WSW	32.7	67	11	11	11
W-NNW	3.3	40	46	7	7
N-NE	7.8	36	39	8	17
ENE-ESE	8.7	59	12	6	23
"Calm"*	1.1	60	20	20	0

*Winds too weak to activate the Aerovane

An additional type of wind profile structure was defined as "katabatic" and included cases which showed either a wind speed maximum below the 8 m level or a pronounced lowering of the rate of wind increase with height under stable conditions. Such cases had been excluded from the grouping of profiles into 30-run groups and are not shown in Table 3.2.3.1; 60 profiles of this type were available. In 9 cases, winds were too weak to activate the Aerovane while 35 cases showed light winds between SSE and ENE. Six cases showed stronger winds from NNW and apparently were profiles that were not fully developed.

SE-SSE. The results shown in Table 3.2.3.1 are not easy to interpret. A possible explanation of the high frequency of the SE-SSE sector of wind direction is that the air tends to flow through the slightly lower region in the azimuth between Byrd Station and the South Pole. Wind direction statistics for both stations (Byrd and the Pole) indicate a tendency of air to drain into this lower area. Also, on the Ross Ice Shelf, some south winds may be diverted by Roosevelt Island, which lies due south of Little America V, but at a distance of more than 40 km, with the highest elevation, 640 m, at about 100 km from the station.

S-WSW. The sector from S to WSW includes the region where the Ross Ice Shelf stretches out for an average distance of approximately 500 miles with an average slope of 1 in 10,000 near Little America V. The most significant interruption to this slope is Roosevelt Island. Some details of the topography near the station are shown by Crary [7, Fig. 1 and 2, pp. 5 and 7]. Beyond the relatively abrupt rise from the ice shelf to the Plateau (Fig. 7), there is a gradual slope upward of about 1 in 500 to the highest land of the Plateau (elevation more than 4000 m). Winds which approach the Little America V station across the gently sloping, quite uniform Ross Ice Shelf show the "expected" profile type with relatively highest frequency, namely 67% of the time (see Tables 3.2.3.1 and 3.2.3.2), in spite of the fact that the camp was located in this wind sector in relation to the micrometeorological wind mast.

Table 3.2.3.2 COMPARISON OF RELATIVE FREQUENCY (per cent) OF WIND PROFILE TYPES AT SOUTH POLE (all directions) AND LITTLE AMERICA V (S-WSW)

	Expected	Expected Irregular	Inverted	Inverted Irregular
South Pole, all directions	76	16	4	4
Little America V, S-WSW	67	11	11	11

This table shows that, at Little America V, the relative distribution of the profile types with winds from the S-WSW sector is closest to that found at the South Pole, where the slope is gentle and quite uniform. There is indication from records for other years (see Vowinckel [11]) that winds from this sector are normally more prevalent than they were in 1957.

W-NNW In the sector from W to NNW, wind flows upslope, and the fetch is across rough terrain close to the station, including a 26 m deep depression called Crevasse Valley, and over a surface sometimes composed of ice and sometimes of water. These fetch conditions may explain the result, shown in Table 3.2.3.1 that "expected irregular" profiles are most frequent.

N-NE In the N-NE sector, the surface is also rough and winds come from the sea. The location of Little America V relative to normal storm tracks is such that most of the migrating disturbances are accompanied by strong N-NE winds at the station. Table 3.2.3.1 shows for this sector the lowest frequency of "expected" profiles. Within this sector, NNE was the most frequent direction (see Fig. 6) and was also the azimuth of the strongest winds.

SE-SSE It is more difficult to account for the large number of "inverted" and "irregular" profiles from the direction of maximum frequency, SE-SSE. Apparently, the type of wind profile does not relate to wind direction alone.

ENE-ESE Figure 6 shows that winds from ENE-ESE are rather infrequent (16.7% of all days), in comparison with winds from SE-SSE (38.5% of all days) but the katabatic type occurs with both fetches. The more southerly the wind in these 2 sectors, the longer the fetch across the ice shelf.

3.2.4 Wind profile types in relation to cloudiness. Cloudiness was considered as a possible factor which could be related to the type of wind profile. The mean opaque cloudiness averages 0.43 for hours of all profiles, 0.33 for hours with "expected" profiles and 0.53 for hours with "inverted" and "irregular" profiles. This may indicate that the latter types occur with greater than average cloudiness. However, a frequency count shows that with 0.6 to 1.0 cloudiness, 55% of the profiles are of the "expected" type, and with 0.0 to 0.5 cloudiness, 42% are of the "expected" type. Thus, the relationship is not statistically significant.

3.2.5 Wind profile types in relation to opaque cloudiness and wind direction. An attempt to relate opaque cloudiness, wind direction, and type of wind profile indicates the following:

(1) With fetches from the S-WSW sector and clear skies, profiles of the "expected" type predominate;

(2) with fetches from the SE-SSE sector, profiles of the "expected" type are most frequently accompanied by clear skies;

(3) with overcast skies, any wind profile type may occur with nearly equal frequency;

(4) winds from the azimuths most likely to show katabatic influence are usually accompanied by overcast skies while profiles of the "inverted" type have various sky conditions, but not clear skies.

Item (4) is the most surprising, since overcast skies are normally not expected with katabatic winds.

3.2.6 Wind profile types in relation to wind speed. A tabulation of type of wind profile as a function of wind speed at the 8 m level (see Table 3.2.6.1), illustrates that when V_8 exceeds a value of about 6 m/sec the profiles of the "expected" type are definitely a rarity.

Table 3.2.6.1 LITTLE AMERICA V. NUMBER OF HOURS WITH INDICATED TYPE OF WIND PROFILE, IN RELATION TO WIND SPEED (m/sec) AT 8 M LEVEL

	Number of hours at indicated wind speed, V_8 (m/sec)			
Type of Profile	1-3	4-6	7-9	>9
"Expected"	43	118	42	8
All other types	16	78	72	45

Although we are obviously considering two closely related measurements, wind speed at 8 m, and the wind gradient below that level, it is somewhat surprising that the degree of regularity decreases with increasing wind speed. The observed relationship may provide some insight regarding the physical mechanism involved, inasmuch as it can be interpreted to indicate the role of advection processes due to horizontal non-uniformity of surface conditions.

3.2.7 Conclusion. Neither the fetch of the wind nor the sky conditions afford a satisfactory correlation with type of wind profile at Little America V. Nor do advection, katabatic effects, nor a combination of the two provide an explanation of the observed wind profiles. Some of the relationships studied in the following sections have been tested using only the "expected" type of wind profile as well as all profiles.

3.3 Seasonal variation of stability and variation of external parameters with stability

3.3.1 Comparison of average bulk stability at Little America V and the South Pole. If one wants to compute monthly means of bulk-Richardson number, Ri', from hours when profiles were recorded at Little America V, the occasional extremely large Ri' raises the average so markedly that it may become unrepresentative. In the attempt to obtain a comparison with South Pole conditions (see Table 3.3.1 in the "South Pole Data Analysis" [2]) all profiles resulting in Ri' larger than 1000 units were omitted in the computation of monthly means. At Little America V, Ri' nevertheless averages consistently higher than at the South Pole.

> In a chart of monthly-mean Ri' for the South Pole Station, aerological data on the total height of the surface inversion and the total temperature difference had been included. However, due to a more complex structure of the lapse rate over the Ross Ice Shelf, it is not possible to obtain a total thickness of the inversion layer for that area with sufficient reliability and accuracy from the aerological soundings available. The main reason is that frequently several inversions occur in the lowest 1000 m.

3.3.2 Monthly frequency of stability from QM data. It appeared that a frequency count of stability occurrence by months, as measured by Ri' for the profile periods, might be more significant than the average monthly Ri'; results for 5 months are summarized in Table 3.3.2.1.

3.3.3 Monthly frequency of stability from USWB data. In view of the fact that hours of micrometeorological profile data are rather unevenly distributed over the months (see Table 3.3.2.1), the regular hourly observations by USWB personnel at Little America V for April through October 1957 were used to round off the QM climatic statistics of stability. A dimensional stability coefficient, S, was computed for every hour of the month, which has the same definition as that used for the South Pole

Station, namely

$$S = (T_{10} - T_{2.5})/(U_{10})^2 \qquad (2)$$

For convenience the USWB data were used in units in which they were recorded: Temperature, T, is in °F, and wind speed, U, in knots; instrument levels as indicated by the subscripts are height in meters. Thus, S, is expressed in $°F/kt^2$.

Table 3.3.2.1 LITTLE AMERICA V, MAY - SEPTEMBER, 1957. NUMBER OF CASES WITH INDICATED BULK STABILITY, Ri' (10^{-3}/m)

	Number of cases					
	May	June	July	Aug	Sep	May - Sep
Ri' < 0	7	0	16	35	33	90
0 < Ri' < 19	26	9	44	47	24	153
Ri' > 19	33	13	70	35	57	206
Total	66	22	130	117	114	449

An empirical relationship between Ri' and S had been derived for grouped hours of simultaneous measurements by QM and USWB at the South Pole, and is illustrated by the solid line in Figure 8. Grouped data for Little America V are plotted on the same graph. While the scatter is considerable at Little America V, due to the climatic complexities, the general relationship is similar to that at the South Pole. The frequency distribution of class intervals of S is shown in Table 3.3.3.1 by months.

3.3.4 Seasonal changes toward less stable conditions. At Little America, as at the South Pole, the stability coefficient, S, was most frequently in the interval from 0 to 0.01 ($°F/kt^2$). A shift toward less stable intervals is evident in warmer months, particularly in those cold months which were, in 1957, warmer than normal, such as June (see Fig. 1). The shift with season toward less stable intervals does not appear in September, i.e., following immediately the return of the sun, but is delayed until October, as is the seasonal rise in temperature.

3.3.5 Variation of wind speed, temperature and sky cover with stability. Figure 9 illustrates the variation with bulk stability, Ri', of wind speed, temperature and sky cover at Little America V. These elements are taken, for the hours of detailed profile data, from the 2 m wind speed, the mean temperature of the 8 m mast-layer and from the USWB visual observations of sky conditions.

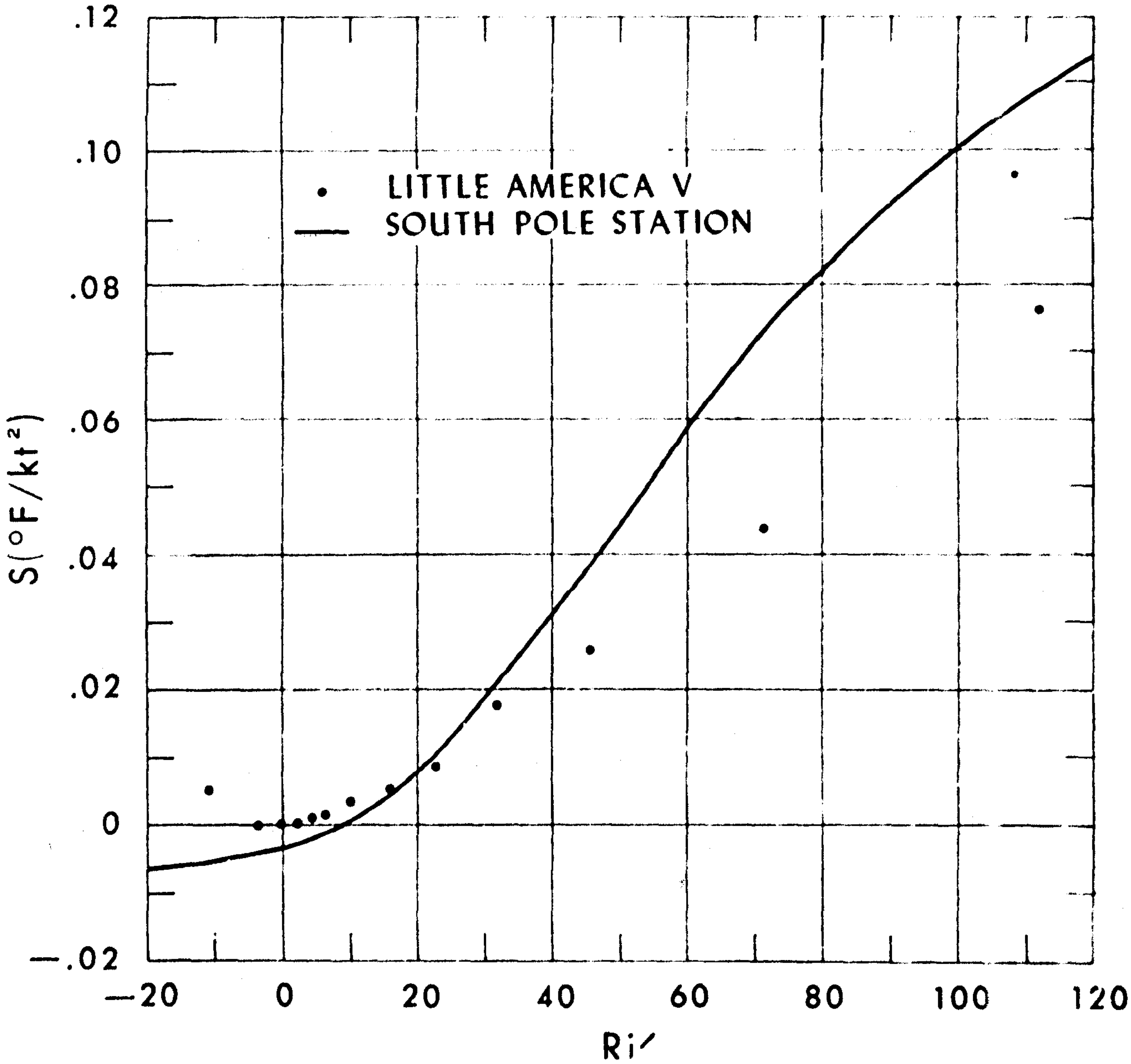


Figure 8. Stability coefficient, S (from USWB data) versus bulk Richardson number, Ri' (from QM data) for Little America V, 1957, compared with relationship established between S and Ri' at the South Pole, 1958.

Table 3.3.3.1 FREQUENCY DISTRIBUTION OF HOURLY VALUES OF THE DIMENSIONAL STABILITY COEFFICIENT, S (computed from USWB data), BY MONTHS AT LITTLE AMERICA V, 1957

S (°F/km)	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr - Oct
	Number of hours							
- ∞ to -.01	1	7	7	6	6	17	15	59
-.01 " 0	35	134	158	82	104	96	188	797
0 " .01	82	380	399	414	446	369	393	2483
.01 " .02	25	43	38	58	46	66	29	305
.02 " .03	6	22	16	21	20	41	18	144
.03 " .04	12	16	6	25	11	13	15	98
.04 " .05	5	7	9	10	8	17	12	68
.05 " .06	8	12	7	10	10	11	6	64
.06 " .07	4	9	5	4	3	6	6	37
.07 " .08	1	1	5	6	3	3	6	25
.08 " .09	3	3	4	7	4	5	5	31
.09 " .10	0	5	1	6	3	2	3	20
.10 " .11	1	5	4	5	4	1	3	23
.11 " .12	1	6	2	2	5	0	0	16
.12 " ∞	17	43	21	64	39	42	21	247
Total	201	693	682	720	712	689	720	4417

The wind and temperature dependencies on bulk stability (Ri') are similar to those for the South Pole, with highest speed and highest temperature for groups near neutral stability. However, sky cover with the unstable cases at Little America V averages 7/10. At the South Pole the rare unstable cases are consistently accompanied by overcast skies. This result is highly interesting. It can mean that at the South Pole the cause of occasionally occurring lapse conditions is long-wave radiation from the lower surface of a "warm" stratus cloud (i.e., warmer than the snow-surface), while at Little America V short-wave radiation from sun and sky can be at least a contributing factor. In view of the high albedo of the antarctic snow cover, this result appears to be understandable, and consistent with conditions of external nature.

Wind speed averages are lower for profiles of the "expected" type than for all hours of profile data (Fig. 9). This is consistent with the evidence discussed in Section 3.2 that wind speed averages tend to be higher for the "irregular" types. Figure 9 also shows lower temperatures at extreme stability for the "expected" than for all cases. There is little change in wind speed, temperature or cloudiness at bulk stabilities beyond 70.

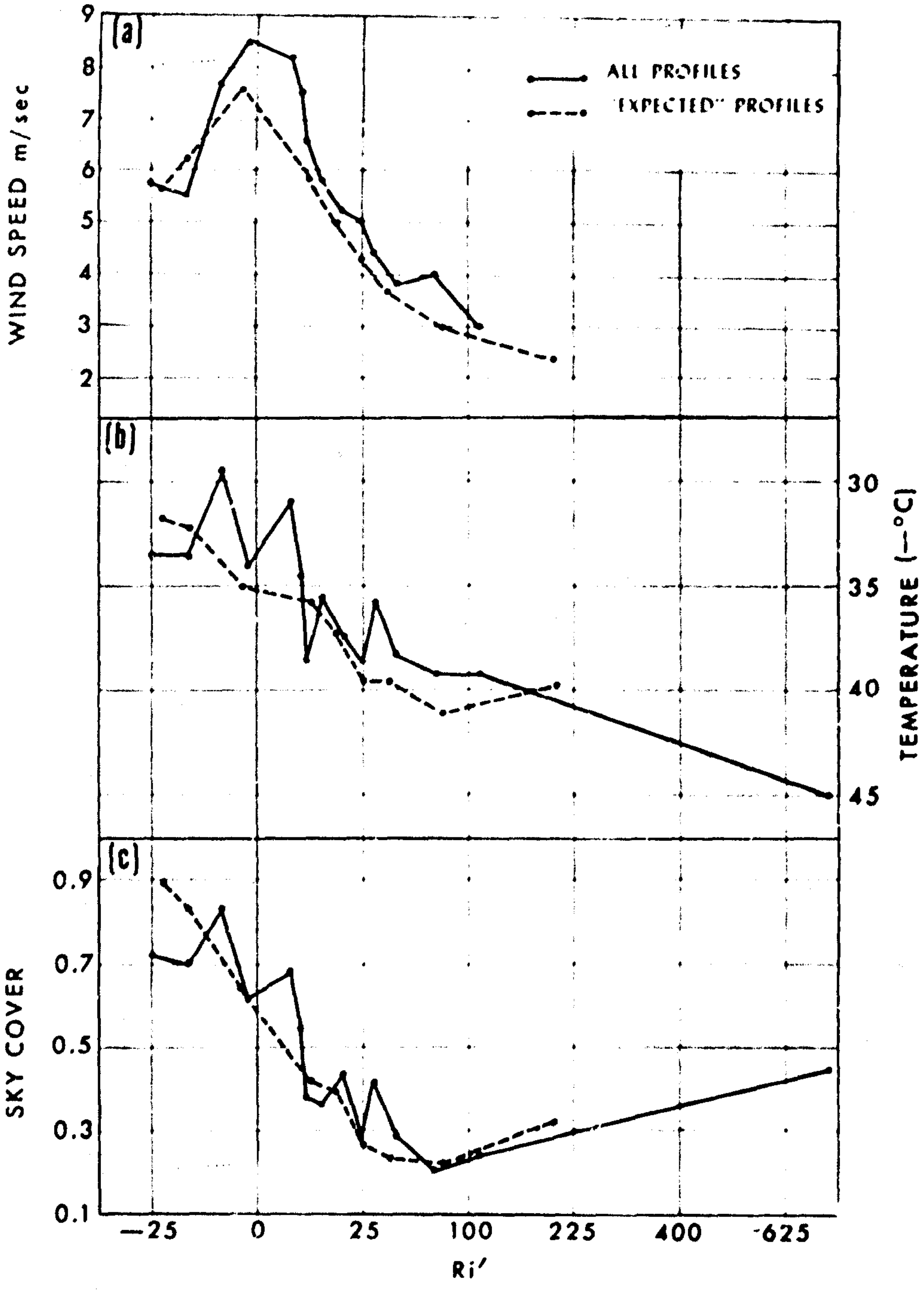


Figure 9. Little America V, 1957. Variation with bulk stability, Ri', of: (a) Wind speed at 2 m; (b) Temperature of the 8 m surface layer; (c) Sky cover. Abscissa values increase in proportion to the square of distance from zero.

The extremely stable cases classed as "katabatic" are not included in Figure 9, since they were omitted in the grouping of profiles. However, those "irregular" and "inverted" cases that are included are responsible for higher temperatures when all cases are used than when only "expected" profiles are used.

It is likely that some of the profiles of the "inverted" type are in reality of the "katabatic" type with a wind maximum at fairly low levels but not below the 8-meter level. The issue is somewhat confused by the fact that, near neutral stability, precise wind profile type classification is impeded by the limits of accuracy of the temperature measurements used in determining Ri'. For example, a slight error in a temperature observation may result in a negative Ri' when actually conditions were such that Ri' should be positive; an observed increase of wind speed gradient (ΔV) with height at negative Ri' was taken as an indicator that this profile must be classified as the "inverted" type. While, for consistency, the separation had to be based on a computed value of Ri' = 0, there are many cases near Ri' = 0 that could fall to the positive or negative side of Ri' with a relatively small change in only one level of temperature observations. Since the over-all temperature gradient is small with winds from the SE-SSE sector (Fig. 6), the resulting near-neutral stability may account for many of the "inverted" and "irregular" cases of profile structure that occur with winds from this sector (see Table 3.2.3.1).

3.4 Vertical profile of Richardson number

The dependency of Richardson number, Ri, on the height for fifteen 30-run groups, is shown in Figure 10. This plot embraces all 4 descriptive types of wind profiles, and includes the correction to the 4 m temperatures discussed in Section 2.4.2. A systematic change of Ri with height in the lowest 4 m is evident, and for all groups, Ri can be assumed to go to zero if one approaches the surface. The over-all height gradient of Ri corresponds rather closely to the group values of Ri'. However, a comparison of Figure 10 with the corresponding graph for the South Pole data [2, Fig. 5] suggests that the Little America V results show more of a systematic curvature in the vertical profiles of Ri for all stabilities.

In Sections 2.2 and 3.2 it was mentioned that at Little America V the vertical gradients of individual micrometeorological elements, including both temperature and wind speed, are of a more complicated structure than at the South Pole. Since the Ri-number computation involves a combination of temperature and wind gradients it is, in fact, surprising to note the degree of regularity evidenced in Figure 10. More organization in the Ri-profile, than in the individual profiles of its constituents, could indicate an interesting tendency for compensation, and illustrate the physical significance of the Ri-number. Since the height-gradient of Ri

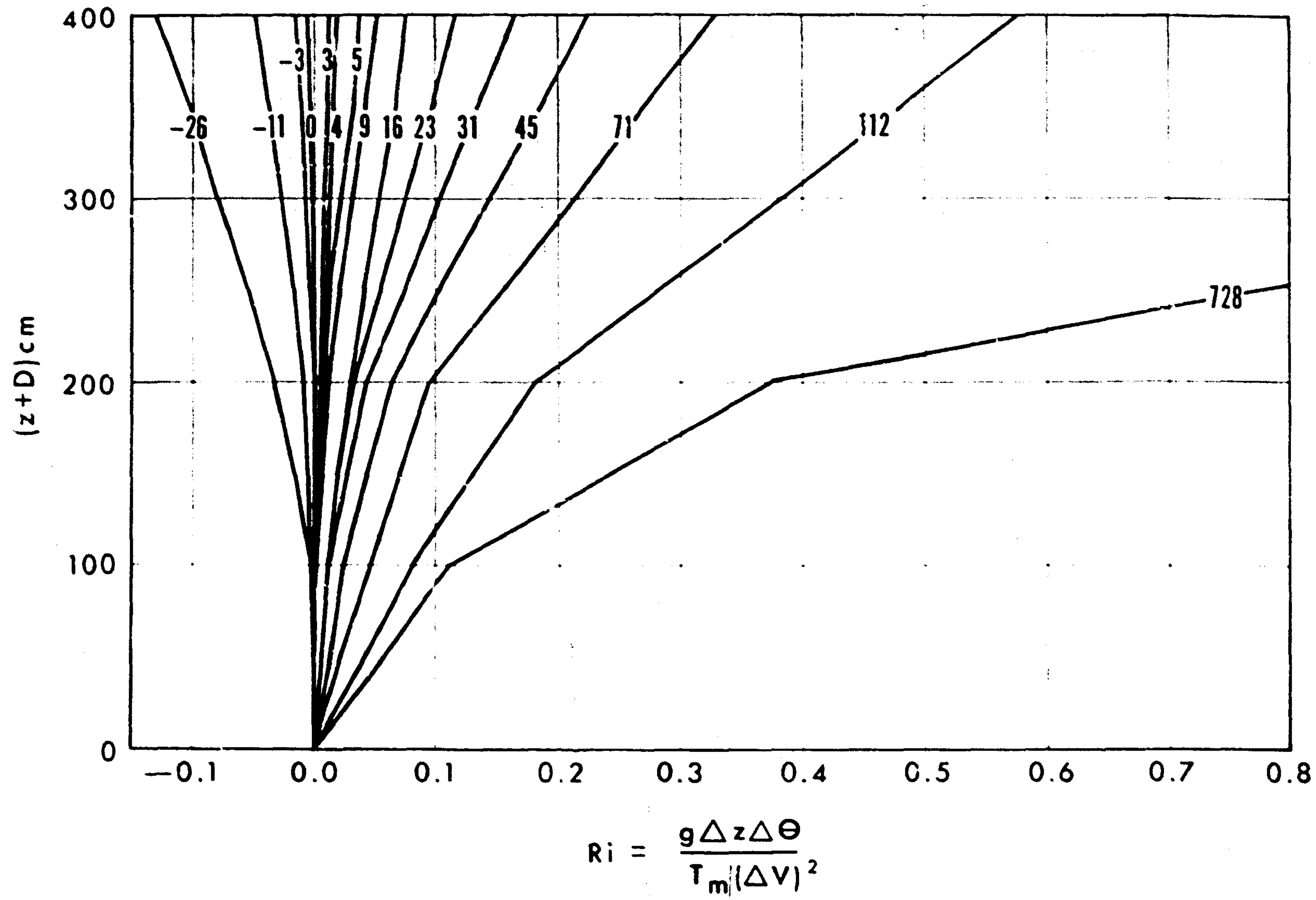


Figure 10. Little America V - Richardson number, Ri, versus height, z + D, for indicated bulk Richardson number, Ri'.

can be expressed by the Deacon numbers of the wind and temperature profiles, more detail will be presented after discussion of these numbers (see Section 3.7).

3.5 Computation of wind profile curvature and zero displacement parameter

The Deacon number of the wind profile, β_V, is a numerical measure of profile curvature. For its definition, reference is made to H. Lettau [14, Section 7.5, p. 340]. β_V was computed for the 30-run groups of Little America V profiles using overlapping differences in the following equation

$$\beta_V = (\Delta \log \Delta z - \Delta \log \Delta V)/ \Delta \log(z + D) \qquad (3)$$

where D = zero displacement parameter = $z_0 + d$
with z_0 = roughness length
d = zero displacement
Δz = height difference
ΔV = wind speed difference corresponding to Δz.

The zero displacement, d, corrects for irregularities of the terrain in the direction from which the wind is blowing, and also movements of snow at the site surrounding the micrometeorological mast installation, which produced uncertainty concerning the actual elevation of the anemometer array above the average or aerodynamically effective ground surface. At the site, the arms of the anemometer mast were adjusted periodically when snow accumulation raised the height of the underlying surface.

In an adiabatic surface layer the Deacon number β_V equals unity, and the zero displacement, d, can be determined with the aid of a least-square fit to the logarithmic wind law; reference is made to Robinson [15] who describes a program for automatic computation of the set of three parameters which are D, z_0, and the shearing velocity $\sqrt{\tau_0/\rho}$ where τ_0 is the surface stress. This method cannot be applied for diabatic conditions, since it is known that the logarithmic law holds true only in adiabatic surface layers.

A revised scheme for the computation of the zero displacement in diabatic surface layers was developed in the "South Pole Data Analysis" [2]. The same approach is used here.

The Deacon numbers for the group analysis were computed using adjacent as well as overlapping height intervals, and assuming a sequence of tentative D values (i.e., first D = 0, then D = -5, -10, -15 cm, then D = 5, 10, 15 cm, etc.). For each group, resulting β_V-values (at nominal heights of 100, 141, 200, 283, 400 cm) were plotted against height in linear coordinates.

A basic model assumption is that the Deacon number goes to unity if z approaches zero, for any diabatic state. The D value which satisfied this model requirement and produced the least change of curvature with height in the computed β_v-profile was selected. In the process of determining this D value for individual profiles, the systematic change of the β_v-profile structure with bulk stability was also considered.

As a result of the trial-and-error method, it was found that, indeed, in the lowest 1 to 2 m layer at Little America V the absolute value, $|1-\beta_v|$, could be made in many cases to be proportional to the distance from the actual surface. This method of D determination did not work as well, however, with the complicated wind profiles at Little America V as with the more clear-cut South Pole data. In general, it was necessary to apply larger negative D values (as large as 25 cm) at Little America V than at the South Pole. This was in line with visual estimates at the two sites and observations that small to micro-scale surface features showed greater amplitudes and more diversity of structure at Little America V than on the central Antarctic Plateau.

3.6 Relationship of profile curvature (Deacon numbers) to bulk stability (bulk Richardson number) and height

The dependency of β_v-profile structure on bulk Richardson number, Ri', is shown in Figure 11. In a neutral case (Ri' = 0), β_v, should equal unity in the lowest atmosphere, provided that the wind profile is exactly logarithmic, and the proper zero displacement is known. For a given bulk stability, the Deacon number departs from unity more at Little America V than at the South Pole. The departure is nevertheless small (see Fig. 11) and, as at the South Pole, for surface cooling (inversion conditions) β_v tends to be smaller than unity and decreases generally with height. At Little America V, an S-shaped β_v-profile is obtained for lapse conditions (surface heating), probably due to relatively strong wind speed increase close to the surface.

As stability increases, β_v decreases with height more and more rapidly as long as Ri' is not extremely large. As at the South Pole, when Ri' becomes greater than approximately 0.05/m, the decrease of β_v is strong only in the lowest part of the 4 m layer under investigation. However, at Little America V the decrease is generally weaker and does not exceed a minimum value of $\beta_v = 0.675$ at about 1.5 m, while at the South Pole, the corresponding minimum was 0.25. Above about 1.5 m the β_v-profiles at Little America V show much more irregularity than at the South Pole. A systematic increase is lacking; the curves tend to show only a lesser decrease with height than at lower stability. The most stable 30-run group did not show any great decrease in β_v with height, even in the lowest layers used, or when broken down into 3 separate 10-run groups. It is possible that a pronounced minimum in β_v occurred at a lower level than is measured here; the lowest reliable β_v-value could be computed only at about 1.5 m. A somewhat uncertain estimate for the 1 m level supports this conjecture. This may indicate an extremely shallow surface layer.

The change of potential temperature gradient with height at Little America V was so irregular that it was not possible to establish any significant relation between the curvature of the temperature profile, β_θ, and bulk stability, Ri', i.e., between Deacon number, β_θ of the temperature profile and bulk Richardson number, Ri'.

3.7 Interdependence between Deacon numbers and Richardson numbers

3.7.1 Non-linear change of Richardson number with height. It was mentioned in Section 3.4 that the vertical profiles of the Richardson number (see Fig. 10) give relatively good evidence of systematic changes with bulk-stability of the group means. In fact, the structure of the curves in Figure 10 suggests that Ri could be proportional to z^m, with a value of the exponent m which seems to be larger than unity, but not larger than 2. This regular pattern in Ri versus height appears interesting, in view of the rather erratic behavior of the individual relationships (such as β_v versus height, or β_v versus Ri, or β_θ versus Ri, etc.).

If $Ri \sim z^m$, it follows directly from the defining equation (1), upon logarithmic differentiation of Ri with respect to height, that an exact equation is

$$\partial \log Ri/\partial \log(z+D) = 2\beta_v - \beta_\theta = m \quad (4)$$

For a constant value of m it must be concluded from equation (4) that only for the special case of m = 1 is it mathematically possible that β_θ approaches unity if β_v goes to unity.

While the micrometeorological conditions at the South Pole corresponded rather closely to the case of m = 1 (as evidenced by the near-to-linear structure of the Ri versus z curves of Fig. 5 in [2]), conditions at Little America V are definitely of a different nature, in that $m > 1$, or, specifically, m appears to be close to 2.

3.7.2 Theoretical relationship between wind profile Deacon number and Richardson number. The relationship between wind profile Deacon number, β_v, and Richardson number is illustrated for Little America V in Figure 12. In comparison with corresponding results reported in [2] for the South Pole, there is definitely more scattering of points at Little America V.

It was found in the analysis of the South Pole data [2] that the dependency of β_v on Ri was reasonably well approximated (at least for small Ri) by a theoretical relationship suggested by various authorities, including Panofsky et al [16]; this relationship has been derived strictly

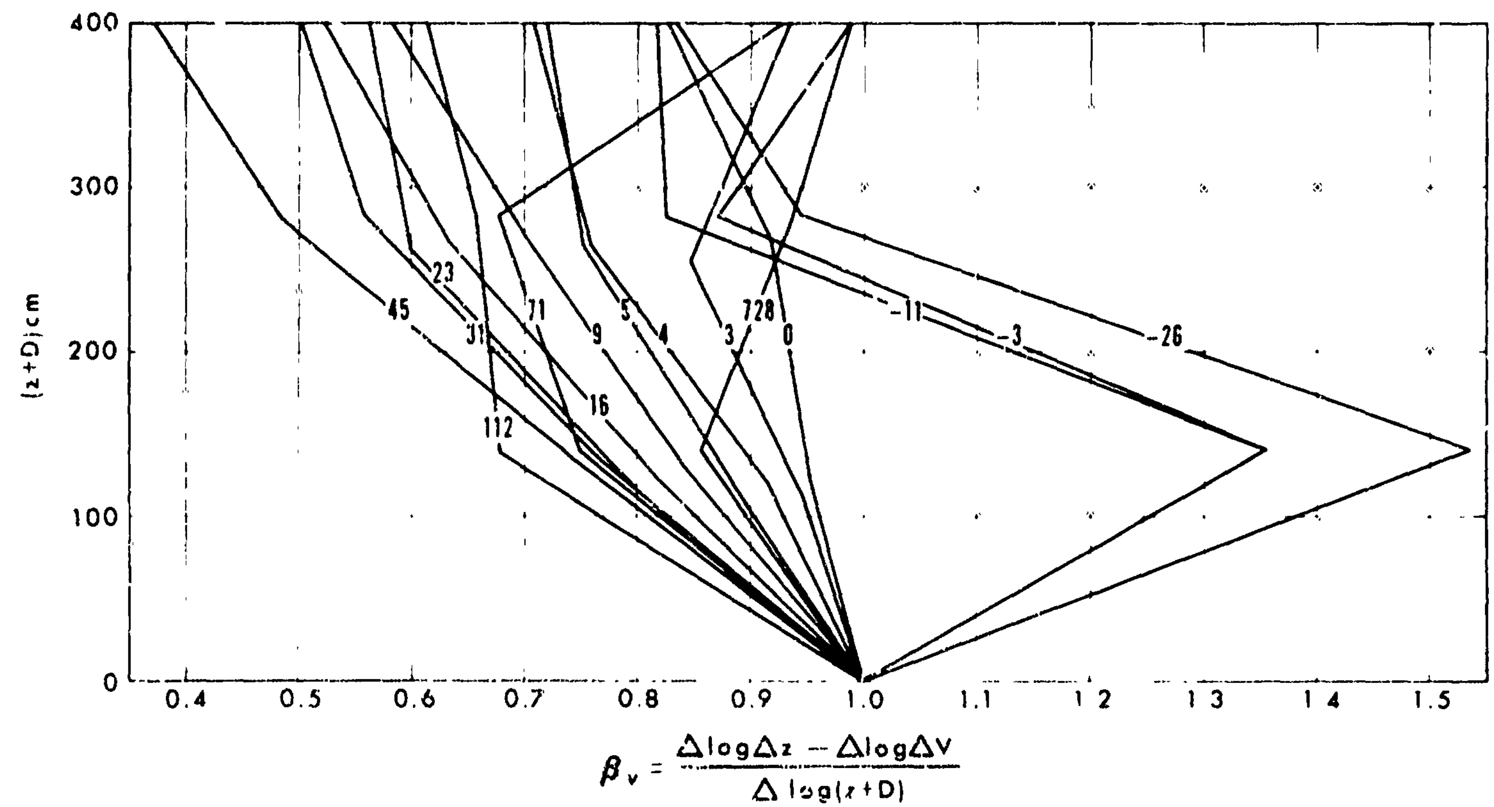


Figure 11. Little America V - Wind profile curvature, β_v, versus height, z + D, for indicated bulk Richardson number, Ri'.

for surface-layer conditions, and is

$$\beta_V = (1 - 18\, Ri)/(1 - 13.5\, Ri) \tag{5}$$

Certain systematic deviations from the theoretical curve, at $Ri' \geq 0.04$, approximately, can readily be explained by the fact that for strong stability some of the upper anemometer levels used for the β_V-computation must have been actually outside the surface layer. That is, increasing Ri', for a given or constant horizontal pressure gradient, is invariably accompanied by a decrease of both surface stress (τ_0) and low-level wind speed V(z); thus, the geostrophic departure of the surface wind must increase and, as a direct consequence of the equation of motion, the absolute value of $\partial\tau/\partial z$ increases. The end result is that $-\tau_0/(\partial\tau/\partial z)$, which determines the thickness of the surface layer, must decrease considerably with increasing stability. For conditions of strong stability, the surface layer may thus be reduced to less than 2, or even 1 meter. For a detailed discussion of this, and the corresponding behavior of β_V above the surface layer of a barotropic and adiabatic boundary layer, reference is made to Lettau [17].

The theoretical relationship (Eq. 5) is indicated for Ri >0, in the plot of β_V versus Ri, Figure 12, as a dashed curve. Obviously, the lack of agreement (with actual β_V) evidences the limitations of existing theories of diabatic profile structure.

3.7.3 Empirical relationship between wind profile Deacon number and Richardson number. Entered also on Figure 12 is a strictly empirical relationship, derived by "curve-fitting," of the form

$$\beta_V = (1 + 14\, Ri)/(1 + 42\, Ri), \tag{6}$$

which produces some degree of approximation to the lower limit of the widely scattered observational β_V-points, for Ri >0. In view of equation (4) and the m-value of approximately 2, it would follow from either equation (5) or (5) that β_4 must be negative for even the smallest deviation of β_V from unity, for $\beta_V < 1$. This seems to be related to the anomaly of the low-level temperature profile, as represented by the frequently observed "elevated minimum" discussed in Section 2.2.3. Advection, lack of fully developed temperature profiles, or the tendency to katabatic motion, can be responsible, to some degree, for the exceptional structure in curvature conditions at Little America V.

3.7.4 Relationship between temperature profile curvature and wind profile curvature. It must be concluded that temperature profile curvature, β_θ, at Little America V is distinctly different from wind profile curvature, β_V. This is important for heat flux computations using similarity principles. The inequality, $\beta_V \neq \beta_\theta$ will mean not only

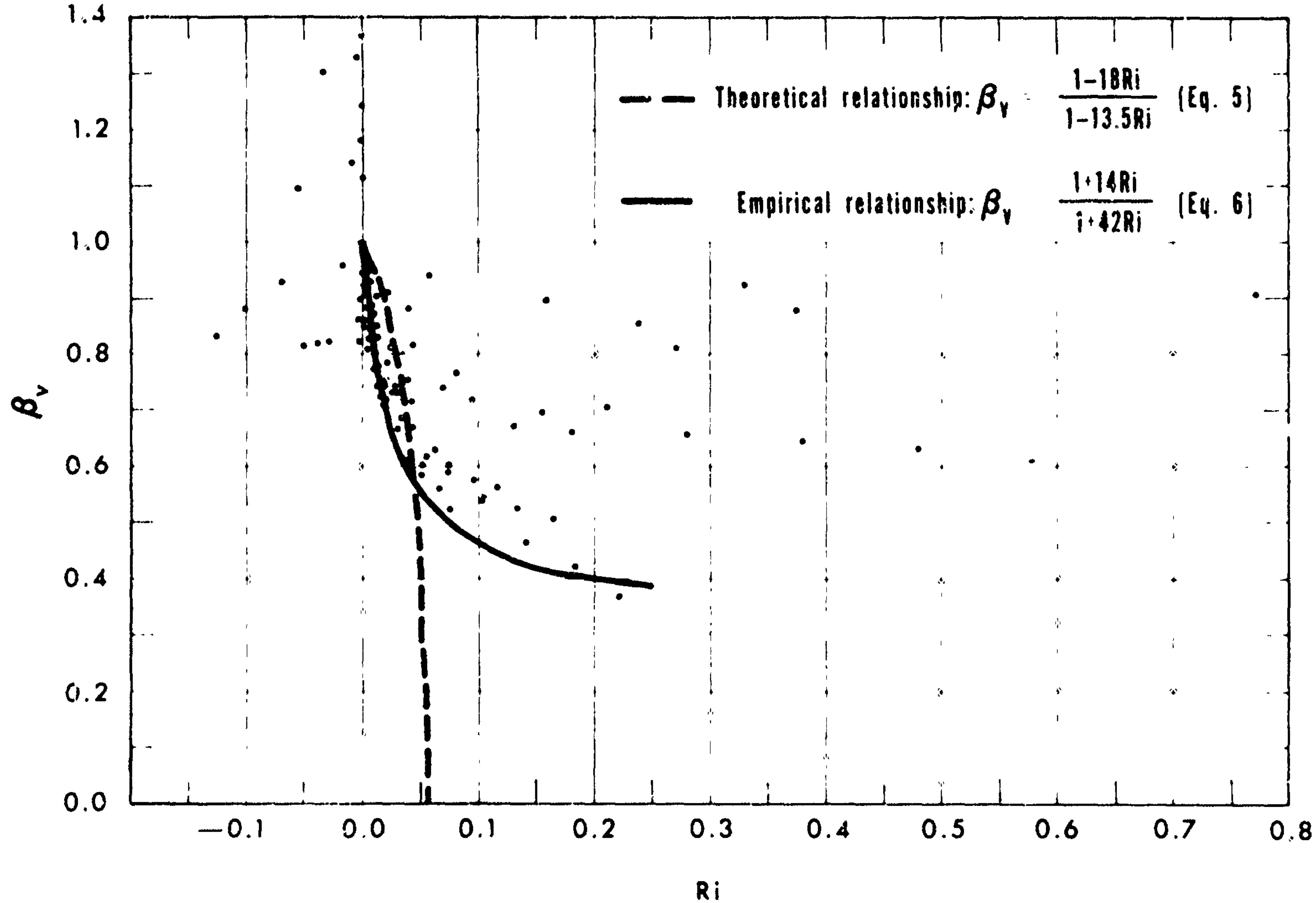


Figure 12. Wind profile curvature, β_v, versus Richardson number, Ri.

that the coefficients of momentum and heat diffusivity (K_M and K_H) are different, but that the ratio K_M/K_H must be a function of height for surface layer conditions. Furthermore, existing theoretical models of diabatic surface layer structure have been derived almost exclusively by using the assumption that $\beta_V = \beta_\theta$. The above-discussed wide discrepancies between β_V and β_θ must lead to the conclusion that a common surface layer for momentum and heat transfer did not exist at Little America V or was so shallow that in nearly all cases the levels at which micrometeorological data are available were above the surface layer.

3.7.5 Possible causes of unusual structure of the micro-meteorological layer. One may think of several physical causes for the unusual structure of the micrometeorological layer at Little America V. The first possible cause which comes to mind is the lack of fully developed profiles. This would imply as the principal causative factor a marked discontinuity of surface conditions at a line which must be intersected by the upwind fetch so that a process of advection begins there. Only if the site were completely encircled by such a marked discontinuity of surface conditions (such as, for example, at the center of a round flat island in the ocean) would a pronounced correlation of advection effects with the azimuth of the air motion be expected. At Little America V, even though there exists a strong discontinuity in the environment of the station (namely, the boundary between ice and water) it is a more or less straight line, and, in most months of the year, is quite far away. Moreover, the observed unusual features of micrometeorological profile structure are not at all convincingly related to air flow from the water, so that advection can be ruled out.

The second possible cause could be katabatic profile structure, or the combination of katabatic effects for fetches from one sector, with advection effects from another. It is physically absolutely unlikely, however, that these two entirely different causes could produce similar effects on the micrometeorological profile structure. Moreover, there is a rather wide sector at Little America V for which neither of the two could be held responsible; with winds out of this sector the profiles show a tendency to the same behavior as with fetches from the distant water, or from the also distant slopes towards higher grounds.

The ruling out of advective and katabatic effects forces us to think of a third causative factor, which must also be related to local geomorphology but for which there is the requirement that it be basically the same for all azimuths from the station. This appears to exclude practically every feature other than the ice shelf itself. In view of the thermal properties of ice floating on water it could be suspected that some particularities of the surface heat budget may represent the cause for which we search. Normally, a strong intensity of sensible heat transfer between ground and air produces order in the temperature profiles. The lack of order could imply that this heat transfer is unusually small.

This could mean that net radiation is almost completely balanced by sub-surface heat flux and latent heat transfer. Such a tentative hypothesis can be tested only by local heat budget investigations. The question still remains why the sensible heat transfer can be small in an air layer which is far from being isothermal. Moreover, it will be shown in Section 8 that the intensity of eddy heat flux is only between 1/2 to 1/3 that of net radiation, which is not a spectacular ratio.

4. Computation of Roughness Length

4.1 Computation from wind profiles

The conventional method of roughness length, z_0, determination is based on the logarithmic wind profile which will exist only in an adiabatic surface layer (see Lettau [14, p. 333]). In view of the extreme rareness of these neutral conditions at Little America V, as well as at the South Pole, a new method of profile analysis was introduced which permits computation of roughness length, z_0, from diabatic profiles (see Section 3.5). The assumption is made that $(\beta_v - 1)$ varies in direct proportion to height, at least in the lowest layer. Then using the equation defining β_v, (Eq. 3) it follows upon integration that

$$\log z_0 = \log(z+D) - 0.4343(\alpha^{-1}e^{(1-\beta_v)} - (1-\beta_v) - 0.25(1-\beta_v)^2 \ldots) \qquad (7)$$

where common logarithms are used and the profile contour number, α, is defined as $\Delta\log V / \Delta\log(z+D)$. Since D was obtained independently (see Section 3.5), equation (7) can be solved for any level where α and β_v are known.

The mean z_0 was obtained from all data levels, or, in the more stable cases, from at least the 3 lowest levels. Results are plotted against bulk stability, Ri' in Figure 13.

4.2 Magnitude and variation of roughness length

Even when only "expected" profiles were used, roughness length computed according to the procedure used in the "South Pole Data Analysis" [2] was erratic, and, in general, too small, based upon comparative visual observation of the terrain at the 2 stations. The neutral stability z_0 value near 0.03 cm appeared reasonable, but was based on only one 10-run group. For profiles with bulk stability Ri' between 6 and 74 10^{-3}/m, roughness length averaged near 0.01 cm but grew with stability. It tended to increase more rapidly towards extreme stability. This increase may be due to the fact that at Little America V the values of $1 - \beta_v$ did not vary in direct proportion to height.

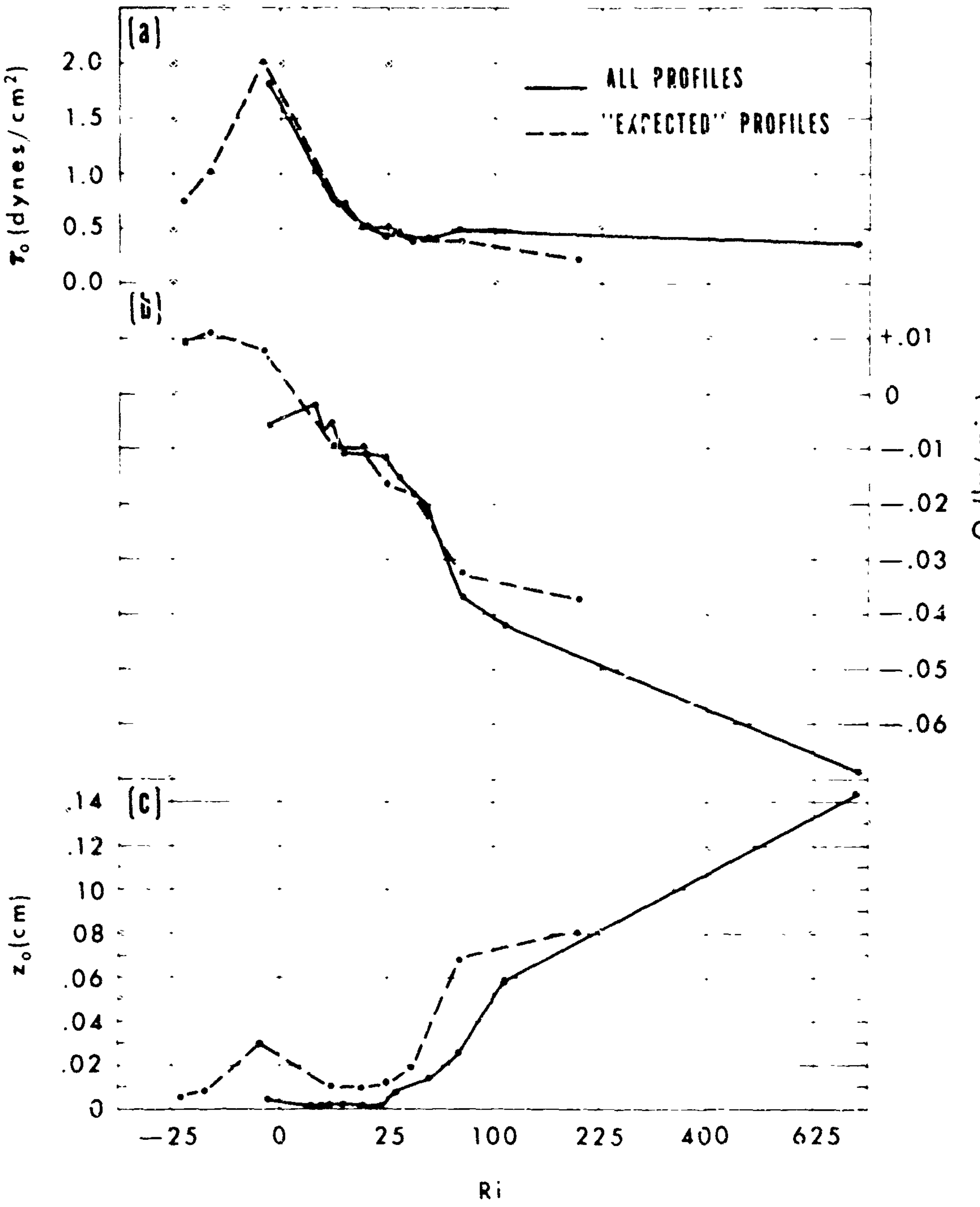


Figure 13. Little America V - Variation with bulk stability, Ri', of: (a) Surface stress, τ_o; (b) Eddy heat flux, Q_o; (c) Roughness length, z_o. Abscissa values increase in proportion to the square of distance from zero.

5. Calculation of Surface Stress, Eddy Heat Flux, and Momentum and Heat Transfer Coefficients

5.1 Surface stress

In order to obtain the surface stress, it was necessary to calculate the friction velocity, $\sqrt{\tau_o/\rho}$, from the wind profiles. The grouped data were used, and a formula was employed which is valid for the same assumptions which underlie equation (7), namely $\partial\beta_v/\partial z$ = constant, and $\beta_{v,o}$ = 1

$$\sqrt{\tau_o/\rho} = 0.4343\ ke^{(\beta_v - 1)} \cdot \frac{\Delta V}{\Delta \log(z + D)} \qquad (8)$$

where common logarithms and a value of the Karman constant $k = 0.428$ are used.

Surface stress, τ_o, was determined by averaging values of $\sqrt{\tau_o/\rho}$ for the lower levels where the profile curvature followed as closely as possible the requirement that $(1 - \beta)$ is directly proportional to height. Air density, ρ, was computed from the USWB station data, using their 3-hourly observations of temperature, pressure and pressure tendency. For these lower levels, stress, τ, is considered independent of height. A convenient drag coefficient (as defined by the dimensionless ratio $(\sqrt{\tau_o/\rho}/V_4)$ also was calculated from the friction velocity obtained from the grouped wind profiles.

Ranges of the surface stress, τ_o, with stability, and values of the drag coefficient at Little America V and the South Pole are shown in Table 5.1.1; variation of τ_o, with stability, at Little America V, is illustrated in Figure 13.

Table 5.1.1 RANGES OF SURFACE STRESS, τ_o, WITH BULK STABILITY, Ri', AND VALUES OF THE DRAG COEFFICIENT, $\sqrt{\tau_o/\rho}/V_4$, LITTLE AMERICA V AND THE SOUTH POLE

Station	Type of Profile	No. of 30-run Groups	Range of Ri'	Range of τ_o (Dynes/cm2)	$\sqrt{\tau_o/\rho}/V_4$
Little America V	all	12	728 to 0	0.4 to 1.6	.037
Little America V	"expected"	7	191 to -13*	0.2 to 1.2*	.040
South Pole	all	20	89 to 10	0.1 to 0.8	.042

*A 10-run group at Ri' = -1 shows τ_o = 2.0 (Fig. 13); also surface stress is relatively higher at all stabilities for "inverted" profiles.

The variation of surface stress with stability shows some degree of parellelity with the variation of wind speed with stability shown in Figure 9a (Section 3.3.5). In comparison with the relationship between Ri' and τ_o, and between Ri' and wind speed at the 2 m level, at the South Pole, the Little America V data indicate again that a certain stability occurs at Little America V with higher wind speed than at the South Pole, at least for $30 < Ri' < 100$, in units of $10^{-3}/m$. The seasonal variation of surface stress will be compared with that of the terms in the energy budget equation in Section 8.

The drag coefficient is relatively independent of bulk stability in the range from Ri' = 0 to 728.

5.2 Eddy heat flux

Eddy heat flux, Q_o, was computed using a similarity relation based on vertical differences of wind speed and potential temperature from all 5 heights, or in cases of extreme stability the lowest 4 or 3 heights,

$$Q_o = -c_p \gamma \tau_o \frac{\Delta\theta}{\Delta V} = -14.4 \gamma \tau_o \frac{\Delta\theta}{\Delta V} \qquad (9)$$

where Q_o = eddy heat flux (ly/min)
c_p = specific heat of air (cal $g^{-1}deg^{-1}$)
γ = K_Q/K_M

K_Q = eddy diffusivity for heat
K_M = eddy diffusivity for horizontal momentum

ΔV and $\Delta\theta$ have the same meaning as explained in Section 2.4 in connection with Equation (1). If the eddy diffusivities for heat and horizontal momentum are the same, γ=1. The sign-convention is chosen so that heat flowing in the direction of increasing z-values (upwards) corresponds to positive Q_o while the heat flux accompanying inversional temperature gradients is in the downward direction and, therefore, a negative Q_o.

Ranges of eddy heat flux, Q_o, with stability (assuming γ =1) are shown, for Little America V and the South Pole, in Table 5.2.1; variation of Q_o, with stability, at Little America V, is illustrated in Figure 13.

Table 5.2.1 RANGES OF EDDY HEAT FLUX, Q_0, WITH BULK STABILITY, Ri', LITTLE AMERICA V AND THE SOUTH POLE

Station	Type of Profile	No. of 30-run Groups	Range of Ri'	Range of Q_0 (ly/min)
Little America V	all	12	728 to 0	-0.0693 to approx. 0
Little America V	"expected"	7	191 to -13	-0.0374 to 0.0130
South Pole	all	20	68*to -18	-0.0239*to +0.0052

*no consistent variation above Ri' = +10

5.3 Momentum transfer and heat transfer coefficients

A relationship can be obtained, by the procedure used in the "South Pole Data Analysis" [2], between the stability coefficient, S, derived from USWB data (see Section 3.3.3 and equation (2)), and momentum transfer and heat transfer coefficients, for the hours when temperatures at 2 levels and wind speed at 1 level are available from both QM and USWB observations. The drag coefficient ($\sqrt{\tau_0/\rho}/V_4$), as was discussed in Section 5.1, varies little with change in bulk stability or wind speed.

A momentum transfer coefficient is defined as

$$\lambda_{WB} = \frac{\tau_0}{\rho (U_{10})^2} \qquad (10)$$

and a heat transfer coefficient is defined as

$$\phi_{WB} = \frac{-Q_0}{c_p \, \rho (U_{10})(T_{10} - T_{2.5})} \qquad (11)$$

where τ_0 and Q_0 are computed from the grouped profiles obtained from QM observations and the wind speed, U, and temperatures, T, at the heights in meters shown in the subscripts, are obtained from synchronous USWB observations. These coefficients were computed for twelve 30-run groups for all types of wind profiles, with the 3 unstable 30-run groups omitted because of the large variation in τ_0 at the 5 levels. The coefficients were computed also for seven 30-run groups of "expected" profiles, including 1 unstable group. When the results are plotted versus the stability coefficient, S, the scatter of points is large relative to that at the South Pole, even when only "expected" profiles are used. It was decided, therefore, to use constant values of the two coefficients, equal to the arithmetic average:

$$a) \quad [illegible] \left(\frac{cm}{m\ knot} \right)$$

$$b) \quad \Phi_{WB} = 2.69 \left(\frac{cm}{sec\ knot} \right)^2$$

These coefficients and equations (10) and (11) will be used in Section 8 to obtain values of the eddy heat flux term in the energy budget equation and values of the surface stress for comparison with the terms in the energy budget equation.

6. Heat Flux in the Snow

6.1 Temperature observations and patterns

6.1.1 Comparison of once-a-day and continuously recorded subsurface temperatures. The vertical heat flux in the snow, S_0, is an important constituent of the heat budget at the snow-air interface. Discussion of this heat flux at Little America V is included in a report by Crary [7, pp. 45-56]. Observations were taken once a day at 6 depths by Chappell*. Most of these temperatures were measured with a "thermohm string." In addition, the USWB recorded thermohm measurements continuously at 2 subsurface levels, the surface, and 3 heights on their 50-foot micrometeorological mast adjacent to the 30-foot Aerovane mast, 300 to 350 feet NNE of the camp.

Figure 14 is a plot of the monthly mean temperatures at the various subsurface levels from Chappell's once-a-day observations; he reduced most of the readings to constant levels and Dr. Crary extended this reduction. The surface temperatures show the abnormal warmth of the month of June, and below-normal temperature of April, in 1957, conditions illustrated previously by Figures 1 to 3, in Section 2.1.

Monthly mean temperatures from the U. S. Weather Bureau's continuously recording thermohms at 2 m above the surface, the surface, and 1 and 2 m depth were compared with those from Chappell's once-a-day observations. With the exception of a colder September mean at the surface, and a warmer October mean at 1 m depth computed from the continuously recorded temperatures, agreement is close.

*Richard Chappell, Eagle Scout, Boy Scouts of America, sponsored by National Academy of Sciences.

6.1.2 Comparison of Little America V, Maudheim and South Pole subsurface temperature extremes. The once-a-day observations, as summarized by Crary [7] are plotted in the form of a tautochrone in Figure 15. It is interesting to compare this tautochrone with those for Maudheim and the South Pole Station [2, Figs. 21 and 22, pp. 55 and 56]. The minimum temperature at about 1 m depth deviates from the average by approximately 8 C° for all three stations. The maximum at about 1 m depth deviates from the average by approximately 16 C° at the South Pole Station (which is the coldest, highest latitude location), by 12 C° at Little America V (78°10'S) and by only 8 C° at Maudheim (71°03'S). The minimum temperature just below the snow surface occurs in August at all 3 stations: In late August at the South Pole, where sunrise is after mid-September; near 1 August at Maudheim, even though sunrise is 27 July; and late in August at Little America V, where sunrise is 25 August. H. Wexler [9] refers to a delayed air temperature minimum at the coastal stations and attributes the lag to extension of the ice pack to hundreds of miles from the coast in late winter, which cools air masses moving to the Antarctic continent from the north. This late minimum would be reflected in temperatures just below the surface, causing the minimum to occur later in relation to sunrise than at the South Pole.

6.2 Analysis of snow temperature variations

[Note: For the sake of consistency with previous work in the literature in the fields of surface layer turbulence as well as subsurface heat diffusion, it is unavoidable that certain mathematical symbols (such as α , λ , etc.) must be used with a different meaning in this section than in Sections 4 and 5. See list of symbols and units in front pages of this report (after the Table of Contents). Natural logarithms are used and abbreviated by "ln."]

6.2.1 Calculation of amplitudes and phase angles of the penetration of the heat wave. The once-a-day subsurface temperatures, summarized by months by Crary [7, p. 49], and plotted in Figure 14 of this report, were analysed by him. An independent re-analysis of the same data used, in simpler form, the method used in the study of the South Pole observations.

Let n = frequency of the annual cycle = $2\pi/365$ = 0.0172 rad/day = 1.99×10^{-7} rad/sec. The first harmonic of the annual variation of temperature is described by:

$$T = T_m + A\cos(nt - \alpha) \qquad (12)$$

which yields for the vertical gradient of temperature,

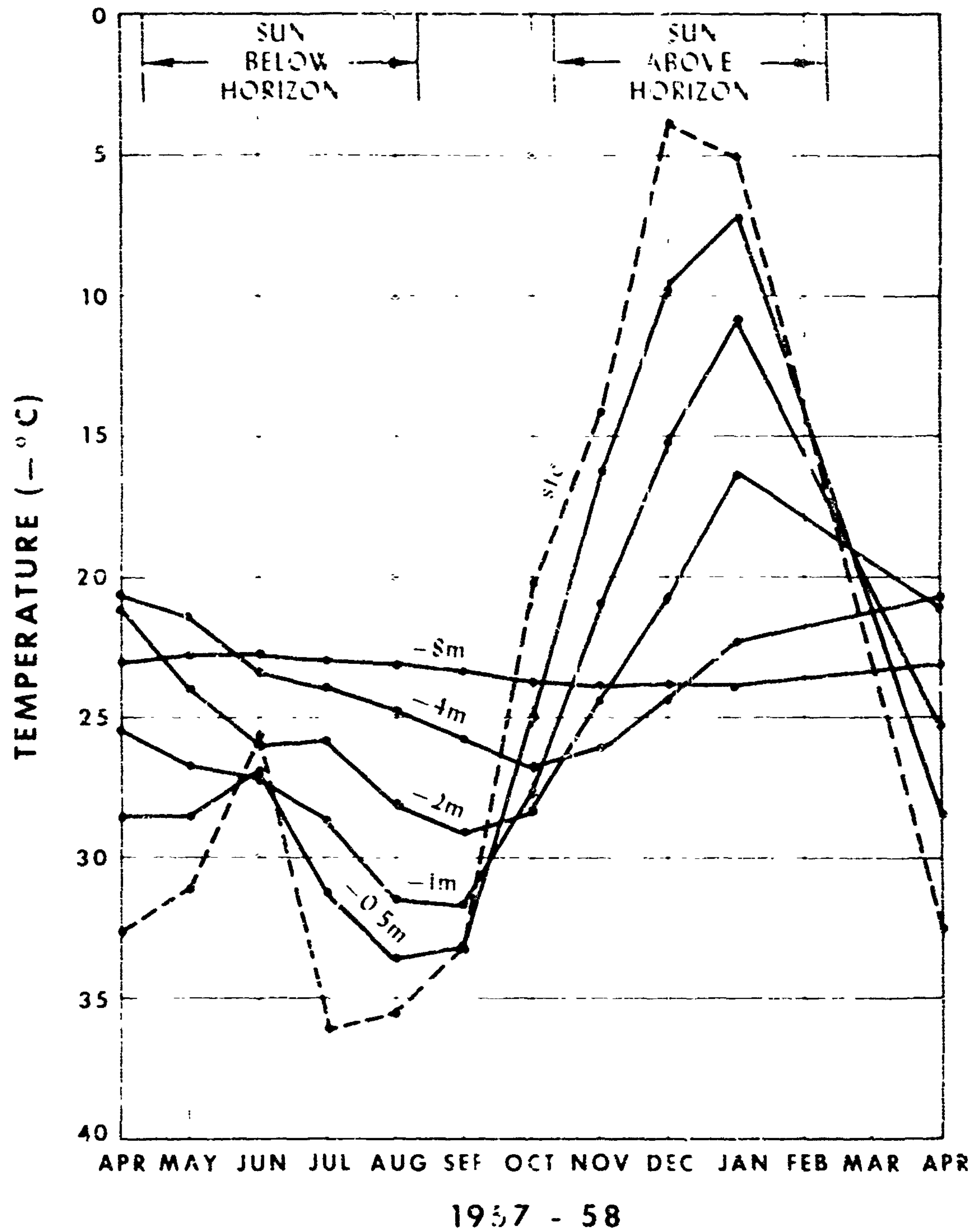


Figure 14. Little America V - monthly mean subsurface temperatures.

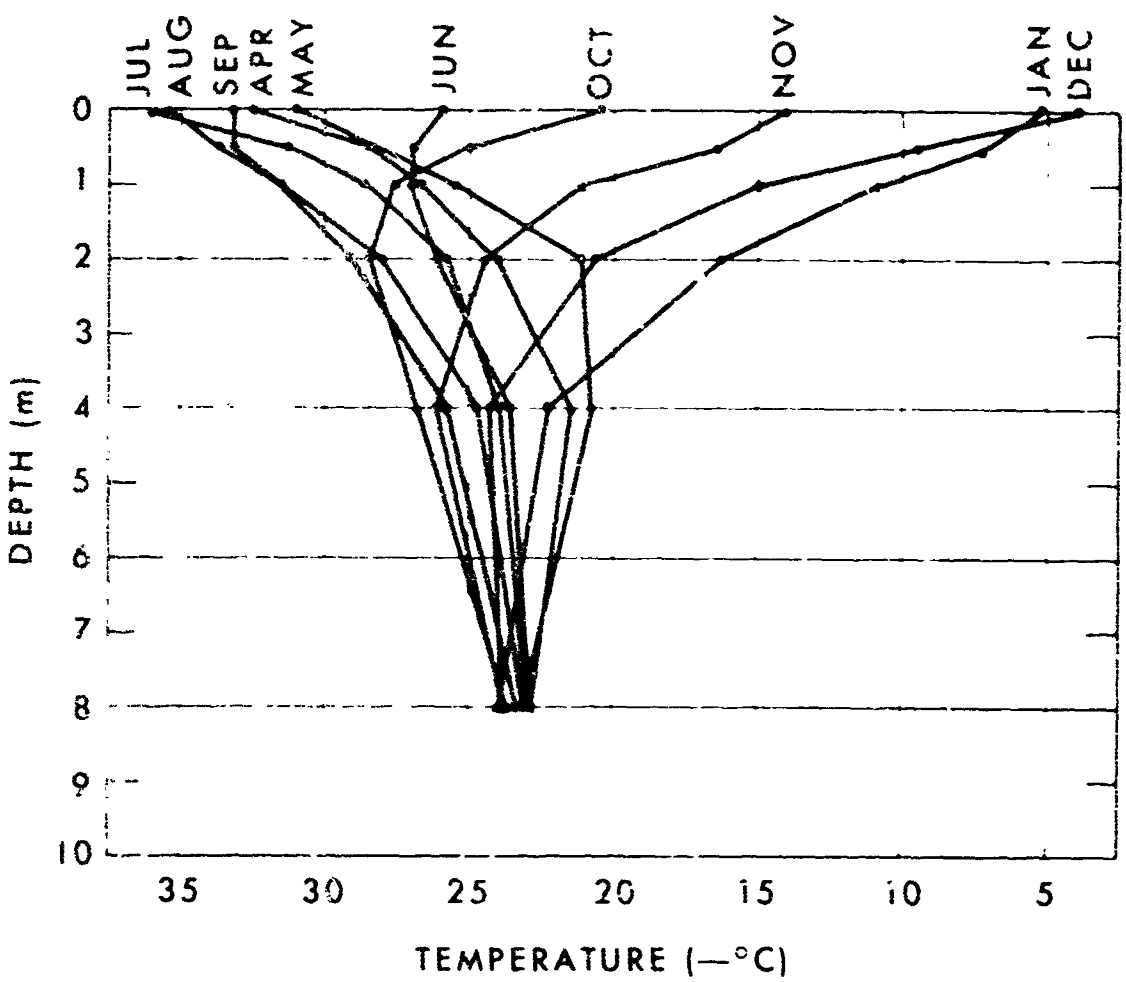


Figure 15. Little America V - Tautochrones, 1957-58.

$$T' \quad T_m' + A'\cos(nt - \alpha) + A\alpha'\sin(nt - \alpha), \qquad (13)$$

where subscript m denotes the annual mean

A = amplitude (deg)
α = phase angle
t = time

and the prime indicates differentiation with respect to depth. The use of the cosine function (rather than the sine function) together with the minus sign of the phase lag in equation (12) is for convenience. This α -value corresponds to the time of occurrence of the extreme phase, at zero date plus α/n. This is the time of minimum value, since all temperatures are negative and Fourier analysis is done without carrying the minus sign of temperatures.

Results of the new analysis and Crary's original analysis are shown in Table 6.2.1.

Table 6.2.1 AMPLITUDES AND PHASE ANGLES OF THE PENETRATION OF THE HEAT WAVE AT THE VARIOUS LEVELS AT LITTLE AMERICA V, AS OBTAINED BY 2 ANALYSES

Depth (z) (m)	Amplitude (A) (deg C)		ln A		Date of Max. Temp.	Phase Angle (α)			
						Days	(Deg)	(Radians)	
	Crary	New	Crary	New	Crary	Crary	New	Crary	New
Sfc	14.9	14.0	2.74	2.64	8 Jan	0	77°25'	0.00	0.00
0.5	12.2	11.4	2.54	2.43	18 Jan	10	87°50'	0.17	0.18
1.0	9.2	8.5	2.22	2.14	28 Jan	20	99°59'	0.34	0.394
2.0	5.8	5.5	1.76	1.71	20 Feb	43	123°41'	0.74	0.808
4.0	2.7	2.7	1.00	0.99	28 Mar	79	168°41'	1.36	1.593
8.0	0.6	0.6	-0.51	-0.56	30 May	142	238° 0'	2.45	1.803

Ln A is plotted versus α in Figure 16. For the classical case of a homogeneous conductor, $d\alpha = -d(\ln A)$, whereupon

$$T' = T_m' - A\alpha' \sqrt{2}\cos(nt - \alpha + .5) \qquad (14)$$

where T' is the vertical temperature gradient.

6.2.2 Calculation of thermal diffusivity and the coefficient of heat conductivity. The penetration of the annual cycle of temperature was examined for homogeneity of heat conduction, in order to determine thermal diffusivity, K, which can be calculated from

$$K = \frac{n}{2(\alpha')^2} \qquad (15)$$

Ln A and α (radians) are plotted against depth in Figure 17 for both analyses, and linear relationships appear to exist, at least below 1 meter. This is a necessary and sufficient condition for homogeneity of heat conduction at and below this level.

From Figure 17

$$-\left(\frac{\partial \ln A}{\partial z}\right)_{2m} \approx \frac{1.92}{500\ \text{cm}} = 0.384/\text{m} = (\alpha')_{2m}$$

resulting when α' is substituted in equation (15), in $K_{2m} = 0.0068\ \text{cm}^2/\text{sec}$, which may be compared with 0.0068 at Maudheim and 0.0047 at the South Pole [2]. It is assumed that this value of K applies also to levels below 2 m.

The coefficient of heat conductivity of the medium, λ, can be calculated from $\lambda = KC$, where the heat capacity $C = \rho c_i$. With a snow density, ρ, of 0.40 g/cm^3 at 2 m, and $c_i = 0.453$ cal/g deg (using the average 1 m, April-October, snow temperature of -28.4°) it follows that $C = 0.181$ cal/cm^{3}deg. Then

$$\lambda = 0.00123\ \frac{\text{ly/sec}}{\text{deg/cm}} = 1.063\ \frac{\text{ly/day}}{\text{deg/m}}$$

a value intermediate between that at the South Pole and that at Maudheim.

6.2.3 Calculation of daily values of the heat flux at 2 m. It must be borne in mind that the thermal diffusion model used rests on the assumption of genuine heat conduction. That is to say, that at any time in the considered layer the flux of heat (F; ly/time) should be directly proportional to the vertical temperature gradient (T'):

$$F = -\lambda T' \qquad (16)$$

Substituting in equation (12) for A and α from table 6.2.1.1, using for A the average of the values obtained by Crary and the re-analysis

$$T_{2m} = -23.3 + 5.65 \cos(nt - 20\ \text{Feb.})$$

and in equation (14)

$$T_{2m}' = -0.15 - 3.07 \cos(nt - 6\ \text{Jan}),\ \text{deg/m}$$

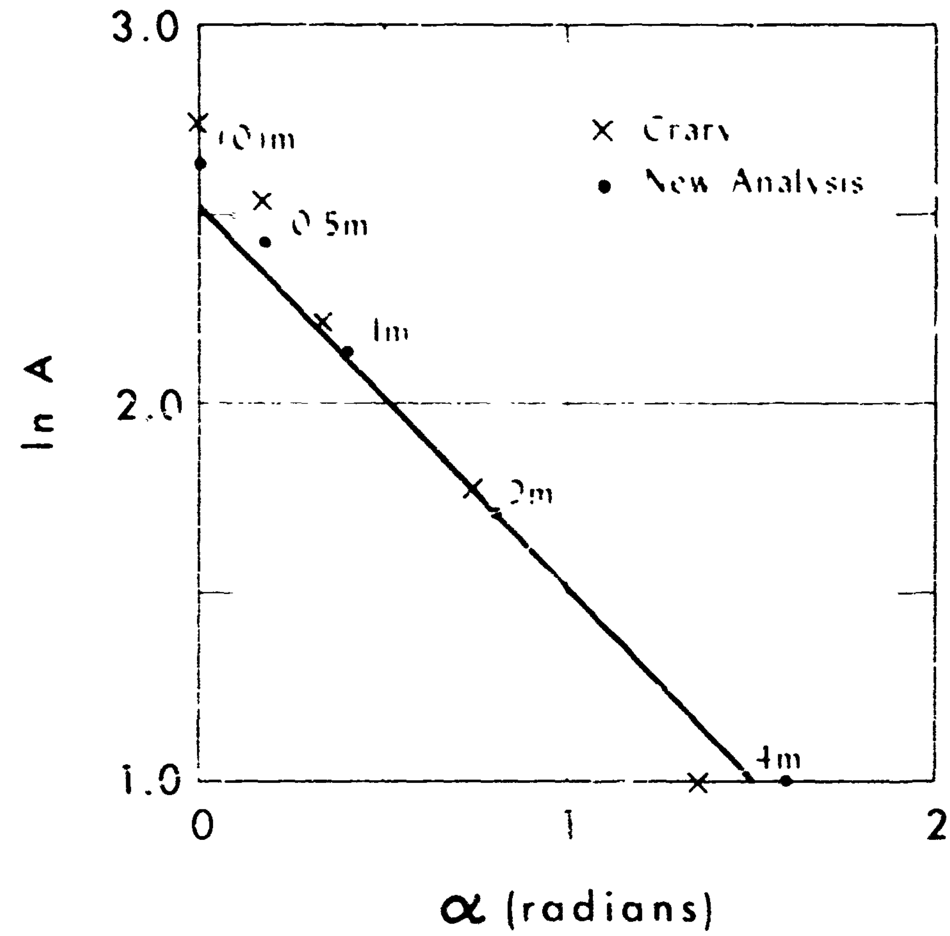


Figure 16. Snow Temperature - Amplitude versus Phase Angle

Using a sign convention that heat flowing in the direction of increasing depth (i.e., downward, away from the surface) is denoted by a positive value, while negative denotes upward heat flux (towards the surface), the daily values of heat flux at 2 m can be obtained as

$$S_{2m} = - \lambda T' = 1.063 \; [0.15 + 3.07 \cos(nt - 6 \text{ Jan})]$$

Neglecting the very small annual mean heat flux term

$$S_{2m} = 3.26 \cos(nt - 6 \text{ Jan}), \text{ ly/day}$$

Daily values of S_{2m} were calculated for the period 25 April through 20 October, 1957.

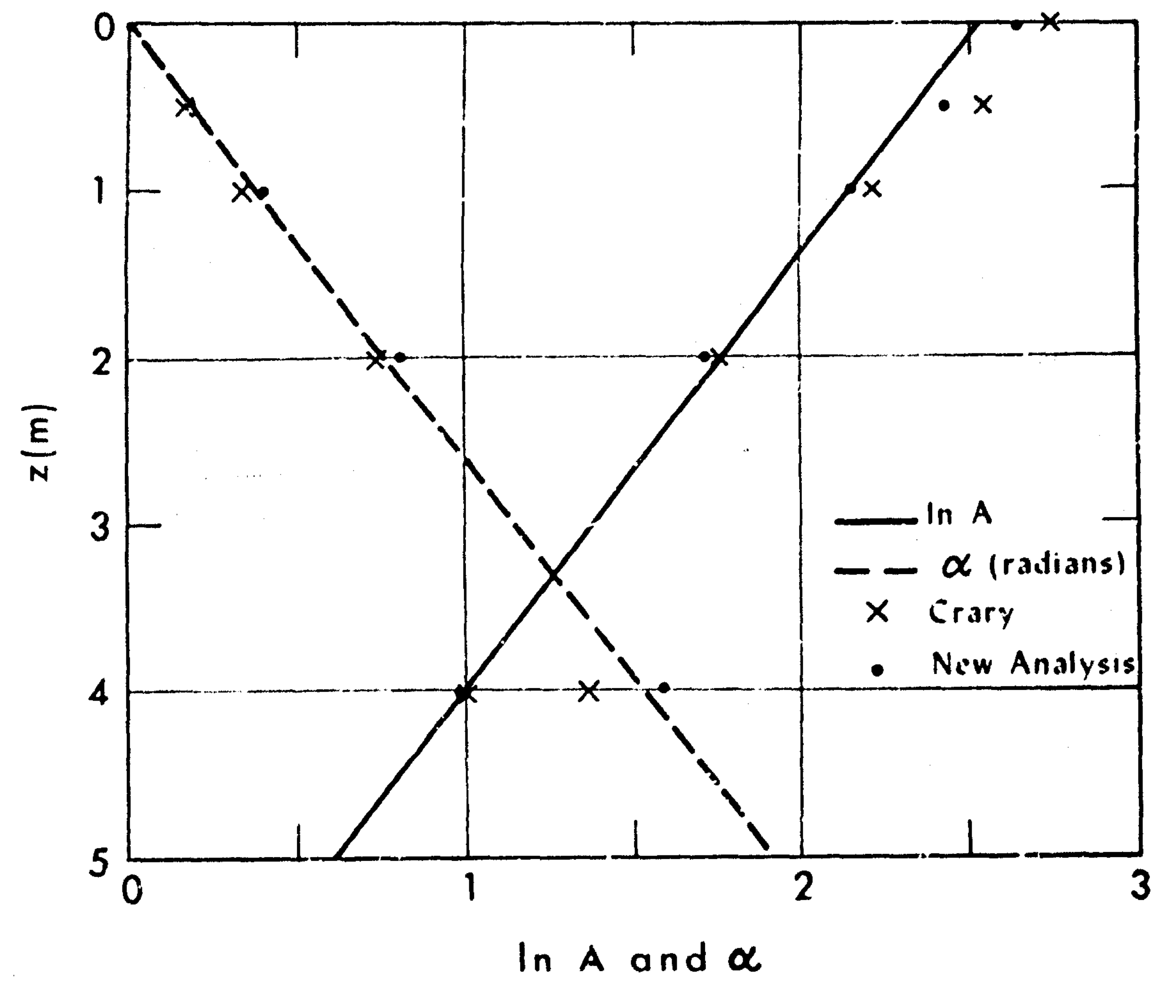


Figure 17. Snow Temperature - Amplitude and Phase Angle versus Depth

6.2.4 Calculation of the heat flux at the surface. Running means of temperatures shown in [7, Appendix, Table 3] were used to integrate the heat flux between 2 meters and the surface. Temperatures at 5 levels were employed: the actual surface, the zero level (which had initially been the surface level but became gradually the season's snow accumulation), and the 3 levels at 55, 78, and 150 cm below the zero level. For each of these 5 levels, temperature change from 2 days before to 2 days after each date was obtained. This was calculated for the upper 3 layers (between surface and the nominal 78 cm level) by averaging the 4-day differences at the top and bottom of each sub-layer. The temperature change at 150 cm depth was assumed as representative for the layer from 78 to 200 cm. Differences are small, in any case, at this depth.

The heat flux contribution of each layer was obtained by multiplying the temperature difference averaged over the 4-day period ($\Delta T/4$) by the thickness of the layer (Δz) and by the heat capacity C, where C is obtained by using the average value of 0.453 cal/g deg for c, and estimating ρ from [7, Fig. 13, p. 39] for each layer. Addition of the heat flux contributions for the 4 layers yielded daily values of the heat flux difference between 2 m and the surface, and subtraction of this quantity from the heat flux at 2 m (computed as described before) resulted in daily values of the heat flux at the surface, S_o, smoothed over a 5-day period, corresponding to a 5-day running mean.

7. Measurement of Net Radiation

Net radiation values, R_o, for Little America V were supplied by Professor Hoinkes, University of Innsbruck; they were directly measured by a net radiometer manufactured by Schulze, both thermopiles of which were recorded separately. Details of his instrumentation are described in [18] and in the references contained therein. Calibration tests after the instrument was returned from the Antarctic revealed that the polyethylene used transmitted less long-wave radiation than anticipated [19], necessitating adjustment of about 50% in the tentative values quoted in [18].

Net radiation was also measured by the U. S. Weather Bureau using, as at the South Pole Station [2], a net exchange radiometer manufactured by Beckman and Whitley. The Schulze instrument employs a radiation dome that does not require ventilation, while the Beckman and Whitley instruments employ a heat flow plate which must be aspirated. Hourly values after 1 July 1957 had been computed by the U. S. Weather Bureau and were available on microfilm. Additional values for April through June 1957 were computed, and the daily totals for April through October 1957 compared with Dr. Hoinkes' revised values. Comparison shows agreement within the limits imposed by differences in instrumentation and some possible differences in exposure.

The daily values of net radiation, revised by Dr. Hoinkes, have been employed to compute the daily heat budgets between 25 April and 20 October, since this is the period for which observations necessary for computing eddy heat flux and the subsurface heat flux were available.

8. Surface Energy Budget

8.1 Definitions, and energy budget equation

The equation of the energy budget at the snow-air interface will be considered in the form

$$R_o = Q_o + S_o + E_o \qquad (17)$$

where R_o = radiation balance or net radiation at the interface

Q_o = eddy heat flux at the interface (defined in Section 5)
S_o = snow heat flux at the interface (defined in Section 6)
E_o = latent heat flux at the interface

All four terms are expressed in ly/time, where ly = langley = cal/cm^2, and cal = gram calorie, or small calorie. Convenient units are either ly/day or ly/hour. The sign-convention for the three fluxes (Q_o, S_o, and E_o) is so that transport away from the interface has the positive sign. Net radiation is defined as positive when more radiation energy is received than emitted from the interface. Thus, a positive R_o indicates an energy source at the interface (usually requiring the presence of solar radiation); a negative R_o indicates an energy sink at the interface and will require, for balance, negative fluxes directed towards the surface.

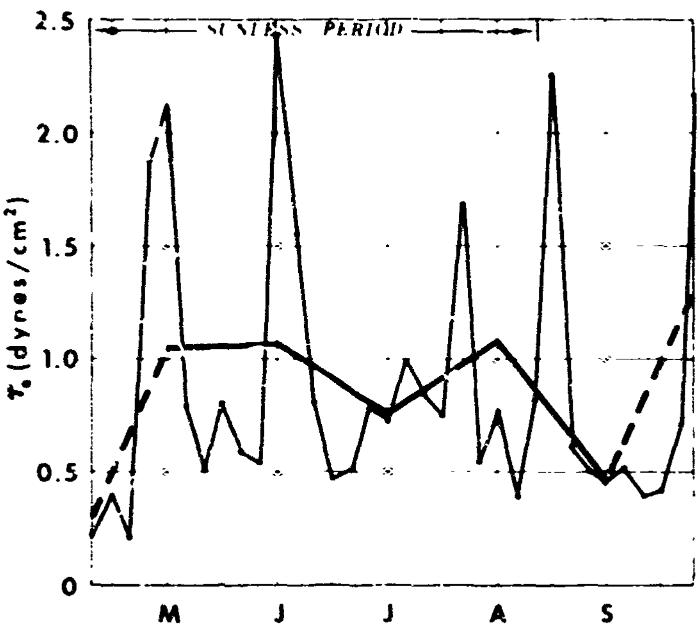
8.2 Computation of terms of the energy budget equation

Using the constant coefficient of heat transfer and equation (11) from Section 5.3, hourly values and 5-day running means of eddy heat flux, Q_o, were computed and listed by the Data Analysis Office. Smoothed daily values of the heat flux at the surface, S_o, corresponding to a 5-day running mean, were obtained by procedures described in Section 6.2. The procedure for obtaining daily values of net radiation, R_o, has been described in Section 7. Five-day running means, corresponding to those of Q_o and S_o, were obtained by the Data Analysis Office. These means of Q_o, S_o, and R_o for 5-day periods were used to obtain a 10-day mean for late April, 30-day means for May through September, and a 20-day mean for the first part of October.

When R_o, Q_o, and S_o are known, the latent heat flux, E_o, is obtained with the aid of equation (17) as the remainder which makes the budget complete. For surface temperature below freezing, a negative E_o will indicate deposition (i.e., the vapor phase transforms directly to solid ice, for example, as hoarfrost), and a positive E_o, sublimation (i.e., the ice evaporates, without intermediate liquid phase). This nomenclature concerning phase changes of H_2O was suggested by MacDonald [20, page 245].

8.3 The seasonal course of surface stress

The seasonal course of surface stress is of interest for comparison with changes in the terms of the energy budget equation. Using the constant coefficient of momentum transfer and equation (10) from Section 5.3, hourly values and 5-day running means of surface stress, τ_o, were computed and listed by the Data Analysis Office. The 5-day means are plotted in Figure 18, and were combined to obtain means for longer periods corresponding to those calculated for the terms of the energy budget equation (see Section 8.2). These means are shown by the heavy line in Figure 18,



F! ~re 18. Little America , 1957: Annual variation of surface stress, τ_O, by 5-day periods, and by 30-day periods (heavy line) approximating the months of May through September. (Dashed line was used for averages of 10 days in April and 20 days in October.)

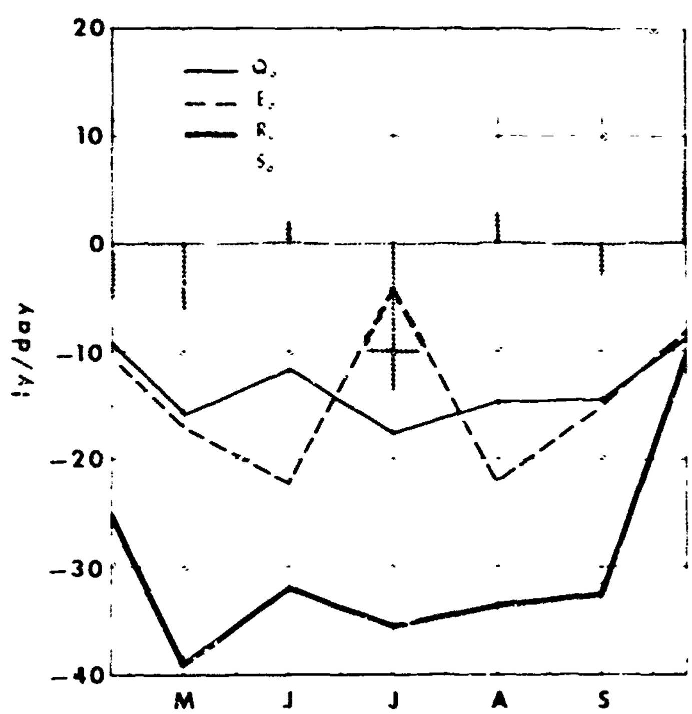


Figure 19. Seasonal trends in energy budget terms of the snow surface at Little America V, 1957. $R_O = Q_O + S_O + E_O$

and the periods of time correspond closely to monthly periods for May through September. Averages are higher than at the South Pole Station [2, Fig. 32], as might be expected from the higher wind speeds at Little America V. The high peaks, shown in the 5-day means and occurring at only slightly irregular intervals, accompany the passage of low pressure areas at this coastal station. (In contrast, the continental climate at the South Pole Station produces a smaller range of τ_o.) The longer period averages obscure this short-period variability of surface stress and produce a graph no more irregular than that for the South Pole.

8.4 Average monthly heat budget constituents at the snow-air interface

Averages of the 4 constituents of the energy balance, discussed in the preceding section, are plotted in Figure 19, and are listed in Table 8.4.1.

Table 8.4.1. ENERGY FLUXES AT LITTLE AMERICA V, 1957. Average monthly heat budget constituents (ly/day) at the snow-air interface: Net radiation (R_o) derived from [illegible]' measurements, eddy heat flux (Q_o) derived from USWB and NLABS data, and snow heat flux (S_o) derived from Chappell's data as published by Crary [7], latent heat flux, $E_o = R_o - Q_o - S_o$ = remainder term.

Month	R_o	Q_o	S_o	E_o
April (beginning 23rd)	-25	- 9	- 5	-11
May	-39	-16	- 6	-17
June	-32	-12	+ 2	-22
July	-35	-17	-14	- 4
August	-34	-15	+ 3	-22
September	-33	-15	- 3	-15
October (ending 19th)	-10	- 9	+ 7	- 8

Table 8.4.1 may be compared with Tables 8.1.1 and 8.3.1 in [2] which show the same quantities for Maudheim and the South Pole. Note, however, that the observations are for different years, and even the 30-day averages do not correspond exactly with calendar months.

8.5 Comparison of hoarfrost deposition at Little America V, Maudheim and the South Pole

On the average, deposition (negative values of E_o) occurred throughout the 6-month period at Little America V; actually, however, longer periods of hoarfrost deposition were interrupted quite frequently by short periods of sublimation. Table 8.3.2 in [2] also indicated that deposition was to be expected at Little America V, and in only slightly less quantity than indicated here, although in larger amount than at Maudheim, the other coastal station. The approximately 6-month mean of deposition can be converted to a mass flux density, or column of liquid water, per time, considering the latent heat of the vapor-to-ice phase equal to 667 cal/g. Thus 15 ly/day, which equals 2700 ly/180 days, corresponds to a water equivalent of 4.0 g/cm^2 or 40 mm of water for the approximately 6-month period, which is 1.2 times as much as the 34 mm of water at Maudheim during a period of corresponding duration. The annual water equivalent of the deposition at Maudheim was estimated to be 27 mm and only the 3 core-months of the Antarctic summer showed positive E_0.

Hoarfrost was observed frequently on the anemometers at Little America V in quantities within the limits of error of the deposition obtained as a remainder in equation (17), but its feathery quality and the measured depth of deposition suggest the error to be on the side of less deposition than computed.

At the South Pole, without advection of additional moisture and with very cold winter temperatures, deposition was light and increased slightly with colder temperature, even with the cases of calm winds omitted. At Little America V, on the other hand, deposition was great in the warm month of June, and in general, was not consistently related to temperature. It is likely that advection of moisture was a primary cause of increased deposition at Little America V. Northeasterly winds were frequent in June and winds from the direction of the sea were normally of higher velocity.

9. Conclusions

At Little America V the winter is "coreless" (with mid-winter reversals of the temperature trend) and the monthly temperature range is large. The minima appear to be controlled by the annual course of net radiation in the interior of the continent and occasional cold air advection, and the maxima by cyclonic activity which advects warmer air in the Ross Sea area. The temperature averages for individual months vary considerably from year to year, and the annual minimum may occur in any winter month. In 1957 stable conditions predominated in the air layer of micrometeorological profile measurements and cases of maximum stability were more extreme than at the South Pole. The minimum temperature during winter frequently was recorded at the 6 or 12 cm level, thus producing an "anomalous" profile structure.

The variation of the wind gradient with height from the surface to 8 m is distinctly less regular at Little America V than at the South Pole Station. Neither the fetch of the wind nor the sky conditions afford a satisfactory correlation with type of wind profile. Nor do advection, katabatic effects, nor a combination of the two provide an explanation of the observed wind and temperature profiles.

The shift toward less stable conditions, along with the seasonal rise in temperature, was delayed until October. Highest wind speed and highest temperature, as at the South Pole, occurred near neutral stability, but unstable conditions were accompanied by less cloudiness.

The Richardson number changes more systematically with height in the lowest 4 m than might be inferred from the complicated structure of the wind and temperature profiles, which suggests an interesting tendency for compensation. The systematic increase of wind profile curvature with height, evident at the South Pole, is lacking above 1.5 m, which may indicate an extremely shallow surface layer at great stability. Conditions at Little America V demonstrate the limitations of existing theories of diabatic profile structure.

Variation of surface stress shows some degree of parallelity with the variation of wind speed. High peaks of surface stress, shown in the 5-day averages, accompany the passage of cyclonic depressions in the Ross Sea area. Drag coefficient, using Kármán's constant as 0.428, averaged 0.037 as compared with 0.042 at the South Pole.

The energy budget at the snow-air interface was considered with net radiation equal to the sum of the eddy heat flux, the heat flux in the snow, and the latent heat flux. The complicated profile structure led to erratic variation of the coefficients of momentum and heat with stability; therefore, constant coefficients were used to relate the stability-grouped QM observations to the USWB standard observations and obtain means of eddy heat flux for use in the energy equation. Once-a-day subsurface temperature observations by Chappell yielded relatively small mean values of the heat flux in the snow. The latent heat flux, when treated as a remainder indicates deposition in the 6-month period in 1957, equivalent to about 40 mm of water, 1.2 times as much as that at Maudheim during corresponding periods in 1950 and 1951. Increased deposition in the milder winter months may be due to an accompanying increase in available moisture.

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APPENDIX A

NOTE ON THE LOW-LEVEL ANOMALY IN VERTICAL TEMPERATURE PROFILES UNDER CONDITIONS OF OUTGOING RADIATION

NOTE ON THE LOW-LEVEL ANOMALY IN VERTICAL TEMPERATURE PROFILES UNDER CONDITIONS OF OUTGOING RADIATION

by

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It has long been known in micrometeorology that, occasionally, during calm clear nights, the vertical profile of average air temperature can exhibit an anomalous structure in that the minimum temperature does not occur at the earth/air interface but at some vertical distance aloft, usually from a few millimeters to decimeters above the surface, producing a "superadiabatic" lapse rate of temperature of the order of 1°C/10 cm in the lowest layer of the nocturnal inversion. This anomaly appears to have been first described by Indian meteorologists who observed it, during micrometeorological studies, on fields and bare ground near Poona, India; reference can be made to L. A. Ramdas and S. Atmanathan (1932), K. R. Ramanathan and L. A. Ramdas (1935), and L. A. Ramdas (1945). More than two decades later K. Raschke (1957) undertook a series of very interesting field experiments also at Poona, to clarify the physical and meteorological conditions under which the anomaly develops. Until that time it was not clear whether or not the phenomenon was of trivial nature; reference can be made to a discussion during the "International Symposium on Atmospheric Turbulence;" see H. H. Lettau (1952), Sec. 7.2.4. Raschke demonstrated convincingly that more or less trivial causes, such as instrumental errors, or radiational cooling of the air layer near the tops of low vegetation, or small-scale advection of air which had been cooled at relatively high rates over neighboring surfaces, or air drainage along sloping terrain can be ruled out. That is, the phenomenon is readily observed over bare level ground, even on top of a flat mesa near Poona. It is predictable because it depends on intensity of overall air motion. Once established, it proved to be remarkably persistent or stable, in that it reproduced itself within a short time after having been thoroughly disturbed, or eliminated, by artificial stirring of the air by waving of a large sheet of plywood.

Observational work in other climatic regions by H. Brewand and H. Kohnke (1952), J. Lake (1956), R. Fleagle (1956), H. Niilisk and H. Moldau (1960), and others leaves no reason for doubt that the phenomenon is real and cannot be explained by instrumental errors (i.e., direct effects of radiation combined with lack of ventilation of the temperature sensors), or by unique and extraordinary local conditions at Poona, India.

A variety of authors have attempted to arrive at a physical understanding of the phenomenon and its causes. Almost exclusively, the theory was based on the properties of long-wave radiation fluxes in the lower atmosphere, and their divergence (or convergence) along the vertical, due to water vapor and temperature gradients. Subsequent vertical patterns of cooling (or heating) rates are assumed to transform an initially monotonically decreasing temperature profile into one which shows a minimum value aloft, or even an S-shape, or inverted S-shape. However, certain discrepancies between the results of different theoretical models of radiation-flux divergence appear to exist; reference can be made to work by F. Moeller (1955) and (1960), K. Raschke (1957), G. N. Geevskaya, K. Y. Kondratjev, and M. E. Yakushevskaya (1962), and others. An attempt to explain the possible generation of S-shaped temperature profiles, independent of radiation divergence, by means of differential reduction of eddy diffusivity in a growing inversion (due to the vertical profile of the Richardson number, and subsequent local divergences of the eddy heat flux) was outlined by H. Lettau (1952), and later taken up by F. K. Davis (1957). In still another approach, Seemann and Loew (1944) suggested that heat of condensation released by dew formation could account for a relative warming of the ground and thus explain the temperature minimum aloft. This explanation can be rejected at once for physical reasons; moreover, F. K. Davis (1957) could show that the micrometeorological anomaly can appear before any dew deposition is evident.

Experimentally, an interesting relationship was discovered by R. Luetzke (1960). The work of this author was deliberately devoted to a statistical analysis of the wind-dependency of the low-level anomaly of the nocturnal temperature profile, and the seasonal variation of its frequency of occurrence, during a full year of a special observational program at two micrometeorological sites in the North-central plains of Germany. R. Luetzke provides an interesting illustration by means of a photographic picture of a small tomato plant, after a late-spring night with such a temperature anomaly, with leaves unharmed near the ground and frozen at upper parts, even though the exposure of all leaves to outgoing radiation was about the same. He concludes that a profile type with minimum temperature near the 25-cm level is most likely to occur when the over-all air motion is weak, and the heat flux from the subsoil is relatively large, i.e., relatively close to the surface value of net radiation. He quotes as supporting evidence the fact that during clear nights with snow-cover on his site the minimum temperature always occurred at the surface, even under conditions of complete calm, while in otherwise similar nights without snow-cover the minimum occurred some distance above the surface; this he attributes to the heat-insulating effect of the snow, which is known to be a poor conductor and to reduce significantly heat flux from below. Over bare ground Luetzke observed a slight tendency for better development of the anomaly in the first part of the night, i.e., when the heat flux from the subsurface is relatively large.

Disregarding heat of condensation (or dew deposit) the heat budget equation of the earth/air interface is

$$R_o = S_o + Q_o$$

where R = net radiation, and S and Q are the fluxes of heat by conduction (or convection) in the subsurface medium and in the air, respectively. The subscript "zero" refers to surface values of the quantities. At nighttime R_o is negative, and, not only the sum, $S_o + Q_o$, but both terms individually will be negative. Then the difference between a poorly and an efficiently conducting sub-surface medium is that the ratio S_o/Q_o will be relatively small for the former, and relatively large for the latter. Luetzke's conclusion can be re-formulated by saying that the prerequisite for anomalous temperature profile structure is a negative Q_o value of an intensity which is relatively small in comparison to that of net radiation, or in comparison to the values of both S_o and R_o. However, no heat budget estimates were provided by Luetzke (1960).

In this connection the measurements of micrometeorological temperature profiles during the antarctic winternight at the South Pole, in 1958, and at Little America V, in 1957, are interesting. It was found that at Little America V the minimum temperature quite frequently occurred at the 6 cm level, while at the South Pole the minimum temperature occurred nearly always at height zero, for otherwise similar meteorological conditions of low wind speed and strong outgoing radiation. Similar equipment was used at both locations, which makes it safe to say that instrumental errors cannot explain this anomaly.

The most striking difference between the two antarctic sites is in the physical structure of the snow. The thermal parameters (such as volumetric heat capacity, and heat conductivity) appear to be significantly lower on the central antarctic plateau than at stations near the coast. A comparison of average heat-budget constituents at the antarctic snow surface was given by P. Dalrymple, H. Lettau, and S. Wollaston (1963). From Table 8.3.1 of their report and Table 8.3.1 of this report it follows, for example, that in 1958 at the South Pole during the month of July (which shows negative averages of S_o and Q_o), the ratio S_o/Q_o is $3/50 = 0.06$, while, in 1957 at Little America V during July, it is $14/17 = 0.82$, i.e., 14 times larger. Evidently, together with the above statement concerning frequency of occurrence, this supports Luetzke's conclusion on the importance of sub-surface heat flux for the development of anomalous temperature profiles.

Furthermore, it appears safe to say that the two sets of micrometeorological data from the antarctic region provide an argument against an explanation of the elevated minimum as being caused by divergence of radiation fluxes. In view of the very low temperature and extremely low atmospheric moisture of the air in the antarctic winter night, any divergence of long-wave radiation fluxes that may possibly exist must be, by several orders of magnitude, smaller than, for example, in the air at Poona, in the subtropical region. In spite of this, the anomaly of the nocturnal temperature profile was of similar magnitude at Little America and Poona.

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APPENDIX B

DATA PRESENTATION

SMC TEMPERATURE PROFILE DATA

Key for Temperature Profile Tables

Symbol	No. of Observations/Hour
+	13 to 15
=	10 to 12
-	7 to 9
#	4 to 6
*	Accompanying Wind Profile

No symbol is used for hours with 15 or more observations; hours with less than 4 observations are not shown.

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
31 March 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	40.5	40.6	40.5	40.3	40.3	39.8	39.4	38.8	37.7	35.7
Number of Obs	19	19	19	19	19	19	19	19	19	19
Daily Mean	40.5	40.6	40.5	40.3	40.3	39.8	39.4	38.8	37.7	35.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
1 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	38.3	38.3	38.1	37.8	38.2	38.0	37.9	37.9	38.0	36.4
01	38.1	38.2	38.0	37.7	37.9	37.7	37.6	37.5	37.3	34.2
02	37.4	37.4	37.2	37.0	37.3	37.2	37.1	37.0	36.2	32.5
03	35.6	35.6	35.2	35.2	35.5	35.4	35.3	35.1	33.5	30.7
04	35.8	35.7	35.6	35.4	35.9	35.8	35.9	36.1	36.6	36.6
05*	34.7	34.7	34.1	34.3	34.7	34.5	34.6	34.7	35.1	34.9
06*	33.3	33.3	33.0	33.0	33.1	33.0	33.0	33.1	33.5	33.5
07	33.1	33.0	32.4	32.5	32.9	32.8	32.9	33.2	33.6	33.6
08	34.0	33.9	32.9	33.3	33.6	33.6	33.6	33.7	34.1	34.2
09	34.0#	33.9#	32.9#	33.8#	34.1#	34.1#	34.1#	34.3#	34.7#	34.7#
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	33.8#	31.9#	36.8#	37.1#	37.2#	36.7#	36.9#	37.0#	37.1#	36.9#
21	34.3+	31.9+	37.2+	37.2+	37.3+	36.9+	37.0+	37.1+	37.3+	37.1+
22										
23										
Number of Obs	195	194	195	195	195	195	195	195	195	195
Daily Mean	35.4	35.2	35.3	35.3	35.6	35.4	35.5	35.5	35.5	34.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
2 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11	37.6	37.4	36.9	36.8	36.9	36.5	36.2	36.4	36.5	35.9
12	36.8	36.5	36.0	36.0	36.1	35.6	35.4	35.5	35.6	35.0
13	36.8	36.6	36.0	36.0	36.0	35.7	35.4	35.5	35.6	35.0
14	36.2	36.0	35.3	35.3	35.3	35.0	34.6	34.7	34.7	34.3
15	37.0	36.8	36.1	36.1	36.2	35.9	35.6	35.7	35.9	35.7
16	38.2	38.2	37.6	37.6	37.7	37.5	37.2	37.3	37.5	37.4
17	38.7	38.8	38.2	38.2	38.3	38.0	37.6	37.8	37.9	37.8
18	37.8	37.6	36.9	36.9	37.0	36.7	36.3	36.3	36.3	35.4
19	38.6	38.6	37.9	37.9	37.9	37.6	37.2	37.1	36.9	35.2
20	37.1	37.1	36.5	36.4	36.5	36.1	35.5	35.4	35.2	32.7
21	35.6#	35.7#	35.4#	35.4#	35.6#	35.3#	35.3#	35.3#	34.8#	29.9#
22										
23										
Number of Obs	189	189	189	189	189	189	189	189	189	189
Daily Mean	37.4	37.3	36.7	36.7	36.8	36.4	36.1	36.1	36.2	35.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
3 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07	32.7+	30.5+	30.1+	29.9+	29.3+	28.2+	27.0+	26.4+	25.8+	25.1+
08	34.2	28.4-	32.1	31.6	31.4	30.8	31.0	30.4	30.1	28.1
09	38.8		37.3	36.6	36.5	36.1	37.0	36.7	37.1	36.6
10	39.5		37.4	36.2	36.4	35.7	36.8	36.3	36.9	34.6
11	39.5=	37.4-	36.8=	36.2=	36.7=	35.6=	37.0=	36.2=	36.8=	36.3=
12	39.3	37.2	36.8	36.2	37.0	35.7	37.0	36.4	36.8	36.3
13	40.0	39.0	38.9	38.4	38.6	38.4	38.9	38.5	38.8	38.5
14	40.6	40.3	40.6	40.3	40.3	40.1	40.2	40.3	40.4	40.0
15	40.2	40.0	40.5	40.3	40.2	39.8	39.7	39.8	39.6	38.2
16	37.8	37.4	37.6	37.5	37.4	36.8	36.1	35.7	34.2	31.1
17	38.5	38.2	38.5	38.3	38.3	38.0	37.9	37.9	38.1	37.2
18	39.1	38.9	39.4	39.3	39.2	38.9	38.8	38.9	38.9	33.8
19	38.9	38.9	39.2	39.1	39.2	39.0	39.0	39.1	39.6	39.4
20	37.8	37.8	38.0	38.0	38.2	38.0	38.0	38.3	38.6	38.6
21	35.7	35.8	35.9	35.9	35.9	35.7	35.8	36.0	36.3	36.3
22	34.1	33.8	34.0	33.9	33.9	33.9	33.8	34.0	34.3	34.3
23	32.5	32.2	32.3	32.1	32.1	32.0	32.0	32.3	32.5	32.5
Number of Obs	298	251	298	298	298	298	298	298	298	298
Daily Mean	37.6	36.8	36.9	36.6	36.6	36.2	36.4	36.2	36.3	35.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
4 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	31.4	31.0	31.3	30.9	31.0	30.8	30.8	31.1	31.4	31.4
01	29.9	29.3	29.6	29.2	29.3	29.0	29.1	29.1	29.3	29.4
02	27.4	26.5	26.6	26.4	26.4	26.2	26.0	26.0	26.3	26.3
03	25.8	24.8	25.1	24.6	24.7	24.4	24.3	24.4	24.6	24.6
04	24.4	23.0	23.2	22.9	22.9	22.7	22.7	22.7	22.9	22.9
05	24.2	22.2	22.5	22.1	22.0	22.0	21.9	22.0	22.2	22.2
06	22.4	21.4	21.7	21.3	21.3	21.2	21.2	21.1	21.3	21.3
07	23.2	22.2	22.3	22.1	22.0	22.0	21.9	22.0	22.1	22.1
08	22.5	21.8	21.9	21.7	21 7	21.6	21.7	21.5	21.8	21.9
09	22.2#	21.3#	21.5#	21.1#	21.3#	21.0#	20.9#	21.1#	21.5#	21 5#
10										
11										
12	19.3	18.3	18.4	17.9	17.9	17.6	17.3	17.4	17.6	17.4
13	21.0	19.3	19.1	18.5	18.5	18.1	17.9	17.7	18.1	17.9
14	21.2=	19.6=	19.4=	19.2=	19.2=	18.7=	18.5=	18.7=	18.9=	18.7=
15	21.7	20.3	20.1	19.6	19.5	19.1	18.9	19.0	19.0	19.0
16	20.5	19.4	19.5	18.8	18.9	18.5	18.2	18.3	18.5	18.5
17	20.4+	19.2+	19.2+	18.8+	18.7+	18.2+	18.2+	18.2+	18.4+	18.4+
18	19.4	19.0	19.3	18.8	18.8	18.3	18.2	18.3	18.7	18.7
19	20.1	19.6	19.8	19.4	19.5	19.1	18.9	19.2	19.3	19.3
20	20.6	20.0	20.1	19.9	20.0	19.6	19.4	19.6	19.7	19.8
21	21.3	20.5	20.6	20.3	20.2	19.9	19.9	20.0	20.2	20.2
22	21.3	20.6	21.0	20.5	20.4	20.1	20.1	20.1	20.3	20.3
23	21.7	20.6	21.2	20.5	20.6	20.4	20.1	20.3	20.3	20.4
Number of Obs	376	376	376	376	376	376	376	376	376	376
Daily Mean	23.0	21.9	22.1	21.7	21.7	21.4	21.3	21.4	21.6	21.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
5 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	21.7	20.5	21.2	20.4	20.4	20.2	19.9	20.1	20.2	20.2
01	21.7	20.4	21.1	20.3	20.1	19.8	19.8	19.8	20.0	20.0
02	22.8	20.7	21.4	20.6	20.6	20.4	20.0	20.4	20.4	20.4
03	23.3	21.4	21.7	21.2	21.0	20.8	20.6	20.9	20.9	20.9
04	24.0	24.2	23.7	24.0	24.3	24.2	24.3	24.5	24.7	24.8
05	24.8	26.0	25.8	26.1	26.4	26.3	26.4	26.5	26.9	27.1
06	25.4	25.9	26.1	26.1	26.2	26.2	26.0	26.4	26.6	26.6
07	25.9	26.1	26.1	26.2	26.2	26.1	26.2	26.4	26.7	26.7
08	26.0	26.2	26.6	26.5	26.5	26.4	26.5	26.5	26.8	26.9
09	26.0	26.2	26.5	26.3	26.4	26.3	26.3	26.5	26.7	26.9
10	26.2	26.2	26.6	26.3	26.4	26.3	26.3	26.4	26.7	26.8
11	26.6	26.4	26.6	26.8	27.1	27.0	26.9	27.1	27.5	27.6
12	28.3	28.0	28.2	28.3	28.5	28.4	28.4	28.6	29.0	29.1
13	30.3■	29.8■	30.3■	30.0■	30.2■	30.1■	30.2■	30.2■	30.7■	30.8■
14	31.2	30.5	31.3	31.0	31.2	31.0	31.1	31.2	31.5	31.6
15	31.5	31.2	31.7	31.3	31.6	31.4	31.4	31.5	31.9	32.0
16	31.7	31.5	31.9	31.6	31.7	31.6	31.6	31.6	32.1	32.2
17	32.6	32.4	32.8	32.5	32.6	32.4	32.4	32.5	32.9	33.0
18	32.7	32.4	32.9	32.5	32.6	32.3	32.3	32.4	32.9	32.9
19*	32.1	31.8	32.3	31.8	31.9	31.6	31.6	31.6	32.1	32.1
20	31.2	30.8	31.3	30.9	30.9	30.6	30.6	30.6	31.0	31.0
21	31.2	30.8	31.2	30.9	30.8	30.5	30.5	30.5	30.9	30.9
22	31.7	31.3	31.6	31.2	31.2	30.8	30.8	30.7	31.0	30.9
23	32.2	31.8	32.1	31.8	31.8	31.5	31.4	31.4	31.7	31.7
Number of Obs	440	440	440	440	440	440	440	440	440	440
Daily Mean	27.9	27.6	27.9	27.6	27.7	27.5	27.5	27.6	27.9	28.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
5 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.1	32.7	33.0	32.7	32.7	32.5	32.3	32.3	32.6	32.5
01	33.6	33.2	33.5	33.2	33.1	32.9	32.8	32.8	33.1	33.2
02	34.7	34.3	34.6	34.3	34.3	34.1	34.0	34.0	34.3	34.4
03*	37.0	36.8	37.0	36.9	36.9	36.8	36.8	37.0	37.3	37.4
04*	37.3	37.0	37.3	37.2	37.2	37.1	37.0	37.1	37.6	37.7
05	40.1	39.8	40.1	39.9	39.9	39.8	39.8	39.9	40.4	40.5
06	41.5	41.2	41.5	41.3	41.3	41.1	41.1	41.2	41.7	41.7
07*	41.1	40.7	41.0	40.8	40.8	40.7	40.7	40.6	41.1	41.2
08	38.4	38.0	38.2	38.1	38.1	37.9	38.0	38.1	38.5	38.6
09	38.2	37.9	38.1	38.0	38.0	37.9	37.9	38.0	38.4	38.5
10	38.3	37.9	38.0	37.8	37.8	37.7	37.7	37.7	38.1	38.2
11	38.7	38.4	38.5	38.4	38.3	38.2	38.1	38.1	38.5	38.6
12*	39.0	38.7	38.8	38.7	38.6	38.4	38.3	38.4	38.7	38.8
13	38.7	38.3	38.6	38.3	38.4	38.1	38.1	38.1	38.5	38.6
14	38.8	38.6	38.9	38.7	38.7	38.5	38.6	38.6	39.2	39.3
15	39.4	39.3	39.5	39.4	39.4	39.3	39.3	39.4	39.9	40.0
16	39.3	39.0	39.3	39.1	39.1	39.0	39.0	39.1	39.4	39.5
17	40.5	39.9	40.4	40.0	40.0	39.8	39.6	39.5	39.7	39.4
18	41.8	41.0	41.6	41.0	40.9	40.6	40.4	40.1	40.0	38.7
19	42.0	41.3	41.7	41.3	41.3	40.8	40.6	40.4	40.3	39.1
20	43.2	42.7	43.0	42.6	42.7	42.3	42.2	42.2	42.6	42.4
21										
22	38.9	38.2	38.8	38.3	38.4	37.9	37.8	37.6	37.3	36.0
23	39.5	38.6	39.1	38.6	38.8	38.5	38.3	38.3	38.6	38.1
Number of Obs	427	427	427	427	427	427	427	427	427	426
Daily Mean	38.8	38.4	38.7	38.5	38.5	38.3	38.2	38.2	38.5	38.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
7 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	41.4	40.7	41.3	40.8	40.8	40.4	40.3	40.2	40.1	39.2
01	41.7	40.5	41.1	40.2	40.2	39.4	38.8	38.3	37.6	35.6
02	41.2	40.1	40.8	40.1	40.1	39.4	38.8	38.4	38.0	35.9
03	44.3	43.6	44.2	43.7	43.8	43.3	43.3	43.3	43.5	42.4
04	44.3	43.6	44.0	43.6	43.7	43.2	43.1	43.1	43.2	42.2
05	45.4	44.9	45.3	45.0	45.0	44.7	44.7	44.8	45.1	45.1
06	46.1	45.6	46.1	45.7	45.7	45.4	45.4	45.5	45.8	45.9
07*	46.1	45.7	46.0	45.8	45.9	45.4	45.4	45.5	45.9	45.9
08	44.9	44.8	45.0	44.7	44.6	44.4	44.6	44.8	45.1	45.2
09	42.6	42.5	42.6	42.3	42.1	42.1	42.2	42.4	42.8	42.9
10	41.6	41.2	41.4	40.9	40.8	40.6	40.7	40.8	41.2	41.2
11*	41.4	40.8	41.1	40.8	40.8	40.5	40.5	40.5	40.9	40.7
12*	40.5	40.3	40.4	40.3	40.4	40.0	40.0	40.1	40.4	40.3
13	39.2	39.0	39.2	39.0	39.1	38.8	38.9	39.1	39.5	39.4
14	38.7	38.1	38.5	38.2	38.3	37.9	38.0	38.0	38.4	38.3
15	38.4	37.5	38.0	37.6	37.6	37.3	37.3	37.3	37.5	37.4
16	38.9	38.0	38.5	38.1	38.1	37.7	37.7	37.8	38.1	38.0
17	37.3	36.4	36.8	36.4	36.5	36.1	36.1	36.2	36.5	36.4
18	36.5	35.7	36.1	35.8	35.9	35.6	35.6	35.7	36.1	36.1
19	36.0	35.4	35.7	35.4	35.5	35.2	35.2	35.4	35.8	35.8
20	35.8	34.6	35.1	34.8	34.9	34.5	34.5	34.6	34.9	35.0
21	35.8	35.6	35.6	35.1	35.3	35.0	35.0	35.1	35.5	35.5
22	35.1	34.6	34.7	34.3	34.4	34.0	34.0	34.2	34.5	34.6
23	33.8	33.0	33.5	33.2	33.2	33.0	33.0	33.1	33.4	33.5
Number of Obs	445	445	444	445	445	445	445	445	445	445
Daily Mean	40.3	39.7	40.0	39.6	39.7	39.3	39.3	39.3	39.6	39.3

LITTLE AMERICA V
Hourly Mean Temperatures ($-^{o}C$)
8 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.9	33.5	33.8	33.5	33.5	33.3	33.3	33.4	33.8	33.9
01	34.4	33.8	34.3	33.9	34.0	33.8	33.7	33.9	34.2	34.3
02	33.8	33.3	33.7	33.4	33.4	33.2	33.2	33.3	33.7	33.7
03	32.9	32.4	32.8	32.4	32.4	32.2	32.1	32.3	32.6	32.6
04	33.7	33.1	33.4	33.2	33.2	33.0	32.9	33.0	33.3	33.4
05	34.5	33.9	34.3	34.0	34.1	34.0	33.8	34.0	34.3	34.4
06	36.0	35.7	35.9	35.5	35.6	35.4	35.4	35.5	35.8	35.9
07	37.3	36.7	37.2	36.9	37.0	36.9	36.8	37.0	37.3	37.3
08	38.8+	38.4+	38.8+	38.5+	38.6+	38.4+	38.4+	38.5+	38.9+	38.9+
09	33.1#	32.9#	33.5#	33.0#	33.1#	33.0#	32.9#	33.1#	33.5#	33.7#
10*	33.6	33.4	33.7	33.5	33.5	33.4	33.3	33.4	33.8	34.0
11	34.3	34.2	34.4	34.1	34.1	34.0	33.9	33.9	34.2	34.3
12	34.6	34.3	34.5	34.1	34.1	33.9	33.8	33.9	34.1	34.2
13	34.4	33.9	34.3	34.1	34.1	33.9	33.7	33.8	34.2	34.2
14*	33.2	32.9	33.2	33.1	33.1	32.8	32.8	32.9	33.3	33.4
15	33.6	33.2	33.6	33.4	33.4	33.2	33.2	33.3	33.7	33.9
16	34.8	34.6	34.8	34.6	34.6	34.4	34.3	34.5	34.8	34.9
17	35.8	35.5	35.7	35.5	35.5	35.3	35.2	35.2	35.5	35.6
18	36.5	36.3	36.4	36.3	36.2	36.0	35.9	35.9	36.3	36.4
19	37.2	36.9	37.2	37.0	37.0	36.8	36.7	36.7	37.1	37.2
20	38.1	37.8	38.0	37.9	37.8	37.7	37.5	37.6	37.9	38.1
21	39.0	38.9	39.0	39.0	38.9	38.8	38.7	38.7	39.1	39.4
22	39.4	39.2	39.4	39.3	39.3	39.2	39.1	39.2	39.6	39.8
23	39.8	39.5	39.8	39.7	39.6	39.5	39.4	39.5	39.8	39.9
Number of Obs	427	427	427	427	427	427	427	427	427	427
Daily Mean	35.6	35.2	35.5	35.3	35.3	35.1	35.0	35.1	35.5	35.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
9 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	41.2	40.8	41.1	40.9	40.9	40.6	40.6	40.5	40.8	40.8
01	42.2	41.8	42.1	41.8	41.8	41.5	41.4	4[illegible].3	41.5	41.1
02	42.5	42.0	42.4	42.0	42.0	41.5	41.4	41.3	41.3	40.8
03	43.0	42.4	42.8	42.3	42.3	41.6	41.4	41.2	41.1	40.4
04	43.9	43.3	43.7	43.1	42.9	42.1	41.6	41.3	41.1	40.4
05	44.0	43.5	43.8	43.4	43.2	42.6	42.2	41.9	41.9	41.0
06	44.2	43.7	43.9	43.6	43.6	43.2	43.0	43.0	43.2	42.7
07	44.3+	44.2+	44.3+	44.1+	44.0+	43.6+	43.7+	43.4+	43.5+	42.7+
08										
09	43.1	43.1	43.3	42.7	42.2	42.3	42.5	42.5	42.6	42.2
10	43.8	43.2	43.5	43.0	42.8	42.6	42.6	42.7	42.9	42.2
11										
12*	43.6	43.4	43.6	43.4	43.4	43.1	43.2	43.2	43.6	43.2
13	44.2	43.8	44.1	43.8	43.9	43.6	43.6	43.7	44.1	44.0
14	44.7+	44.3+	44.7+	44.4+	44.5+	44.2+	44.2+	44.3+	44.7+	44.7+
15	44.1=	43.6=	44.1=	43.8=	43.9=	43.4=	43.5=	43.5=	43.8=	43.7=
16	43.7	43.1	43.7	43.2	43.3	42.9	42.9	43.0	43.3	43.1
17	44.0-	43.1-	43.8-	43.3-	43.3-	42.9-	43.0-	43.0-	43.3-	43.1-
18	43.6-	42.9-	43.4-	42.9-	43.0-	42.6-	42.6-	42.7-	43.1-	42.9-
19	41.0	40.7	41.2	40.9	41.0	40.7	40.8	40.9	41.3	41.4
20	38.4	37.8	38.4	38.0	38.1	37.8	37.8	37.9	38.3	38.3
21	36.5+	36.0+	36.5+	36.2+	36.3+	36.1+	36.1+	36.3+	36.7+	36.8+
22	35.9	35.5	35.9	35.6	35.7	35.5	35.5	35.7	36.0	36.2
23	35.2+	34.9+	35.2+	35.0+	35.0+	34.8+	34.9+	35.1+	35.4+	35.5+
Number of Obs	369	369	369	369	369	369	369	369	369	369
Daily Mean	42.1	41.7	42.1	41.7	41.7	41.3	41.3	41.3	41.5	41.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
10 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	34.7	34.5	34.8	34.6	34.7	34.5	34.6	34.8	35.1	35.3
01	34.6▪	34.2▪	34.6▪	34.4▪	34.4▪	34.2▪	34.2▪	34.5▪	34.8▪	34.9▪
02										
03										
04										
05										
06										
07										
08	26.4	26.5	26.6	26.2	26.3	26.2	26.1	26.2	26.5	26.6
09	26.7	26.8	26.9	26.5	26.7	26.5	26.4	26.6	26.9	27.0
10										
11				13.9	13.8	13.5	13.3	13.2	13.4	13.4
12	13.6			13.0	12.8	12.6	21.4	12.4	12.6	12.6
13	13.0			12.3	12.3	12.2	11.9	12.0	12.2	12.3
14	12.9#	12.7#		12.3#	12.3#	12.2#	11.8#	11.9#	12.1#	12.3#
15										
16*	11.7▪	11.5-		11.2▪	11.3▪	11.2▪	10.9▪	11.1▪	11.2▪	11.3▪
17*	12.0	11.8		11.5	11.6	11.5	11.3	11.3	11.6	11.6
18	12.3	11.9		11.8	11.8	11.6	11.5	11.5	11.8	11.8
19	12.5	12.2		12.1	12.1	11.9	11.7	11.8	12.0	12.2
20	13.6	13.2	13.4▪	13.0	13.1	12.7	12.6	12.7	12.9	13.1
21	13.3	13.2	13.0	12.9	12.8	12.5	12.4	12.4	12.6	12.8
22	13.5	13.6▪	13.5▪	13.1	12.9	12.7	12.5	12.6	12.8	12.9
23	13.1	13.2▪	13.0▪	12.7	12.7	12.4	12.2	12.4	12.6	12.7
Number of Obs	253	198	121	269	270	270	270	270	270	270
Daily Mean	17.6	18.6	22.8	17.0	17.0	16.8	16.6	16.7	16.9	17.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
11 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	13.1			12.6	12.7	12.4	12.2	12.3	12.5	12.6
01	12.9			12.4	12.5	12.2	12.0	12.1	12.3	12.4
02	13.6+	13.8#	13.5#	12.9+	13.0+	12.7+	12.6+	12.7+	12.8+	12.9+
03	14.3	13.9	13.9	13.9	13.7	13.4	13.2	13.3	13.5	13.6
04	14.3	14.0	13.9	13.7	13.7	13.4	13.2	13.3	13.5	13.6
05	13.9	13.4	13.3	13.2	13.3	13.0	12.8	12.8	13.0	13.2
06	13.5	12.9	12.9	12.9	13.0	12.6	12.5	12.5	12.8	12.9
07	14.0	13.4	13.5	13.4	13.5	13.1	13.0	13.1	13.3	13.5
08	14.4	14.2	14.1	13.9	13.9	13.8	13.6	13.7	13.9	14.1
09	14.7	14.5	14.5	14.0	14.0	13.7	13.6	13.8	13.9	14.1
10	15.2	15.0	14.7	14.1	14.4	14.1	14.1	14.2	14.4	14.5
11	15.8	15.2+	15.0+	14.5+	14.9+	15.2	15.3	15.6	15.8	14.9#
12	20.9					23.3	23.5	23.9	24.4	
13	22.2-		26.1-		26.7-	26.5	26.7	26.8	27.3	28.3-
14					27.9	27.7	27.8	28.0	28.4	29.4
15				28.5#	28.5	28.3	28.5	28.7	29.1	29.8-
16	29.7	29.6	30.0	29.6	29.7	29.5	29.6	29.7	30.1	
17	30.1	30.1	30.4	30.1	30.1	29.9	29.9	29.9	30.3	
18	31.1	31.0	31.2	30.8	30.9	30.4	30.4	30.2	30.5	
19	31.7	31.5	31.8	31.5	31.6	31.0	30.9	30.9	31.2	
20	32.8	32.8	32.8	32.5	32.5	31.8	31.6	31.4	31.3	32.2-
21	35.1	35.0	35.9	34.4	34.5	33.2	32.5	31.9	31.9	33.5
22	33.9	34.2	34.9	34.2	34.2	33.3	32.8	32.1	31.5	32.7
23	30.5	30.3	30.5	30.4	30.5	30.3	30.2	30.4	30.6	31.4
Number of Obs	387	313	324	365	404	433	432	433	433	296
Daily Mean	21.4	22.4	22.6	21.1	21.8	21.6	21.5	21.5	21.7	19.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
12 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	30.2	39.8	30.1	29.9	30.0	29.8	29.7	29.6	29.9	31.2+
01	33.8	33.8	34.3	33.6	33.7	32.8	32.5	31.9	31.1	31.3
02	32.9	32.8	33.1	32.8	32.7	32.3	32.1	32.1	32.2	32.8
03	32.5	32.0	32.3	31.8	31.8	31.3	31.2	31.1	31.1	32.2
04	33.0	32.4	32.6	32.0	32.0	31.3	31.2	31.0	31.0	31.9+
05	34.0	33.4	33.7	33.0	33.1	32.3	32.1	31.9	31.9	33.1=
06	34.6	34.2	34.4	33.8	33.8	32.9	32.7	32.5	32.4	33.1+
07	34.0	33.4	33.6	32.9	32.8	32.2	32.0	31.8	31.8	32.4
08	33.2	32.7	33.0	31.9	31.8	31.3	31.0	30.9	30.8	31.5+
09				31.1	31.0	30.7	30.6	30.5	30.3	
10				31.9	31.9	31.6	31.5	31.4	31.3	
11	32.6	31.9	31.8	31.5	31.5	31.0	30.8	30.6	30.6	
12	29.7	28.7	28.9	28.6	28.4	28.2	28.1	28.0	28.2	
13	29.6+	29.4+	29.6+	29.4+	29.3+	29.3+	29.0+	29.0+	29.4+	
14	29.9	29.6	29.9	29.6	29.6	29.4	29.3	29.2	29.6	
15	29.3	28.7	28.9	28.7	28.7	28.5	28.4	28.3	28.7	
16*	28.4	28.1	28.2	28.1	28.0	27.7	27.7	27.5	28.1	28.4#
17	28.0	27.7	27.7	27.7	27.7	27.4	27.2	27.3	27.7	
18	28.9	28.8	29.0	28.8	28.9	28.8	28.7	28.7	29.2	
19	29.1	29.0	29.3	29.1	29.1	29.0	28.9	29.0	29.4	
20	28.6+	28.5+	28.7+	28.5+	28.5+	28.3+	28.3+	28.4+	28.7+	
21	28.5	28.4	28.7	28.4	28.4	28.3	28.2	28.2	28.7	
22	30.4	30.3	30.2	30.2	30.4	30.3	30.2	30.3	30.3	
23	30.0	30.0	30.2	30.0	30.0	29.9	29.8	29.9	30.3	
Number of Obs	395	396	395	432	430	432	430	432	432	147
Daily Mean	31.0	30.7	30.9	30.6	30.6	30.2	30.1	30.0	30.2	32.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
13 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	30.3	30.0	30.3	29.7	29.7	29.4	29.3	29.4	29.7	
01	31.1	31.1	31.0	30.9	30.9	30.5	30.3	30.4	30.5	
02	31.6	31.7	31.8	31.7	31.7	31.5	31.4	31.4	31.6	
03	34.6	35.1	34.8	34.7	34.9	34.3	34.2	34.2	34.4	
04	34.9	35.5	35.5	35.4	35.5	34.9	34.9	34.8	34.9	
05	34.7	34.9	34.9	34.3	34.4	33.5	33.1	32.6	32.4	
06	33.4	33.6	33.8	33.6	33.7	33.4	33.4	33.4	33.7	
07*	34.8+	35.5+	35.2+	35.5+	35.6+	35.6+	35.6+	35.6+	36.1+	
08	37.2	38.3	37.5	38.0	38.1	37.9	37.9	37.7	38.0	
09	38.8=	39.8=	39.6=	38.6	38.4	37.7	37.5	37.1	37.1	
10				34.8+	34.3+	33.5+	33.4+	33.0+	33.3+	
11				34.5	33.9	33.2	32.8	32.3	32.0	
12						33.1	32.3	31.3	30.6	
13				31.4-	30.9-	30.3	29.6	29.2	28.7	
14		28.5		28.4	27.9	27.8	27.4	27.5	26.9=	
15	32.9=	32.7	32.9	32.5	32.0	32.1	31.8	32.0		
16	33.2	32.6	32.4	32.4	32.1	32.1	31.9	32.2		
17	35.6	34.8	34.2	34.2	34.1	34.1	33.8	33.8		
18	33.7	32.7	32.9	32.9	32.5	32.5	32.2	32.1		
19	31.3	30.1	30.4	30.5	30.0	30.0	29.7	29.8		
20	32.3	31.3	31.4	31.4	31.3	31.0	30.9	30.6		
21	30.3	29.4	29.4	29.4	29.4	28.9	28.7	28.3		
22										
23										
Number of Obs	291	317	296	368	369	393	394	395	262	
Daily Mean	33.4	33.0	33.2	33.1	32.9	32.5	32.3	32.1	32.7	

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
19 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21	37.9+	37.4+	38.0+	37.4+	37.6+	37.3+	37.0+	37.2+	37.5+	36.8+
22	38.4	38.0	38.5	38.2	38.2	37.9	37.9	38.1	38.4	38.1
23	38.3	38.0	38.5	38.3	38.1	38.0	37.9	38.0	38.5	38.1
Number of Obs.	47	47	47	47	47	47	47	47	47	47
Daily Mean	38.2	37.8	38.4	38.0	38.0	37.7	37.6	37.8	38.2	37.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
20 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	38.5	38.3	38.7	38.7	38.4	38.2	38.1	38.2	38.6	38.2
01	38.5	38.4	38.8	38.8	38.6	38.4	38.3	38.4	38.9	38.6
02	38.5	38.3	38.7	38.7	38.4	38.3	38.3	38.4	38.8	38.4
03	37.8	37.8	38.2	38.2	38.0	38.0	37.9	38.0	38.4	37.7
04	38.0	37.8	38.2	38.1	37.9	37.8	37.7	37.9	38.1	37.2
05	38.8	38.5	39.1	38.9	38.6	38.4	38.3	38.1	38.0	35.7
06	36.5	36.1	36.3	36.3	36.1	35.7	35.4	34.6	33.5	31.5
07	34.9	34.8	35.1	35.1	34.9	34.8	34.7	34.7	34.4	31.6
08	33.6	33.5	33.7	33.7	33.6	33.5	33.6	33.6	33.8	31.6
09	32.0	31.3	31.6	31.5	31.3	31.1	31.1	31.1	31.4	30.9
10*	31.0	30.2	30.5	30.3	30.0	29.9	29.8	29.8	30.0	29.5
11	31.4	30.4	30.8	30.5	30.1	30.0	29.7	29.6	29.7	28.8
12	31.8	30.6	31.0	30.6	30.3	30.0	29.8	29.5	29.3	28.0
13	32.2	31.0	31.5	30.9	30.5	29.9	29.6	28.8	28.3	26.8
14	31.0	29.7	29.1	29.8	29.4	28.7	28.7	28.1	28.3	27.0
15	28.2	26.9	27.3	27.1	26.7	26.5	26.4	26.2	26.1	24.7
16	27.1	25.9	26.0	25.9	25.5	25.3	25.2	24.9	24.7	23.3
17	26.4	24.9	25.1	24.8	24.3	23.5	23.1	22.2	22.3	21.8
18	25.5	23.8	24.0	23.8	23.3	22.7	22.4	22.2	22.3	21.9
19	25.4	24.2	24.4	24.3	23.9	23.7	23.7	23.3	23.1	22.6
20	25.2	23.9	24.1	24.0	23.7	23.5	23.4	23.2	23.1	22.5
21*	25.1	23.8	23.9	23.8	23.6	23.4	23.2	23.1	23.2	22.6
22	24.6	23.4	23.5	23.5	23.2	23.0	22.9	22.9	22.9	22.2
23	24.3	23.3	23.4	23.3	23.1	23.0	22.8	22.8	23.0	22.6
Number of Obs	449	449	449	449	449	449	449	449	449	449
Daily Mean	31.5	30.7	31.0	30.9	30.6	30.3	30.2	30.0	30.0	29.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
21 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	24.4	23.6	23.7	23.6	23.5	23.4	23.3	23.3	23.5	23.5
01	24.4	23.5	23.7	23.6	23.4	23.3	23.2	23.2	23.5	23.4
02	24.5	23.6	23.8	23.7	23.6	23.5	23.4	23.4	23.7	23.6
03	24.4	23.6	23.8	23.7	23.6	23.6	23.5	23.5	23.7	23.6
04	24.5	23.8	24.0	23.9	23.7	23.6	23.4	23.5	23.8	23.8
05	24.7	24.0	24.1	24.1	23.9	23.9	23.7	23.8	24.1	24.1
06	24.8	24.1	24.3	24.3	24.0	24.0	23.9	24.3	24.2	24.2
07	24.7	23.9	24.2	24.1	23.9	23.8	23.8	23.8	24.1	23.9
08	24.3	23.4	23.6	23.5	23.3	23.2	23.2	23.2	23.5	23.4
09	23.7	22.4	22.6	22.5	22.4	22.2	22.2	22.2	22.5	22.4
10	22.9	21.6	21.8	21.7	21.5	21.5	21.4	21.4	21.8	21.7
11	22.3	21.3	21.4	21.4	21.1	21.1	21.0	21.2	21.3	21.2
12	22.3	21.2	21.2	21.2	20.9	20.9	20.8	20.9	21.1	21.0
13	23.0	21.8	22.0	21.9	21.6	21.5	21.4	21.3	21.6	21.5
14*	22.3	21.2	21.4	21.3	21.1	20.9	21.0	20.9	21.2	21.0
15	22.1	21.1	21.2	21.2	20.9	20.9	20.8	20.8	21.2	21.1
16	21.6▪	20.4▪	20.6▪	20.5▪	20.2▪	20.1▪	20.0▪	20.2▪	20.4▪	20.2▪
17	21.2	20.0	20.1	20.0	19.8	19.7	19.7	19.7	19.9	19.8
18	20.9	19.5	19.7	19.6	19.3	19.2	19.2	19.2	19.5	19.3
19	20.8	19.5	19.6	19.6	19.3	19.2	19.2	19.2	19.4	19.4
20	20.5	19.2	19.3	19.2	19.0	18.9	18.9	18.9	19.1	19.0
21	20.4	18.9	19.0	19.0	18.7	18.7	18.7	18.6	18.8	18.8
22	20.6	19.1	19.2	19.2	19.0	18.9	18.8	18.9	19.1	19.1
23	20.6	18.7	18.8	18.8	18.6	18.5	18.4	18.5	18.6	18.6
Number of Obs	443	443	443	442	443	442	443	443	442	441
Daily Mean	22.8	21.7	21.8	21.8	21.5	21.5	21.4	21.4	21.7	21.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
22 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	20.6	18.8	18.9	18.9	18.6	18.6	18.5	18.6	18.7	18.7
01	20.4	18.6	18.7	18.7	18.4	18.3	18.3	18.3	18.6	18.5
02	20.2	18.2	18.4	18.3	18.0	17.9	17.8	17.8	18.1	18.1
03	20.2	18.1	18.2	18.1	17.9	17.7	17.7	17.8	18.0	17.9
04	20.1	17.9	18.1	18.0	17.7	17.6	17.6	17.5	17.8	17.7
05	20.0	18.2	18.4	18.3	17.9	17.9	17.9	17.9	18.1	18.1
06	19.9	18.1	18.3	18.3	17.9	17.9	17.9	17.9	18.1	18.0
07*	19.6	17.7	17.8	17.7	17.4	17.4	17.3	17.3	17.6	17.5
08	19.4	17.5	17.6	17.5	17.3	17.0	17.1	17.1	17.5	17.2
09	19.2	17.4	17.6	17.5	17.1	16.9	16.9	16.9	17.3	17.1
10	18.8	16.8	17.0	17.0	16.8	16.7	16.6	16.6	16.8	16.7
11	18.8	16.9	16.9	16.9	16.6	16.6	16.5	16.6	16.7	16.7
12	18.7	16.8	16.9	16.8	16.5	16.5	16.5	16.4	16.7	16.6
13	18.6	16.6	16.7	16.6	16.4	16.3	16.3	16.2	16.5	16.3
14	17.5	15.9	16.1	16.0	15.7	15.5	15.5	15.4	15.7	15.6
15*	16.7	15.8	16.0	15.8	15.5	15.4	15.3	15.2	15.6	15.3
16	17.0	16.0	16.1	16.0	15.7	15.7	15.6	15.6	15.7	15.5
17*	16.6	15.7	15.9	15.8	15.4	15.3	15.2	15.3	15.5	15.3
18	16.9	16.2	16.3	16.2	16.0	15.9	15.8	15.7	16.1	16.0
19	16.9	16.2	16.3	16.2	15.9	15.9	15.7	15.7	16.0	15.8
20	18.1	17.2	17.6	17.3	16.9	16.8	16.7	16.8	16.9	16.8
21	21.9	20.9	21.0	20.7	20.1	19.8	19.2	18.9	18.8	17.9
22	25.9	24.6	24.8	24.4	23.4	22.1	21.0	20.5	20.2	19.5
23	27.6	27.2	27.3	26.9	25.9	24.1	23.0	22.4	21.8	21.0
Number of Obs	446	446	446	446	446	446	446	446	446	446
Daily Mean	19.6	18.1	18.2	18.1	17.7	17.5	17.4	17.3	17.5	17.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
23 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	28.5	27.9	28.0	27.6	26.6	25.6	24.6	23.9	23.2	21.8
01	29.4	28.4	28.6	28.6	27.8	26.5	25.7	25.1	24.5	23.1
02	29.5	29.1	29.2	29.1	28.6	28.5	27.7	27.7	27.6	26.9
03	29.8	29.7	29.9	29.7	29.4	29.1	28.6	28.2	27.9	26.7
04	30.9	30.6	30.8	30.6	30.1	29.5	28.8	28.2	27.4	26.7
05	32.8#	32.5#	32.9#	32.6#	31.9#	30.7#	30.0#	29.2#	28.5#	28.5#
06										
07	29.1■	28.0■	28.1■	27.9■	27.5■	27.0■	26.8■	26.7■	26.9■	26.4■
08	28.5	27.7	27.8	27.7	27.2	26.7	26.6	26.5	26.8	26.3
09	27.7+	27.2+	27.3+	27.2+	26.8+	26.5+	26.3+	26.3+	26.5+	26.2+
10	28.2	27.8	28.0	27.7	27.4	27.1	27.0	27.0	27.2	26.9
11	27.8	27.2	27.5	27.2	26.8	26.5	26.4	26.4	26.6	26.4
12	28.7	28.2	28.4	28.2	27.8	27.6	27.4	27.5	27.7	27.4
13	28.1	27.6	27.8	27.8	27.4	27.1	26.9	26.9	27.1	26.8
14	27.7	27.2	27.3	27.2	26.7	26.5	26.3	26.3	26.5	26.2
15	30.0	29.5	29.8	29.6	29.2	29.0	28.9	29.0	29.3	28.8
16*	30.4	29.9	30.2	29.9	29.5	29.4	29.2	29.3	29.5	29.1
17	32.4	32.0	32.2	32.0	31.6	31.5	31.2	31.2	31.6	31.0
18	33.8	33.4	33.7	33.5	33.1	33.0	32.7	32.7	33.1	32.[illegible]
19	35.1	34.7	34.9	34.8	34.4	34.1	33.9	33.8	34.2	33.5
20*	36.0	35.8	36.0	35.9	35.7	35.5	35.2	35.3	35.7	35.3
21	37.0	36.9	36.9	36.9	36.6	36.5	36.3	36.4	36.7	36.4
22	37.6	37.4	37.6	37.4	37.2	37.0	36.9	37.0	37.3	37.0
23	37.9	37.8	38.0	37.9	37.6	37.5	37.0	37.5	37.8	37.5
Number of Obs	404	404	404	403	404	404	404	403	404	404
Daily Mean	31.2	30.8	31.0	30.8	30.4	30.0	29.7	29.6	29.7	29.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
24 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	38.1	38.1	38.3	38.2	38.0	38.0	37.9	37.9	38.2	38.1
01	38.4	38.3	38.6	38.5	38.3	38.2	38.1	38.1	38.5	38.3
02	39.3	39.1	39.4	39.2	39.1	38.9	38.8	38.9	39.3	38.8
03	40.4	40.2	40.4	40.3	40.2	40.0	39.7	39.8	40.4	39.8
04	40.9	40.7	41.1	40.9	40.7	40.5	40.2	40.3	40.9	40.4
05	41.5	41.4	41.7	41.6	41.3	41.2	40.9	41.0	40.5	40.9
06	41.7	41.6	41.9	41.8	41.5	41.4	41.1	41.3	41.8	41.1
07	41.2	41.0	41.3	41.3	40.9	40.7	40.4	40.6	41.1	40.5
08	40.9	40.7	41.0	40.9	40.5	40.4	40.3	40.5	40.8	40.3
09	40.5	40.3	40.6	40.5	40.3	40.1	39.8	40.0	40.3	40.0
10	40.3	40.0	40.3	40.2	39.9	39.7	39.6	39.5	39.8	39.6
11	40.3	39.9	40.2	40.1	39.8	39.7	39.4	39.4	39.7	39.5
12	40.5	40.2	40.5	40.3	40.0	39.9	39.8	39.7	40.0	39.7
13	40.6	40.3	40.5	40.3	40.2	40.0	39.7	39.7	40.2	39.8
14	40.2	39.9	40.2	40.0	39.8	39.6	39.3	39.3	39.1	39.3
15	40.1	39.8	40.1	39.9	39.7	39.6	39.4	39.3	39.7	39.3
16	40.5	40.2	40.5	40.3	40.2	40.0	39.6	39.9	40.2	39.9
17	40.5	40.2	40.4	40.3	40.0	39.9	39.5	39.7	40.0	39.9
18	40.3	39.9	40.2	40.0	39.7	39.7	39.4	39.5	39.9	39.7
19	39.1	38.7	39.1	38.7	38.5	38.4	38.1	38.1	38.4	38.2
20	38.4	37.8	37.7	37.8	37.4	37.3	37.1	37.1	37.1	37.0
21	38.1	37.4	37.8	37.5	37.2	37.0	36.8	36.7	37.0	36.8
22	39.	38.7	38.9	38.6	38.5	38.3	38.1	38.1	38.3	38.1
23	40.9	40.7	40.8	40.7	40.6	40.4	40.2	40.1	40.4	40.0
Number of Obs	447	447	446	444	447	446	447	447	447	448
Daily Mean	40.1	39.8	40.1	39.9	39.7	39.5	39.3	39.4	39.7	39.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
25 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	41.2	40.9	41.0	40.9	40.7	40.6	40.4	40.3	40.7	40.5
01	41.3	41.1	41.4	41.2	40.9	40.8	40.6	40.6	40.9	40.8
02	41.8	41.6	41.8	41.6	41.2	41.3	41.1	41.2	41.4	41.3
03	42.3	42.1	42.4	42.2	41.8	41.8	41.5	41.7	42.0	41.8
04	42.5	42.3	42.5	42.3	41.9	41.9	41.7	41.8	42.1	41.9
05	42.6	42.4	42.8	42.5	42.1	42.1	41.8	41.9	42.4	42.1
06	42.6	42.3	42.5	42.4	42.0	42.0	41.7	41.8	42.2	42.0
07	43.2	42.8	43.2	43.0	42.6	42.6	42.3	42.5	42.9	42.6
08*	43.6	43.4	43.7	43.5	43.4	43.3	43.0	43.3	43.6	43.3
09	44.0	43.7	44.0	43.8	43.6	43.6	43.3	43.5	43.8	43.5
10	44.0	43.8	44.2	44.0	43.7	43.7	43.4	43.4	43.8	43.4
11	44.4	44.2	44.6	44.4	44.0	44.0	43.7	43.8	44.1	43.1
12	43.8	43.6	44.1	43.7	43.3	43.1	42.8	42.8	42.9	41.6
13	43.9	43.7	43.9	43.8	43.4	43.2	42.8	42.7	42.9	41.5
14	44.4	44.3	44.4	44.3	44.0	43.8	43.1	42.8	42.6	40.9
15	44.1	43.8	44.0	43.9	43.5	43.5	42.8	42.3	41.6	38.6
16	44.7	44.6	44.6	44.6	43.9	43.4	42.4	41.5	41.1	38.4
17	44.6	44.3	44.4	44.3	43.9	43.9	43.3	43.0	42.7	41.3
18	45.5	45.2	45.4	45.2	44.8	44.6	44.1	43.8	43.4	41.5
19	45.6	45.2	45.4	45.3	44.9	44.8	44.5	44.8	45.0	43.6
20	45.9	45.7	45.8	45.7	45.4	45.4	45.1	45.2	45.6	44.9
21	46.4+	46.1+	46.3+	46.3+	45.9+	45.9+	45.6+	45.6+	46.1+	45.5+
22	46.4	46.0	46.2	46.2	45.7	45.7	45.4	45.5	46.0	45.5
23	47.2	46.7	46.9	46.8	46.5	46.4	46.1	46.2	46.8	46.4
Number of Obs	446	446	446	446	446	446	445	446	446	446
Daily Mean	44.0	43.7	44.0	43.8	43.4	43.4	43.0	43.0	43.2	42.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
26 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	47.5	47.1	47.3	47.2	46.9	46.9	46.5	46.8	47.4	46.9
01	48.5	48.2	48.3	48.3	48.1	48.1	47.7	47.9	48.4	48.1
02	49.2	49.0	49.1	49.1	48.8	48.9	48.6	48.7	49.3	49.0
03	49.8	49.6	49.7	49.7	49.4	49.5	49.2	49.3	49.0	48.8
04	50.0	49.8	49.9	49.8	49.4	49.6	49.2	49.5	49.9	49.4
05	49.8	49.5	49.6	49.6	49.2	49.3	49.0	49.1	49.3	48.7
06	50.3	50.0	50.0	50.0	49.7	49.8	49.5	49.5	49.9	49.4
07	50.0	49.6	49.6	49.6	49.3	49.3	49.0	49.1	49.4	48.8
08*	47.5	47.0	47.1	47.1	46.7	46.7	46.3	46.5	46.8	46.2
09	46.3	45.8	46.0	45.9	45.4	45.5	45.1	45.1	45.4	45.0
10	46.7	46.3	46.6	46.4	45.9	46.0	45.7	45.7	45.9	45.2
11	46.8	46.3	46.6	46.5	45.9	46.0	45.6	45.4	45.5	44.3
12										
13										
14										
15	47.0	46.4	46.7	46.5	46.3	46.1	45.9	46.2	46.6	46.1
16	47.0=	46.5=	46.8=	46.8=	46.4=	46.2=	46.0=	46.2=	46.5=	46.2=
17	46.7	46.2	46.6	46.4	46.1	45.9	45.7	45.8	46.1	45.8
18	46.5	46.2	46.3	46.3	45.8	45.7	45.5	45.6	46.0	45.7
19	46.3	45.9	46.2	46.1	45.7	45.6	45.3	45.4	45.8	45.6
20	46.2	45.9	46.2	46.0	45.6	45.6	45.4	45.5	45.8	45.6
21	46.5	46.1	46.4	46.2	45.7	45.7	45.5	45.6	45.9	45.6
22	47.3	46.6	46.9	46.8	46.4	46.3	46.0	46.1	46.4	46.0
23	47.2	46.7	47.0	46.8	46.3	46.3	45.9	46.0	46.4	45.9
Number of Obs	384	384	383	383	384	384	384	382	384	384
Daily Mean	47.8	47.4	47.6	47.5	47.1	47.1	46.8	46.9	47.2	46.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
27 April 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	47.5	47.0	47.3	47.1	46.6	46.6	46.3	46.3	46.6	46.2
01	47.8	47.3	47.6	47.3	46.9	46.9	46.5	46.6	47.0	46.6
02	48.3	47.7	48.1	47.9	47.4	47.4	47.1	47.2	47.5	46.9
03	48.5	48.0	48.2	48.0	47.7	47.6	47.3	47.4	47.8	47.0
04	48.7	48.2	48.5	48.3	47.9	47.8	47.4	47.5	47.9	47.2
05	48.5	48.1	48.4	48.2	47.7	47.7	47.4	47.5	47.9	47.2
06	48.6	48.3	48.5	48.4	47.9	47.9	47.5	47.5	47.8	47.4
07*	48.3	48.1	48.4	48.2	47.9	47.8	47.4	47.5	47.6	46.6
08	48.4	48.2	48.3	48.1	47.8	47.6	47.4	47.4	47.6	46.6
09	48.5	48.5	48.5	48.2	48.1	47.8	47.7	47.7	47.8	45.4
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	188	188	188	187	186	188	187	188	188	188
Daily Mean	48.3	47.9	48.2	48.0	47.6	47.5	47.2	47.3	47.6	46.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
17 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19	26.4-	26.4-	26.3-	26.1-	25.6-	25.4-	24.7-	24.3-	23.7-	23.7-
20	24.4	24.7	24.6	24.3	24.2	24.0	23.8	23.6	23.1	22.6
21	23.0	22.9	23.1	22.9	22.6	22.4	22.2	22.2	22.1	22.1
22	23.4	23.7	23.8	23.5	23.2	22.7	22.1	21.9	21.7	21.6
23	22.2	22.1	22.3	22.0	21.6	21.1	20.5	20.3	20.3	20.3
Number of Obs	82	82	82	82	82	82	82	82	82	82
Daily Mean	23.5	23.6	23.7	23.4	23.1	22.8	22.[illegible]	22.2	22.0	21.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
18 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	21.3	21.0	21.1	20.8	20.5	20.1	19.7	19.7	19.6	19.7
01	20.5	20.0	20.1	19.8	19.6	19.5	19.3	19.3	19.2	19.1
02	20.8	20.3	20.4	20.1	19.9	19.7	19.4	19.1	18.8	18.9
03	20.4+	19.8+	20.0+	19.8+	19.5+	19.4+	19.3+	19.2+	19.1+	19.0+
04	20.6	20.2	20.4	20.2	19.9	19.8	19.7	19.8	19.9	19.9
05	21.7	21.6	21.8	21.6	21.4	21.3	21.2	21.3	21.4	21.3
06	22.7	22.8	23.0	22.8	22.6	22.5	22.4	22.5	22.6	22.5
07	24.6	25.0	25.1	24.8	24.5	24.3	23.9	23.7	23.4	23.5
08	27.1	27.7	28.0	27.0	26.2	25.6	25.0	24.4	23.8	24.1
09	30.2	31.4	31.5	30.1	27.8#	27.9	26.8	25.5	24.0	24.5
10	30.6	31.4	31.4	30.0		26.9	25.4	25.3	25.3	25.1
11	26.1	26.3	26.5	26.1	25.8	25.4	24.9	24.8	24.4	24.1
12	24.7	24.8	25.1	24.9	24.7	24.5	24.2	24.5	24.1	23.9
13	23.7	23.6	23.8	23.5	23.4	23.2	23.2	23.4	23.3	23.3
14	23.7	23.7	24.0	23.7	23.5	23.4	23.4	23.6	23.6	23.5
15	23.3	23.2	23.4	23.1	23.0	22.8	22.8	23.0	23.0	23.0
16	22.6	22.5	22.8	22.5	22.4	22.2	22.2	22.4	22.4	22.4
17										
18										
19										
20	24.8*	25.0*	25.3*	25.1*	24.9*	24.8*	24.8*	25.2*	25.0*	25.1*
21	25.0	25.3	25.6	25.4	25.2	25.1	25.0	25.4	25.	25.3
22	25.7	26.0	26.3	26.1	26.0	25.	25.9	26.3	26.2	26.2
23	26.4	26.8	27.1	26.9	26.7	26.6	26.7	27.0	26.9	27.1
Number of Obs	372	372	372	372	339	372	372	371	372	372
Daily Mean	24.2	24.3	24.5	24.1	23.2	23.4	23.2	23.1	23.0	23.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
19 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	26.5+	26.9+	27.2+	26.9+	26.8+	26.7+	26.7+	26.9+	26.9+	26.9+
01	26.7+	27.0+	27.4+	27.2+	27.1+	26.8+	26.8+	27.3+	27.4+	27.4+
02	27.1	27.6	27.5	27.3	27.2	27.0	27.1	27.3	27.3	27.5
03	27.7	27.7	28.1	27.9	27.8	27.5	27.3	27.5	27.5	27.5
04	28.0	27.9	28.4	28.2	28.0	27.7	27.7	27.9	27.5	27.3
05	27.7	27.7	28.2	27.9	27.8	27.5	27.6	27.8	27.6	27.4
06	27.5	27.9	27.9	27.6	27.5	27.2	27.2	27.5	27.5	27.5
07	27.4	27.6	27.8	27.5	27.1	27.0	26.9	27.5	27.4	27.4
08	27.5	27.3	27.8	27.4	27.3	27.1	27.3	27.5	27.2	27.4
09	28.0	27.8	28.2	28.0	27.9	27.6	27.7	27.9	27.7	27.8
10	28.2	28.0	28.6	28.4	28.2	28.0	27.9	28.0	28.0	27.9
11	29.2	28.9	29.4	29.1	28.8	28.5	28.7	28.7	28.4	28.1
12	31.1	30.8	31.3	30.9	30.2=	30.5	30.5	30.5	30.1	29.5
13	26.2	26.3	26.5	26.3		25.9	25.8	26.0	25.9	25.7
14	25.4	25.7	25.9	25.6	25.6+	25.4	25.4	25.5	26.3	25.4
15	24.3	24.3	24.7	24.5	24.3	24.0	24.0	24.3	24.3	24.0
16	23.7	23.7	24.1	23.9	23.7	23.4	23.3	23.7	23.7	23.3
17	23.2	23.3	23.6	23.5	23.2	23.0	23.0	23.2	23.3	23.1
18	23.5	23.5	23.8	23.6	23.4	23.2	23.1	23.3	23.4	23.2
19	23.3	23.3	23.6	23.4	23.2	23.0	23.0	23.1	23.2	23.1
20	22.9	22.9	23.1	23.0	22.7	22.4	22.5	22.7	22.9	22.8
21	22.6	22.6	22.7	22.6	22.4	22.1	22.2	22.3	22.4	22.3
22*	22.6	22.7	22.9	22.7	22.5	22.1	22.3	22.4	22.5	22.3
23*	22.4	22.5	22.6	22.5	22.3	22.0	22.1	22.2	22.3	22.2
Number of Obs	444	444	441	442	413	444	442	443	444	439
Daily Mean	25.9	26.0	26.3	26.1	25.8	25.6	25.6	25.8	25.8	25.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
20 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	22.7	23.1	23.4	23.2	23.0	22.8	22.8	23.0	23.1	22.9
01	23.4	23.7	24.1	23.9	23.7	23.5	23.4	23.6	23.7	23.7
02	23.6	23.8	24.2	24.0	23.8	23.6	23.6	23.9	24.0	23.9
03	24.7	25.2	25.4	25.3	25.3	25.2	25.3	26.1	25.6	25.6
04	26.0	26.6	26.8	26.7	26.6	26.5	26.3	26.5	26.7	26.6
05	27.3	27.7	28.0	27.6	27.7	27.5	27.3	27.4	27.5	27.5
06	28.2	29.0	29.3	29.1	28.9	28.7	34.2	28.8	28.9	29.3
07	29.4=	29.6=	30.0=	29.8=	29.6=	29.3=	29.4=	29.3=	29.5=	29.4=
08										
09										
10										
11										
12										
13										
14										
15*	34.1-	34.1-	34.4-	33.9-	33.9-	33.8-	33.7-	33.7-	34.0-	33.6-
16*	35.0	35.0	35.4	35.1	35.0	34.7	34.7	34.8	35.2	34.8
17*	36.2	36.3	36.5	36.3	36.1	36.1	36.0	36.0	36.3	36.2
18	37.0	36.9	37.0	36.8	36.6	36.4	36.4	36.4	36.7	36.6
19	36.5#	37.4	37.6	37.5	37.2	36.9	37.0	36.9	37.4	37.5
20	40.0	38.1	38.3	38.0	37.8	37.7	37.6	37.5	38.0	38.0
21*	40.2	38.7	38.8	38.5	38.4	38.2	38.1	38.1	38.5	38.2
22	40.5	38.9	39.1	38.9	38.7	38.4	38.4	38.3	38.9	38.5
23	41.9	39.8	39.9	39.7	39.5	39.5	39.2	39.1	39.8	39.7
Number of Obs	283	296	296	296	296	295	296	296	296	296
Daily Mean	32.0	32.0	32.2	32.0	31.9	31.7	32.0	31.7	32.0	31.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
21 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	42.2	40.2	40.3	40.2	40.0	39.8	39.6	39.6	40.2	39.9
01	40.3	40.4	40.5	40.3	40.1	40.1	40.0	39.9	40.5	40.2
02	40.4	40.7	41.1	40.8	40.7	40.6	40.7	40.5	40.9	40.7
03	41.1	41.4	41.5	41.4	41.3	41.2	41.2	41.1	41.4	41.3
04	41.7	42.1	42.4	42.2	42.0	42.0	41.8	41.7	42.2	42.0
05	41.4	41.8	41.9	41.8	41.5	41.4	41.4	41.2	41.8	41.5
06	41.6	42.0	42.1	42.0	41.8	41.7	41.5	41.4	41.9	41.6
07	41.4	41.8	41.9	41.7	41.5	41.5	41.3	41.3	41.9	
08*	40.1	40.4	40.7	40.4	40.3	40.1	40.0	40.1	40.5	
09	40.2	40.5	40.6	40.6	40.3	40.3	39.9	40.0	40.5	40.3
10	40.0	40.1	40.2	40.2	39.9	39.7	39.4	39.5	39.7	39.6
11*	40.2	40.4	40.4	40.3	39.9	39.9	39.5	39.7	39.8	39.6
12*	40.3	40.6	40.5	40.5	40.2	40.1	39.7	39.6	40.0	39.7
13*	39.1	39.2	39.1	38.9	38.7	38.6	38.4	38.3	38.4	38.0
14	38.3	38.4	38.4	38.1	37.9	37.7	37.5	37.4	37.7	37.3
15	38.3	38.3	38.4	38.1	37.7	37.7	37.3	37.3	37.5	37.1
16*	38.8	38.9	38.9	38.7	38.3	38.2	38.0	38.0	38.1	37.8
17	38.9	39.0	39.0	38.9	38.4	38.2	37.9	38.0	38.2	37.8
18*	39.8	40.0	40.0	39.9	39.4	39.3	39.0	39.0	39.0	38.5
19	39.6	39.7	39.8	39.7	39.4	39.2	39.0	39.8	39.0	37.9
20	39.9	40.1	40.1	39.8	39.5	39.4	39.2	39.1	39.3	38.3
21	38.9	39.1	39.1	38.9	38.5	38.4	38.2	38.0	38.5	37.9
22	39.0	39.2	39.2	39.1	38.7	38.6	38.3	38.1	38.7	38.1
23	39.5	39.7	39.7	39.5	39.1	39.0	38.9	38.6	39.1	38.6
Number of Obs	450	450	448	448	450	447	450	450	449	413
Daily Mean	40.1	40.2	40.2	40.1	39.8	39.7	39.5	39.4	39.8	39.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
22 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	39.2	39.4	39.3	39.1	38.7	38.5	38.4	38.1	38.7	37.9
01	37.5	37.5	37.6	37.5	37.1	37.1	36.9	36.7	37.2	36.8
02	37.5	37.6	38.0	37.8	37.6	37.5	37.5	37.4	38.0	37.6
03	39.2	39.5	39.7	39.6	39.3	39.3	39.2	39.0	39.7	39.3
04	41.1	41.3	41.6	41.4	41.2	40.9	41.0	41.0	41.2	40.8
05	42.4	42.7	43.1	42.8	42.5	42.4	42.2	42.2	42.6	
06	42.4	42.5	42.9	42.6	42.2	42.0	41.9	41.8	42.0	
07	41.3	41.6	41.7	41.5	41.0	40.9	40.7	40.8	40.9	
08	41.6	41.9	42.0	41.8	41.4	41.3	41.1	41.0	41.5	
09	42.1	42.4	42.4	42.3	41.8	41.8	41.4	41.5	41.9	
10	42.1	42.5	42.8	42.4	42.0	41.8	41.7	41.7	42.0	
11	42.4	42.6	42.7	42.5	42.0	41.9	41.8	41.8	41.9	
12	41.9	42.1	42.3	42.1	41.5	41.4	41.3	41.4	41.5	
13	42.3	42.6	42.6	42.2	42.0	41.8	41.6	41.5	41.8	
14*	42.8	43.0	43.1	42.7	42.2	42.1	41.8	41.8	42.2	
15*	42.2	42.4	42.5	42.2	42.0	41.7	41.5	41.4	41.6	
16*	41.7	42.0	42.1	41.9	41.5	41.3	41.1	41.1	41.3	
17*	41.8	42.0	42.1	41.9	41.5	41.3	41.1	41.0	41.3	
18*	42.3	42.7	42.7	42.6	42.3	42.1	41.8	41.7	42.1	
19										
20	38.5	38.5	38.6	38.2	37.9	37.8	37.7	37.8	37.7	
21	38.8	39.1	38.9	38.7	38.2	38.3	38.1	37.9	38.1	
22	39.9	40.2	40.2	40.0	39.7	39.5	39.2	38.8	39.6	
23	41.0	41.2	41.4	41.0	40.6	40.5	40.1	39.9	40.4	
Number of Obs	430	427	429	428	430	426	430	430	428	96
Daily Mean	41.0	41.2	41.3	41.1	40.7	40.6	40.4	40.3	40.7	38.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
23 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	41.0	41.1	41.1	40.9	40.4	40.2	39.7	39.3	39.5	
01	39.9	40.2	39.6	39.4	38.8	38.6	38.0	37.5	36.8	
02	40.1	40.7	39.6	39.1	38.2	37.6	36.1	34.5	32.6	
03	36.0	36.3	35.9	35.6	35.1	34.5	34.0	33.0	31.7	
04	35.8	35.7	35.4	35.2	34.4	33.8	33.7	33.3	33.0	
05	37.9	37.0	36.6	35.7	34.4	33.7	33.2	32.3	32.0	
06	37.4	37.7	37.4	37.0	35.9	34.5	33.3	32.4	31.9	
07	35.9	35.5	35.0	34.7	34.1	33.7	33.0	32.2	31.4	
08	36.5	36.3	36.1	35.8	35.3	34.5	33.5	32.7	33.0	
09*	37.0	37.3	37.4	37.2	36.8	36.5	36.2	36.1	36.0	
10*	38.7	38.9	39.0	38.7	38.1	37.9	37.9	37.6	37.5	
11*	41.5	42.1	42.0	41.7	41.2	41.0	40.8	40.7	40.8	
12*	42.8	43.3	42.9	42.6	41.8	41.7	41.4	41.1	41.0	
13*	42.5	42.8	42.9	42.7	42.2	42.1	41.6	41.8	42.1	
14	44.8	45.3	45.4	45.2	44.8	44.7	44.6	44.5	45.0	
15	45.6	45.9	46.3	46.0	45.6	45.4	44.9+	45.2	45.5+	
16	45.7	46.0	46.4	46.1	45.8	45.7	45.3	45.5	45.9	
17	47.4	47.8	48.3	48.1	47.6	47.6	47.5	47.4	47.9	
18	49.0	49.3	49.7	49.6	49.4	49.2	48.8	48.7	49.1	
19	49.4	49.6	50.1	49.9	49.7	49.5	49.2	49.3	49.5	
20	49.6	49.9	50.3	49.9	50.0	49.8	49.5	49.5	50.1	
21	50.3	50.4	50.7	50.6	50.4	50.3	50.3	50.2	50.3	
22	51.0	51.2	51.4	51.3	51.1	51.1	50.9	50.9	51.0	
23	51.0	51.3	51.5	51.5	51.3	51.2	50.9	50.8	51.2	
Number of Obs	448	445	447	444	447	444	444	443	444	
Daily Mean	42.8	43.0	43.0	42.7	42.2	41.9	41.4	41.1	41.0	

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
24 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	51.3	51.5	51.9	51.8	51.6	51.6	51.1	51.1	51.6	
01	51.4	51.8	52.2	52.0	52.0	51.8	51.3	51.3	51.7	
02	51.8	52.0	52.3	52.1	52.0	51.8	51.7	51.6	52.0	
03	51.2	51.5	51.9	51.7	51.5	51.4	51.0	51.1	51.2	
04	50.5	50.9	51.1	51.0	50.7	50.6	50.0	50.0	50.4	
05	50.9	51.1	51.3	51.2	51.1	50.9	50.7	50.6	50.4	
06	51.3	51.6	52.1	51.9	51.5	51.2	50.6	50.6	50.3	
07	52.2	52.4	52.5	52.4	52.1	52.0	51.8	51.5	51.5	
08	53.4	53.5	53.8	53.5	53.4	53.0	52.9	52.4	53.5	
09*	53.7	53.9	54.6	54.5	54.4	54.3	54.2	54.1	54.2	
10*	51.5-	51.7-	52.0-	51.8-	51.8-	51.5-	51.4-	51.5-	51.9-	
11*	51.8	52.0	52.2	52.1	52.0	51.8	51.7	51.7	52.2	
12*	52.1	52.5	52.8	52.6	52.5	52.4	52.2	52.3	52.7	
13	52.5	52.8	53.1	52.9	52.8	52.5	52.5	52.5	53.0	
14	52.6	52.9	53.2	52.9	52.9	52.7	52.6	52.6	53.1	
15*	53.1	53.3	53.6	53.4	53.3	53.2	53.0	53.1	53.6	
16*	52.4	52.5	52.9	52.7	52.6	52.3	52.2	52.3	52.7	
17										
18	52.5+	52.7+	53.1+	52.7+	52.7+	52.5+	52.4+	52.5+	52.9+	52.5+
19	53.0	53.2	53.5	53.1	53.1	52.8	52.7	52.9	53.2	52.9
20	53.5	53.7	54.0	53.6	53.7	53.4	53.3	53.3	53.9	53.3
21	52.3	52.4	52.6	52.3	52.2	51.9	51.8	51.8	52.2	51.7
22	52.1	52.3	52.5	52.3	52.1	52.0	51.8	51.9	52.3	51.9
23	51.4	51.6	51.8	51.6	51.4	51.2	51.1	51.2	51.5	51.2
Number of Obs	414	413	414	413	411	414	412	414	414	107
Daily Mean	52.1	52.3	52.6	52.4	52.3	52.1	51.9	51.9	52.3	52.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
25 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	50.8	51.0	51.2	50.9	50.8	50.6	50.4	50.5	50.9	50.5
01	50.9	51.1	51.3	51.1	50.9	50.7	50.6	50.7	51.1	50.6
02	50.9	51.0	51.3	51.0	50.8	50.5	50.4	50.5	50.9	50.3
03	50.5	50.5	50.8	50.6	50.3	50.1	50.0	50.1	50.5	50.2
04	50.9+	51.0+	51.2+	51.0+	50.8+	50.5+	50.4+	50.5+	50.8+	50.6+
05	50.2	50.2	50.5	50.2	50.0	49.8	49.7	49.8	49.5	49.8
06	50.2	50.2	50.5	50.3	50.1	49.6	49.5	49.8	50.0	49.8
07	50.2	50.3	50.6	50.3	50.1	49.9	49.8	49.9	50.2	49.8
08*	50.5	50.6	50.9	50.5	50.4	50.2	50.1	50.1	50.5	49.5
09*	50.5	50.5	50.9	50.6	50.4	50.1	50.0	50.0	50.5	50.2
10*	49.8	49.8	50.0	49.9	49.5	49.3	49.1	4 3	49.6	48.8
11	49.9	49.9	50.2	49.9	49.6	49.3	49.2	49.2	49.5	48.4
12	50.2	50.1	50.4	50.2	50.0	49.7	49.5	49.4	49.6	48.4
13	50.1	50.1	50.4	50.1	49.9	49.6	49.5	49.5	50.0	49.4
14	51.2	51.3	51.6	51.4	51.3	51.1	51.0	51.0	51.5	51.2
15	52.0	52.1	52.5	52.1	51.9	51.7	51.6	51.7	52.1	51.7
16	52.6	52.6	53.0	52.6	52.4	52.3	52.1	52.2	52.5	52.0
17	52.4	52.4	52.8	52.5	52.3	52.1	52.0	52.1	52.4	51.9
18	52.4	52.4	52.7	52.5	52.2	52.0	51.9	52.0	52.3	51.9
19	51.7	51.7	52.1	51.9	51.5	51.4	51.2	51.2	51.7	51.1
20	51.1	51.1	51.4	51.0	50.8	50.6	50.4	50.4	50.8	50.1
21	49.4	49.3	49.5	49.2	48.9	48.7	48.5	48.6	48.8	48.2
22	48.8	48.8	49.1	48.8	48.5	48.3	48.2	48.1	48.4	48.0
23	49.2	49.3	49.7	49.4	49.2	49.1	48.8	48.6	49.0	48.7
Number of Obs	438	437	438	437	438	432	436	438	436	437
Daily Mean	50.7	50.7	51.0	50.8	50.5	50.3	50.2	50.2	50.6	50.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
26 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	49.4	49.4	49.8	49.6	49.3	49.1	49.0	49.0	49.4	48.9
01	48.7	48.7	49.0	48.8	48.4	48.4	48.2	48.2	48.6	48.0
02	48.0	47.8	48.1	47.7	47.6	47.4	47.3	47.4	47.7	47.1
03	47.6	47.6	47.9	47.6	47.3	47.1	47.0	47.1	47.2	46.2
04	47.7	47.7	48.0	47.7	47.5	47.3	47.2	47.3	47.6	47.1
05	48.6	48.6	49.1	48.8	48.6	48.3	48.3	48.1	48.7	48.3
06	48.8	48.8	49.1	48.9	48.7	48.5	48.3	48.4	48.6	47.8
07	49.1■	49.2■	49.5■	49.2■	49.2■	49.0■	48.8■	48.9■	49.3■	48.7■
08	48.9	48.9	49.2	48.8	48.6	48.4	48.3	48.3	48.3	46.4
09	49.0	49.0	49.2	49.0	48.6	48.5	48.3	48.3	48.0	44.8
10	49.2	49.2	49.5	49.3	49.0	48.8	48.6	48.4	47.8	42.4
11	47.4	47.2	47.0	46.7	46.2	45.7	45.0	44.2	41.2	36.7
12	46.1	45.7	45.5	45.2	44.7	44.3	43.8	43.5	42.8	40.2
13*	45.6	45.4	45.3	45.2	44.7	44.5	44.1	43.9	43.8	42.4
14	44.2	43.7	43.6	43.3	42.9	42.5	42.1	41.8	41.6	39.7
15*	44.4	44.2	44.4	44.1	43.7	43.5	43.4	43.4	43.6	42.8
16*	44.5	44.3	44.4	44.1	43.8	43.6	43.4	43.3	43.5	42.3
17*	43.2	43.0	43.1	42.8	42.4	42.2	41.9	41.7	41.8	39.8
18	40.6	40.1	40.0	39.6	39.1	38.7	38.2	38.1	37.8	35.4
19	43.0	42.9	43.2	42.9	42.7	42.4	42.3	42.0	41.6	37.3
20	41.8	41.5	41.5	41.1	40.7	40.4	40.2	39.7	39.1	35.7
21	40.8	40.4	40.4	40.0	39.3	39.0	38.5	38.0	36.9	31.7
22	40.0	39.6	39.6	39.1	38.7	38.4	37.8	37.3	36.6	34.0
23	38.0	37.3	37.0	36.6	36.1	35.7	35.0	34.5	33.4	30.9
Number of Obs	445	438	445	444	444	443	444	440	444	445
Daily Mean	45.5	45.4	45.5	45.2	44.9	44.6	44.3	44.1	43.9	41.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
27 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	37.8	37.3	37.2	36.9	36.6	36.2	36.0	35.9	35.6	33.8
01	37.2	36.7	36.6	36.4	35.9	35.6	35.3	35.3	35.0	33.6
02	37.8	37.5	37.5	37.2	36.9	36.6	36.3	36.3	36.2	34.5
03	37.2	36.8	36.7	36.4	36.1	35.6	35.2	35.1	34.8	33.7
04	37.2	36.8	36.6	36.4	36.0	35.6	35.4	35.3	34.9	33.9
05	38.3	38.0	38.0	37.6	37.3	36.8	36.3	36.0	35.5	34.3
06	38.9	38.6	38.5	38.2	37.7	37.5	37.2	37.0	36.9	36.0
07	38.7	38.4	38.4	38.1	37.8	37.5	37.2	37.1	37.0	36.1
08	39.2	38.9	39.1	38.8	38.5	38.2	38.0	38.0	38.0	37.0
09*	38.9+	38.9=	38.9+	38.6+	38.4+	38.0+	37.9=	37.8+	37.9+	37.5+
10*	41.1	41.2	41.5	41.3	41.0	40.9	40.8	40.7	41.2	40.7
11	42.3	42.3	42.7	42.6	42.[illegible]	42.4	42.1	42.2	42.5	41.9
12	42.1+	42.2+	42.8+	42.6+	42.2+	42.2+	42.0+	42.0+	42.1+	41.4+
13	42.8	42.7	43.0	42.8	42.7	42.4	42.4	42.3	42.7	42.4
14	43.5	43.5	43.9	43.6	43.3	43.2	43.1	43.2	43.6	43.2
15*	43.9	44.0	44.3	44.0	43.7	43.7	43.4	43.7	43.8	43.5
16*	43.0+	43.0+	43.5+	43.3+	43.1+	42.9+	42.9+	42.9+	42.8+	42.7+
17	42.6	42.6	43.1	43.0	42.8	42.7	42.5	42.5	42.9	42.4
18	43.9	43.8	44.3	44.3	44.3	44.2	43.8	43.8	44.2	44.1
19	44.8+	44.9+	45.1+	45.1+	45.0+	44.9+	44.8+	44.9+	45.1+	44.9+
20										
21										
22										
23										
Number of Obs	350	347	350	347	349	349	349	348	349	349
Daily Mean	40.5	40.3	40.5	40.3	40.0	39.7	39.5	39.5	39.5	38.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
28 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03	47.6-	47.6-	47.5-	47.4-	47.4-	47.3-	47.1-	47.1-	47.2-	46.9-
04	47.2	47.1	47.1	47.1	46.9	46.8	46.6	46.5	46.8	46.5
05	47.2	47.2	47.4	47.3	47.1	47.0	46.9	46.7	47.0	47.0
06	47.8	47.8	48.1	47.9	47.7	47.4	47.2	47.2	47.3	47.1
07	48.0	48.0	47.9	47.9	47.7	47.7	47.4	47.5	47.9	47.6
08	50.4+	50.3+	50.6+	50.6+	50.2+	50.1+	49.3+	49.9+	50.3+	49.8+
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	95	95	95	95	95	95	95	95	95	95
Daily Mean	48.0	47.9	48.0	48.0	47.7	47.6	47.3	47.4	47.7	47.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
29 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23*	43.1	43.1	43.4	42.9	42.8	42.6	42.5	42.7	42.9	42.6
Number of Obs	16	16	16	16	16	16	16	16	16	16
Daily Mean	43.1	43.1	43.4	42.9	42.8	42.6	42.5	42.7	42.9	42.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
30 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.1	43.9	44.5	43.8	43.8	43.5	43.5	43.6	43.9	43.5
01	44.0	44.2	44.4	43.9	43.8	43.6	43.5	43.6	43.9	43.5
02	44.0	44.1	44.4	44.0	43.8	43.6	43.6	43.7	44.0	43.6
03	44.9	44.9	45.4	44.9	44.8	44.6	44.5	44.7	45.1	44.8
04	45.5	45.6	46.0	45.6	45.4	45.5	45.1	45.3	45.6	45.3
05	45.3	45.3	45.7	45.2	45.0	44.8	44.7	44.7	44.9	44.3
06	43.4	43.2	43.4	42.8	42.5	42.2	41.9	41.8	41.7	39.7
07	43.8	43.7	44.0	43.5	43.2	42.9	42.6	42.4	42.0	39.5
08	43.5	43.4	43.7	43.2	43.0	42.7	42.5	42.4	42.3	41.2
09	44.3	44.4	44.8	44.4	44.0	43.9	43.7	43.6	43.7	43.2
10	45.4	45.4	45.8	45.4	45.2	45.0	44.7	44.8	44.9	44.3
11*	45.9	46.0	46.4	46.1	45.9	45.7	45.6	45.7	46.1	45.6
12	46.8	46.9	47.3	47.0	46.9	46.7	46.6	46.8	47.1	46.7
13	47.4	47.5	47.9	47.6	47.5	47.3	47.3	47.4	47.8	47.5
14	47.7	47.8	48.2	47.8	47.7	47.5	47.4	47.5	47.9	47.4
15	47.7	47.8	48.2	47.8	47.7	47.5	47.4	47.5	47.9	47.6
16	48.2	48.3	48.7	48.4	48.2	48.0	48.0	48.1	48.5	48.1
17	48.1	48.3	48.6	48.3	48.2	48.0	47.9	48.0	48.5	48.0
18*	48.5	48.6	49.1	48.8	48.6	48.4	48.4	48.5	49.0	48.6
19	48.9	49.0	49.2	49.1	49.0	48.7	48.7	48.8	49.2	48.9
20	49.1	49.3	49.7	49.3	49.2	49.0	48.9	49.0	49.5	49.1
21*	49.3	49.4	49.8	49.4	49.2	49.0	48.9	49.0	49.3	48.9
22*	49.2	49.3	49.5	49.4	49.3	49.0	38.9	38.9	49.2	48.4
23	49.2	49.3	49.7	49.3	49.2	48.9	48.9	49.0	49.3	48.8
Number of Obs	452	450	451	452	451	452	450	452	451	452
Daily Mean	46.4	46.5	46.9	46.5	46.3	46.1	46.0	46.0	46.3	45.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
31 May 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	49.6	49.7	50.2	49.8	49.7	49.4	49.3	49.5	49.9	49.4
01	49.7	49.8	50.3	49.7	49.7	49.5	49.4	49.5	49.9	49.4
02	49.7	49.9	50.3	49.9	49.8	49.6	49.5	49.6	50.0	49.3
03	49.9	50.1	50.5	50.1	50.0	49.8	49.7	49.9	50.2	49.8
04	50.0	50.1	50.5	50.2	50.1	49.8	49.8	49.9	50.2	49.4
05	50.1	50.2	50.7	50.3	50.2	50.1	50.0	50.1	50.4	49.1
06	50.3	50.4	50.9	50.5	50.4	50.2	50.2	50.3	50.6	47.7
07	50.0	50.1	50.4	50.1	50.0	49.7	49.6	49.7	49.6	41.9
08	49.8	49.9	50.3	49.8	49.8	49.5	49.4	49.4	48.4	38.9
09	47.3	47.4	47.6	47.4	47.2	47.1	47.0	47.1	47.0	38.8
10*	47.2	47.2	47.4	47.1	46.9	46.7	46.6	46.5	46.2	38.4
11	48.0	48.0	48.3	47.9	47.7	47.4	47.3	47.3	47.1	42.6
12	48.0	48.1	48.3	47.9	47.7	47.4	47.2	47.1	46.7	42.6
13*	47.2	47.2	47.4	46.9	46.7	46.4	46.2	45.9	45.4	40.6
14	45.4	45.4	45.5	45.0	44.8	44.5	44.3	44.1	43.3	38.4
15	45.7	45.7	45.8	45.6	45.2	45.0	44.8	44.6	44.0	39.1
16	45.4	45.4	45.5	45.1	44.8	44.5	44.4	44.2	43.8	40.9
17	45.2	45.2	45.3	44.9	44.6	44.4	44.0	43.9	43.5	40.2
18*	45.5	45.4	45.5	45.2	44.8	44.6	44.3	44.1	43.6	39.9
19	45.6	45.6	45.8	45.3	44.9	44.7	44.6	44.5	43.9	39.6
20	45.6	45.6	45.8	45.3	45.0	44.8	44.6	44.4	44.0	39.9
21	45.1	45.0	45.1	44.7	44.4	44.1	43.9	43.8	43.3	40.3
22	43.1■	43.1■	43.2■	42.9■	42.4■	42.2■	42.1■	41.9■	41.7■	39.7■
23	42.5	42.4	42.5	42.1	41.8	41.6	41.4	41.4	41.2	39.6
Number of Obs	442	441	441	442	440	441	440	442	442	440
Daily Mean	47.4	47.4	47.7	47.3	47.1	46.9	46.7	46.7	46.5	42.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
1 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	41.7	41.7	41.8	41.3	41.0	40.7	40.6	40.8	40.4	39.0
01	42.2	42.1	42.3	41.9	41.6	41.4	41.2	41.2	41.1	39.7
02	43.4+	43.4+	43.8+	43.4+	43.1+	43.0+	42.9+	43.0+	43.1+	42.4+
03	43.8	43.9	44.2	43.9	43.6	43.4	43.3	43.4	43.7	43.3
04	43.7	43.7	44.0	43.6	43.4	43.2	43.1	43.2	43.4	43.0
05	42.9	43.0	43.2	42.8	42.6	42.4	42.3	42.3	42.5	42.0
06	42.0	42.0	42.3	41.8	41.5	41.3	41.2	41.2	41.3	40.9
07	40.9	40.9	41.1	40.6	40.2	40.0	39.9	39.9	40.0	39.4
08	41.2+	41.3+	41.5+	41.2+	40.9+	40.6+	40.7+	40.8+	40.9+	40.3+
09	41.5	41.5	41.7	41.4	41.1	40.9	40.9	41.1	41.2	40.7
10*	41.1	41.1	41.4	41.1	40.8	40.5	40.6	40.6	40.8	40.3
11*	40.7	40.7	41.0	40.7	40.4	40.2	40.3	40.4	40.7	40.2
12*	39.9	39.9	40.2	39.9	39.6	39.5	39.5	39.6	39.8	39.5
13										
14										
15	38.3	38.2	38.6	38.3	38.1	37.8	37.9	38.1	38.3	38.1
16	37.5	37.5	38.0	37.5	37.4	36.9	37.0	37.3	37.4	37.2
17	37.7	37.8	38.2	37.9	37.7	37.2	37.5	37.7	37.9	37.3
18	37.3	37.5	37.7	37.5	37.3	36.9	37.1	37.2	37.5	37.2
19	37.7	37.7+	37.9	37.6	37.4	37.1	37.2	37.3	37.7	37.5
20	38.0	39.0	38.3	37.9	37.7	37.5	37.5	37.7	37.9	37.5
21	37.9	38.0	38.2	38.0	37.5	37.3	37.5	37.5	37.9	37.7
22	37.3	37.4	37.7	37.5	36.9	36.8	36.9	36.9	37.3	37.2
23	35.6	35.7	36.0	35.8	35.3	35.2	35.2	35.3	35.6	35.4
Number of Obs	407	401	407	407	407	405	405	405	407	401
Daily Mean	40.0	40.1	40.3	40.0	39.7	39.5	39.5	39.6	39.8	39.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
2 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	34.9	34.9	35.2	34.9	34.5	34.3	34.4	34.4	34.8	34.7+
01	35.3	35.3	35.7	35.4	34.9	34.8	34.9	35.1	35.5	
02	36.5	36.6	36.9	36.5	36.3	36.2	36.2	36.5	36.7	
03	36.8	36.9	37.0	36.8	36.4	36.1	36.2	36.4	36.5	
04	37.0	37.1	37.2	37.0	36.6	36.4	36.2	36.3	36.6	
05	36.8	36.8	36.9	36.8	36.4	36.1	36.1	36.1	36.3	
06	37.1	37.4	37.4	37.2	36.9	36.8	36.6	36.8	37.1	
07	37.9	38.0	38.2	38.0	37.7	37.5	37.4	37.5	37.9	
08	39.1	39.2	39.7	39.4	39.1	38.9	38.8	39.0	39.4	39.0-
09	38.7	38.9	39.4	39.2	39.1	38.7	38.9	38.8	39.0	38.4
10	37.4	37.6	37.9	37.8	37.7	37.3	37.7	37.7	38.0	37.8-
11	37.3	37.5	37.8	37.7	37.9	37.4	37.8	37.6	38.1	
12*	36.9	37.0	37.4	37.3	37.4	37.0	37.2	37.3	37.6	
13*	36.7	36.8	36.9	36.8	37.0	36.4	36.9	36.7	36.9	36.7
14	35.6	35.9	35.8	35.9	35.6	35.3	35.7	35.6	36.1	
15	34.2	34.3	34.5	34.5	34.7	34.7	35.0	34.8	35.1	
16	34.5	34.5	34.5	34.5	34.5	34.3	34.9	34.7	34.9	
17	33.8	33.9	34.1	34.1	33.8	33.8	34.0	34.0	34.4	
18	33.7	33.9	33.9	33.8	33.5	33.5	34.0	34.0	34.0	
19	34.6	33.8	33.6	33.5	33.3	33.3	33.3	33.4	33.6	33.5-
20	35.1	34.4	34.0	33.9	33.7	33.7	33.9	34.3	34.2	33.9
21	34.7+	34.3+	33.7+	33.7+	33.6+	33.6+	33.7+	33.7+	34.1+	34.2+
22	34.0	33.8	33.6	33.6	33.6	33.5	33.7	33.6	34.0	34.1
23										
Number of Obs	427	420	426	418	426	424	426	423	425	132
Daily Mean	36.0	36.0	36.2	36.0	35.8	35.7	35.8	35.9	36.1	35.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
3 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22	40.5=	40.0=	39.9=	39.3=	39.1=	39.1=	38.5=	38.6=	38.1=	36.9=
23	39.3	38.9	38.4	38.1	37.6	37.2	36.7	36.6	35.9	34.3
Number of Obs	30	30	30	30	30	30	30	30	30	30
Daily Mean	39.7	39.3	38.9	38.5	38.1	37.9	37.4	37.3	36.7	35.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
4 June 1957

Hr \ cm.	Sfc	3	6	12	25	50	100	200	400	800
00	39.2	39.0	39.0	38.9	38.3	37.7	37.8	37.7	37.6	36.9
01	40.3	40.2	39.8	39.7	39.0	38.3	38.5	38.3	38.1	36.9
02	40.7	40.3	39.8	39.5	38.9	38.5	38.4	38.5	38.2	37.4
03	41.2	41.1	40.6	40.3	39.6	39.0	39.2	39.0	38.9	38.[illegible]
04	42.5	42.3	42.1	41.8	41.3	40.5	40.3	40.2	40.4	40.3
05	44.3	44.1	43.7	43.5	42.8	42.4	41.9	41.4	41.3	41.0
06	45.0	44.8	44.5	44.0	43.2	42.0	41.1	41.0	41.0	39.7
07	46.0	46.1	45.9	45.8	45.1	44.2	43.8	42.9	41.0	38.8
08	46.3	46.2	45.8	45.5	44.9	43.6	42.0	41.0	39.9	37.7
09	43.4	43.3	43.1	42.7	42.0	40.5	40.1	38.6	37.0	33.7
10	42.7	42.7	42.8	42.5	41.3	39.9	38.3	36.2	33.8	30.8
11	45.6	45.6	45.4	45.3	44.2	42.3	40.9	36.9	35.5	32.6
12	46.0	46.0	45.6	45.4	43.9	41.4	40.1	36.7	34.7	31.7
13	45.9	45.9	45.5	45.4	42.9	40.7	37.5	34.1	33.2	31.0
14	46.0	46.0	45.0	45.3	43.4	40.6	37.0	33.4	33.2	31.4
15	43.0-	42.8-	42.2-	42.3-	40.6-	39.3-	38.1-	34.4-	31.5-	28.9-
16	43.4	42.7	41.8	41.7	40.0	38.0	36.4	32.6	28.4	26.6
17*	42.5	42.2	40.5	40.7	39.6	37.8	36.9	34.7	31.7	29.1
18	43.5	43.4	43.0	43.0	42.4	41.6	40.1	38.3	35.5	31.8
19	44.6	44.5	43.6	43.4	42.1	39.5	36.9	34.0	32.5	30.7
20	44.3	44.2	44.0	43.7	42.4	41.5	40.3	39.4	39.3	38.1
21	43.9	43.7	43.7	43.5	42.7	42.2	41.5	41.1	40.5	39.7
22	44.9	44.9	45.2	45.0	44.3	43.9	43.4	43.2	42.7	42.1
23	46.2	46.1	46.0	45.8	45.2	44.6	43.7	42.9	42.7	41.9
Number of Obs	442	442	442	441	442	442	442	442	442	442
Daily Mean	43.8	43.7	43.3	43.1	42.1	40.8	39.8	38.2	37.1	35.[illegible]

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
5 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	47.1	47.0	47.1	46.8	46.3	45.5	43.9	42.6	42.6	41.8
01	45.4	45.1	45.1	44.6	44.1	43.6	43.1	42.9	42.8	42.1
02	44.3	44.0	44.3	43.8	43.5	43.3	43.2	43.1	43.3	42.5
03	44.8	44.9	45.2	44.9	44.7	44.4	44.1	43.9	43.5	42.6
04	44.4	44.5	44.6	44.4	44.1	43.8	43.4	42.9	42.3	40.8
05	41.4	41.4	41.4	41.1	40.7	40.6	40.5	40.4	40.4	39.2
06	41.3	41.1	41.3	41.0	40.7	40.5	40.3	40.3	40.7	40.2
07	41.5	41.5	41.9	41.6	41.4	41.2	41.2	41.3	41.7	41.3
08	41.0	41.1	41.6	41.3	41.2	41.1	41.3	41.3	41.7	41.3
09	40.7	40.9	41.3	41.1	41.2	40.9	41.2	41.4	41.8	41.4
10	40.2	40.4	41.0	40.7	40.7	40.5	40.7	41.0	41.3	41.0
11	40.4	40.5	40.9	40.7	40.7	40.5	40.7	40.9	41.3	40.9
12	40.1	40.2	40.7	40.4	40.4	40.2	40.4	40.7	40.9	40.6
13	39.6	39.7	40.1	39.8	39.8	39.5	39.7	39.9	40.2	39.8
14	39.3	39.4	39.8	39.4	39.4	39.2	39.3	39.4	39.8	39.5
15	38.8	38.9	39.3	39.1	38.9	38.5	38.8	39.0	39.4	38.8
16	38.4	38.4	38.9	38.6	38.5	38.2	38.4	38.5	38.8	38.2
17	37.8	37.9	38.3	38.1	37.9	37.6	37.8	37.9	38.3	37.8
18	36.8	36.8	37.2	37.1	36.8	36.5	36.7	36.8	37.1	36.6
19	35.6	35.7	36.1	35.9	35.7	35.5	35.6	35.7	36.1	35.8
20	35.3	35.4	35.7	35.3	35.2	35.0	35.1	35.2	35.6	35.4
21	34.8	34.9	35.2	35.0	34.8	34.7	34.8	34.9	35.3	35.2
22	34.5	34.5	34.8	34.7	34.5	34.4	34.5	34.6	35.1	35.1
23	34.1	34.1	34.4	34.2	34.1	33.9	34.1	34.2	34.6	34.7
Number of Obs	451	448	451	450	451	449	451	449	451	451
Daily Mean	39.9	40.0	40.3	40.0	39.8	39.6	39.5	39.6	39.9	39.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
6 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	34.0	34.0	34.3	34.1	33.9	33.9	33.9	34.0	34.4	34.4
01	33.3	33.3	33.7	33.5	33.3	33.1	33.2	33.3	33.8	33.8
02	32.8	32.8	33.2	32.9	32.7	32.7	32.7	32.8	33.3	33.2
03	32.7	32.7	33.0	32.8	32.7	32.5	32.6	32.7	33.2	33.2
04	32.8	32.7	33.1	32.9	32.7	32.6	32.7	32.7	33.3	33.3
05	32.9	32.5	32.7	32.5	32.3	32.2	32.2	32.4	32.8	32.9
06	31.6	31.6	31.9	31.7	31.4	31.3	31.4	31.5	31.9	32.0
07	29.8	29.7	30.0	29.7	29.4	29.3	29.3	29.4	29.8	29.6
08	28.2	28.1	28.4	28.1	28.0	27.7	27.8	27.7	28.1	27.5
09	27.0	26.9	27.0	26.8	26.6	26.4	26.4	26.4	26.7	26.0
10	24.2	23.8	24.0	23.5	23.2	22.9	22.7	22.7	22.7	21.8
11	22.6	21.4	21.6	21.1	20.6	20.2	20.3	20.3	20.4	19.6
12	22.1	21.5	21.8	21.2	20.7	20.4	20.3	20.9	20.4	19.6
13	18.0-	17.9-	18.3-	17.9-	17.5-	17.2-	17.4-	17.3-	17.5-	16.9-
14	20.2	19.9	20.0	19.4	18.9	18.7	18.7	18.6	18.7	18.1
15	21.3	20.9	21.0	20.6	20.1	19.8	19.8	19.8	19.9	19.2
16	22.9	22.8	23.0	22.5	22.1	21.8	21.7	21.7	21.8	21.2
17	24.3	24.2	24.6	23.9	23.7	23.3	23.3	23.1	23.3	22.5
18	25.0	25.0	25.3	24.7	24.4	24.1	24.1	24.0	24.4	23.6
19	25.9	25.8	26.0	25.5	25.1	24.8	24.7	24.6	24.8	24.2
20	25.4	25.4	25.6	25.1	24.8	24.6	24.5	24.5	24.5	23.8
21	26.6	26.6	26.8	26.4	25.9	25.6	25.4	25.3	25.2	24.5
22	28.4	28.3	28.4	28.1	27.6	27.1	26.9	26.5	26.3	25.9
23	28.8	28.7	28.9	28.5	28.1	27.8	27.7	27.4	27.4	27.0
Number of Obs	443	438	438	437	438	440	439	431	438	439
Daily Mean	27.3	27.1	27.4	27.0	26.7	26.5	26.4	26.4	26.7	26.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
7 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	29.3	29.2	29.5	29.0	28.6	28.2	26.1	27.9	27.9	27.5
01	32.5	32.5	32.8	31.7	30.8	30.3	29.8	29.2	28.8	28.4
02	35.0	35.2	35.7	34.0	33.1	32.3	31.2	29.8	29.6	29.1
03	35.3	35.6	36.0	34.8	33.8	32.7	31.5	30.4	29.9	29.1
04	33.7	33.8	34.4	33.7	33.1	32.6	32.0	31.6	31.4	30.6
05	36.6	36.8	37.4	36.5	35.5	34.8	34.1	33.2	32.5	31.4
06	38.5	38.5	38.4	37.4	35.9	34.7	34.1	33.1	32.5	32.0
07	40.2	40.1	40.0	38.5	36.9	35.7	34.8	33.5	32.6	31.[illegible]
08	41.5	41.5	41.7	41.1	40.2	39.1	38.1	35.0	33.5	32.2
09	42.2	42.2	42.0	41.5	40.2	38.5	36.9	33.3	33.2	32.8
10	41.4	41.5	41.2	40.8	39.6	38.0	36.2	33.6	33.0	32.0
11	38.5	38.4	38.4	37.8	37.1	36.2	35.1	32.9	31.8	30.8
12	39.3	39.1	39.0	38.4	36.7	34.6	33.5	32.2	31.8	31.0
13	41.6	41.6	40.7	40.1	37.3	35.2	34.7	32.6	32.0	31.1
14	41.5	41.5	42.3	40.1	38.3	36.1	34.5	32.9	32.7	31.8
15	41.4	41.5	41.7	41.2+	40.9	40.3	39.8	38.5	35.4	33.1
16	41.4	41.3+	41.7	41.1+	40.8	40.5+	40.2	39.6+	36.3	33.0
17	42.6	42.3	42.4	41.9	41.3	40.4	40.0	39.2	36.5	33.9
18	41.7	41.5	41.5	41.2	40.6	39.8	39.3	37.9	35.5	33.7
19	43.9	43.8+	43.6	42.8	41.4	40.0	38.7	37.8	37.2	35.5
20	43.9	43.4+	42.9	42.2	39.8	37.0	35.7	34.4	34.6	35.8
21										
22										
23										
Number of Obs	392	370	388	380	390	384	390	389	39[illegible]	389
Daily Mean	39.1	39.0	39.3	38.3	37.2	36.0	35.1	33.7	32.8	31.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
8 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10	35.7	35.0	35.2	34.4	33.6	32.6	32.0	31.0	30.8	29.6
11	36.4	36.2	36.5	36.2	35.9	35.5	35.0	34.0	32.4	30.6
12	36.1	35.8	36.1	35.7	35.5	35.3	35.2	35.0	34.9	32.4
13	34.4	33.9	34.3	33.7	33.7	33.4	33.3	33.4	33.3	32.3
14	33.6	33.2	33.5	33.1	32.9	32.8	32.7	32.7	32.8	32.0
15	32.9	32.4	32.6	32.2	32.0	31.8	31.7	31.7	31.9	31.4
16	34.4	33.7	33.9	33.5	33.3	33.0	32.9	32.7	32.8	32.2
17	33.5	32.9	33.2	32.8	32.5	32.3	32.2	32.2	32.4	31.9
18	32.4	32.9	33.2	32.9	32.7	32.6	32.5	32.5	32.8	32.4
19	33.2	33.2	33.4	33.1	33.0	32.9	32.9	32.9	33.3	33.0
20	33.4	33.4	33.7	33.4	33.3	33.2	33.1	33.2	33.6	33.4
21	33.0	32.9	33.2	32.9	32.8	32.7	32.7	32.8	33.1	32.6
22	32.3	32.3	[illegible]	32.3	32.2	32.1	32.1	32.2	32.6	32.4
23	31.6	31.7	[illegible]	31.6	31.5	31.4	31.4	31.5	31.9	31.7
Number of Obs	261	255	261	257	261	254	259	257	258	256
Daily Mean	33.8	33.5	33.8	33.4	33.2	33.0	32.8	[illegible]	32.8	32.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
9 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	31.2	31.2	31.5	31.3	31.1	31.0	31.0	31.1	31.5	31.2
01	30.9	31.0	31.3	31.0	30.9	30.8	30.9	30.9	31.3	31.1
02	30.8	30.9	31.0	31.1	30.9	30.8	30.8	30.9	31.3	31.1
03	30.9	30.9	31.1	31.0	30.8	30.7	30.7	30.8	31.3	31.0
04	30.2	30.2	30.4	30.3	30.0	29.9	30.0	30.0	30.4	30.2
05	29.9	29.5	29.8	29.5	29.4	29.4	29.3	29.4	29.8	29.5
06	30.5	30.1	29.8	29.5	29.4	29.3	29.3	29.4	29.8	29.6
07	30.9	30.5	30.2	29.9	29.8	29.7	29.7	29.8	30.1	29.9
08	31.0	30.6	30.3	30.0	29.8	29.7	29.7	29.8	30.1	29.9
09	31.1	30.6	30.3	29.9	29.8	29.7	29.7	29.7	30.1	29.9
10	31.1	30.6	30.4	30.2	30.0	30.0	29.9	30.0	30.4	30.2
11	31.1	30.5	30.5	[illegible].2	30.0	30.0	30.0	30.1	30.5	30.3
12	31.1	30.7	30.4	30.2	30.0	29.9	29.9	30.0	30.3	30.1
13	31.0	30.5	30.2	29.7	29.6	29.4	29.4	29.5	29.8	29.5
14	31.1	31.1	31.0	30.6	30.4	30.0	29.7	29.6	29.6	29.3
15	31.6	32.6	31.9	30.9	30.7	30.3	29.9	29.7	29.6	29.0
16	32.0	32.4	31.6	30.7	30.5	30.2	30.1	29.8	29.9	29.3
17	32.3	32.9	32.6	31.7	31.4	31.0	30.9	30.6	30.6	30.0
18	32.4	32.8	32.3	31.2	30.9	30.6	30.4	30.3	30.3	29.9
19	32.3	32.9	32.9	32.3	32.0	31.7	31.5	31.4	31.4	30.8
20	32.7	34.0	34.4	33.6	33.4	33.0	32.7	32.5	32.4	31.6
21	33.2	34.2	33.3	32.4	32.2	31.8	31.6	31.5	31.3	30.6
22	32.8	32.5	31.9	31.1	30.7	30.5	30.4	30.2	30.3	29.7
23	32.8	33.9	33.8	33.1	32.8	32.5	32.1	31.8	31.6	30.4
Number of Obs	445	439	444	437	443	438	441	437	441	444
Daily Mean	31.4	31.5	31.4	30.9	30.7	30.5	30.4	30.4	30.6	30.2

LITTLE AMERICA [illegible]

Hourly Mean Temperatures (-°C)

10 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.4	35.1	36.4	35.1	34.8	34.4	34.0	33.4	32.8	31.4
01	33.9	35.0	34.8	34.2	33.9	33.6	33.4	33.3	33.3	32.4
02	33.7	33.9	34.0	33.9	33.7	33.6	32.6	33.6	34.0	33.[illegible]
03	33.4	33.2	33.0	32.7	32.6	32.4	32.4	32.5	32.8	32.4
04	33.2	33.1	33.7	33.7	33.6	33.5	33.5	33.6	34.1	33.8
05	33.1	33.0	33.3	33.4	33.4	33.4	33.4	33.5	33.9	33.6
06	33.0	33.0	33.3	33.3	33.2	33.2	33.2	33.3	33.7	33.5
07	32.9	32.9	33.0	32.9	32.9	32.8	32.8	32.9	33.2	33.1
08	32.9	32.8	33.0	32.8	32.7	32.6	32.6	33.0	33.1	32.8
09	33.0	33.0	33.9	33.7	33.7	33.7	33.7	33.8	34.2	34.0
10			34.6	34.3	34.2	34.1	34.1	34.2	34.6	34.4
11			36.3	35.8	35.6	35.4	35.3	35.3	35.7	35.4
12			39.1	38.7	38.3	38.1	38.0	38.0	38.3	37.8
13			41.9	41.4	41.1	40.8	40.7	40.5	40.7	39.8
14			42.7	42.0	41.6	41.4	41.1	40.8	40.9	40.0
15			42.0	41.5	41.1	40.8	40.6	40.4	40.5	39.5
16	43.0-	43.3-	43.5	42.9	42.8	42.6	42.5	42.4	42.6	41.8
17	43.2	43.5	44.2	43.9	43.8	43.6	43.3	43.1	43.5	42.9
18	43.7	43.9	44.6	44.2	44.1	43.8	43.7	43.4	43.8	43.3
19	44.3	44.6	45.0	44.7	44.6	44.5	44.3	44.2	44.7	44.1
20	45.0	45.5	45.9	45.6	45.5	45.3	45.2	45.3	45.6	45.0
21	45.4	45.8	46.1	45.8	45.6	45.5	45.4	45.3	45.8	45.1
22	44.1	44.4	44.7	44.4	44.2	44.1	43.9	43.9	44.3	43.9
23	44.3	44.7	45.0	44.7	44.5	44.3	44.3	44.3	44.6	43.9
Number of Obs	325	321	446	445	446	445	440	444	442	444
Daily Mean	37.9	38.3	38.9	38.[illegible]	38.4	38.2	38.2	38.1	38.4	37.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
11 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.6	45.0	45.3	45.0	44.8	44.7	44.6	44.6	44.9	44.3
01	45.7	46.3	46.6	46.3	46.1	46.0	45.9	46.0	46.5	46.1
02	46.2	46.7	47.0	46.8	46.6	46.5	46.4	46.5	47.0	46.5
03	45.9	46.3	46.7	46.4	46.2	46.1	45.9	46.0	46.5	46.0
04	44.6	44.8	45.1	44.7	44.5	44.4	44.3	44.3	44.6	43.9
05	42.0	42.0	42.3	41.9	41.7	41.5	41.5	41.4	41.7	41.1
06	40.4	40.5	40.7	40.4	40.2	40.0	39.9	39.9	40.2	39.6
07	39.4	39.4	39.7	39.3	39.1	38.9	38.8	38.8	39.0	38.6
08	38.7	38.7	39.0	38.6	38.4	38.2	38.2	38.2	38.5	38.0
09	38.1	38.1	38.4	38.1	37.9	37.7	37.6	37.6	38.0	37.6
10*	37.9	37.8	38.2	37.8	37.5	37.4	37.3	37.4	37.7	37.3
11*	37.1	37.3	37.6	37.3	37.2	37.1	37.0	37.1	37.4	36.9
12	36.9	37.1	37.4	37.2	37.0	36.8	36.8	37.0	37.2	36.8
13	37.7	37.8	38.2	37.9	37.7	37.5	37.5	37.6	37.9	37.5
14	37.6	37.7	38.0	37.8	37.7	37.5	37.5	37.6	37.9	37.6
15	36.7	37.1	37.4	37.2	37.0	37.0	36.9	37.2	37.5	37.1
16*	36.3	36.7	37.1	36.8	36.7	36.6	36.5	36.8	37.2	36.8
17*	36.0	36.4	36.7	36.5	36.5	36.3	36.4	36.5	37.0	36.6
18	36.3	36.6	37.1	36.8	36.7	36.7	36.7	36.9	37.3	37.0
19	36.5	36.8	37.2	37.0	36.9	36.8	36.8+	37.0	37.4+	37.1
20	36.1	36.3	36.6	36.4	36.3	36.2	36.3	36.6	37.0	36.6
21	36.1	36.4	36.7	36.6	36.4	36.3	36.4	36.5	37.0	36.7
22	35.8	36.1	36.4	36.2	36.1	36.0	36.0	36.2	36.7	36.4
23	35.3	35.6	35.9	35.7	35.6	35.5	35.6	35.7	36.2	35.9
Number of Obs	450	449	448	448	449	448	448	447	447	448
Daily Mean	39.1	39.3	39.6	39.4	39.2	39.1	39.0	39.2	39.5	39.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
12 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	35.1	35.3	35.6	35.4	35.3	35.2	35.3	35.4	35.9	35.5
01	35.0	35.2	35.5	35.3	35.2	35.1	35.1	35.3	35.7	35.4
02	34.8	34.9	35.2	35.0	34.9	34.8	34.8	35.0	35.4	35.0
03	34.1	34.2	34.6	34.4	34.2	34.1	34.1	34.3	34.7	34.4
04	33.7	33.9	34.2	34.0	33.8	33.7	33.8	33.9	34.2	34.0
05	33.2+	33.3+	33.7+	33.4+	33.3+	33.2+	33.2+	33.3+	33.7+	33.4+
06	32.9+	33.0+	33.3+	33.1+	32.9+	32.8+	32.9+	33.0+	33.4+	33.1+
07	32.5	32.6	32.9	32.7	32.6	32.5	32.5	32.6	33.0	32.8
08	31.2■	31.1■	31.4■	31.2■	31.0■	30.9■	30.9■	31.1■	31.4■	31.1■
09	30.0	29.5	29.8	29.6	29.4	29.2	29.2	29.3	29.7	29.3
10*	29.1	28.2	28.5	28.2	28.0	27.8	27.8	27.9	28.2	27.5
11*	27.9	25.5	25.6	25.4	25.3	25.0	25.0	25.0	24.9	23.6
12*	26.1	21.0	21.4	20.8	20.5	20.3	20.0	19.9	20.3	19.5
13	24.2	21.6	21.7	21.5	21.2	21.4	21.4	21.4	21.7	20.5
14	21.2	18.8	19.2	18.8	18.5	18.3	18.2	18.3	18.4	17.8
15	20.5	18.2	18.6	18.3	17.9	17.7	17.7	17.7	18.0	17.3
16	23.2	18.8	18.9	18.5	18.2	18.0	18.0	18.0	18.2	17.4
17	22.2	19.4	19.6	19.2	18.8	18.6	18.6	18.6	18.8	18.1
18	21.2	19.8	20.2	19.7	19.3	19.1	19.1	19.0	19.2	18.3
19	22.2	20.6	21.4	20.5	20.0	19.8	19.8	19.7	19.9	19.1
20	21.4-	20.5+	20.8+	20.2	19.9	19.7	19.7	19.6	19.9	19.0
21			19.7#	19.4	19.0	18.8	18.8	18.8	19.1	18.3
22	19.3■	[illegible]+	18.7	18.5	18.1	18.0	17.9	18.0	18.2	17.4
23	19.5	18.4	18.7	18.3	17.9	17.7	17.8	17.7	17.9	17.3
Number of Obs	394	403	414	429	430	430	429	430	430	429
Daily Mean	27.5	26.0	26.2	25.6	25.3	25.2	25.2	25.2	25.5	24.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
13 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	18.9	18.2	18.4	18.1	18.4	17.6	17.6	17.6	17.9	15.8
01	18.2	17 8	18.1	17.8	17.5	17.4	17.4	17.4	17.7	16.9
02	17.8	17.3	17.7	17.4	17.1	17.0	17.0	17.0	17.3	16.4
03	17.5	17.1	17.5	17.2	16.9	16.8	16.8	16.8	17.1	16.3
04	17.1	16.8	17.2	16.8	16.5	16.4	16.5	16.5	16.8	16.0
05	16.9	16.7	17.0	16.7	16.3	16.2	17.1	16.3	16.7	15.7
06	16.9	16.7	17.0	16.7	16.4	16.3	16.3	16.4	16.7	15.7
07	16.8	16.4	16.7	16.4	16.0	16.0	16.1	15.9	16.4	15.4
08	16.1	15.8	16.1	15.8	15.5	15.4	15.4	15.4	15.7	14.7
09	15.9+	15.4	15.7	15.4	15.1	14.9	15.0	14.9	15.4	14.3
10		15.8	16.1	15.7	15.3	15.2	15 2	15.1	15.7	14.4
11		15.6	16.0	15.5	15.2	15.0	15.1	14.9	15.5	14.0
12		15.9	16.4	15.8	15.5	15.3	15.3	15.2	15.7	14.2
13		16.1	16.5	15.9	15.5	15.4	15.4	15.2	15.8	14.2
14		15.3	15.8	15.3	15.0	14.9	15.0	14.9	15.5	14.0
15		15.0#	15.3#	14.9#	14.6#	14.4#	14.6#	14.4#	15.2#	13.5#
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	183	285	284	285	285	285	285	285	285	283
Daily Mean	17.2	16.5	16.8	16.4	16.1	16.0	16.1	15.9	16.4	15.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
21 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22	18.8#	18.4#	18.8#	18.3#	18.0#	17.9#	18.1#	18.8#	18.3#	17.5#
23	18.5	18.0	18.3	17.9	17.7	17.5	17.5	17.9	17.6	17.0
Number of Obs	23	23	23	23	23	23	23	23	23	23
Daily Mean	18.5	18.1	18.4	18.0	17.7	17.6	17.6	18.0	17.7	17.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
22 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	17.3	16.9	17.3	16.9	16.5	16.4	16.5	17.0	16.5	15.9-
01	17.9■	17.5■	17.7■	17.2■	16.7■	16.6■	16.6■	16.8■		
02										
03	17.9	17.7	18.2	17.7	17.3	17.3	17.3	17.1	17.6	16.6+
04	18.5	18.5	19.0	18.6	18.2	18.2	18.2	18.3	18.6	17.7
05	18.9	19.2	19.7	19.2	19.0	19.0	19.1	19.1	19.5	18.7+
06	18.6	18.5	19.0	18.5	18.2	18.1	18.2	18.4	18.5	
07	18.7	18.4	18.7	18.3	17.9	17.9	18.1	18.2	18.3	17.8+
08	17.5+	17.4+	17.8+	17.4+	17.1+	17.1+	17.3+	17.5+	17.6+	17.2+
09	16.3	16.0	16.3	16.0	15.7	15.6	15.7	15.8	15.9	15.7
10	16.0	15.8	15.9	15.8	15.5	15.3	15.3	15.8	15.8	15.0
11	17.3	17.1	17.1	16.9	16.6	16.4	16.4	16.7	16.8	15.9
12	19.1	19.4	19.3	19.0	18.6	18.6	18.4	18.6	18.6	17.5
13	21.2	21.7	21.7	21.6	21.4	21.2	21.2	21.4	21.3	20.4
14	22.4	23.	23.1	22.7	22.7	22.2	22.1	22.1	22.1	20.9
15	22.7	23.0	23.1	23.0	22.7	22.7	22.5	22.8	22.4	21.6
16	23.1	23.6	23.7	23.6	23.9	23.4	23.4	23.7	23.6+	22.9
17	22.3	22.6	23.0	23.0	23.0	22.9	22.9	23.3	23.3	22.8
18	22.3	22.5	22.9+	2[illegible].0	23.0	23.0	23.5+	23.4	23.5■	22.9
19	22.5	22.8	23.6	23.3	23.3	23.3	23.3+	23.7	23.6	23.3
20	22.7	23.0	23.4	23.4	23.4	23.3	23.4	23.5	23.5+	23.3
21	23.5	23.6	24.0	24.0	24.0+	24.0	24.0+	24.3	24.2	23.8
22	24.7	25.6	26.0	25.9	25.9	25.7	25.5+	26.3	26.4	25.9
23	28.7	29.5	29.9	29.8	29.7	29.6	29.7	29.8	29.8	29.3
Number of Obs	420	413	409	411	407	408	397	412	381	348
Daily Mean	20.5	20.6	20.9	20.7	20.5	20.4	20.3	20.6	20.6	20.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
23 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	29.8	30.2	30.5	30.5	30.3	30.2	30.1	30.6	30.4	29.8
01	30.0	30.3	30.9+	30.5	30.3	30.2	30.1	30.7	30.6+	29.9
02										
03	32.0+	32.0+	32.6+	32.3=	32.1-	32.0=	32.1=	32.2+	32.2=	31.6+
04	32.9	33.0	33.4+	33.3+	33.1+	33.0+	33.0	33.0+	33.9+	32.5
05	33.3	33.5	34.0+	33.8	33.7	33.5	33.5	33.6	33.5+	33.0
06	34.2-	34.5-	34.8-	34.8-	34.6-	34.6-	34.5-	34.6-	35.0-	33.9-
07	35.2=	35.6=	35.9-	35.9=	35.6=	35.5=	35.4-	35.5=	35.9=	34.8=
08	35.8-	36.3-	36.4-	36.5-	36.3-	36.3-	36.1-	36.1-	36.6-	35.5-
09	35.3	35.5	35.5	35.6	35.6	35.4	35.3	35.4	35.6	34.7
10	34.5	34.4	34.8	34.7	34.6	34.6	34.6	34.6	34.6	33.9
11	34.7	34.7	35.0	35.0	35.0	34.9	34.9	34.9	34.9	34.3
12	35.0	35.4	35.8	35.5	35.5	35.3	35.3	35.3	35.4	34.8
13	34.3	34.6	35.0	34.8	34.8	34.6	34.6	34.8	34.6	34.4
14	32.6	32.7	32.9	33.0	33.1	32.9	32.9	33.1	33.3	32.8
15	30.7	30.6	30.7	30.7	30.7	30.7	30.7	31.0	31.0	30.6
16	29.6	28.9	29.1	28.9	28.7	28.4	28.4	28.6	28.5	27.0
17	28.2	26.9	27.1	26.9	26.6	26.3	26.3	26.2	25.9	24.2
18	24.8	23.6	23.8	23.5	23.2	22.9	22.[illegible]	23.0	22.4	20.9
19	22.6	21.7	21.9	21.8	21.8	21.4	21.4	21.7	21.7	20.7
20	23.3	23.1	23.4	23.4	23.3	23.3	23.3	23.6	23.6	23.2
21	24.2	24.6	24.8	24.8	24.8	24.7	24.7	25.0	25.0	24.8
22	25.0	25.3	25.4	25.7	25.7	25.7	25.7	26.1	26.0	26.1
23	34.5	34.5	34.6	34.7	34.7	34.7	34.7	34.9	34.9	24.4
Number of Obs	387	386	376	384	376	383	380	386	375	396
Daily Mean	30.2	30.2	30.3	30.4	30.2	30.1	30.0	30.3	30.1	29.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
24 June 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	23.7	23.5	23.7	23.6	23.6	23.5	23.6	23.8	23.8	23.5
01	22.9	22.7	22.9	22.9	22.8	22.8	22.8	23.1	23.0	22.6
02	22.5	22.3	22.6	22.5	22.4	22.4	22.4	22.8	22.7	22.1
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	57	53	57	55	57	57	57	56	57	56
Daily Mean	23.0	22.8	23.0	[illegible]	[illegible]	22.9	22.9	23.2	23.2	22.7

LITTLE [illegible]
Hourly Mean T[illegible]
4 Ju[illegible]

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11	36.1■	36.4■	36.5■	36.1■	35.9■	35.6■	35.0■	34.3■	32.1■	31.1■
12	37.0	37.5	37.4	37.0	36.8	36.4	35.6	34.7	33.1	31.7
13	39.0	39.5	39.4	38.9	38.8	38.4	37.5	36.8	35.5	33.4
14	38.8	39.2	39.1	38.8	38.6	38.3	37.7	37.1	35.4	32.2
15	38.5	38.8	38.8	38.4	37.9	37.8	37.2	36.7	35.2	32.0
16	38.5	38.8	38.8	38.3	38.2	37.9	37.2	36.7	35.4	32.8
17*	38.2	38.4	38.4	38.1	38.0	37.7	37.2	36.9	36.0	34.2
18*	36.8	37.0	37.2	36.8	36.8	36.4	36.0	35.6	34.[illegible]	32.2
19*	35.0	35.2	35.1	34.8	34.6	34.4	34.2	33.9	33.6	32.2
20*	34.3	34.6	34.5	34.1	33.9	33.7	33.5	33.3	33.0	31.6
21	34.1	34.3	34.2	33.9	33.8	33.6	33.4	33.3	33.4	32.7
22	34.5	34.6	34.7	34.6	34.5	34.3	34.3	34.5	34.6	33.9
23	34.3	34.5	34.5	34.5	34.5	34.3	34.2	34.5	34.7	34.0
Number of Obs	236	235	223	235	230	235	235	236	235	236
Daily Mean	36.6	36.8	36.8	36.5	36.3	36.1	35.6	35.3	34.4	32.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
5 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	34.5	34.7	34.8	34.8	34.7	34.5	34.5	34.6	34.9	34.5
01	34.6	34.8	35.0	34.9	34.7	34.6	34.5	34.6	34.8	34.2
02	36.1	36.3	36.6	36.3	36.2	36.0	35.8	35.8	35.7	33.2
03	39.1	39.5	40.0	39.5	39.5	39.4	39.1	38.9	38.3	34.5
04	40.3	40.7	41.[illegible]	[illegible]	[illegible]	[illegible]	40.0	39.5	37.5	34.0
05	40.7	41.1	[illegible]	[illegible]	[illegible]	40.6	40.1	39.6	33.2	34.5
06	40.5	40.9	[illegible]	[illegible]	40.7	40.3	39.9	39.5	37.8	34.8
07	39.4	39.7	39.9	39.6	39.6	39.4	39.3	39.3	38.8	35.1
08	37.9	38.1	38.2	38.1	38.0	37.8	37.7	37.7	37.5	34.8
09*	39.8	40.1	40.4	40.1	40.0	39.7	39.1	38.0	36.3	34.2
10*	40.9	41.0	41.1	40.7	40.3	39.3	37.8	35.6	35.5	34.7
11*	40.5	40.6	40.5	39.9	39.3	37.9	36.7	35.9	35.9	34.6
12*	40.4	40.5	40.2	39.7	39.3	38.5	37.6	36.3	36.0	34.6
13	41.1	41.3	41.1	40.7	40.3	39.8	39.3	38.5	38.3	36.6
14*	40.6	40.8	40.6	40.3	40.1	39.8	39.5	39.2	39.3	37.7
15*	40.7	40.9	40.9	40.8	40.6	40.4	40.4	40.5	40.6	39.5
16	41.4	41.6	41.7	41.5	41.4	41.2	41.2	41.2	41.4	40.7
17	43.3	43.6	43.7	43.6	43.5	43.3	43.2	43.2	43.4	42.6
18	43.7	44.1	44.0	43.8	43.7	43.5	43.3	43.4	43.7	42.6
19	44.9	45.2	45.3	45.1	45.1	45.0	44.8	45.0	45.3	44.5
20	45.3	45.6	45.7	45.6	45.5	45.3	45.2	45.3	45.6	44.[illegible]
21	46.0	46.4	46.7	46.8	46.8	46.5	46.5	46.8	47.2	46.7
22	46.7	47.2	47.4	47.5	47.5	47.3	47.2	47.3	47.8	47.3
23	47.4▪	48.0▪	48.2▪	48.1▪	48.1▪	48.0▪	47.7▪	47.8▪	48.1▪	47.9▪
Number of Obs	441	440	441	439	439	440	440	440	441	441
Daily Mean	41.0	41.2	41.4	41.1	41.0	40.7	40.3	40.0	39.8	38.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
6 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	50.8+	51.3+	51.5+	51.3+	51.3+	51.1+	51.0+	51.2+	51.7+	51.3+
01	51.6	52.0	52.2	52.2	52.1	51.9	51.8	52.1	52.5	52.0
02	51.9	52.5	52.7	52.6	52.6	52.4	52.3	52.5	52.9	52.4
03	52.5	53.0	53.2	53.2	53.2	53.0	52.9	53.1	53.6	53.1
04	52.9	53.4	53.6	53.6	53.6	53.4	53.4	53.5	53.9	53.5
05	53.2	53.6	53.9	53.8	53.8	53.6	53.5	53.6	54.0	53.4
06	53.3	53.5	53.7	53.6	53.6	53.4	53.3	53.4	53.8	52.9
07	53.1	53.5	53.6	53.5	53.4	53.3	53.1	53.2	53.5	52.9
08	53.0	53.3	53.5	53.3	53.3	53.1	53.1	53.1	53.5	52.7
09*	52.9	53.1	53.2	53.1	53.1	52.8	52.7	52.7	53.0	52.3
10*	52.6	52.7	52.8	52.7	52.5	52.3	52.2	52.0	52.4	51.5
11*	53.2	53.3	53.6	53.5	53.4	53.2	53.1	53.1	53.3	52.4
12*	53.4	53.7	54.0	53.8	53.7	53.5	53.4	53.2	53.4	52.5
13	52.8+	53.2+	53.4+	53.3+	53.2+	52.9+	52.9+	52.8+	52.8+	52.0+
14										
15	52.5	53.0	53.3	53.1	52.9	52.8	52.6	52.7	53.0	52.5
16	53.1	53.6	53.8	53.5	53.3	53.3	53.2	53.3	53.7	53.1
17	53.2	53.6	53.8	53.5	53.2	53.3	53.2	53.3	53.7	53.1
18	52.9	53.2	53.5	53.1	52.9	52.8	52.7	52.9	53.2	52.7
19	52.9	53.1	53.4	53.0	52.9	52.7	52.7	52.9	53.1	52.7
20	52.8	53.0	53.3	52.9	52.8	52.8	52.6	52.6	53.0	52.5
21	52.9	53.0	53.3	53.0	53.0	52.8	52.6	52.7	53.0	52.2
22	52.9	53.1	53.4	53.1	53.0	53.0	52.7	52.8	53.0	52.2
23	52.9	53.0	53.4	53.0	52.9	52.9	52.6	52.7	52.8	51.9
Number of Obs	425	425	425	425	424	424	424	425	424	425
Daily Mean	52.8	53.1	53.3	53.1	53.0	52.9	52.8	52.8	53.2	52.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
7 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	52.9	53.1	53.3	53.0	52.8	52.7	52.6	52.6	52.9	52.2
01	53.0	53.1	53.4	53.1	53.0	52.8	52.6	52.8	53.0	52.2
02	53.0	53.0	53.5	53.1	53.0	52.9	52.7	52.7	53.0	52.0
03	53.1	53.2	53.6	53.3	53.2	53.0	52.9	53.0	53.3	52.5
04	52.7	52.9	53.2	52.9	52.7	52.4	52.2	52.4	52.6	51.8
05	52.7	52.7	53.0	52.7	52.6	52.4	52.2	52.3	52.7	52.1
06	52.7	52.7	53.0	52.8	52.8	52.6	52.4	52.6	53.0	52.5
07	52.7	52.8	53.0	52.8	52.8	52.6	52.4	52.7	53.1	52.6
08	51.6	51.7	52.0	51.7	51.6	51.4	51.2	51.5	51.8	51.4
09	50.5	50.5	50.7	50.5	50.4	50.3	50.1	50.3	50.6	50.2
10	49.9	49.9	50.1	49.9	49.8	49.6	49.4	49.5	48.9	49.5
11	49.5	49.6	49.8	49.5	49.4	49.3	49.1	49.3	49.7	49.2
12	49.4	49.4	49.8	49.4	49.3	49.2	49.0	49.1	49.6	49.1
13	49.8	49.8	50.2	49.0	49.9	49.7	49.6	49.7	50.1	49.7
14	50.5	50.6	51.0	50.7	50.6	50.4	49.2	50.4	50.9	50.5
15	50.6	50.7	51.0	50.7	50.6	50.4	50.2	50.3	50.8	50.4
16	50.6	50.7	51.1	50.7	50.6	50.5	50.5	50.5	50.9	50.5
17	51.1	51.3	51.6	51.3	51.1	51.0	51.0	51.1	51.6	51.2
18	51.1	51.2	51.6	51.3	51.2	51.0	50.9	51.1	51.6	51.1
19	50.4	50.5	50.8	50.5	50.3	50.2	50.1	50.3	50.7	50.4
20	49.2	48.3	49.6	49.1	49.0	49.0	48.9	49.0	49.5	49.1
21	48.5	48.5	48.9	48.6	48.5	48.3	48.3	48.3	48.8	48.5
22	46.1	46.2	46.5	46.2	46.1	46.0	46.0	46.2	46.6	46.3
23	44.7	44.8	45.1	44.8	44.7	44.6	44.6	44.7	45.1	44.8
Number of Obs	448	447	447	448	448	447	448	448	448	448
Daily Mean	50.7	50.7	51.1	50.7	50.7	50.5	50.3	50.5	50.9	50.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
8 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.3	44.5	44.7	44.5	44.4	44.3	44.2	44.3	44.8	44.5
01	44.3	44.3	44.7	44.4	44.3	44.1	44.1	44.3	44.6	44.3
02	43.7	43.7	44.1	43.7	43.6	43.4	43.4	43.5	43.9	43.6
03	42.9	43.0	43.3	43.0	42.8	42.7	42.7	42.8	43.1	42.8
04	42.6	42.7	42.9	42.8	42.6	42.5	42.5	42.7	43.0	42.7
05	42.8	42.8	43.1	43.0	42.9	42.9	42.9	43.1	43.5	43.2
06	42.7	42.8	43.0	43.0	42.9	42.8	42.9	43.0	43.4	43.1
07	42.0-	42.0-	42.2-	42.1-	42.1-	42.0-	42.0-	42.2-	42.6-	42.4-
08	41.2	41.2	41.4	41.4	41.2	41.2	41.3	41.4	41.8	41.6
09	41.2	41.2	41.5	41.3	41.2	41.2	41.4	41.4	41.7	41.5
10										
11										
12										
13										
14										
15										
16										
17										
18	40.2+	40.3+	40.7+	40.4+	40.3+	40.3+	40.3+	40.4+	40.8+	40.5+
19	40.1	40.2	40.6	40.2	40.1	40.0	40.1	40.2	40.6	40.2
20	41.0	41.1	41.4	41.2	41.0	41.0	41.0	41.1	41.5	41.2
21*	41.5	41.7	42.0	41.7	41.6	41.6	41.6	41.7	42.1	41.8
22	42.1	42.2	42.6	42.3	42.2	42.2	42.2	42.3	42.7	42.4
23	43.1	43.2	43.7	43.3	43.1	43.1	43.1	43.1	43.5	43.2
Number of Obs	281	281	281	281	281	281	281	281	281	281
Daily Mean	42.3	42.4	42.7	42.4	42.3	42.2	42.3	42.4	42.8	42.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
9 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	43.6	43.6	44.2	43.7	43.5	43.5	43.5	43.5	43.9	43.6
01	43.8	43.9	44.3	43.9	43.7	43.7	43.7	43.7	44.1	43.7
02	44.4	44.3	44.9	44.4	44.3	44.2	44.3	44.2	44.6	44.5
03	45.0	45.0	45.6	45.1	45.0	44.9	44.8	44.9	45.3	44.9
04	45.2	45.3	45.8	45.3	45.2	45.1	45.0	45.1	45.5	45.1
05	45.2	43.7	45.7	45.3	45.1	45.0	44.9	45.0	45.4	45.0
06	45.2	45.3	45.7	45.2	45.1	45.0	44.9	45.0	45.3	[illegible]
07	45.3	45.4	45.9	45.4	45.2	45.1	45.0	45.0	45.4	44.9
08	45.5	45.5	46.0	45.4	45.2	45.0	45.1	45.1	45.5	45.0
09	45.6	45.6	46.1	45.5	45.3	45.2	45.3	45.2	45.6	45.1
10*	45.7	45.7	46.3	45.7	45.4	45.4	45.4	45.3	45.6	45.2
11	45.7	45.9	46.3	45.8	45.6	45.6	45.7	45.6	46.0	45.5
12	46.0	46.0	46.5	46.1	45.8	45.8	45.8	45.8	[illegible]	45.6
13	46.3	46.4	46.1	46.5	46.2	46.2	46.3	46.3	46.6	46.1
14*	46.8	46.8	47.5	46.9	46.7	46.6	46.6	46.6	47.0	46.4
15	47.1	47.1	47.8	47.1	46.9	47.0	46.9	46.9	47.3	46.6
16	47.4	47.5	48.0	47.5	47.2	47.2	47.2	47.2	47.6	46.8
17*	47.8	47.8	48.5	47.8	47.6	47.6	47.6	47.7	47.9	47.4
18	47.9	48.0	48.7	47.9	47.8	47.7	47.7	47.7	48.1	47.5
19	47.9	47.9	48.4	47.8	47.8	47.5	47.6	47.6	48.0	[illegible]
20	47.5	47.5	47.9	47.4	47.3	47.1	47.1	47.1	47.3	46.8
21	47.2	47.2	47.6	47.0	46.8	46.7	46.7	46.6	46.8	46.0
22	47.1	47.0	47.6	46.9	46.6	46.5	46.6	46.5	46.8	46.1
23	46.8	46.8	47.3	46.7	46.5	46.4	46.4	46.3	46.6	46.0
Number of Obs	448	448	448	448	448	448	448	448	447	[illegible]
Daily Mean	46.1	46.1	46.6	46.1	45.9	45.8	45.8	45.8	46.2	45.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
10 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	46.9	47.0	47.5	46.9	46.6	46.5	46.5	46.5	46.8	46.2
01	47.1	47.1	47.6	46.9	46.8	46.6	46.6	46.6	46.8	46.2
02	47.6	47.6	47.9	47.4	47.3	47.1	47.1	47.0	47.4	46.9
03	48.0	48.0	48.5	47.9	47.8	47.5	47.6	47.6	48.0	47.4
04	48.6	48.6	49.0	48.6	48.4	48.2	48.2	48.1	48.6	47.9
05	48.5	48.6	48.9	48.6	48.3	48.1	48.0	48.1	48.6	48.1
06	48.7	48.7	49.1	48.5	48.5	48.3	48.3	48.3	48.7	48.2
07	48.7	48.7	49.0	48.7	48.5	48.4	48.3	48.4	48.8	48.2
08	48.8	48.8	49.2	48.8	48.7	48.5	48.5	48.5	48.9	48.2
09*	48.5	48.5	49.0	48.4	48.3	48.2	48.2	48.1	48.5	48.0
10	48.5	48.6	49.1	48.6	48.3	48.2	48.2	48.1	48.6	47.9
11*	48.4	48.4	48.9	48.3	48.1	48.0	47.9	47.9	48.2	47.5
12*	48.1	48.2	48.6	48.0	47.8	47.6	47.5	47.5	47.9	47.1
13*	47.3	47.4	47.6	47.2	47.0	46.8	46.6	46.8	47.0	46.3
14*	47.2	47.3	47.6	47.2	46.8	46.8	46.6	46.6	46.9	45.9
15	46.9	46.9	47.3	46.7	46.5	46.3	46.1	46.1	46.3	45.1
16*	46.8	46.9	47.2	46.7	46.4	46.1	46.0	45.9	46.1	45.1
17	47.7	47.7	48.3	47.7	47.4	47.3	47.1	47.1	47.4	46.5
18	48.8	48.9	49.5	48.8	48.6	48.4	48.4	48.2	48.6	47.7
19	49.3	49.3	49.9	49.2	49.0	48.7	48.8	48.7	49.1	48.2
20	50.2	50.2	50.8	50.2	50.1	49.8	49.8	49.8	40.1	49.3
21*	51.3	51.5	52.2	51.4	51.3	51.0	51.0	50.9	51.5	50.3
22	51.3	51.3	51.9	51.3	51.1	50.9	50.8	50.7	51.2	50.0
23	51.9	52.1	52.7	52.1	52.0	51.8	51.7	51.5	52.1	50.8
Number of Obs	449	449	449	449	448	448	448	448	448	448
Daily Mean	48.5	48.6	49.0	48.5	48.3	48.1	48.1	48.0	48.4	47.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
11 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	52.8	52.9	53.6	53.0	53.0	52.7	52.6	52.6	53.2	52.1
01	53.5	53.6	54.2	53.8	53.7	53.6	53.4	53.5	54.1	53.3
02	53.8	54.0	54.7	54.1	54.1	53.8	53.7	53.8	54.4	53.6
03	54.1	54.2	54.8	54.4	54.2	54.0	53.9	54.1	54.7	53.7
04	54.1	54.4	55.1	54.5	54.5	54.2	54.1	54.3	54.9	53.8
05	54.3	54.4	55.1	54.6	54.5	54.3	54.2	54.3	54.8	52.9
06	54.1	54.3	55.0	54.4	54.4	54.2	54.0	54.0	54.2	49.6
07	54.0	54.1	54.9	54.3	54.1	53.8	53.7	53.5	53.1	45.8
08	53.8	54.0	54.6	54.1	53.9	53.7	53.6	53.5	53.0	46.2
09	53.6	53.7	54.3	53.7	53.6	53.4	53.1	52.7	51.3	44.8
10*	53.0	53.1	53.6	53.1	52.9	52.6	52.6	52.0	49.9	43.8
11*	52.8	52.9	53.4	52.8	52.8	52.6	52.2	52.0	50.5	44.5
12	52.5	52.7	53.2	52.5	52.4	52.1	51.8	51.6	49.8	43.0
13	52.5	52.7	53.0	52.5	52.3	52.0	51.7	51.2	48.7	42.6
14*	52.3	52.4	52.9	52.2	52.0	51.6	51.1	50.2	47.9	42.1
15*	52.0	52.1	52.8	51.9	51.7	51.4	50.8	50.0	47.7	41.0
16*	52.0	52.0	52.6	51.9	51.6	51.3	50.9	50.3	48.7	42.2
17	51.2	51.3	51.9	51.0	50.7	50.4	50.0	49.1	47.4	40.8
18	50.7	50.7	51.4	50.4	50.2	49.8	49.5	48.7	46.3	39.7
19	50.5	50.6	50.9	50.1	49.9	49.3	48.4	46.8	43.9	38.5
20	50.2	50.1	50.7	49.9	49.7	49.2	48.8	48.3	46.6	39.8
21	49.3	49.2	49.7	48.7	48.7	48.1	48.0	47.4	46.1	39.5
22	49.0	48.9	49.3	48.5	48.4	48.0	47.8	47.4	46.8	40.7
23	48.3	48.1	48.6	47.7	47.5	46.9	46.6	45.7	43.9	37.4
Number of Obs	448	448	448	448	448	447	448	447	448	448
Daily Mean	52.3	52.4	52.9	52.2	52.1	51.8	51.5	51.1	50.1	45.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
12 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	43.5	43.3	43.4	42.9	42.8	42.3	42.4	42.1	41.5	37.8
01	40.2	40.1	39.9	39.7	39.7	39.4	39.6	39.6	39.3	37.9
02	38.8	38.8	39.0	38.3	38.7	38.4	38.7	38.6	38.7	37.5
03	37.7	37.7	37.7	37.4	37.3	37.1	37.3	37.3	37.5	36.8
04	36.5	36.4	36.5	36.2	36.1	35.9	36.1	36.1	36.3	36.0
05	35.2	35.2	35.3	35.1	34.9	34.7	35.0	35.0	35.1	35.0
06	34.5	34.4	34.5	34.3	34.2	34.0	34.3	34.3	34.4	34.3
07	33.6	33.5	33.7	33.4	33.3	33.0	33.4	33.3	33.6	33.4
08	33.3	33.3	33.4	33.2	33.1	33.0	33.2	33.1	33.4	33.2
09*	32.1+	32.2+	32.5+	32.2+	32.0+	32.0+	32.2+	32.2+	32.5+	32.4+
10*	32.0	32.1	32.4	32.0	31.8	31.8	32.0	32.1	32.3	32.2
11	31.3	31.3	31.7	31.2	31.1	31.0	31.4	31.1	31.4	31.2
12	30.6	30.7	31.1	30.6	30.5	30.5	30.7	30.6	30.6	30.5
13*	30.0	30.0	30.5	29.7	29.7	29.6	29.9	29.6	29.7	29.7
14	29.9	30.0	30.5	29.8	29.8	29.7	30.0	29.8	29.8	29.8
15*	30.0	30.0	30.5	29.8	29.8	29.7	30.0	29.7	29.7	29.7
16	29.4	29.5	29.9	29.3	29.2	29.1	29.4	29.2	29.3	29.2
17										
18										
19										
20										
21										
22										
23										
Number of Obs	312	310	311	312	310	311	311	310	312	311
Daily Mean	34.1	34.1	34.3	33.9	33.8	33.6	33.9	33.8	33.9	33.3

LITTLE AMERICA V
Hourly Mean Temperature. (-°C)
13 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21*	30.3	30.5	30.8	30.5	30.3	30.[illegible]	30.2	30.4	30.5	30.1
22	30.1	30.3	30.5	30.2	30.0	29.9	29.9	30.1	30.2	29.8
23	29.7	29.8	30.0	29.7	29.5	29.4	29.4	29.6	29.7	29.3
Number of Obs	53	53	53	53	53	53	53	53	53	53
Daily Mean	30.0	30.2	30.4	30.1	29.9	29.8	29.8	30.0	30.1	29.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
14 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	29.4	29.6	29.9	29.6	29.4	29.3	29.4	29.5	29.7	29.4
01	29.2	29.3	29.6	29.3	29.1	29.0	29.1	29.2	29.3	29.0
02	28.4	28.5	28.9	28.6	28.4	28.3	28.4	28.6	28.7	28.4
03	29.7	29.9	30.3	30.1	29.9	29.8	30.0	30.2	30.4	30.1
04	30.3	30.5	30.8	30.6	30.4	30.4	30.4	30.6	30.9	30.4
05	29.6	29.8	30.1	29.8	29.6	29.4	29.5	29.6	29.9	29.5
06	29.0	29.1	29.5	29.2	29.0	28.9	28.9	29.1	29.4	29.0
07	29.4	29.6	29.8	29.5	29.3	29.3	29.3	29.6	30.0	
08	28.6	28.6	28.8	28.4	28.2	28.1	28.2	28.4	28.8	
09	27.9	27.9	27.6	27.5	27.3	27.2	27.2	27.4	27.6	
10	27.4	27.5	27.8	27.5	27.3	27.2	27.3	27.5	27.9	
11	28.3	28.5	28.8	28.6	28.4	28.3	28.4	28.6	29.0	
12*	28.9	29.1	29.4	29.2	29.0	29.0	29.1	29.4	29.7	29.3
13	29.4	29.5	30.0	29.8	29.6	29.5	29.6	29.5	30.3	29.7
14	29.7	29.9	30.3	30.1	29.9	29.8	29.9	30.1	30.5	29.9
15*	29.6	29.8	30.2	30.0	29.8	29.7	29.8	30.0	30.4	30.0
16	29.8	30.0	30.4	30.2	30.0	30.0	30.1	30.3	30.7	30.3
17	30.8	31.0	31.4	31.1	31.0	30.9	31.0	31.2	31.6	31.1
18*	31.6	31.8	32.2	32.0	31.8	31.8	31.8	32.0	32.3	31.9
19*	31.0	31.2	31.5	31.4	31.3	31.3	31.3	31.6	32.0	31.6
20*	30.8	30.9	31.1	31.0	31.0	30.8	30.8	31.1	[illegible]	31.1
21	30.5	30.6	30.8	30.7	30.6	[illegible]	30.4	30.6	30.8	30.6
22*	30.6	30.7	31.1	30.9	30.8	30.8	30.9	31.0	31.3	31.0
23	30.2	30.4	30.7	30.5	30.4	30.3	30.4	30.6	30.9	30.6
Number of Obs	444	444	444	444	444	444	444	444	444	353
Daily Mean	29.6	29.7	30.0	29.8	29.6	29.6	29.6	29.8	30.1	30.1

LITTLE MELICA V
Hourly Mean Temperatures (-°C)
15 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	29.6	29.7	30.0	29.9	29.8	29.8	29.9	30.1	30.4	30.2
01	29.5	29.6	29.9	29.7	29.5	29.5	29.5	29.7	30.0	29.7
02	29.2	29.3	29.6	29.4	29.2	29.2	29.2	29.4	29.6	29.4
03	29.1	29.1	29.4	29.1	29.0	28.9	29.0	29.1	29.3	29.1
04	29.1	29.2	29.5	29.2	29.1	29.0	29.1	29.2	29.5	29.2
05	28.9	29.0	29.3	29.1	28.9	28.8	28.8	29.0	29.2	28.9
06	27.8	28.0	28.2	28.1	27.3	27.3	27.9	28.0	28.2	27.9
07	24.8	24.7	24.8	24.3	24.1	24.0	23.9	23.9	23.7	23.3
08	21.1	20.9	21.2	20.6	20.5	20.5	20.3	20.2	20.2	20.0
09	20.6	20.6	20.8	20.4	20.2	20.2	20.1	20.2	20.2	18.5
10	21.3	21.2	21.4	21.1	20.9	21.0	20.9	21.0	21.0	20.6#
11	21.6	21.5	21.8	21.5	21.4	21.4	21.3	21.4	21.5	21.2
12	21.6	21.6	21.8	21.5	21.3	21.3	21.3	21.3	21.4	21.2
13	21.7	21.7	21.9	21.6	21.4	21.5	21.4	21.4	21.5	21.4
14	22.3	22.2	22.5	22.2	22.0	22.1	22.0	22.0	22.1	22.1
15*	22.8	22.7	23.0	22.6	22.5	22.5	22.4	22.4	22.4	22.4
16*	23.1	23.1	23.3	23.0	22.8	22.9	22.8	22.7	22.8	22.7
17*	23.1	23.2	23.3	23.0	22.8	22.8	22.8	22.7	22.8	22.7
18*	23.6	23.6	23.8	23.5	23.3	23.3	23.3	23.2	23.2	23.0
19*	24.3	24.4	24.6	24.3	24.2	24.2	24.3	24.2	24.2	23.9
20*	24.5	24.6	24.8	24.5	24.4	24.3	24.4	24.3	24.4	23.9
21	24.7	24.8	25.0	24.7	24.5	24.5	24.6	24.5	24.6	24.3
22	24.6	24.7	24.9	24.7	24.5	24.4	24.5	24.5	24.5	24.3
23	24.8	24.8	25.1	24.7	24.7	24.7	24.7	24.6	24.8	24.6
Number of Obs	448	448	448	448	448	448	448	448	448	433
Daily Mean	24.7	24.8	25.0	24.7	24.5	24.5	24.5	24.5	24.7	24.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
16 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	25.2	25.2	25.5	25.2	25.1	25.1	25.1	25.1	25.3	25.1
01	25.4	25.5	25.7	25.4	25.3	25.3	25.3	25.3	25.4	25.2
02	25.5	25.1	25.8	25.5	25.4	25.4	25.4	25.4	25.5	25.2
03	26.2	26.2	26.4	26.1	26.0	26.0	25.9	25.9	26.0	25.8
04	28.6	28.6	28.7	28.2	28.1	27.9	27.8	27.7	27.6	26.9
05	27.5	27.5	27.7	27.3	27.1	27.0	26.9	27.0	27.1	26.6
06	30.0	29.9	30.1	29.6	29.5	29.3	29.2	29.2	29.1	28.4
07	31.3	31.3	31.4	31.1	30.9	30.8	30.6	30.7	30.7	30.1
08	33.0	33.0	33.1	32.7	32.6	32.4	32.4	32.4	32.5	31.2
09	34.2	34.2	34.4	34.1	33.9	33.8	33.7	33.9	34.0	33.1
10	34.9	35.0	35.2	34.9	34.7	34.6	34.5	34.6	34.7	33.8
11*	35.4	35.3	35.5	35.2	35.1	34.8	34.8	34.9	35.0	34.2
12*	35.1	35.1	35.2	34.7	34.5	34.4	34.2	34.3	34.4	33.5
13*	35.7	35.8	36.0	35.5	35.4	35.3	35.1	35.0	34.7	33.1
14	36.3	36.2	36.4	35.9	35.7	35.5	35.2	35.0	34.5	32.5
15	37.2	37.3	37.3	36.7	36.5	36.2	36.0	35.8	35.3#	32.7
16	38.0	38.2	38.5	37.7	37.6	37.3	37.0	36.7	36.0-	34.5
17	38.0	38.0	38.1	37.5	37.2	36.6	35.5	34.7	33.8	32.5
18	33.9	33.8	34.0	33.5	33.3	33.0	32.8	32.7	32.5	31.9
19	33.5	33.7	33.9	33.6	33.4	33.3	33.2	33.1	33.0	32.2
20	35.3	35.2	35.5	35.0	34.8	34.4	34.1	33.9	33.6	33.0
21	37.1	37.2	37.4	36.9	36.7	36.4	36.3	36.5	36.5	36.2
22	38.5	39.0	39.1	38.7	38.6	38.4	38.3	38.4	38.5	38.3
23	39.7+	40.6+	40.5+	40.2+	40.1+	40.0+	39.8+	39.9+	39.9+	39.4+
Number of Obs	439	439	439	439	439	439	439	439	419	439
Daily Mean	33.0	33.1	33.3	32.9	32.7	32.5	32.4	32.3	32.0	31.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
17 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	40.1	40.8	40.8	40.4	40.3	40.1	40.0	40.2	40.2	39.8
01	39.4	40.0	40.0	39.5	39.4	39.2	39.1	39.2	39.3	38.9
02	40.2	40.7	40.7	40.4	40.3	40.1	40.0	40.1	40.3	39.9
03	40.9	41.2	41.1	40.5	40.3	40.2	40.0	40.2	40.4	40.1
04	41.1	41.4	41.5	40.7	40.6	40.3	40.0	40.1	40.2	39.6
05	42.4	42.9	43.2	42.6	42.4	42.0	41.5	40.9	40.1	39.0
06	42.1	42.6	42.7	42.1	41.8	41.3	40.4	38.9	37.4	35.6
07	41.4	41.9	41.8	39.7	39.0	37.6	36.2	35.5	35.0	33.7
08	38.3	38.4	38.4	36.9	36.2	35.2	34.5	33.9	33.8	32.4
09	37.9	37.4	37.7	36.1	35.6	35.1	34.6	34.2	33.7	31.3
10*	36.3	35.7	36.0	34.6	34.1	33.6	33.2	32.8	32.2	30.1
11*	34.5	33.8	34.2	33.0	32.6	32.1	31.8	31.3	30.8	29.5
12*	33.5	32.8	33.2	32.0	31.7	31.3	31.1	30.7	30.3	29.1
13*	32.5	31.9	32.3	31.2	30.8	30.5	30.2	30.1	29.7	28.6
14*	32.5	31.9	32.5	31.3	30.9	30.5	30.3	29.9	29.6	28.1
15	31.8	31.1	31.6	30.5	30.2	29.8	29.5	29.2	28.8	27.5
16	28.7	28.1	28.5	27.7	27.5	27.1	27.1	26.9	26.8	26.1
17										
18										
19										
20										
21										
22										
23										
Number of Obs	318	318	318	318	318	318	318	318	318	318
Daily Mean	37.3	37.2	37.4	36.4	36.1	35.7	35.3	35.0	34.6	33.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
18 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02	33.3	33.3	33.6	33.2	32.9	32.8	32.7	32.8	33.0	32.2
03	36.1	36.0	36.3	35.9	35.7	35.5	35.3	35.5	35.5	34.7
04	37.2	37.0	37.2	36.8	36.5	36.4	36.1	36.3	36.2	35.1
05	36.6	36.4	36.6	36.1	35.9	35.7	35.6	35.7	35.6	34.5
06	37.6	37.4	37.6	37.1	36.9	36.7	36.5	36.8	36.7	35.9
07	37.7	37.4	37.7	37.1	37.0	36.8	36.6	36.9	36.9	36.1
08	37.3	36.9	37.1	36.6	36.3	36.1	36.0	36.2	36.[illegible]	35.5
09	36.8	36.3	36.6	35.9	35.8	35.6	35.4	35.7	35.7	35.0
10	34.6	34.0	34.2	33.5	33.2	33.0	33.0	33.1	33.1	32.3
11	35.9	35.4	35.7	35.0	34.8	34.6	34.4	34.7	34.7	33.8
12	36.4	36.1	36.3	35.9	35.5	35.4	35.2	35.6	35.5	34.8
13	36.0	35.7	35.7	35.4	35.2	35.0	34.9	35.1	35.1	34.5
14*	36.4	36.1	36.2	35.8	35.6	35.4	35.4	35.5	35.7	35.1
15*	38.0	37.9	37.9	37.7	37.6	37.4	37.3	37.6	37.7	37.1
16*	38.4	38.3	38.3	37.9	37.8	37.6	37.5	37.7	37.8	37.2
17*	38.2	38.0	38.0	37.8	37.7	37.4	37.3	37.6	37.6	37.0
18	39.5	39.4	39.5	39.2	39.0	38.9	38.8	39.0	39.0	38.4
19	39.7	39.5	39.5	39.2	39.1	38.9	38.7	39.0	39.1	38.4
20	40.0	39.9	39.8	39.6	39.5	39.3	39.1	39.4	39.5	38.8
21	40.1	40.1	40.3	40.0	39.9	39.7	39.7	39.8	39.8	39.4
22	40.3	40.6	40.8	40.5	40.4	40.2	40.1	40.3	40.4	40.0
23	40.9	41.1	41.3	41.0	40.7	40.6	40.4	40.6	40.9	40.3
Number of Obs	411	411	411	411	411	411	411	411	411	411
Daily Mean	37.6	37.4	37.6	37.2	37.0	36.8	36.7	36.9	36.9	36.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
19 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	40.7	40.8	41.0	40.6	40.5	40.3	40.1	40.3	40.5	39.9
01	41.2	41.2	41.1	41.0	40.8	40.6	40.4	40.6	40.9	40.3
02	41.4	41.4	41.4	41.3	41.1	40.9	40.7	40.9	41.1	40.5
03	41.8	41.9	41.8	41.7	41.5	41.4	41.3	41.4	41.6	41.0
04	42.0	42.0	42.0	41.8	41.7	41.5	41.3	41.5	41.7	41.0
05	42.5	42.6	42.5	42.4	42.2	42.1	41.9	42.1	42.4	41.6
06	43.4	43.5	43.5	43.4	43.2	43.0	42.9	43.0	43.3	42.5
07	43.4	43.4	43.3	43.2	43.0	42.9	42.8	42.9	43.1	42.3
08	43.7	43.9	43.9	43.7	43.6	43.4	43.3	43.5	43.7	42.8
09	44.3	44.5	44.5	44.3	44.3	44.1	43.9	44.2	44.4	43.7
10	43.9	43.9	44.0	43.7	43.5	43.3	43.3	43.5	43.8	43.0
11	43.8	44.0	44.1	43.8	43.6	43.4	43.3	43.5	43.8	43.2
12	44.9	45.1	45.4	45.0	44.8	44.7	44.6	44.9	45.1	44.6
13	45.5	45.6	45.9	45.6	45.4	45.2	45.1	45.4	45.7	45.1
14	45.6	45.9	45.9	45.8	45.6	45.4	45.4	45.6	45.9	45.4
15	45.7	45.9	45.8	45.7	45.5	45.4	45.2	45.5	45.8	45.1
16	45.3	45.4	45.3	45.2	45.1	44.9	44.9	45.1	45.4	44.7
17	45.3	45.5	45.4	45.3	45.2	45.0	45.0	45.3	45.6	44.9
18	44.6	44.8	44.8	44.7	44.6	44.4	44.3	44.6	44.9	44.3
19	44.1=	44.2=	44.2=	44.1=	44.0=	43.9=	43.8=	44.0=	44.3=	43.7=
20	43.3+	43.4+	43.6+	43.2+	43.0+	42.9+	42.9+	43.0+	43.3+	42.7+
21	43.0	43.0	43.2	42.9	42.7	42.5	42.5	42.7	42.9	42.4
22	42.9	43.0	43.2	42.8	42.7	42.5	42.5	42.7	42.9	42.4
23	42.2	42.3	42.5	42.1	41.9	41.7	41.7	41.9	42.2	41.6
Number of Obs	437	436	437	437	436	437	437	437	437	437
Daily Mean	43.5	43.6	43.7	43.4	43.3	43.1	43.0	43.2	43.5	42.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
20 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	41.4	41.4	41.6	41.3	41.1	40.9	40.8	41.0	41.4	40.7
01	41.5	41.5	41.6	41.3	41.2	41.0	40.9	41.1	41.4	40.7
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13	40.1	40.1	40.0	39.9	39.8	39.6	39.5	39.7	39.8	39.5
14										
15	41.2	41.3	41.5	41.4	41.3	41.2	41.1	41.2	41.4	41.1
16	42.3	42.5	42.6	42.6	42.5	42.4	42.3	42.3	42.6	42.3
17	43.3	43.4	43.6	43.4	43.4	43.3	43.2	43.3	43.7	43.3
18	44.3	44.5	44.7	44.6	44.5	44.4	44.4	44.5	44.8	44.5
19	45.0	45.3	45.5	45.4	45.3	45.2	45.2	45.2	45.6	45.3
20	45.0	45.3	45.5	45.4	45.4	45.3	45.3	45.4	45.8	45.5
21	43.9	44.3	44.6	44.5	44.5	44.4	44.4	44.6	45.0	44.8
22	44.0	44.2	44.4	44.3	44.3	44.2	44.2	44.3	44.6	44.3
23	44.1	44.3	44.5	44.4	44.3	44.2	44.2	44.3	44.5	44.3
Number of Obs	208	208	208	208	208	208	208	208	208	208
Daily Mean	43.0	43.2	43.4	43.2	43.1	43.0	43.0	43.1	43.4	43.0

LITTLE AMERICA V

Hourly Mean Temperatures (-°C)

21 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	43.7	44.0	44.2	44.2	44.1	44.0	43.9	44.1	44.4	44.1
01	42.3	42.4	42.6	42.5	42.3	42.3	42.3	42.4	42.8	42.4
02	40.8	41.0	41.3	41.1	41.0	40.9	40.9	41.1	41.5	41.2
03	40.0	40.1	40.4	40.2	40.1	40.0	40.0	40.2	40.5	40.1
04	37.0	37.1	37.4	37.2	37.0	36.9	37.0	37.2	37.5	37.1
05	35.1	35.1	35.4	35.2	35.0	35.0	35.0	35.2	35.5	35.1
06	33.0	32.9	33.1	32.9	32.7	32.6	32.7	32.7	33.0	32.6
07	31.0	30.8	31.2	30.8	30.6	30.5	30.6	30.6	30.8	30.4
08	29.4	29.2	29.5	29.3	29.0	28.9	29.0	29.0	29.1	28.9
09	29.3	29.2	29.5	29.2	29.0	28.8	28.9	29.0	29.2	28.9
10	28.2	28.0	28.3	28.0	27.8	27.6	27.7	27.7	27.9	27.5
11	27.1	26.9	27.2	26.9	26.6	26.4	26.6	26.6	26.6	26.3
12*	24.7#	24.4#	24.7#	24.0#	23.7#	23.5#	23.7#	23.5#	23.4#	23.0#
13	23.8	23.5	23.8	23.1	22.8	22.7	22.7	22.4	22.2	21.6
14	22.0	21.7	21.7	20.9	20.5	20.3	20.2	19.7	19.3	18.8
15*	21.9	21.8	21.6	21.3	20.9	20.7	20.8	20.3	20.0	19.4
16*	25.3	25.2	25.0	24.6	24.2	23.7	23.6	22.7	21.8	20.8
17	27.2	27.0	27.1	26.3	26.0	25.6	25.3	24.3	23.2	21.7
18*	27.5	27.2	27.4	26.7	26.3	25.9	25.8	25.0	23.6	21.3
19*	24.6	24.4	24.4	23.5	23.1	23.0	22.9	21.5	21.9	21.0
20	21.6	21.4	21.7	20.9	20.6	20.4	20.4	20.1	20.0	19.5
21	23.5	23.3	23.2	23.0	22.5	22.3	22.3	21.9	21.7	21.1
22	26.1	25.9	25.8	25.3	24.9	24.6	24.5	24.0	23.6	22.8
23	23.1	22.8	22.8	22.4	22.2	22.0	22.1	21.8	21.8	21.4
Number of Obs	432	432	432	432	432	432	432	432	432	432
Daily Mean	29.6	29.5	29.6	29.2	28.9	28.8	28.8	28.6	28.5	27.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
22 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	22.8	22.4	22.8	22.1	21.9	21.8	21.8	21.7	21.5	21.1
01	27.5	27.4	27.6	26.9	26.6	26.4	26.4	25.9	25.5	24.0
02	26.3	26.2	26.6	26.0	25.8	25.7	25.8	25.7	25.5	24.5
03	25.3	25.0	25.6	25.0	24.8	24.7	24.8	24.8	24.8	24.4
04	25.8	25.7	26.3	25.9	25.6	25.6	25.7	25.7	25.9	25.6
05	26.4	26.5	27.0	26.5	26.3	26.2	26.3	26.3	26.5	26.2
06	25.5	25.5	25.9	25.3	25.1	25.0	25.1	25.0	25.1	24.7
07	24.8	25.7	25.1	24.6	24.3	24.2	24.4	24.3	24.3	24.0
08	23.9	23.7	24.2	23.7	23.4	23.3	23.6	23.4	23.3	23.0
09	23.6	23.5	24.0	23.5	23.3	23.1	23.3	23.2	23.2	23.0
10	21.9	21.8	22.3	21.8	21.5	21.4	21.6	21.5	21.4	21.2
11	20.1	20.1	20.5	19.9	19.6	19.5	19.8	19.5	19.5	19.2
12										
13										
14	18.0▪	17.9▪	17.9▪	17.8▪	17.7▪	17.6▪	17.7▪	17.6▪	17.6▪	17.5▪
15	18.2	18.1	37.4	18.0	17.8	17.7	18.1	17.8	17.8	17.7
16	18.1	18.0	18.1	17.8	17.8	17.6	17.9	17.7	17.7	17.7
17	18.6	18.5	18.6	18.4	18.3	18.2	18.6	18.3	18.3	18.3
18*	18.7	18.6	18.9	18.6	18.4	18.3	18.5	18.4	18.5	18.4
19	18.7	18.4	18.6	18.4	18.3	18.2	18.6	18.3	18.1	18.1
20	18.5	18.3	18.5	18.2	18.0	17.9	18.1	18.1	18.0	17.9
21	18.5	18.3	18.4	18.2	18.1	17.9	18.3	18.1	18.1	18.0
22	18.6	18.4	18.6	18.3	18.2	18.1	18.6	18.2	18.1	18.3
23	18.7	18.7	18.8	18.6	18.5	18.5	18.8	18.6	18.5	18.5
Number of Obs	407	407	407	407	407	407	406	407	407	406
Daily Mean	21.8	21.7	22.9	21.6	21.4	21.3	21.5	21.3	21.3	21.1

LITTLE AMERICA V
Hourly Mean Temperature (-°C)
23 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	20.8	20.8	21.2	20.7	20.6	20.5	21.0	20.6	20.6	20.4
01	20.1	20.5	20.4	19.9	19.8	19.7	20.1	19.8	19.7	19.5
02	22.9	23.1	23.6	23.3	23.3	23.2	23.5	23.4	23.4	23.3
03	23.5	23.4	23.8	23.4	23.3	23.2	23.4	23.3	23.2	22.7
04	22.3	22.2	22.3	21.9	21.9	21.8	22.0	21.8	21.6	21.5
05	19.5	19.5	19.5	19.0	18.9	18.8	19.5	18.7	18.6	18.6
06	19.8	19.7	19.8	19.5	19.5	19.4	19.6	19.5	19.4	19.5
07	19.5	19.3	19.5	19.3	19.2	19.1	19.5	19.2	18.9	19.2
08	19.3	19.6	19.3	18.9	18.9	18.8	19.1	18.8	18.6	18.8
09	19.8	19.8	19.8	19.6	19.5	19.5	19.7	19.5	19.3	19.4
10	20.5	20.4	20.6	20.3	20.3	20.1	20.4	20.3	20.1	20.2
11	21.5	21.5	21.6	21.4	21.3	21.2	21.3	21.2	21.0	21.6
12	21.7	21.7	21.9	21.6	21.5	21.4	21.7	21.5	21.5	21.5
13	21.9	21.8	22.0	21.8	21.7	21.6	21.7	21.7	21.6	21.6
14	22.5	22.5	22.8	22.4	22.3	22.3	22.5	22.4	22.3	22.3
15	23.8	23.8	24.1	23.6	23.5	23.4	23.5	23.5	23.3	23.2
16	24.4	24.6	24.9	24.2	24.1	23.9	24.0	23.8	23.7	23.6
17	24.1	24.2	24.1	23.6	23.5	23.3	23.4	23.3	23.0	22.9
18	23.9	24.0	24.1	23.7	23.6	23.4	23.6	23.4	23.3	23.1
19	22.3	22.3	22.4	22.2	22.1	22.0	22.2	22.1	22.1	22.0
20	24.2	24.2	24.4	24.1	23.9	23.7	23.9	23.8	23.8	23.7
21	26.5	26.9	27.4	27.[illegible]	27.0	27.0	27.1	27.1	27.1	27.2
22	28.6	29.0	29.4	29.2	29.1	29.0	29.1	29.1	29.1	29.0
23	29.3	29.7	30.1	29.9	29.7	29.7	29.7	29.8	29.8	29.7
Number of Obs	449	449	449	449	449	449	449	449	449	449
Daily Mean	22.6	22.7	22.9	22.5	22.4	22.3	22.5	22.4	22.3	22.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
24 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	29.4	29.9	30.4	30.2	30.2	30.1	30.1	30.2	30.4	30.4
01	31.0	31.3	31.7	31.5	31.4	31.3	31.4	31.4	31.6	31.4
02	28.6	28.7	28.9	28.5	28.2	28.1	28.1	28.1	28.0	27.6
03	25.7	25.6	25.7	25.2	25.1	25.0	25.1	25.0	24.8	24.7
04	25.5	25.7	25.7	25.1	25.0	24.9	24.9	24.8	24.8	24.5
05	27.7	27.9	27.9	27.4	27.2	27.0	27.0	26.8	26.6	26.1
06	29.7	30.1	30.2	29.6	29.3	29.2	29.1	29.0	28.8	28.3
07	27.4	27.4	27.7	27.1	27.0	26.9	27.0	26.9	26.8	26.6
08	25.4	25.4	25.7	25.3	25.2	25.1	25.3	25.3	25.2	25.0
09	23.6	23.6	23.9	23.5	23.4	23.2	23.4	23.4	23.3	23.1
10	22.5	22.4	22.6	22.3	22.2	22.1	22.2	22.2	22.1	21.9+
11	22.3	22.4	21.7	21.7	21.7	21.7	21.3	21.7	21.8	
12	21.8	22.0	21.6	21.5	21.4	21.3	21.3	21.5	21.4	
13	19.1	19.6	19.5	18.9	18.7	18.6	19.0	18.7	18.5	18.4
14*	16.9	17.0	16.7	16.5	16.5	16.4	16.7	16.6	16.4	16.9#
15*	17.0	17.2	16.5	16.5	16.6	16.6	16.5	16.7	16.6	16.6#
16*	17.6	17.5	17.2	17.2	17.2	17.2	17.4	17.4	17.2	17.1-
17	18.0	17.9	17.5	17.2	17.2	17.2	17.3	17.5	17.4	
18	18.5	18.3	17.5	17.6	17.7	17.7	17.9	18.1	17.9	
19	18.8	18.8	18.5	18.5	18.5	18.5	18.6	18.8	18.6	18.4#
20	19.2	19.5	19.1	19.0	18.9	18.9	19.1	19.2	18.9	18.8
21	19.0	19.1	18.7	18.7	18.7	18.7	18.8	19.0	18.7	18.7+
22	19.2	19.1	18.7	18.8	18.8	18.8	19.0	19.1	18.8	18.8
23	19.8	19.8	19.6	19.6	19.6	19.5	19.6	19.8	19.5	19.3
Number of Obs	447	447	447	447	447	447	447	447	447	314
Daily Mean	22.6	22.7	22.6	22.4	22.3	22.2	22.3	22.3	22.2	23.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
25 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	20.4	20.4	20.3	20.1	20.0	20.0	19.9	19.8	19.5	19.3
01	20.1	20.0	20.0	19.7	19.7	19.7	19.8	19.6	19.4	19.1
02	20.7	20.5	20.6	20.4	20.3	20.3	20.5	20.1	19.9	19.4
03	20.7	20.4	20.7	20.3	20.2	20.1	20.3	20.0	19.7	19.3
04	20.7	20.6	20.8	20.4	20.3	20.2	20.3	20.0	19.6	19.6
05	21.8	21.9	22.2	21.9	21.7	21.7	21.8	21.6	21.2	20.3
06	22.0	22.0	22.3	22.0	21.9	21.8	21.9	21.9	21.4	20.4
07	22.3	22.2	22.6	22.2	22.0	21.8	21.8	21.1	20.3	19.0
08	22.1	21.9	22.2	21.8	21.5	21.2	21.1	20.5	20.1	19.5
09	21.6	21.5	21.9	21.5	21.3	21.3	21.4	21.1	20.8	19.8
10	22.0	22.1	22.5	22.1	21.9	21.8	22.0	21.8	21.4	20.3
11	24.5	24.9	25.3	25.1	24.9	24.9	25.1	25.1	25.2	24.8
12	28.1	28.5	28.9	28.7	28.5	28.4	28.5	28.6	28.6	28.2
13	30.1	30.5	30.8	30.6	30.5	30.3	30.3	30.4	30.3	29.7
14	29.2	29.7	30.4	30.0	29.9	30.0	30.1	30.3	30.4	30.0
15	28.3	28.8	29.2	29.2	29.2	29.1	29.3	29.4	29.5	29.3
16*	27.3	27.8	28.2	28.2	28.1	28.1	28.2	28.4	28.5	28.4+
17	26.4	26.7	27.1	27.0	27.0	27.0	27.1	27.2	27.1	
18	25.1	25.2	25.6	25.4	25.2	25.2	25.3	25.3	25.2	24.6
19	24.2	24.2	24.6	24.4	24.3	24.2	24.3	24.3	24.1	23.8
20	24.2	24.3	24.7	24.5	24.4	24.4	24.5	24.4	24.4	24.2
21	25.6	25.8	26.2	26.0	25.8	25.6	25.4	25.0	24.6	24.2
22	27.7	28.2	28.7	28.5	28.4	28.3	28.3	28.2	28.1	27.9
23	30.2	30.9	31.5	31.5	31.5	31.5	31.6	31.6	31.8	31.7
Number of Obs	445	445	445	445	445	445	445	445	445	424
Daily Mean	24.4	24.5	24.9	24.6	24.5	24.5	24.5	24.4	24.2	23.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
26 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.1	34.1	34.3	34.2	34.2	34.2	34.1	34.0	34.0	33.7
01	31.8	32.9	33.1	32.6	32.5	32.4	32.1	32.0	31.9	31.7
02	34.1	34.9	35.2	34.8	34.8	34.7	34.5	34.5	34.5	34.2
03	36.0+	36.8+	37.1+	36.8+	36.7+	36.7+	35.6+	36.7+	36.7+	36.4+
04	37.5	38.5	38.7	38.4	38.4	38.3	38.2	38.2	38.2	37.9
05	38.3	39.3	39.5	39.2	39.1	39.1	38.9	39.0	39.0	38.7
06	38.7	39.7	40.0	39.6	39.5	39.5	39.2	39.3	39.4	39.2
07	38.7	39.6	39.8	39.4	39.3	39.2	38.9	39.0	38.9	38.6
08	38.7	39.8	39.8	39.3	39.3	39.1	38.9	38.9	38.7	38.1
09	39.2	39.9	40.2	40.0	39.9	39.8	39.7	39.8	39.8	39.7
10	41.6	42.4	42.8	42.7	42.7	42.7	42.6	42.6	42.8	42.7
11	42.1	43.2	43.4	43.3	43.3	43.3	43.1	43.1	43.1	43.0
12	42.4	43.4	43.8	43.5	43.6	43.5	43.3	43.4	43.4	43.4
13										
14										
15										
16	43.4	44.0	44.5	44.4	44.1	44.2	44.1	44.2	44.2	44.0
17	44.5	45.1	45.5	45.5	45.0	45.1	45.1	45.3	45.[illegible]	45.4
18	45.0	45.7	46.1	46.1	45.9	45.9	45.9	45.9	46.0	45.9
19	44.3	44.8	45.1	45.1	45.0	45.0	44.9	44.9	44.9	44.5
20	44.6	45.2	45.4	45.4	45.3	45.3	45.1	45.2	45.2	44.8
21	44.9	45.4	45.6	45.6	45.5	45.5	45.4	45.4	45.4	44.6
22	44.4	44.9	45.1	45.0	44.8	44.8	44.6	44.7	44.6	43.7
23	44.5	45.0	45.2	45.1	44.8	44.7	44.6	44.6	44.5	43.4
Number of Obs	388	389	389	389	389	389	389	389	389	389
Daily Mean	40.4	41.2	41.5	41.3	41.2	41.1	41.0	41.0	41.0	40.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
27 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.3	44.9	45.1	45.1	44.9	44.3	44.6	44.5	44.3	43.1
01	45.1	45.8	46.0	45.9	45.7	45.5	45.3	45.4	45.3	44.3
02	45.2	45.8	46.0	45.9	45.7	45.6	45.3	45.3	45.2	44.4
03	43.8	44.3	44.7	44.4	44.2	44.1	44.0	44.0	43.9	43.4
04	44.1	44.6	45.0	44.9	44.7	44.6	44.3	44.3	44.2	43.7
05	43.6	44.2	[illegible]	44.3	44.1	44.1	43.9	43.9	[illegible]	43.3
06	42.9	43.6	43.8	43.6	43.2	43.2	43.0	43.0	43.0	42.6
07	42.9	43.5	43.8	43.6	43.4	43.4	43.	43.2	43.2	42.9
08	43.4	44.1	44.5	44.3	44.0	44.0	43.8	43.8	43.8	43.3
09	43.5	44.3	44.4	44.1	43.8	43.7	43.4	43.3	43.1	42.0
10	43.5	44.3	44.6	44.1	43.7	43.5	43.2	43.1	42.9	41.9
11	45.2	46.4	46.5	46.1	45.3	44.6	43.9	43.6	43.2	42.3
12	45.0	46.2	46.4	46.1	45.4	44.5	43.3	42.6	41.2	39.7
13	44.8	46.0	46.1	45.3	44.3	43.5	42.0	40.6	39.6	39.2
14	45.1	46.3	46.5	45.6	44.4	42.9	40.8	39.9	39.3	38.2
15	43.9	44.9	45.0	43.6	42.4	41.4	39.6	38.8	38.4	37.7
16*	41.7	42.1	42.1	41.0	40.5	40.1	39.5	39.1	38.1	36.1
17*	41.9	42.2	42.4	41.4	40.5	39.5	38.7	38.2	37.6	36.2
18*	42.7	43.3	43.3	42.0	41.1	39.5	[illegible]	37.3	36.2	34.5
19	43.6	44.4	44.5	43.6	42.4	41.3	39.9	39.2	38.7	37.6
20	44.6	45.8	45.6	41.2	42.1	39.6	38.5	37.9	37.9	36.3
21	43.5	44.5	44.1	41.8	39.9	36.6	37.1	35.6	34.7	33.3
22	43.5	44.7	44.9	43.0	40.1	37.3	35.3	33.7	33.3	31.9
23	40.5	41.5	41.5	39.2	36.8	34.7	33.5	33.1	32.9	32.1
Number of Obs	448	448	448	448	448	448	448	448	448	448
Daily Mean	43.7	44.5	44.6	43.9	43.0	42.2	41.4	41.0	[illegible]	39.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
28 July 1957

Hr \ cm	Sfc	3	8	12	25	50	100	200	400	800
00	40.3	41.5	41.8	39.1	37.3	35.5	34.0	33.0	32.7	31.9
01	39.8	41.0	41.2	39.0	36.8	34.9	33.6	32.7	32.6	31.8
02	39.4	40.8	40.9	38.8	36.6	34.8	33.7	32.9	32.9	32.2
03	40.6	41.2	41.1	38.7	37.1	35.4	33.9	32.9	32.8	32.1
04	42.5	41.9	41.8	39.3	37.1	35.4	33.3	33.1	33.3	32.6
05	43.2	41.6	41.5	39.2	36.4	35.0	34.5	32.9	33.2	32.4
06	43.2	42.1	42.0	39.3	36.4	34.7	34.1	32.6	32.8	32.2
07	43.8	43.0	42.7	40.6	38.1	36.5	35.6	33.7	33.6	32.9
08	42.5	42.4	42.6	40.4	38.6	37.2	35.5	33.8	33.8	33.0
09	42.2	42.0	42.2	40.2	38.3	36.8	35.5	34.1	33.8	33.1
10	42.5	41.8	41.9	40.5	38.8	37.3	36.4	34.9	34.3	33.6
11	42.5	41.5	41.2	39.8	38.5	37.8	37.4	36.2	35.9	35.0
12	43.4	43.6	43.9	43.0	42.0	41.1	40.4	39.2	37.9	36.6
13	45.2	45.8	46.3	46.2	45.6	44.9	43.4	40.4	38.3	37.1
14	41.4	40.8	40.7	39.8	38.9	38.2	36.8	35.3	34.6	33.8
15	38.5+	37.3+	37.4+	36.4+	35.5+	35.0+	34.8+	34.2+	33.8+	33.0+
16	36.2	35.0	35.1	34.3	33.5	33.0	32.7	32.2	31.6	30.7
17	36.3	34.9	34.7	33.6	32.8	32.4	32.2	32.0	31.6	31.1
18	33.1	32.1	32.1	31.6	30.8	30.8	30.7	30.6	30.3	29.9
19	32.3	31.2	31.2	30.9	30.5	30.3	30.2	30.2	29.9	29.4
20	32.4	31.0	31.0	30.8	30.5	30.2	30.1	29.9	29.6	29.2
21	33.5	32.9	33.3	33.2	33.0	32.9	32.8	32.8	32.5	31.1
22	34.7	34.9	35.5	35.5	35.5	35.5	35.5	35.6	35.6	34.8
23	34.8	34.9	35.5	35.4	35.4	35.4	35.4	35.5	35.7	35.7
Number of Obs	443	443	443	443	443	443	443	443	443	442
Daily Mean	39.3	39.0	39.1	37.7	36.4	35.5	34.7	33.8	33.5	32.7

LITTLE AMERICA V
Hourly Mean Temperatures ($-^{o}C$)
29 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	34.3	33.9	34.2	34.1	34.0	33.9	33.9	34.0	34.0	33.8
01	34.0	33.0	33.2	33.0	32.9	32.8	32.8	32.8	32.8	32.6
02	34.1	32.5	32.6	32.5	32.4	32.2	32.2	32.2	32.3	32.2
03	34.6	33.4	33.7	33.4	33.1	32.9	32.6	32.9	32.8	32.5
04	35.5	35.7	36.1	36.0	35.7	35.5	35.5	35.4	35.3	35.0
05	36.0	36.2	36.7	36.6	36.5	36.5	36.4	36.5	36.7	36.6
06	36.5	37.2	37.8	37.7	37.6	37.6	37.6	37.7	37.7	37.8
07	37.8	38.3	38.7	38.7	38.6	38.5	38.5	38.6	38.7	38.6
08*	36.7	37.1	37.5	37.5	37.5	37.5	37.4	37.5	37.7	37.6
09*	36.3	36.5	36.9	36.9	36.9	36.9	36.8	37.0	37.1	37.0
10	36.3	36.3	36.6	36.6	36.6	36.6	36.6	36.6	36.7	36.7
11	35.7	35.7	36.0	36.0	36.0	36.0	36.0	36.0	36.2	36.2
12	35.7	35.7	35.8	35.8	35.8	35.8	35.8	35.8	35.9	35.9
13	35.3	35.3	35.4	35.5	35.4	35.4	35.4	35.4	35.5	35.5
14*	35.1	35.1	35.3	35.3	35.3	35.3	35.3	35.4	35.4	35.4
15*	35.2	35.2	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.5
16*	35.9	36.0	36.3	36.4	36.3	36.3	36.3	36.3	36.4	36.4
17	36.2	36.8	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2
18	35.5	35.6	35.9	35.9	35.9	35.9	35.9	35.9	36.0	36.0
19	35.5	35.5	35.7	35.8	35.8	35.8	35.8	35.9	36.1	36.2
20	35.1	35.1	35.4	35.4	35.5	35.5	35.5	35.6	35.6	35.7
21	34.4	34.4	34.6	34.6	34.6	34.6	34.6	34.7	34.8	34.8
22	33.7	33.7	34.0	34.0	34.0	34.0	34.0	31.6	34.1	34.2
23	33.8	33.8	34.1	34.2	34.2	34.2	34.1	34.1	34.3	34.3
Number of Obs	444	444	443	443	444	441	444	442	444	442
Daily Mean	35.4	35.3	35.6	35.6	35.5	35.5	35.5	35.4	35.6	35.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
30 July 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.9	33.9	34.1	34.2	34.2	34.1	34.1	34.2	34.2	34.3
01	34.3	34.4	34.6	34.5	34.5	34.4	34.3	34.3	34.4	34.3
02	35.5	35.8	36.2	36.1	36.0	35.9	35.8	35.7	35.7	35.5
03	35.1	35.1	35.3	35.3	35.3	35.2	35.2	35.1	35.2	35.1
04	35.4	35.6	35.8	35.8	35.8	35.7	35.7	35.6	35.6	35.5
05	35.5	35.9	36.5	36.5	36.4	36.4	36.4	36.4	36.6	36.6
06	35.3	35.9	36.6	36.6	36.6	36.6	36.6	36.7	36.8	36.9
07	36.2	37.2	37.7	37.7	37.6	37.6	37.6	37.6	37.8	37.8
08	37.9	38.3	38.7	38.8	38.8	38.7	38.7	38.7	38.8	38.7
09*	39.5	40.0	40.5	40.6	40.6	40.6	40.6	40.6	40.8	40.7
10*	41.7	42.4	42.8	42.9	42.9	42.8	42.8	42.8	42.9	42.9
11*	42.3	43.1	43.5	43.5	43.5	43.5	43.5	43.5	43.6	43.5
12*	42.7	44.3	44.7	44.7	44.7	44.7	44.7	44.7	44.8	44.8
13*	44.3	45.4	45.7	45.7	45.8	45.7	45.7	45.8	46.0	45.9
14										
15	45.3#	46.0#	46.5#	46.4#	46.3#	46.3#	46.3#	46.6#	46.9#	46.6#
16	44.3	45.3	45.7	45.7	45.6	45.6	45.6	45.6	45.8	45.8
17	43.9	45.6	46.0	46.0	46.0	46.0	45.9	46.0	46.2	46.1
18	44.5	45.6	46.1	46.1	46.1	46.1	46.1	46.2	46.4	46.4
19	45.9	46.4	46.8	46.8	46.8	46.8	46.7	46.8	47.1	47.1
20	46.4	46.9	47.2	47.2	47.2	47.2	47.2	47.2	47.5	47.5
21	46.5	47.1	47.4	47.4	47.4	47.4	47.4	47.5	47.7	47.6
22	46.6+	47.2+	47.5+	47.5+	47.4+	47.4+	47.4+	47.5+	47.7+	47.6+
23	46.2	46.7	46.9	46.9	46.9	46.8	46.8	46.9	47.1	47.1
Number of Obs	409	406	409	407	409	407	409	409	409	409
Daily Mean	40.6	41.3	41.6	41.7	41.6	41.6	41.6	41.6	41.8	41.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
31 Jul, 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	45.7	46.3	46.5	46.4	46.4	46.3	46.2	46.2	46.4	46.3
01	47.2	47.7	47.8	47.8	47.7	47.7	47.7	47.8	47.9	47.8
02	46.5	47.0	47.2	47.3	47.3	47.3	47.2	47.3	47.4	47.4
03	47.2	47.8	48.1	48.0	48.0	48.0	47.9	47.9	48.1	48.2
04	48.8	49.3	49.7	49.7	49.6	49.6	49.6	49.7	49.9	49.8
05	49.0	49.6	49.9	50.0	50.0	50.0	50.0	50.2	50.5	50.4
06	48.3	49.0	49.3	49.2	49.2	49.2	49.2	49.2	49.5	49.4
07	48.0	48.5	48.8	48.7	48.7	48.6	48.6	48.6	48.9	48.9
08	48.1	48.7	48.9	48.8	48.7	48.7	48.6	48.6	48.8	48.7
09	48.8	49.4	49.6	49.2	49.2	49.0	48.7	48.7	48.8	48.5
10	49.6	50.1	50.4	50.1	49.8	49.6	49.2	49.1	49.1	48.9
11*	50.2	50.7	50.9	50.6	50.4	50.1	49.7	49.5	49.5	48.8
12*	51.1	51.5	51.8	51.6	51.4	51.1	49.9	48.6	47.5	47.2
13*	51.1	51.3	51.6	51.4	51.0	50.1	48.3	44.9	43.2	43.1
14*	49.6	50.0	50.1	49.9	49.6	49.3	48.5	47.4	44.7	42.1
15*	49.0	49.2	49.3	49.1	48.9	48.6	48.1	47.7	45.5	41.5
16*	47.2	47.4	47.7	47.6	47.5	47.3	47.3	47.2	47.0	44.2
17*	45.3	45.4	45.7	45.5	45.4	45.2	45.2	45.2	45.2	44.6
18	43.9	43.5	43.5	43.5	43.3	43.1	43.1	43.0	43.0	42.8
19	43.2	42.7	42.8	42.6	42.5	42.3	42.2	42.2	42.3	42.2
20	42.2	41.7	41.8	41.7	41.6	41.5	41.4	41.4	41.6	41.5
21	42.4	42.5	42.7	42.7	42.7	42.7	42.6	42.6	42.9	42.9
22	42.2*	42.2*	42.4*	42.4*	42.4*	42.3*	42.0*	42.3-	42.5-	42.4*
23	43.8	44.2	44.5	44.5	44.5	44.5	44.5	44.6	44.8	44.8
Number of Obs	440	440	440	440	440	440	439	440	440	439
Daily Mean	47.1	47.4	47.6	47.5	47.4	47.3	47.0	46.7	46.5	46.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
1 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	43.2	43.5	43.7	43.8	43.8	43.8	43.8	43.8	44.0	44.0
01	43.1	43.2	43.3	43.3	43.4	43.4	43.3	43.5	43.6	43.4
02	42.3	42.3	42.1	42.2	42.3	42.2	42.2	42.3	42.4	42.2
03	41.1	41.1	40.8	40.9	41.0	41.0	40.9	41.1	41.1	40.7
04	40.7	40.6	40.3	40.6	40.6	40.6	40.5	40.9	40.8	40.5
05	40.9	40.8	40.3	40.4	40.5	40.4	40.3	40.5	40.6	
06	40.1	40.1	39.9	39.9	39.8	39.7	39.7	39.8	40.0	
07	41.1	41.1	40.8	40.9	40.9	40.9	40.8	41.0	41.3	
08	41.3	41.3	40.8	40.9	40.9	40.9	40.8	41.1	41.3	
09	40.5	40.4	40.1	40.0	40.0	39.9	39.9	39.9	40.0	
10	39.8	39.5	39.3	39.2	39.1	39.0	38.8	38.9	39.4	
11	38.2	38.1	38.0	37.9	37.8	37.7	37.6	37.7	38.1	
12	37.2	37.1	37.1	37.0	36.8	36.7	36.5	36.7	37.1	36.8#
13	36.4	36.2	36.0	35.8	35.7	35.6	35.4	35.6	36.2	
14*	35.7	35.3	35.2	35.0	34.9	34.8	34.5	34.8	35.3	
15*	35.2	35.0	35.0	34.7	34.6	34.5	34.3	34.5	35.3	
16*	36.1	36.0	36.1	36.0	36.0	35.9	35.8	35.9	36.2	36.5-
17*	36.6	36.6	36.8	36.7	36.6	36.5	36.4	36.5	36.8	36.6
18*	37.7	37.0	38.1	38.0	37.9	37.9	37.8	37.9	38.1	38.0
19	40.2	41.0	41.3	41.3	41.3	41.3	41.3	41.4	41.7	41.7
20	41.8	42.6	43.0	43.0	42.9	42.9	42.9	42.9	43.2	43.2
21	43.0	44.2	44.5	44.5	44.5	44.4	44.4	44.5	44.9	44.9
22	43.8	44.9	45.2	45.2	45.2	45.2	45.1	45.2	45.8	45.5+
23	44.2	45.0	45.3	45.3	45.3	45.3	45.3	45.3	45.9	45.6
Number of Obs	450	450	450	449	450	450	448	450	448	216
Daily Mean	40.0	40.1	40.1	40.1	40.1	40.0	39.9	40.1	40.4	41.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
2 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.5	45.1	45.5	45.5	45.5	45.5	45.4	45.5	45.9	45.8
01	44.6	45.5	45.9	45.8	45.8	45.8	45.7	45.9	46.2	46.1
02	44.6	45.5	45.9	45.8	45.8	45.8	45.7	45.8	46.2	46.1
03	44.2	45.1	45.4	45.4	45.3	45.3	45.3	45.4	45.8	45.7
04	44.0	45.0	45.3	45.3	45.3	[illegible]	45.2	45.3	45.7	45.6
05	43.8	44.7	45.1	45.1	45.0	45.0	45.0	45.2	45.5	45.3
06	43.2	44.0	44.4	44.4	44.3	44.2	44.2	44.4	44.7	44.6
07	42.1	42.1	42.3	41.7	41.4	41.2	41.1	41.0	41.2	40.6
08	38.9	37.5	37.5	36.6	36.3	36.1	36.0	35.9	36.0	35.5
09	39.0	38.4	38.5	37.9	37.6	37.5	37.3	37.3	37.4	37.2
10	38.0	37.7	37.6	36.9	36.4	36.1	35.9	35.7	35.6	35.0
11*	36.8	36.6	36.3	35.7	35.3	35.0	34.6	34.2	34.1	33.5
12*	37.2	36.3	35.9	35.2	34.7	34.3	34.0	33.7	33.4	32.4
13*	36.1	34.5	34.5	33.9	33.4	33.1	32.8	32.6	32.4	31.7
14	36.4	35.0	35.0	34.5	34.1	33.7	33.4	33.2	33.0	32.2
15	36.7	35.4	35.3	34.8	34.4	34.0	33.7	33.5	33.3	32.2
16*	39.2	37.9	37.7	37.2	36.6	36.1	35.3	34.8	34.4	32.7
17	40.6	39.3	39.1	38.1	37.4	36.7	35.9	35.2	35.0	33.6
18	40.4	38.3	37.9	37.2	36.4	35.6	34.9	34.4	34.4	33.7
19	41.0	39.5	39.0	38.1	37.2	36.2	35.5	34.7	34.7	33.9
20	42.0	40.4	40.2	39.4	33.3	33.2	37.1	35.6	35.0	34.0
21	44.0	43.2	43.1	42.5	41.5	40.6	38.9	36.8	35.2	33.9
22	46.3	46.3	46.5	46.3	46.0	45.7	45.0	43.8	38.4	35.9
23	47.1	47.2	47.5	47.4	47.2	46.9	46.5	45.6	43.0	40.3
Number of Obs	450	450	450	450	450	450	450	450	450	449
Daily Mean	41.3	40.9	41.0	40.5	40.1	39.8	39.4	39.0	38.6	37.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
3 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	47.9	48.0	48.3	48.2	48.1	47.9	47.7	47.5	47.2	43.1
01	48.1	48.3	48.4	48.3	48.1	47.9	47.7	47.5	47.3	45.0
02	49.0	49.2	49.5	49.4	49.3	49.2	49.1	49.0	49.2	48.4
03	48.9	49.0	49.2	49.0	48.8	48.7	48.4	48.4	48.4	47.4
04	48.2	48.0	48.1	47.8	47.5	47.4	47.2	47.2	47.2	46.2
05	47.5	47.5	47.5	47.3	47.2	47.1	46.9	46.8	46.9	46.1
06	45.6	45.3	45.4	45.0	44.8	44.6	44.5	44.4	44.4	43.9
07	42.0	41.8	41.9	41.6	41.4	41.3	41.2	41.2	41.3	41.2
08	41.1	40.7	40.7	40.4	40.2	40.0	39.9	40.0	40.2	39.8
09	39.5	39.2	39.2	38.9	38.8	38.5	38.6	38.5	38.7	38.4
10	37.9	37.6	37.7	37.4	37.3	37.1	37.0	37.1	37.3	37.1
11	37.2	37.0	37.1	36.9	36.7	36.7	36.6	36.6	36.8	36.7
12	36.3	35.9	35.9	35.8	35.6	35.4	35.4	35.4	35.6	35.5
13	35.5	35.2	35.2	35.1	34.9	34.8	34.8	34.7	34.9	34.8
14	35.5	34.8	34.8	34.7	34.5	34.3	34.3	34.3	34.4	34.2
15										
16										
17										
18	35.7#	35.6#	35.7#	35.5#	35.4#	35.3#	35.3#	35.3#	35.4#	35.3#
19	37.0	37.0	37.1	36.7	36.6	36.5	36.3	36.4	36.5	36.2
20	40.2	40.3	40.5	40.4	40.1	40.0	39.9	39.8	39.8	39.4
21	42.8	42.8	43.0	42.8	42.7	42.6	42.5	42.4	42.4	43.0
22	43.5	43.5	43.5	43.4	43.3	43.2	43.0	43.0	43.0	42.6
23	44.0	44.0	44.2	44.1	44.0	44.0	43.8	43.8	43.9	43.4
Number of Obs	380	380	380	380	380	380	380	380	380	380
Daily Mean	42.3	42.1	42.3	42.1	41.9	41.7	41.6	41.6	41.7	41.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
4 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.7	44.7	44.9	44.8	44.7	44.6	44.5	44.5	44.5	44.1
01	45.2	45.2	45.4	45.2	45.1	45.0	44.8	44.8	44.7	44.1
02	44.7	44.8	45.0	44.9	44.7	44.6	44.5	44.5	44.6	44.0
03	44.1	44.1	44.3	44.1	43.9	43.7	43.6	43.6	43.8	43.4
04	44.3	44.3	44.4	44.1	43.9	43.7	43.6	43.6	43.7	43.2
05	43.8	43.7	43.9	43.6	43.4	43.2	43.0	43.0	43.0	42.2
06	43.2	43.0	43.1	42.7	42.5	42.2	42.1	42.1	42.2	41.4
07	42.2	42.0	42.1	41.9	41.7	41.5	41.5	41.5	41.6	41.3
08	40.6	40.5	40.6	40.4	40.2	40.1	40.0	40.0	40.3	40.0
09	39.9	39.4	39.4	39.0	38.8	38.7	38.5	38.6	38.8	38.4
10	41.3	41.0	41.1	40.8	40.6	40.5	40.3	40.3	40.5	40.1
11	42.0	41.8	41.9	41.4	41.2	41.0	40.9	40.9	41.0	40.3
12	41.2	40.9	41.0	40.6	40.4	40.2	40.1	40.1	39.9	38.7
13	41.2	41.2	41.4	41.2	41 0	40.9	40.8	40.9	41.1	40.8
14	40.2	40.0	40.1	39.8	39.6	39.4	39.3	39.4	39.7	39.5
15	39.3	38.9	39.1	38.8	38.6	38.5	38.4	38.5	38.8	38.6
16	37.1	36.3	36.4	36.1	35.9	35.8	35.8	35.9	36.1	35.9
17	36.1	35.8	35.9	35.8	35.5	35.4	35.4	35.6	35.9	35.6
18	35.9	35.7	35.9	35.7	35.4	35.4	35.4	35.5	35.9	35.6
19	34.8	34.7	34.7	34.7	34.6	34.5	34.4	34.5	34.8	34.7
20	35.7	35.5	35.6	35.5	35.3	35.2	35.2	35.4	35.7	35.5
21										
22	34.6	34.4	34.6	34.5	34.3	34.3	34.3	34.4	34.7	34.5
23	34.0	33.9	34.0	33.9	33.9	33.8	33.8	34.0	34.1	34.0
Number of Obs	429	429	429	429	429	429	429	429	429	429
Daily Mean	40.0	39.8	40.0	39.7	39.6	39.4	39.3	39.4	39.6	39.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
5 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.8	33.5	33.6	33.5	33.4	33.4	33.4	33.5	33.6	33.6
01	32.6	30.8	30.9	30.5	30.2	30.1	30.0	30.0	30.0	29.8
02	31.3	29.3	29.3	28.9	28.7	28.5	28.5	28.5	28.2	28.4
03	29.0	28.5	28.6	28.4	28.1	28.0	28.0	28.0	28.1	27.9
04	28.7	28.2	28.3	28.1	27.9	27.8	27.7	27.7	27.7	27.5
05	27.6	27.1	27.2	26.9	26.7	26.5	26.4	26.5	26.5	26.3
06	28.4	27.1	26.2	26.2	25.8	25.7	25.4	25.7	25.8	
07	27.9	27.5	27.2	27.1	26.8	26.8	26.5	26.7	26.8	
08	28.8	28.5	28.4	28.1	27.9	27.8	27.7	27.8	27.8	
09	29.5	29.2	29.1	28.8	28.6	28.4	28.3	28.3	28.4	27.7
10	29.7	29.2	28.6	28.6	28.4	28.3	27.9	28.2	28.3	
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	206	206	206	206	206	206	206	206	206	120
Daily Mean	29.7	29.0	28.9	28.6	28.4	28.3	28.2	28.3	28.3	28.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
6 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21	46.7	46.9	47.0	46.6	46.2	46.2	46.0	46.0	46.0	44.9
22	46.9	47.1	47.2	46.9	46.5	46.7	46.4	46.4	46.5	45.0
23	46.8	46.9	47.0	46.9	46.7	46.7	46.4	46.4	46.4	45.8
Number of Obs	56	56	56	56	56	56	56	56	56	56
Daily Mean	46.8	47.0	47.1	46.8	46.5	46.5	46.3	46.3	46.3	45.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
7 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	46.6	46.6	46.7	46.6	46.3	46.3	46.2	46.1	46.2	45.6
01	47.4	47.4	47.6	47.5	47.2	47.2	47.1	47.1	47.1	46.7
02	47.6	47.6	47.7	47.6	47.3	47.3	47.2	47.2	47.3	46.9
03	47.6	47.7	47.9	47.8	47.5	47.5	47.3	47.3	47.4	47.1
04	47.2	47.3	47.4	47.3	47.1	47.1	46.9	46.9	47.0	46.5
05	46.4	46.4	46.6	46.5	46.2	46.2	46.1	46.1	46.2	45.7
06	45.3	45.4	45.7	45.6	45.2	45.3	45.2	45.2	45.4	45.0
07	45.4	45.5	45.7	45.6	45.4	45.4	45.3	45.3	45.5	45.1
08	44.8	44.9	45.2	45.0	44.8	44.7	44.7	44.7	44.9	44.6
09	43.6	43.6	43.8	43.7	43.5	43.3	43.2	43.2	43.2	42.7
10	43.0	43.0	43.1	43.0	42.9	42.8	42.7	42.7	42.7	42.1
11	42.9	42.9	43.1	43.0	42.8	42.7	42.6	42.6	42.7	42.4
12	41.9	41.7	41.7	41.5	41.4	41.2	41.1	41.1	41.1	40.8
13	39.3	39.1	39.1	38.9	38.8	38.7	38.6	38.6	38.7	38.4
14	38.6	38.3	38.3	38.2	38.0	37.8	37.7	37.7	37.8	37.6
15	35.2	35.0	35.0	34.9	34.7	34.6	34.5	34.5	34.7	34.4
16	33.0	32.7	32.8	32.7	32.5	32.4	32.3	32.3	32.5	32.3
17	31.6	31.4	31.5	31.3	31.1	31.0	30.9	30.9	31.1	30.9
18	29.8	29.3	29.4	29.3	29.0	29.1	29.0	29.0	29.1	28.9
19	28.0	27.7	27.8	27.7	27.5	27.6	27.6	27.5	27.6	27.4
20	27.8	27.3	27.4	27.3	27.1	27.2	27.2	27.2	27.3	27.2
21	28.6	28.1	28.2	28.1	28.0	28.1	28.2	28.2	28.2	28.2
22										
23										
Number of Obs	413	413	413	413	413	413	413	413	413	412
Daily Mean	40.0	39.9	40.0	39.9	39.7	39.7	39.6	39.6	39.7	39.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
8 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16	38.3	38.4	38.7	38.5	38.3	38.3	38.2	38.4	38.6	38.3
17	38.1	38.2	38.4	38.3	38.2	38.1	38.1	38.1	38.2	38.1
18	38.4	38.4	38.7	38.5	38.4	38.4	38.3	38.3	38.4	38.4
19	37.7	37.9	38.1	38.0	37.9	37.8	37.7	37.8	38.0	37.9
20	37.0	37.0	37.2	37.1	37.0	36.9	36.8	36.9	37.1	37.0
21	35.6	35.6	35.7	35.7	35.6	35.5	35.4	35.6	35.8	35.7
22	34.9	34.9	35.0	34.9	34.8	34.8	34.6	34.7	35.0	34.9
23	34.1	34.0	34.1	34.0	33.9	33.8	33.8	33.9	34.1	34.0
Number of Obs	150	150	150	150	150	150	150	150	150	150
Daily Mean	36.7	36.7	36.9	36.8	36.7	36.6	36.6	36.7	36.9	36.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
9 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	33.8	33.7	33.9	33.8	33.6	33.5	33.5	33.6	33.8	33.7
01	33.8	33.8	33.9	33.7	33.5	33.4	33.3	33.5	33.7	33.7
02	34.3	34.2	34[illegible]	34.2	34.0	33.9	33.9	34.0	34.2	34.1
03	34.8	34.7	3[illegible]	34.6	34.4	34.3	34.3	34.3	34.5	34.4
04	35.9	35.9	36.[illegible]	35.9	35.8	35.7	35.6	35.6	35.7	34.8
05	37.3	37.4	37.6	37.5	37.3	37.2	37.1	37.1	37.4	37.0
06	38.2	38.3	38.6	38.4	38.3	38.2	38.1	38.2	38.1	36.6
07	37.9	38.1	38.4	38.4	38.3	38.2	38.2	38.3	38.1	36.4
08	38.6	38.7	39.0	38.9	38.9	38.8	38.7	38.7	38.9	38.2
09	38.7	38.[illegible]	39.2	39.0	38.9	38.8	38.7	38.6	38.7	36.0
10	38.5	38.6	38.9	38.8	38.6	38.5	38.3	38.3	37.5	33.0
11*	38.9	39.1	39.3	39.2	39.0	38.8	38.7	38.6	38.3	33.4
12*	39.5	39.6	39.9	39.7	39.5	39.3	39.1	39.1	38.5	33.5
13	39.7	39.8	40.1	39.9	39.7	39.5	39.2	39.0	36.8	31.3
14	38.6	38.8	39.0	38.9	38.7	38.4	38.1	36.9	33.7	30.5
15	37.2	37.2	37.4	37.3	37.3	37.3	37.3	37.[illegible]	34.8	30.6
16										
17										
18	39.0-	39.2-	39.6-	39.4-	39.2-	39.1-	39.0-	39.1-	39.5-	38.6-
19	39.7	39.9	40.1	39.9	39.7	39.5	39.2	39.1	38.0	36.0
20	40.2	40.3	40.7	40.4	40.2	40.1	39.9	39.9	39.7	36.4
21	40.5	40.5	41.0	40.8	40.6	40.6	40.5	40.6	40.8	38.9
22	41.4	41.5	41.8	41.6	41.5	41.4	41.3	41.3	41.6	41.2
23	40.3	40.5	40.8	40.6	40.4	40.2	40.0	40.1	40.2	39.6
Number of Obs	401	401	401	401	401	400	401	401	401	401
Daily Mean	38.0	38.1	38.3	38.2	38.0	37.9	37.8	37.7	37.3	35.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
10 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	40.3	40.4	40.7	40.4	40.2	40.1	39.9	39.9	40.0	39.1
01	41.1	41.2	41.4	41.3	41.1	40.9	40.8	40.9	41.1	40.4
02	40.9	41.1	41.3	41.1	40.8	40.7	40.5	40.5	40.5	39.1
03	40.5	40.5	40.6	40.2	39.9	39.6	39.2	39.1	38.9	37.5
04	39.5	39.4	39.5	39.2	38.9	38.7	38.5	38.5	38.5	38.1
05	41.4	41.6	42.0	41.8	41.7	41.6	41.6	41.7	42.0	41.4
06	41.5	41.9	42.2	42.1	42.0	41.9	41.9	42.0	42.4	42.1
07	41.2	41.5	41.8	41.7	41.6	41.5	41.5	41.6	42.0	42.3
08	41.1	41.3	41.4	41.3	41.3	41.2	41.2	41.2	41.5	41.4
09	41.0	41.2	41.5	41.3	41.1	41.0	40.9	41.0	41.4	41.2
10	40.6	40.7	41.0	40.7	40.5	40.3	40.3	40.3	40.7	40.5
11	41.4	41.5	41.8	41.7	41.6	41.4	41.3	41.4	41.7	41.6
12	41.0	41.2	41.5	41.4	41.2	41.4	41.1	41.1	41.4	41.3
13	41.0	41.2	41.5	41.2	41.1	40.9	40.9	40.9	41.3	41.0
14	42.3	42.5	42.8	42.6	42.4	42.3	42.3	42.3	42.7	42.5
15	43.0	43.3	43.6	43.5	43.4	43.2	43.2	43.3	43.6	43.5
16*	42.9	43.2	43.4	43.2	43.0	42.8	42.8	42.9	43.1	43.0
17*	43.0	43.1	43.5	43.2	43.2	42.9	42.8	42.9	43.2	42.9
18*	44.4	44.7	45.0	44.8	44.7	44.6	44.5	44.6	45.0	44.8
19*	45.3	45.6	45.9	45.7	45.6	45.4	45.3	45.3	45.5	45.0
20	45.9	46.2	46.4	46.2	46.1	45.9	45.7	45.7	45.6	43.6
21	46.0	46.2	46.4	46.2	46.0	45.8	45.5	45.4	44.7	42.0
22	45.9	46.0	46.1	45.9	45.7	45.4	45.0	44.6	43.5	40.9
23	46.1	46.3	46.4	46.3	46.0	45.7	45.4	45.0	44.5	41.6
Number of Obs	452	452	452	452	452	452	451	452	452	452
Daily Mean	42.4	42.6	42.8	42.6	42.5	42.3	42.2	42.2	42.3	41.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
11 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	46.0	46.0	46.1	45.8	45.4	45.1	44.9	44.8	44.5	42.0
01	46.3	46.4	46.6	46.3	46.0	45.7	45.3	45.0	44.2	40.5
02	46.2	46.5	46.8	46.5	46.3	46.0	45.7	45.5	44.7	41.8
03	45.7	45.9	46.2	45.8	45.6	45.3	44.9	44.6	43.7	41.2
04	45.0	45.2	45.4	45.2	45.0	44.9	44.7	44.7	44.3	41.6
05	44.8	45.0	45.2	44.9	44.8	44.6	44.4	44.5	44.4	41.8
06	43.6	43.8	44.1	43.9	43.8	43.7	43.6	43.7	43.9	43.1
07	43.1	43.4	43.7	43.6	43.5	43.4	43.3	43.4	43.8	43.4
08	42.7	42.9	43.1	43.0	42.9	42.8	42.8	42.9	43.2	43.0
09	41.5	41.7	41.8	41.7	41.5	41.5	41.5	41.6	41.9	41.1
10	40.5	40.6	40.9	40.7	40.6	40.5	40.6	40.7	41.1	40.9
11	40.3	40.3	40.6	40.5	40.3	40.2	40.3	40.4	40.8	40.7
12	39.8	39.8	40.0	39.8	39.6	39.5	39.5	39.7	39.9	39.8
13*	39.6	39.5	39.7	39.4	39.2	39.0	39.0	39.1	39.4	39.0
14	39.7	39.6	39.8	39.5	39.4	39.1	39.1	39.2	39.5	39.0
15*	39.4	39.3	39.4	39.2	39.0	38.8	38.8	38.9	39.1	38.9
16*	38.9	38.8	38.8	38.7	38.5	38.3	38.3	38.4	38.6	38.3
17	38.8	38.7	38.8	38.6	38.4	38.3	38.3	38.3	38.5	38.1
18	38.4	38.1	38.2	38.0	37.8	37.7	37.7	37.7	37.9	37.3
19*	35.0	34.7	34.8	34.7	34.6	34.4	34.4	34.6	34.7	34.8
20*	33.4	33.2	33.4	33.3	33.2	33.0	33.1	33.2	33.4	33.4
21	33.2+	32.9+	33.1+	33.0+	32.8+	32.7+	32.8+	33.0-	33.2+	33.2+
22	32.1	32.0	32.0	31.9	31.8	31.7	31.7	31.8	32.1	32.1
23	31.6	31.5	31.5	31.5	31.3	31.3	31.3	31.3	31.5	31.5
Number of Obs	442	442	442	442	442	442	442	440	442	442
Daily Mean	40.3	40.3	40.5	40.3	40.1	40.0	39.9	40.0	40.0	39.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
12 August 1957

Hr \ cm	S.c	3	6	12	25	50	100	200	400	800
00	31.5	31.4	31.5	31.5	31.4	31.3	31.3	31.4	31.6	31.6
01	31.3	31.2	31.3	31.2	31.1	31.0	31.0	31.1	31.3	31.3
02	33.6	33.4	33.5	33.3	33.1	33.0	33.0	33.1	33.3	33.1
03	34.8	34.5	34.6	34.4	34.1	34.0	33.9	34.0	34.2	34.0
04	35.9	35.7	35.8	35.6	35.4	35.2	35.2	35.2	35.3	35.1
05	35.9	35.5	35.6	35.3	35.0	34.9	34.8	34.8	34.9	34.7
06	35.9	35.5	35.5	35.3	35.0	34.9	34.8	34.8	34.9	34.6
07	35.7	34.9	35.0	34.7	34.4	34.2	34.2	34.2	34.2	33.8
08	35.4	34.5	34.5	34.2	34.0	33.8	33.7	33.7	33.7	33.3
09	35.0	34.0	34.1	33.8	33.5	33.4	33.2	33.1	33.1	32.7
10*	34.8	34.4	34.5	34.1	33.9	33.8	33.7	33.7	33.8	33.4
11*	35.3	34.9	35.1	34.7	34.5	34.4	34.3	34.3	34.4	34.1
12*	34.4	34.1	34.2	33.9	33.7	33.5	33.4	33.5	33.6	33.3
13	33.5	33.3	33.5	33.1	32.8	32.7	32.7	32.8	32.9	32.6
14	32.5	32.3	32.5	32.1	31.8	31.7	31.8	31.9	32.0	31.7
15	33.4	33.2	33.4	33.0	32.8	32.7	32.7	32.8	32.9	32.7
16*	32.3	32.0	32.2	31.8	31.6	31.4	31.6	31.6	31.7	31.4
17*	31.5	31.2	31.4	31.1	30.9	30.8	30.8	31.0	31.1	30.9
18	31.2	30.9	31.1	30.8	30.6	30.5	30.5	30.6	30.7	30.5
19	30.1	29.6	29.9	29.5	29.3	29.1	29.2	29.3	29.5	29.2
20	29.3	28.9	29.1	28.8	28.6	28.4	28.4	28.6	28.7	28.3
21	30.2	29.7	29.9	29.5	29.3	29.2	29.2	29.2	29.4	29.1
22	30.0	29.4	29.6	29.2	29.0	28.9	28.8	28.8	28.9	28.5
23	31.0	30.5	30.7	30.3	30.1	29.9	29.9	29.9	29.9	29.6
Number of Obs	449	449	449	449	449	449	449	449	449	449
Daily Mean	33.1	32.7	32.8	32.5	32.3	32.2	32.2	32.2	32.3	32.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
13 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	32.4	32.0	32.0	31.8	31.6	31.5	31.4	31.4	31.5	31.1
01	32.6	32.2	32.2	31.9	31.7	31.6	31.5	31.5	31.6	31.4
02	33.1	32.9	33.0	32.7	32.6	32.5	32.4	32.4	32.6	32.4
03	34.8	34.9	35.1	35.1	35.0	34.9	34.8	34.8	35.0	34.8
04	35.2	35.4	35.6	35.6	35.6	35.5	35.5	35.5	35.8	35.6
05	34.2	34.2	34.4	34.3	34.3	34.2	34.1	34.1	34.2	34.1
06	33.4	33.3	33.5	33.4	33.4	33.3	33.3	33.3	33.6	33.5
07	33.4	33.4	33.5	33.5	33.4	33.3	33.3	33.3	33.6	33.5
08	33.4	33.3	33.5	33.4	33.3	33.2	33.1	33.2	33.4	33.4
09	34.0	33.9	34.0	33.9	33.7	33.6	33.5	33.5	33.6	33.5
10	33.6	33.5	33.6	33.4	33.3	33.2	33.2	33.1	33.3	33.2
11*	33.9	33.8	33.8	33.7	33.6	33.5	33.4	33.4	33.5	33.5
12*	34.1	34.1	34.3	34.2	34.1	34.0	33.9	34.0	34.1	34.0
13*	34.6	34.6	34.7	34.6	34.5	34.4	34.3	34.3	34.4	34.3
14*	34.4	34.4	34.4	34.3	34.2	34.1	34.0	34.1	34.1	34.0
15*	34.0	33.8	33.8	33.7	33.5	33.3	33.2	33.3	33.2	33.1
16										
17										
18										
19										
20										
21										
22										
23	31.8	31.9	32.2	31.9	31.8	31.7	31.7	31.9	32.1	31.9
Number of Obs	313	313	313	313	313	313	313	313	313	313
Daily Mean	33.7	33.6	33.8	33.6	33.5	33.4	33.4	33.4	33.5	33.4

LITTLE AMERICA V
Hourly Mean Temperatures ($-^{\circ}C$)
14 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	32.0	32.0	32.3	32.1	32.0	32.0	32.0	32.0	32.3	32.2
01	31.4	31.3	31.4	31.3	31.2	31.0	31.1	31.1	31.3	31.3
02	31.2	31.2	31.3	31.2	31.1	31.1	31.0	31.1	31.3	31.3
03	31.4	31.4	31.5	31.3	31.2	31.1	31.1	31.2	31.4	31.4
04	32.1	32.0	32.2	32.1	31.9	31.9	31.8	31.9	32.2	32.0
05	32.2	32.1	32.2	32.1	31.9	31.9	31.8	31.9	32.1	31.9
06	32.5	32.3	32.4	32.2	32.1	31.9	31.9	32.0	32.2	31.8
07	33.2	33.2	33.4	33.4	33.2	33.1	33.0	33.0	33.3	33.0
08	33.8	33.8	34.1	33.9	33.8	33.7	33.6	33.7	33.9	33.8
09*	33.7	33.7	33.8	33.7	33.6	33.5	33.4	33.4	33.6	33.4
10*	33.8	33.8	33.9	33.8	33.7	33.6	33.4	33.5	33.6	33.3
11*	33.6	33.7	33.8	33.7	33.6	33.5	33.4	33.5	33.6	33.3
12*	33.7	33.8	33.9	33.8	33.6	33.5	33.4	33.4	33.6	33.3
13*	34.0	34.1	34.2	34.1	33.9	33.9	33.8	33.8	33.9	33.8
14	33.1	33.2	33.3	33.2	33.1	33.0	33.0	33.1	33.4	33.3
15	31.8	32.0	32.2	32.1	31.9	31.9	31.9	32.0	32.2	32.2
16	31.8	31.8	31.9	31.9	31.7	31.6	31.6	31.7	31.9	31.7
17	33.0	32.9	33.0	32.9	32.7	32.6	32.5	32.5	32.7	32.4
18	33.4	33.3	33.5	33.4	33.2	33.0	33.0	33.0	33.1	32.9
19	33.0	32.9	33.0	32.9	32.8	32.7	32.6	32.7	32.8	32.5
20	32.6	32.5	32.5	32.4	32.3	32.1	32.1	32.2	32.3	32.1
21	31.9	31.7	31.7	31.6	31.4	31.3	31.3	31.3	31.4	31.3
22	32.1	31.9	32.0	31.9	31.7	31.6	31.6	31.6	31.8	31.6
23	32.5	32.4	32.4	32.3	32.1	31.9	31.9	31.9	32.0	31.9
Number of Obs	452	451	452	452	452	452	452	452	452	452
Daily Mean	32.7	32.6	32.8	32.6	32.5	32.4	32.3	32.4	32.6	32.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
15 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	32.4	32.3	32.4	32.3	32.0	31.9	31.8	31.9	32.0	31.9
01	31.1	30.9	31.0	30.9	30.7	30.6	30.5	30.6	30.8	30.7
02	30.4	30.2	30.4	30.3	30.1	30.0	30.0	30.1	30.3	30.2
03	30.2	30.0	30.1	30.0	29.8	29.7	29.6	29.7	29.9	29.8
04	29.6	29.2	29.4	29.2	29.0	28.9	28.8	28.9	29.0	29.0
05	29.6	29.2	29.4	29.3	29.0	28.9	28.9	29.0	29.1	28.9
06	30.0	29.9	30.0	29.9	29.8	29.6	29.6	29.8	29.9	29.9
07	29.3	29.3	29.5	29.4	29.3	29.3	29.2	29.4	29.6	29.6
08	30.5	30.5	30.7	30.6	30.5	30.4	30.4	30.4	30.7	30.6
09	31.4	31.4	31.5	31.5	31.3	31.2	31.1	31.2	31.4	31.2
10*	31.3	31.3	31.4	31.2	31.1	31.0	30.9	30.9	31.1	30.9
11*	29.4	29.5	29.7	29.7	29.5	29.4	29.4	29.6	29.8	29.8
12*	28.1=	27.6	27.7	27.7	27.5	27.5	27.5	27.6	27.8	27.9
13*		26.6	27.0	26.8	26.7	26.7	26.7	26.9	27.1	27.1
14*	27.3=	26.7	27.0	26.9	26.8	26.7	26.8	26.9	27.2	27.0
15	28.1+	27.5	27.6	27.5	27.4	27.3	27.3	27.4	27.6	27.5
16		26.1	26.2	26.0	25.9	25.9	25.9	26.0	26.2	26.1
17		25.0	25.1	25.1	24.9	24.8	24.9	24.9	25.1	25.0
18		24.2	24.3	24.3	24.1	24.1	24.2	24.3	24.4	24.3
19		24.0	23.3	23.1	22.9	22.8	22.7	22.8	22.9	22.7
20		22.7-	22.0	21.6	21.3	21.1	21.1	20.9	20.8	20.4
21			25.3	24.6	24.4	24.2	24.0	23.8	23.6	22.4
22	28.3-	27.6-	26.3	25.7	25.4	25.1	25.0	24.7	24.5	23.1
23	28.6	28.2	27.5	27.1	26.7	26.5	26.5	26.5	26.4	26.1
Number of Obs	285	408	444	444	445	446	438	446	445	444
Daily Mean	29.9	28.4	28.1	27.9	27.8	27.6	27.6	27.7	27.8	27.6

LITTLE AMERICA V
Hourly Mean Temperatures (-^{o}C)
16 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	28.8	27.9	27.3	26.7	26.4	26.2	26.1	26.0	25.9	25.2
01	29.1	27.9	27.5	27.1	26.8	26.6	26.5	26.5	26.3	25.3
02	29.4	29.1	28.7	28.2	27.9	27.6	27.5	27.4	27.2	26.2
03	29.5	28.6	28.3	27.8	27.5	27.3	27.3	27.3	27.0	26.7
04	29.5	28.4	28.3	28.0	27.7	27.5	27.5	27.5	27.5	27.1
05	29.4	28.9	29.0	28.7	28.4	28.3	28.3	28.3	28.4	28.1
06	30.1	30.7	30.8	30.5	30.3	30.2	30.1	30.2	30.2	29.8
07	30.0	30.2	30.4	30.3	30.2	30.1	30.1	30.2	30.5	30.3
08	30.5	31.7	32.0	31.8	31.6	31.5	31.5	31.7	31.9	31.7
09	31.4	32.1	32.4	32.2	32.0	31.8	31.8	31.8	32.0	31.8
10*	30.1	30.2	30.4	30.2	30.0	30.0	30.0	30.1	30.3	30.2
11*	29.6-	29.7-	29.8-	29.8-	29.5-	29.4-	29.5-	29.5-	29.9-	29.9-
12*	29.4	29.1	29.7	29.5	29.5	29.4	29.4	29.5	29.7	29.6
13	32.0	32.3	32.5	32.4	32.2	32.1	32.1	32.2	32.4	32.2
14	33.7	33.9	34.0	33.9	33.7	33.5	33.4	33.5	33.7	33.4
15*	33.4	33.7	33.8	33.6	33.4	33.3	33.2	33.3	33.6	33.2
16*	34.1	34.6	34.8	34.6	34.4	34.3	34.2	34.3	34.6	34.2
17	35.6	35.9	36.1	35.9	35.7	35.6	35.5	35.6	35.8	35.5
18	35.1	36.6	36.7	36.5	36.2	36.1	35.9	36.0	36.3	35.9
19	35.0	36.8	36.9	36.7	36.6	36.4	36.3	36.5	36.7	36.2
20	36.7	36.9	37.2	37.2	36.9	36.9	36.8	36.9	37.1	36.8
21	37.0	37.2	37.4	37.4	37.2	37.2	37.1	37.1	37.3	37.1
22	37.3	37.4	37.6	37.5	37.3	37.2	37.1	37.1	37.3	37.1
23	37.6	37.7	37.9	37.8	37.6	37.5	37.4	37.5	37.7	37.3
Number of Obs	439	439	439	439	439	438	439	438	439	438
Daily Mean	32.3	32.5	32.5	32.3	32.1	32.0	31.9	32.0	32.1	31.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
17 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	37.8	38.0	38.2	38.1	37.9	37.8	37.7	37.8	38.1	37.8
01	38.1	38.3	38.5	38.4	38.3	38.2	38.0	38.1	38.3	38.0
02	38.4	38.5	38.6	38.5	38.4	38.3	38.2	38.2	38.4	38.2
03	38.3	38.4	38.6	38.5	38.4	38.3	38.2	38.2	38.4	38.2
04	38.5	37.9	38.8	38.7	38.6	38.6	38.5	38.5	38.7	38.5
05	38.6	38.6	38.8	38.8	38.6	38.5	38.4	38.5	38.6	38.4
06	38.4	38.5	38.7	38.6	38.4	38.4	38.3	38.4	38.5	38.3
07	38.6	37.8	38.9	38.7	38.6	38.5	38.4	38.4	38.7	38.4
08	38.9	39.0	39.2	39.0	38.8	38.7	38.7	38.7	39.0	38.6
09	38.6	38.7	38.9	38.7	38.5	38.5	38.4	38.5	38.6	38.3
10*	36.7	36.9	37.0	36.9	36.7	36.7	36.6	36.7	37.0	36.9
11*	35.0	35.1	35.3	35.2	35.1	35.1	35.0	35.1	35.4	35.4
12*	34.8	34.9	35.1	35.0	34.9	34.9	34.9	35.0	35.2	35.2
13*	34.5	34.6	34.7	34.6	34.5	34.5	34.4	34.6	34.9	34.8
14	36.1	36.2	36.3	36.2	36.1	36.0	36.0	36.0	36.2	36.1
15	37.5	37.6	37.8	37.8	37.6	37.4	37.4	37.5	37.7	37.5
16	38.5	38.6	38.8	38.7	38.6	38.5	38.4	38.5	38.7	38.4
17	39.6	39.6	39.8	39.7	39.5	39.4	39.3	39.4	39.7	39.3
18	39.3	39.5	39.7	39.5	39.4	39.4	39.3	39.3	39.6	39.4
19	39.3	39.4	39.5	39.4	39.2	39.1	39.0	39.0	39.2	38.8
20	39.6	39.7	39.9	39.7	39.5	39.5	39.4	39.4	39.6	39.1
21	40.3	40.4	40.7	40.5	40.4	40.3	40.2	40.2	40.5	40.1
22	41.5	41.6	41.8	41.7	41.6	41.5	41.3	41.4	41.7	41.3
23										
Number of Obs	429	427	429	429	429	429	430	428	430	429
Daily Mean	38.1	38.2	38.4	38.3	38.1	38.1	38.0	38.0	38.3	38.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
18 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	43.4	43.6	43.8	43.6	43.5	43.5	43.4	43.4	43.7	43.4
01	45.1	45.3	45.5	45.5	45.4	45.3	45.2	45.2	45.5	45.3
02	45.2	45.5	45.7	45.6	45.5	45.4	45.3	45.4	45.7	45.4
03	45.6	45.9	46.1	46.0	45.9	45.8	45.7	45.7	46.1	45.8
04	45.7	46.0	46.2	46.1	46.0	45.9	45.8	45.9	46.2	45.9
05	45.8	46.0	46.2	46.1	46.0	45.9	45.7	45.8	46.1	45.7
06	45.9	46.1	46.3	46.2	46.1	46.0	45.9	45.9	46.2	45.8
07	45.7	46.0	46.2	46.1	46.0	45.9	45.8	45.9	46.1	45.9
08	45.5	45.8	46.1	46.0	45.9	45.8	45.7	45.7	46.1	45.8
09	46.0	46.1	46.3	46.2	46.1	46.0	45.9	45.9	46.0	45.7
10	46.8	46.1	47.2	47.1	47.0	46.8	46.7	46.6	46.7	45.9
11	47.5	47.6	47.7	47.5	47.4	47.3	47.2	47.0	47.0	45.5
12	48.1	48.3	48.4	48.4	48.3	48.1	47.7	47.1	46.5	45.0
13	48.7	48.9	48.8	48.6	48.3	47.8	47.4	46.7	45.8	44.8
14	48.8	48.7	48.4	47.8	47.5	46.7	46.2	45.3	45.3	44.2
15	47.1	47.0	47.0	46.5	46.2	45.8	45.4	44.9	45.2	44.4
16	47.4	47.3	47.3	46.8	46.5	45.7	45.2	44.7	44.7	43.6
17	44.5	44.5	44.6	44.3	44.2	43.9	43.8	43.7	43.8	43.5
18	45.6	45.6	45.7	45.6	45.4	45.2	45.2	45.1	45.2	45.0
19	46.8	46.7	46.7	46.3	46.3	46.2	46.0	45.8	46.0	45.7
20	46.6	46.6	46.6	46.4	46.3	46.0	45.9	45.6	45.8	45.6
21	46.0	46.1	46.1	45.8	45.7	45.5	45.4	45.1	45.3	45.0
22	45.4	45.3	45.3	44.8	44.7	44.3	44.2	43.9	44.1	43.9
23	44.9	44.7	44.8	44.4	44.2	43.8	43.7	43.4	43.3	42.2
Number of Obs	447	447	446	444	446	447	447	447	446	447
Daily Mean	46.2	46.2	46.4	46.1	46.0	45.8	45.6	45.4	45.5	45.0

LITTLE AMERICA V
Hourly Mean Temperatures ($-^{o}C$)
19 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	45.8	45.2	45.1	44.4	43.9	42.9	[illegible]	41.2	40.9	39.7
01	48.3	47.8	47.6	46.7	45.7	44.6	43.0	40.9	40.3	39.2
02	45.4	44.3	44.0	43.1	42.5	41.5	40.5	39.3	37.9	36.3
03	43.0	41.4	40.6	39.1	38.1	36.7	35.8	34.8	34.4	33.7
04	36.4	34.8	34.5	33.9	33.4	32.9	32.6	32.1	31.7	30.4
05	34.7	33.4	33.3	32.4	31.9	31.3	31.0	30.6	30.4	29.7
06	35.6	34.4	34.4	33.1	32.4	31.4	30.4	29.4	29.5	29.2
07	35.8	34.8	34.8	34.1	33.6	32.6	32.0	31.5	31.4	30.9
08	35.6	35.3	35.3	35.1	34.8	34.6	34.6	34.5	34.5	33.5
09	36.5	[illegible]	36.3	36.0	35.9	35.7	35.6	35.6	35.6	35.3
10	37.0	36.8	36.9	36.8	36.6	36.5	36.4	36.4	[illegible]	36.4
11	38.1-	38.1-	38.3-	38.2-	39.1-	38.1-	38.0-	38.0-	38.2-	38.0-
12	44.9	44.9	45.0	45.0	45.0	44.9	44.9	44.8	44.8	42.6
13	47.4	47.4	47.5	47.5	47.5	47.4	47.4	47.4	47.5	47.1
14	48.8	48.9	49.0	49.0	49.0	49.0	48.9	48.9	49.3	49.0
15	49.2	49.2	49.3	49.3	49.3	49.1	49.1	49.0	49.2	48.1
16	49.8	49.8	50.0	50.0	50.0	49.9	49.6	49.5	49.5	47.1
17*	50.1	50.2	50.3	50.3	50.3	50.1	49.8	49.3	48.1	43.7
18	50.0	50.0	50.1	50.1	49.9	49.6	48.9	48.2	47.0	43.5
19*	47.7	47.8	47.8	47.6	47.5	47.2	46.6	45.8	44.9	41.8
20*	41.7	41.5	41.6	41.4	41.1	40.9	40.9	40.8	40.8	40.0
21	39.1=	39.0=	39.2=	39.1=	39.0=	38.9=	39.0=	39.0=	39.1=	38.7=
22	38.7	38.6	38.7	38.6	38.5	38.5	38.5	38.6	38.8	38.6
23	37.1	37.0	37.1	37.0	36.8	36.8	36.8	36.8	37.0	36.9
Number of Obs	426	426	426	426	426	426	426	426	426	426
Daily Mean	42.5	42.1	42.1	41.7	41.4	41.0	40.6	40.2	39.9	38.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
20 August, 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	36.2	36.0	36.1	36.0	35.9	35.8	35.7	35.8	36.2	36.1
01	34.9	34.7	34.7	34.5	34.3	34.3	34.2	34.2	34.4	34.4
02	34.0	33.7	33.8	33.5	33.3	33.3	33.2	33.2	33.4	33.3
03	32.5	32.0	32.0	31.7	31.5	31.4	31.3	31.3	31.5	31.3
04	31.5	30.7	30.7	30.3	30.0	29.8	29.7	29.7	29.5	28.8
05	32.9	32.8	33.0	32.8	32.6	32.5	32.5	32.6	32.8	31.9
06	33.9	33.8	34.0	33.8	33.6	33.5	33.5	33.7	33.9	33.8
07	33.9	33.8	34.0	33.8	33.6	33.4	33.5	33.5	33.8	33.7
08	33.5	33.4	33.6	33.3	33.2	33.1	33.1	33.2	33.6	33.5
09	33.7	33.5	33.7	33.6	33.5	33.3	33.3	33.4	32.6	33.6
10	33.3	32.9	33.0	32.7	32.6	32.4	32.4	32.4	32.5	32.4
11*	33.0	32.4	32.5	32.4	32.2	32.0	32.0	32.0	32.1	32.0
12*	34.1	33.8	33.8	33.7	33.5	33.3	33.3	33.3	33.6	33.5
13	37.3	36.8	36.9	36.5	36.4	36.0	35.9	35.8	36.1	35.7
14	40.1	39.8	39.7	39.1	38.9	38.2	37.8	37.5	37.6	36.7
15*	43.0	43.2	43.4	43.0	42.7	41.1	38.8	37.6	38.0	37.1
16*	43.6	43.8	43.9	43.5	43.3	42.6	41.4	38.8	37.3	36.3
17	44.8	44.9	45.0	44.5	44.3	43.7	42.6	40.9	37.2	35.6
18	43.1	42.7	42.7	42.1	41.8	41.3	40.7	39.9	38.1	35.1
19	43.7	43.7	43.7	43.2	43.0	42.4	41.6	40.2	37.8	36.0
20	39.2	39.2	39.2	39.0	38.9	38.7	38.7	38.6	38.2	35.9
21	37.1	36.8	36.8	36.6		36.2	36.2	36.2	36.2	35.0
22	35.2	34.4	34.4	34.0		33.6	33.5	33.4	33.2	32.3
23	32.8	31.4	31.3	30.9		30.3	30.3	30.2	30.1	29.6
Number of Obs	449	449	449	449	392	449	449	449	449	449
Daily Mean	36.6	36.3	36.3	36.0	36.2	35.5	35.2	34.9	34.6	33.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
21 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	29.3▪	27.7▪	27.7▪	27.2▪		26.6▪	26.6▪	26.5▪	26.5▪	26.1▪
01	27.4	26.7	26.6	26.3	26.0	25.8	25.7	25.7	25.9	25.7
02	27.5	27.0	27.0	26.7	26.4	26.2	26.2	26.2	26.4	26.3
03	29.2	28.4	28.4	28.0	27.8	27.6	27.5	27.4	27.6	27.3
04	28.5	28.0	28.0	27.7	27.3	27.2	27.1	27.1	27.2	26.9
05	26.3	25.8	25.8	25.5	25.2	25.0	25.1	25.1	25.2	25.0
06	25.1	24.7	24.7	24.4	24.2	24.1	24.1	24.2	24.3	24.1
07	25.2	24.9	25.0	24.7	24.5	24.3	24.2	24.5	24.7	24.5
08	25.7	25.4	25.5	25.2	25.0	24.9	24.9	25.0	25.2	25.1
09	25.5	25.4	25.5	25.2	24.9	24.9	25.0	24.9	25.2	25.0
10	25.4	25.3	25.4	25.1	24.8	24.7	24.8	24.8	25.0	24.9#
11	26 2	26.0	26.1	25.8	25.6	25.5	25.6	25.6	25.8	
12*	26.9	26.6	26.7	26.6	26.3	26.2	26.2	26.2	26.4	
13	26.3	26.1	26.1	25.9	25.8	25.7	25.7	25.7	25.8	
14*	25.9	25.7	25.8	25.6	25.4	25.3	25.3	25.3	25.4	
15*	26.1	25.9	26.0	25.9	25.7	25.5	25.5	25.4	25.7	
16	27.5	27.4	27.4	27.3	27.2	27.1	27.0	27.0	27.1	
17	28.4	28.3	28.4	28.2	28.0	27.9	27.8	27.8	28.0	
18	29.9	29.8	30.0	29.8	29.6	29.6	29.5	29.5	29.7	
19	33.7	33.8	34.0	33.8	33.7	33.6	33.4	33.5	33.5	
20	33.0	33.1	33.2	33.1	33.0	32.8	32.7	32.8	32.9	
21	31.9	32.0	32.1	32.0	32.0	31.9	31.8	31 8	32.0	
22	34.1	34.1	34.3	34.3	34.2	34.1	34.0	34.0	34.0	
23										
Number of Obs	423	423	423	423	414	423	423	422	423	192
Daily Mean	28.0	27.7	27.8	27.[illegible]	27.4	27.2	27.2	27.2	27.4	25.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
23 August 1957

Hr \ cm	Sfc.	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14*	28.3-	27.5-	27.6-	27.1-	26.8-	26.6-	26.6-	26.6-	26.5-	26.4-
15*	26.7=	26.4=	26.4=	25.9=	25.7=	25.5=	25.5=	25.4=	25.3=	25.2=
16*	25.8	25.6	25.6	25.2	24.8	24.7	24.6	24.6	24.6	24.4
17*	26.2	25.9	26.0	25.6	25.3	25.2	25.1	25.1	25.5	25.1
18	26.9	26.7	26.8	26.6	26.2	26.1	26.1	26.2	26.5	26.3
19*	27.3	27.1	27.3	27.0	26.8	26.7	26.7	26.8	27.2	26.9
20*	27.8	27.5	27.7	27.4	27.2	27.1	27.1	27.2	27.5	27.2
21	28.3	28.0	28.2	27.8	27.6	27.5	27.4	27.5	27.9	27.6
22	28.6	28.3	28.5	28.2	28.0	27.9	27.9	27.9	28.2	28.0
23*	28.5	28.4	28.5	28.2	28.1	27.9	27.9	27.9	28.3	28.1
Number of Obs	167	167	167	167	167	166	167	167	167	166
Daily Mean	27.4	27.2	27.3	26.9	26.7	26.6	26.5	26.6	26.9	26.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
24 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00*	28.5	28.3	28.5	28.3	28.1	27.9	27.8	27.9	28.2	28.0
01	28.7	28.5	28.6	28.4	28.1	28.0	28.0	28.0	28.2	28.0
02*	29.4	29.2	29.2	28.9	28.6	28.4	28.4	28.4	28.4	28.3
03	29.6	29.4	29.5	29.0	28.7	28.5	28.4	28.4	28.5	28.2
04	29.4	29.3	29.3	28.8	28.5	28.2	28.2	28.2	28.3	28.2
05	29.2	29.0	29.1	28.6	28.4	28.2	28.2	28.2	28.3	28.1
06	30.1	29.9	30.0	29.4	29.1	28.9	28.8	28.9	28.9	28.5
07	30.1	29.9	30.0	29.5	29.3	29.1	29.0	29.0	29.0	28.6
08	30.4	30.3	30.3	29.7	29.4	29.2	29.2	29.1	29.1	28.7
09	32.3	32.2	32.2	31.6	31.4	31.1	30.8	30.6	30.3	29.4
10	33.6	33.6	33.6	33.0	32.6	32.2	31.7	31.5	31.0	29.7
11	33.4	33.3	33.1	32.3	31.7	31.5	31.1	30.8	30.7	30.0
12	34.6	34.5	34.6	33.7	32.7	31.6	30.6	29.6	29.7	29.4
13	38.4	38.4	38.5	38.1	37.3	35.6	33.8	31.5	30.6	30.5
14*	39.7	39.9	39.9	39.6	39.3	38.8	38.0	36.5	32.0	30.7
15*	40.3	40.5	40.5	40.3	40.1	39.8	39.4	38.8	35.2	31.3
16*	40.4	40.7	40.7	40.4	40.1	39.8	39.2	38.1	35.6	31.5
17	39.4	39.5	39.5	39.0	38.6	38.1	37.4	36.6	34.9	31.4
18	36.3	36.2	36.3	35.8	35.4	35.1	35.0	34.8	34.5	33.3
19	38.9	39.1	39.3	39.0	38.8	38.6	38.6	38.5	38.5	37.6
20	39.6	39.8	40.0	39.8	39.6	39.5	39.4	39.4	39.5	39.1
21	39.9	40.1	40.3	40.1	39.9	39.8	39.6	39.7	39.7	39.0
22	39.7	39.8	40.0	39.9	39.6	39.5	39.3	39.4	39.5	39.1
23	36.7	36.6	36.7	36.6	36.1	35.8	35.8	35.8	35.9	35.5
Number of Obs	446	445	446	446	446	446	445	446	446	445
Daily Mean	34.5	34.5	34.6	34.2	33.8	33.5	33.2	32.8	32.3	31.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
25 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	36.5	36.6	36.8	36.5	36.2	36.0	36.0	36.0	36.2	35.9
01	37.8	38.0	38.2	38.0	37.7	37.6	37.5	37.5	37.7	37.5
02	37.4	37.5	37.7	37.5	37.3	37.1	37.1	37.1	37.2	36.9
03	37.4	37.5	37.7	37.4	37.2	37.0	37.0	37.0	37.1	36.9
04	37.2	37.2	37.5	37.2	37.0	36.8	36.8	36.8	36.9	36.7
05	38.0	38.1	38.4	38.2	38.0	37.8	37.7	37.8	37.9	37.7
06	37.7	37.8	37.9	37.6	37.4	37.3	37.2	37.3	37.4	37.1
07	38.0	38.1	38.3	38.0	37.8	37.7	37.6	37.7	37.9	37.7
08	39.1	39.3	39.5	39.3	39.2	39.0	39.0	39.1	39.4	39.3
09	40.0	40.3	40.5	40.3	40.2	40.1	40.0	40.1	40.4	40.1
10	40.1	40.2	40.5	40.3	40.1	40.1	40.0	40.1	40.3	39.9
11	40.2	40.4	40.6	40.4	40.3	40.1	40.2	40.2	40.4	40.1
12	41.0	41.2	41.4	41.3	41.2	41.1	41.1	41.1	41.4	41.2
13	41.1	41.4	41.6	41.4	41.3	41.3	41.2	41.2	41.5	41.3
14	41.0	41.1	41.4	41.3	41.2	41.2	41.1	41.1	41.2	40.9
15	41.6	41.8	41.9	41.8	41.8	41.7	41.6	41.6	41.7	41.6
16	41.0	41.0	41.2	41.0	41.0	40.8	40.7	40.6	40.7	40.3
17	41.6	41.7	41.9	41.7	41.7	41.5	41.5	41.4	41.4	40.7
18	43.1	43.2	43.4	43.4	43.3	43.3	43.3	43.3	43.4	42.9
19	43.6	43.9	44.1	44.0	44.0	43.9	43.9	43.9	44.1	43.9
20	44.2	44.4	44.5	44.5	44.5	44.5	44.5	44.5	44.6	44.6
21	44.6	44.7	44.9	44.8	44.8	44.8	44.7	44.7	44.8	44.6
22	45.5	45.5	45.7	45.6	45.6	45.6	45.4	45.4	45.3	45.1
23	45.8	45.9	46.0	46.0	46.0	46.0	45.9	45.9	45.8	45.4
Number of Obs	446	446	446	446	446	446	446	446	446	446
Daily Mean	40.6	40.7	40.9	40.8	40.6	40.5	40.5	40.5	40.6	40.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
26 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	45.5	45.7	45.8	45.8	45.7	45.6	45.4	45.4	45.1	44.3
01	46.1	46.1	46.3	46.2	46.1	46.0	45.9	45.9	45.8	45.3
02	46.7	46.8	47.0	46.9	46.8	46.7	46.6	46.5	46.5	46.2
03	46.7	46.9	46.9	46.9	46.8	46.8	46.6	46.5	46.4	46.0
04	46.9	47.0	47.1	47.0	47.0	46.9	46.6	46.5	46.1	44.8
05	46.7	46.7	46.8	46.7	46.6	46.5	46.2	46.1	45.7	44.6
06	46.4	46.5	46.5	46.4	46.2	46.1	46.0	45.9	45.8	44.5
07	46.2	46.2	46.3	46.2	46.1	45.9	45.6	45.5	45.2	41.7
08	46.9	47.1	47.3	47.2	47.1	47.0	47.0	46.9	46.8	46.3
09	47.6	47.8	47.9	47.9	47.7	47.5	47.5	47.5	47.7	47.0
10*	47.1	47.1	47.2	47.2	46.9	46.5	46.5	46.3	45.7	42.2
11*	45.9	46.0	46.0	46.0	45.6	45.2	45.2	45.2	45.2	43.4
12*	46.1	46.1	46.2	46.1	45.9	45.6	45.5	45.2	44.9	41.4
13*	45.2	45.2	45.3	45.1	44.9	44.7	44.5	44.4	44.1	43.0
14	46.1	46.2	46.4	46.2	46.1	45.8	45.8	45.8	45.8	45.5
15	47.1	47.2	47.3	47.2	47.1	47.0	47.0	47.0	47.0	46.9
16	47.9	48.0	48.1	48.1	48.0	47.9	47.8	47.8	47.8	47.7
17	48.2	48.3	48.4	48.3	48.2	48.2	48.1	48.1	48.2	48.0
18	48.0	48.1	48.3	48.2	48.1	48.0	48.0	47.9	48.0	47.9
19	47.1	47.2	47.3	47.2	47.2	47.1	46.9	47.0	47.0	46.9
20	47.7	47.9	48.0	47.9	47.8	47.8	47.7	47.7	47.8	47.7
21	48.2	48.4	48.5	48.4	48.3	48.2	48.1	48.2	48.2	48.2
22	48.5	48.6	48.8	48.6	48.5	48.5	48.4	48.4	48.5	48.4
23	48.2	48.3	48.4	48.3	48.2	48.2	48.0	48.0	48.1	48.0
Number of Obs	445	445	445	445	445	445	445	445	445	443
Daily Mean	47.0	47.1	47.2	47.1	46.9	46.8	46.7	46.7	46.6	45.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
27 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	48.0	48.1	48.3	48.2	47.9	47.9	47.8	47.8	48.0	47.8
01	48.1	48.2	48.4	48.3	48.1	48.1	47.9	47.9	48.1	48.0
02	48.4	48.5	48.8	48.6	48.4	48.4	48.2	48.2	48.4	48.2
03	48.7	48.8	48.9	48.8	48.7	48.7	48.6	48.5	48.7	48.5
04	48.6	48.8	49.0	48.9	48.8	48.7	48.6	48.6	48.8	48.6
05	48.8	48.9	49.1	49.0	48.9	48.8	48.7	48.7	48.8	48.6
06	48.8	48.9	49.1	49.0	48.8	48.7	48.6	48.6	48.8	48.5
07	48.3	48.4	48.6	48.5	48.4	48.3	48.2	48.2	48.3	48.1
08	47.7	47.7	47.9	47.8	47.7	47.6	47.5	47.4	47.5	47.5
09	47.2	47.2	47.3	47.2	47.1	46.9	46.7	46.8	47.0	46.8
10	47.1	47.1	47.2	47.1	46.9	46.6	46.5	46.6	45.8	46.5
11	47.3	47.3	47.4	47.4	47.2	47.0	47.0	47.0	47.1	47.0
12	47.1	47.1	47.3	47.2	47.0	46.8	46.7	46.7	46.9	46.8
13										
14										
15*	46.7	46.6	46.7	46.4	46.3	46.0	46.0	46.0	46.1	45.8
16	45.8	45.6	45.7	45.4	45.3	45.1	45.0	44.9	45.0	44.7
17	45.2	45.0	45.0	44.7	44.6	44.4	44.3	44.3	44.4	44.1
18	45.4	45.3	45.3	45.1	44.9	44.7	44.6	44.6	44.7	44.5
19	44.1	44.0	44.0	43.8	43.6	43.4	43.4	43.4	43.5	43.4
20	39.8	39.5	39.5	39.2	39.0	38.8	38.8	38.8	39.0	38.1
21*	38.1	37.6	37.7	37.5	37.2	37.0	37.0	36.9	37.2	37.1
22*	37.0	36.4	36.6	36.3	36.0	35.7	35.7	35.7	36.1	35.9
23*	37.8	36.8	36.8	36.2	35.8	35.7	35.7	35.7	36.0+	
Number of Obs	410	410	410	410	410	410	410	410	405	389
Daily Mean	45.6	45.5	45.7	45.5	45.3	45.2	45.1	45.1	45.4	45.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
28 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00*	37.4	36.6	36.4	35.8	35.4	35.4	35.3	35.4	35.6#	
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	19	19	19	19	19	19	19	19	5	
Daily Mean	37.4	36.6	36.4	35.8	35.4	35.4	35.3	35.4	35.6	

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
29 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15	30.8	30.7	30.8	30.7	30.4	30.3	30.3	30.4	30.5	30.6
16*	29.2	28.7	28.7	28.6	28.3	28.2	28.3	28.3	28.4	28.4
17*	27.7=	26.1	25.9	25.8	25.3	25.1	25.2	25.2	25.4	25.4
18*		25.1	24.6	24.0	23.8	23.6	23.7	23.7	23.7	24.1=
19*		25.1	25.0	24.5	24.3	24.2	24.4	24.4	24.4	24.5
20		25.6	25.5	25.0	24.8	24.7	24.8	24.8	24.8	24.9
21		25.4	25.3	25.1	24.8	24.6	24.6	24.7	24.8	24.7
22		24.6=	25.2	24.9	24.7	24.6	24.6	24.6	24.7	25.5
23				27.7	27.2	26.9	26.	26.5	26.6	26.1
Number of Obs	47	139	147	165	166	166	166	166	166	159
Daily Mean	29.4	26.4	26.3	26.2	25.9	25.8	25.8	25.8	25.9	26.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
30 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00			26.3#	26.9+	26.5	26.3	26.2	26.2	26.1	24.9
01			25.[illegible]	24.5	24.3	24.2	24.3	24.3	24.4	23.8
02			23.3	22.7	22.2	22.1	22.1	22.1	22.2	22.2
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs			44	52	57	57	57	57	57	57
Daily Mean			24.5	24.5	24.3	24.2	24.2	24.2	24.2	23.6

LITTLE AMERICA V

Hourly Mean Temperatures (-°C)

31 August 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	33.1	33.3	33.5	33.3	33.1	33.1	33.2	33.2	33.4	33.3
Number of Obs	19	19	19	19	19	19	19	19	19	19
Daily Mean	33.1	33.3	33.5	33.3	33.1	33.1	33.2	33.2	33.4	33.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
1 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	32.8	32.9	33.0	32.9	32.9	32.9	32.8	32.9	33.1	33.0
01	34.9	35.0	35.0	35.0	34.9	34.8	34.7	34.7	34.8	34.7
02	37.2	37.5	37.6	37.6	37.6	37.5	37.4	37.4	37.4	37.5
03	37.4	38.1	38.3	38.3	38.2	38.1	38.1	38.1	38.3	38.4
04	35.5	35.9	36.1	36.1	36.0	36.0	35.9	36.0	36.3	36.3
05	34.1	33.9	34.0	33.9	33.8	33.8	33.7	33.7	33.9	33.9
06	33.4	33.3	33.4	33.3	33.2	33.2	33.1	33.2	33.3	33.4
07	32.3	31.9	32.0	31.8	31.6	31.5	31.5	31.5	31.8	31.7
08	31.7	31.5	31.5	31.2	31.1	31.1	31.1	31.1	31.3	31.3
09	31.7	31.3	31.3	31.0	31.0	30.9	30.9	30.9	31.1	31.1
10	31.5	31.3	31.4	31.0	31 0	31.1	31.1	31.1	31.4	31.5
11	31.7	31.7	30.7	31.5	31.4	31.4	31.4	31.0	31.7	30.9
12	33.0	33.9	34.2	33.8	33.9	33.9	34.0	34.1	34.4	34.4
13	35.1	36.4	36.5	36.5	36.5	36.4	36.3	36.3	36.5	36.6
14	36.1	37.2	37.4	37.4	37.3	37.3	37.2	37.2	37.3	37.3
15	37.0	38.1	38.2	38.3	38.2	38.1	38.0	38.0	38.1	38.1
16	37.4	38.4	38.6	38.6	38.5	38.4	38.4	38.3	38.5	38.4
17	38.0	39.0	39.1	39.3	39.1	39.0	38.9	38.9	39.1	39.0
18	37.7	38.4	38.6	38.6	38.4	38.4	38.4	38.4	38.5	38.5
19	38.6	39.6	39.7	39.8	39.7	39.5	39.5	39.4	39.6	39.6
20	38.6	39.2	39.3	39.4	39.3	39.2	39.2	39.1	39.2	39.2
21	37.6	37.8	38.0	38.0	37.9	37.9	37.9	37.9	38.0	38.0
22	37.2	37.2	37.3	37.3	37.3	37.2	37.2	37.2	37.3	37.4
23	36.3	36.3	36.3	36.3	36.3	36.2	36.1	36.1	36.2	36.2
Number of Obs	446	446	446	446	446	446	446	443	445	445
Daily Mean	35.3	35.7	35.7	35.7	35.6	35.6	35.5	35.5	35.7	35.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
2 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	36.7	36.7	36.8	36.8	36.8	36.7	36.7	36.7	36.7	36.7
01	37.7	37.8	37.8	37.9	37.6	37.5	37.4	37.4	37.5	37.5
02	38.1	38.2	38.2	38.2	37.9	37.8	37.7	37.7	37.8	37.7
03	38.3	38.3	38.3	38.3	38.0	37.8	37.7	37.7	37.8	37.4
04	38.0	37.6	37.4	37.4	36.9	36.6	36.5	36.5	36.5	35.8
05	38.8	39.0	39.1	39.1	39.0	38.8	38.7	38.7	38.8	38.7
06	39.7	40.3	40.5	40.4	40.4	40.4	40.4	40.4	40.5	40.5
07	40.5	41.4	41.6	41.6	41.5	41.4	41.4	41.4	41.5	41.5
08	40.5	40.9	41.2	40.9	40.9	40.9	40.9	40.9	41.1	41.1
09	41.1	41.8	42.1	41.2	41.6	41.6	41.6	41.8	42.0	42.0
10	42.1	42.7	43.1	42.1	42.4	42.5	42.5	42.6	43.0	42.9
11	42.5	43.3	43.6	42.3	42.9	42.9	43.0	43.1	43.4	43.1
12	42.9	43.9	44.0	43.6	43.6	43.7	43.6	43.7	43.9	43.9
13	43.1	43.8	43.9	43.8	43.3	43.7	43.6	43.6	43.7	43.5
14	43.7	44.5	44.6	44.5	44.5	44.3	44.3	44.4	44.5	44.6
15*	43.5	43.8	43.8	44.1	43.6	43.3	43.2	43.2	43.4	43.3
16*	42.0	41.8	41.7	41.6	41.1	40.9	40.7	40.7	40.8	40.7
17	41.9	41.8	41.8	41.7	41.4	41.2	41.0	41.0	41.2	41.2
18	41.8	41.8	41.9	41.8	41.5	41.3	41.2	41.2	41.4	41.4
19	41.9	41.9	41.9	41.9	41.7	41.5	41.4	41.4	41.6	41.6
20	42.2	42.3	42.3	42.3	42.1	42.1	42.0	42.0	42.1	42.1
21	42.0	42.1	42.1	42.1	41.9	41.9	41.8	41.8	41.9	41.9
22	41.7	41.7	41.7	41.7	41.3	41.3	41.2	41.2	41.2	41.3
23	42.0	42.0	42.1	42.1	42.0	41.9	41.7	41.7	41.8	41.8
Number of Obs	448	448	447	447	448	448	448	448	448	448
Daily Mean	40.9	41.2	41.3	41.1	41.0	40.9	40.8	40.9	41.0	40.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
3 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	42.2	42.3	42.4	42.4	42.2	42.2	42.0	42.0	42.1	42.2
01	42.3	42.5	42.6	42.6	42.5	42.4	42.3	42.3	42.4	42.5
02	42.8	43.2	43.3	43.3	43.2	43.1	43.1	43.1	43.2	43.3
03	43.4	43.7	43.9	43.9	43.8	43.7	43.6	43.6	43.7	43.8
04	43.9	44.2	44.3	44.3	44.2	44.2	44.1	44.1	44.2	44.3
05	44.2	44.3	44.4	44.4	44.3	44.2	44.2	44.2	44.2	44.3
06	44.0	44.0	44.1	44.2	43.9	43.9	43.8	43.8	43.9	43.9
07	43.9	44.0	44.1	44.1	44.0	43.9	43.8	43.8	43.8	43.8
08	44.2	44.3	44.4	44.1	43.9	43.9	43.9	43.9	44.1	43.9
09	43.4	43.4	43.4	43.0	42.6	42.6	42.7	42.7	43.0	42.4
10	42.5	42.6	42.8	42.5	41.9	41.9	42.0	42.0	42.2	42.1
11										
12										
13	42.3	41.9	41.8	41.3	41.1	41.0	41.0	40.9	41.2	40.7
14	42.2	41.6	41.6	41.2	40.8	40.6	40.5	40.5	40.6	40.1
15*	44.2	44.2	44.2	43.9	43.7	43.5	43.4	43.3	43.4	42.6
16*	45.0	45.1	45.2	45.1	44.9	44.7	44.6	44.6	44.7	44.3
17*	45.6	45.6	45.7	45.6	45.3	45.1	45.0	45.0	45.1	44.6
18	46.7	47.4	47.4	47.4	47.3	47.2	47.1	47.0	47.0	46.2
19	47.0	47.2	47.3	47.3	47.2	47.1	46.9	46.9	47.1	46.8
20	47.3	47.9	48.0	48.0	47.9	47.8	47.7	47.7	47.9	47.8
21	47.2	47.7	47.9	47.9	47.8	47.7	47.6	47.6	47.8	47.7
22										
23										
Number of Obs	372	372	372	372	372	372	372	372	372	372
Daily Mean	44.2	44.4	44.4	44.3	44.1	44.0	44.0	43.9	44.1	43.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
6 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19*	39.6	39.7	39.9	39.5	39.4	39.2	39.1	39.2	39.2	38.5
20*	39.9	40.1	40.1	40.0	39.9	39.8	39.7	39.7	39.7	38.9
21*	40.1	40.2	40.3	40.2	40.1	40.1	39.9	39.8	39.8	39.0
22*	40.3	40.3	40.4	40.3	40.2	40.2	40.0	39.9	39.9	38.8
23	39.9	39.9	40.1	40.0	40.0	39.8	39.7	39.7	39.7	39.2
Number of Obs	92	92	92	92	92	92	92	92	92	92
Daily Mean	40.0	40.1	40.2	40.0	39.9	39.8	39.7	39.7	39.7	38.9

LITTLE AMERICA V
Hourly Mean Temperature ([illegible])
7 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	[illegible]	400	800
00	38.3	38.3	38.5	38.4	38.3	38.3	38.[illegible]	[illegible]	38.6	38.2
01	38.0	38.0	38.2	38.0	37.9	37.8	[illegible]	[illegible]	37.8	37.4
02	39.8	40.1	40.2	40.2	40.0	39.8	39.[illegible]	[illegible]	39.6	33.3
03	41.0	41.6	41.7	41.7	41.6	41.6	41.5	41.5	41.5	41.3
04	41.2	41.5	41.8	41.7	41.7	[illegible]	41.4	41.4	[illegible]	40.7
05	41.1	41.7	41.8	41.8	41.8	41.6	41.7	41.7	41.9	41.5
06	39.3	39.5	39.6	39.6	39.6	[illegible]	39.6	39.7	40.0	40.0
07	37.8	37.5	37.5	37.4	37.3	37.3	37.2	37.2	37.5	37.4
08	36.4	36.1	36.2	36.0	36.0	35.9	35.8	35.9	36.2	36.[illegible]
09	34.9	34.3	34.2	34.1	33.9	33.8	33.8	33.8	34.0	33.4
10	33.3	32.0	32.0	31.8	31.6	31.5	31.5	31.5	31.6	31.3
11										
12										
13	29.8	28.4	28.5	28.3	28.1	28.0	28.0	28.0	28.1	28.0
14	29.[illegible]	27.8	27.8	27.7	27.5	27.4	27.4	27.3	27.4	27.3
15	29.1*	28.0*	27.9*	27.8*	27.6*	27.5*	27.4*	27.4*	27.6*	27.5*
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	259	259	259	259	259	259	259	259	259	259
Daily Mean	36.5	36.2	36.3	36.2	36.1	36.0	35.9	35.9	36.1	35.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
8 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15*	29.5+	29.7+	30.0+	29.7+	29.5+	29.4+	29.6+	29.8+	30.0+	29.8+
16*	29.8+	30.0+	30.3+	30.1+	29.8+	29.8+	29.8+	30.0+	30.2+	30.0+
17*	30.8	30.8	31.2	31.0	30.8	30.7	30.7	30.9	31.1	30.8
18	32.2	32.4	32.7	32.5	32.3	32.2	32.0	32.2	32.4	31.8
19	33.1	33.0	33.2	33.0	32.8	32.6	32.5	32.6	32.7	32.0
20	34.2	34.2	34.5	34.2	34.0	33.9	33.7	33.8	33.9	33.0
21	34.8	34.6	34.8	34.5	34.4	34.2	34.0	34.1	34.1	32.1
22	34.6	34.2	34.4	34.1	33.9	33.7	33.6	33.7	33.8	32.2
23	34.9	34.8	35.0	34.7	34.5	34.4	34.3	34.4	34.6	33.2
Number of Obs	160	160	160	160	160	160	160	160	160	160
Daily Mean	32.8	32.8	33.0	32.8	32.5	32.4	32.4	32.5	32.6	31.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
9 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	34.5	34.2	34.4	34.1	34.0	33.7	33.7	33.8	34.0	32.7
01	34.7	34.3	34.5	34.2	34.0	33.9	33.5	33.9	34.1	32.9
02	35.4	35.3	35.5	35.2	35.0	34.8	34.8	34.9	35.0	34.1
03	35.8	35.6	35.8	35.5	35.2	35.1	35.0	35.1	35.3	34.3
04	36.3	36.1	36.3	36.0	35.8	35.6	35.5	35.6	35.8	34.8
05	36.9	36.7	36.9	36.6	36.4	36.2	36.1	36.3	36.4	35.6
06	37.4	37.3	37.5	37.2	36.9	36.8	36.7	36.7	36.8	36.1
07	37.8	37.8	38.1	37.7	37.5	37.3	37.2	37.3	37.4	36.6
08	38.2	38.2	38.8	38.2	37.9	37.7	37.7	37.9	37.9	37.0
09	38.3	37.3	38.3	37.3	37.0	36.8	36.9	37.0	37.2	36.4
10	38.0	36.3	37.5	36.3	36.0	35.9	35.8	36.1	36.3	35.5
11	37.6	35.7	37.1	35.6	35.4	35.3	35.2	35.4	35.5	34.7
12	37.4	36.0	37.2	35.9	35.8	35.7	35.6	35.6	35.7	34.9
13*	38.0	37.5	38.0	37.4	37.2	37.0	37.0	37.0	36.9	35.7
14	38.8	38.8	39.0	38.6	38.5	38.3	38.1	38.2	38.2	36.5
15*	39.5	39.9	40.1	39.8	39.7	39.5	39.5	39.6	39.7	38.6
16*	40.0	40.3	40.5	40.2	40.1	40.0	39.9	40.0	40.1	39.1
17*	40.4	40.7	41.0	40.6	40.5	40.3	40.2	40.3	40.5	39.7
18	41.2	42.1	42.3	42.1	41.9	41.8	41.7	41.7	41.5	39.8
19	41.4	41.9	42.0	41.9	41.7	41.6	41.4	41.4	41.3	40.3
20	41.6	42.0	42.2	42.0	41.8	41.7	41.5	41.5	41.7	40.6
21	42.0	42.5	42.6	42.5	42.4	42.3	42.0	42.0	42.0	41.2
22	42.5	42.7	42.9	42.7	42.4	42.3	42.0	42.1	42.1	40.4
23	43.0	43.4	43.7	43.4	43.2	43.0	42.9	42.8	42.7	40.3
Number of Obs	446	446	446	446	446	446	446	446	446	446
Daily Mean	38.6	38.5	38.8	38.4	38.2	38.0	37.9	38.0	38.1	37.0

LITTLE AMERICA V

Hourly Mean Temperatures (-°C)

10 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	43.1	43.2	43.4	43.1	43.0	42.8	42.6	42.6	42.6	40.5
01	43.0	43.0	43.2	42.9	42.7	42.5	42.4	42.5	42.5	41.7
02	43.2	43.3	43.5	43.3	43.1	42.9	42.8	42.8	43.0	42.5
03	43.5	43.9	44.1	43.8	43.7	43.5	43.4	43.5	43.6	43.0
04	43.6	43.9	44.1	43.8	43.7	43.5	43.4	43.5	43.6	43.1
05	43.6	43.9	44.0	43.7	43.6	43.4	43.3	43.3	43.4	42.8
06	43.8	43.8	44.1	43.7	43.3	43.0	43.0	43.2	43.2	42.2
07	43.6	42.8	44.0	42.8	42.0	41.9	42.0	42.2	41.8	41.1
08	43.1	40.8	43.9	40.9	40.6	40.2	40.5	40.4	40.2	39.6
09	43.4	40.1	42.9	40.3	39.8	39.7	39.8	39.8	39.5	37.5
10	43.4	39.0	41.9	39.0	38.5	38.5	38.4	38.3	37.5	33.8
11	42.7	38.6	42.5	38.7	38.6	38.4	38.5	38.4	38.0	35.5
12	42.2	39.2	42.5	39.3	39.2	38.9	38.8	38.7	38.7	36.8
13										
14										
15	39.6	37.8	37.9	37.1	36.6	35.8	35.1	34.8	34.3	32.8
16	37.3	35.5	35.5	34.7	34.3	33.6	33.3	33.1	32.7	31.5
17	36.0	34.0	34.2	33.5	33.1	32.5	32.2	31.6	30.9	28.7
18	38.6	37.3	37.6	36.6	35.8	34.5	33.4	32.6	31.7	29.9
19	39.3	38.1	38.1	37.4	36.4	34.5	32.9	31.8	31.0	27.7
20	38.2	37.4	36.8	36.7	36.0	34.9	33.0	29.5	28.4	25.5
21	33.9	33.0	32.8	32.3	32.0	31.7	31.7	31.2	29.9	27.3
22	32.1	31.1	30.9	30.4	30.0	29.9	29.9	29.3	27.1	24.8
23	31.1	29.9	29.7	29.3	28.9	28.5	28.3	27.1	24.6	22.6
Number of Obs	408	408	408	408	408	408	408	408	408	408
Daily Mean	40.4	39.1	40.0	38.8	38.5	38.0	37.7	37.3	36.8	35.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
11 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	30.2	28.1	27.9	27.3	26.9	26.3	25.8	24.8	23.8	22.8
01	29.2	27.5	27.7	27.3	26.9	26.7	26.6	26.5	26.5	25.9
02	28.5	27.6	27.7	27.3	27.1	26.8	26.9	26.9	26.9	26.7
03	28.7	27.9	28.0	27.7	27.5	27.2	27.3	27.3	27.4	27.2
04	29.3	28.5	28.7	28.4	28.2	28.1	28.1	28.2	28.4	28.2
05	29.5	28.7	28.9	28.7	28.4	28.3	28.3	28.4	28.6	28.4
06	29.7	29.2	29.3	29.1	28.9	28.7	28.8	28.9	29.1	29.0
07	29.7	29.3	29.4	29.3	29.1	28.9	29.0	29.1	29.3	29.3
08	29.8	29.8	29.9	29.8	29.6	29.5	29.6	29.6	29.9	29.9
09	29.8	29.8	30.0	29.9	29.8	29.6	29.7	29.8	30.0	30.0
10	29.8	29.8	30.0	29.8	29.7	29.5	29.6	29.6	29.9	29.9
11	29.7	29.6	29.9	29.7	29.6	29.4	29.5	29.5	29.8	29.8
12	29.9	29.9	30.1	30.0	29.9	29.8	29.9	29.9	30.2	30.2
13	29.9	29.9	30.1	30.0	29.8	29.7	29.8	29.8	30.1	30.0
14	30.0	29.7	29.9	29.5	29.4	29.3	29.4	29.4	29.7	29.5
15	30.1	29.8	30.0	29.8	29.6	29.5	29.6	29.6	29.9	28.2
16*	30.1	29.4	29.6	29.3	29.0	28.9	28.9	29.0	28.9	28.1
17*	29.9	29.2	29.4	29.1	28.8	28.7	28.7	28.8	29.0	28.3
18*	29.4	28.4	28.5	28.3	28.0	27.9	27.9	28.0	28.0	27.0
19*	28.6	27.4	27.5	27.3	27.0	26.9	26.9	27.1	27.2	26.4
20*	28.1	27.3	27.3	27.1	26.8	26.7	26.7	26.8	27.0	26.0
21										
22										
23										
Number of Obs	393	393	393	393	393	393	393	393	393	393
Daily Mean	29.5	28.9	29.0	28.8	28.6	28.4	28.4	28.4	28.5	28.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
12 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17*	29.9	29.9	30.1	29.7	29.7	29.5	29.6	29.7	29.9	29.9
18*	30.0	30.1	30.3	30.0	29.9	29.8	29.9	29.9	30.2	30.2
19*	30.3	30.6	30.8	30.6	30.4	30.3	30.4	30.5	30.8	30.6
20	31.9	32.5	32.7	32.5	32.3	32.1	32.1	32.2	32.4	32.1
21	34.2	35.4	35.6	35.3	35.1	34.9	34.9	34.9	35.1	34.8
22	35.4	36.9	37.1	36.9	36.7	36.6	35.5	36.6	36.8	36.5
23	36.8+	38.5+	38.8+	38.5+	38.3+	38.2+	38.1+	38.2+	38.5+	38.0+
Number of Obs	125	125	125	125	125	125	125	125	125	125
Daily Mean	32.6	33.3	33.5	33.2	33.1	33.0	32.9	33.0	33.3	33.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
13 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	38.0	39.6	39.8	39.5	39.3	39.2	39.0	39.2	39.5	38.4
01	38.4	39.5	39.7	39.4	39.1	39.0	38.9	39.0	39.3	38.3
02	38.8	39.8	40.0	39.7	39.5	39.3	39.2	39.3	39.6	38.6
03	39.4	40.1	40.4	40.0	39.8	39.7	39.5	39.7	39.9	38.8
04	39.4	39.7	39.9	39.5	39.4	39.1	38.9	39.0	39.1	37.8
05	40.0	41.0	41.2	40.9	40.7	40.6	40.4	40.6	40.7	39.4
06	40.6	41.7	41.8	41.6	41.2	41.2	41.1	41.2	41.4	39.8
07	41.0	41.7	42.1	41.7	41.4	41.6	41.3	41.6	41.8	41.1
08	41.2	41.6	41.5	41.5	41.4	41.7	41.3	41.7	41.7	41.7
09	41.2	40.6	40.5	40.5	40.3	40.7	40.3	40.6	40.7	39.0
10	40.7	39.1	38.9	38.8	38.6	39.0	38.8	38.8	39.5	37.[illegible]
11										
12										
13										
14										
15*	42.9	43.3	43.4	43.0	42.7	42.5	42.3	42.1	41.8	40.5
16*	43.4	44.0	44.1	43.9	43.7	43.6	43.5	43.4	43.3	42.2
17	44.0	44.8	45.0	44.8	44.6	44.5	44.4	44.3	44.3	43.1
18	44.4	45.0	45.1	44.9	44.8	44.6	44.5	44.5	44.5	43.6
19	45.0	46.0	46.1	46.0	45.9	45.8	45.7	45.7	45.9	45.5
20*	45.3	46.2	46.2	46.1	46.0	45.8	45.8	45.8	45.9	44.9
21*	45.5	46.2	46.4	46.2	46.1	45.9	45.9	45.9	46.0	45.2
22*	45.6	46.3	46.4	46.3	46.2	46.0	46.0	46.0	46.1	45.3
23	45.5	46.1	46.2	46.0	45.9	45.8	45.7	45.7	45.8	45.3
Number of Obs	371	371	370	370	371	371	371	371	371	371
Daily Mean	42.0	42.6	42.7	42.5	42.3	42.3	42.1	42.2	42.3	41.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
14 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	45.5	46.0	46.1	45.9	45.9	45.7	45.6	45.6	45.7	45.2
01	45.5	46.1	46.3	46.1	46.0	45.9	45.8	45.8	45.8	45.0
02	45.6	46.1	46.2	46.0	46.0	45.8	45.7	45.7	45.8	45.2
03	45.1	45.3	45.4	45.1	45.0	44.9	44.7	44.7	44.8	44.3
04	44.8	44.8	44.9	44.6	44.5	44.3	44.2	44.2	44.3	43.7
05	44.7	44.7	44.8	44.5	44.3	44.1	44.0	44.0	44.1	43.6
06	44.3	44.0	44.0	43.8	43.6	43.4	43.2	43.3	43.4	43.0
07	43.8	43.5	43.7	43.3	43.1	43.0	42.7	42.8	43.1	42.6
08	43.2	42.6	42.4	42.1	42.0	42.0	41.8	41.8	42.3	41.6
09	43.2	41.5	41.2	40.8	40.8	40.8	40.8	40.7	41.1	39.8
10	42.2#	39.2#	39.0#	38.6#	38.6#	38.5#	38.3#	38.2#	38.5#	37.2#
11										
12										
13										
14	34.4=	33.1=	33.5=	33.1=	32.9=	32.8=	32.9=	33.1=	33.4=	33.0=
15*	33.3	31.8	32.1	31.7	31.5	31.3	31.5	31.7	31.9	31.3
16*	32.1	30.0	30.2	29.8	29.6	29.4	29.5	29.5	29.7	28.9
17	31.3	29.2	29.3	28.9	28.7	28.5	28.6	28.6	28.8	28.0
18*	30.6	28.2	28.2	27.9	27.7	27.4	27.4	27.4	27.4	26.0
19	30.1	27.5	27.5	27.2	26.8	26.6	26.4	26.3	25.6	22.1
20	28.2	23.9	23.9	23.3	22.8	22.3	21.8	21.6	21.2	17.6
21	24.8	21.4	21.5	21.1	20.7	20.2	19.9	19.9	19.9	20.0
22	23.7	20.9	21.0	20.7	20.3	19.9	19.8	19.8	19.9	20.7
23	23.8	21.1	21.2	20.9	20.5	20.1	19.9	20.0	20.0	21.0
Number of Obs	370	370	370	369	370	370	370	370	370	370
Daily Mean	37.0	35.7	35.7	35.4	35.2	35.0	34.9	34.9	35.0	34.2

LITTLE AMERICA V

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
15 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	23.2	20.9	21.0	20.7	20.3	20.1	19.9	[illegible]	20.0	20.4
01	22.9	21.3	21.5	21.1	20.8	20.6	20.4	20.5	20.6	20.5
02	24.0	21.9	22.1	21.8	21.5	21.2	21.0	21.1	21.2	20.5
03	24.5	22.8	22.8	22.5	22.2	21.9	21.8	21.8	21.9	21.3
04	25.0	23.4	23.3	23.0	22.7	[illegible]	22.4	22.4	22.4	21.8
05	24.5	22.8	22.9	22.6	22.3	22.0	22.0	22.0	22.1	21.6
06	24.3	23.3	23.4	23.0	22.8	22.5	22.5	22.6	22.7	22.3
07	26.1	25.2	25.0	24.6	24.5	24.3	24.3	24.3	24.5	23.9
08	28.0	26.9	26.4	26.0	25.9	25.9	25.8	25.7	25.7	25.0
09	28.0	26.4	26.1	25.8	25.6	25.4	25.2	25.2	25.2	24.6
10	25.7	24.9	25.0	24.6	24.4	24.1	24.1	24.1	24.2	23.9
11	24.9	24.0	24.3	23.9	23.6	23.4	23.5	23.5	23.6	23.4
12	26.3	25.5	25.9	25.5	25.3	25.2	25.3	25.3	25.5	25.3
13	26.9	25.9	26.2	25.8	25.6	25.5	25.6	25.6	25.8	25.6
14	27.1	26.1	26.2	25.9	25.7	25.6	25.6	25.7	25.8	25.6
15	27.1	26.2	26.1	25.9	25.7	25.6	25.5	25.6	25.7	25.4
16	27.2	26.1	26.1	25.9	25.7	25.6	25.6	25.6	25.7	25.5
17	27.2	26.3	26.3	26.0	25.7	25.7	25.7	25.7	25.7	25.6
18	26.9	25.2	25.1	24.6	24.3	24.1	24.1	24.1	24.2	23.7
19	26.9	25.3	25.0	24.8	24.5	24.3	24.3	24.3	24.3	23.9
20	26.8	24.8	24.4	24.0	23.7	23.5	23.5	23.5	23.4	23.1
21	26.6	24.5	24.1	23.7	23.4	23.3	23.2	23.2	23.1	22.8
22	26.0	24.7	24.6	24.3	24.0	23.8	23.8	23.9	23.8	22.8
23	26.1	24.9	24.8	24.6	24.2	24.2	24.2	24.2	24.2	22.4
Number of Obs	447	447	447	447	447	446	447	447	447	447
Daily Mean	25.9	24.6	24.5	24.2	23.9	23.8	23.7	23.7	23.8	23.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
16 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	26.5	24.8	24.7	24.5	24.2	24.0	24.0	24.1	24.1	[illegible]
01	26.6	24.9	24.8	24.6	24.3	24.2	24.2	24.3	24.3	[illegible]
02	26.8	25.4	25.4	[illegible]	25.0	24.9	24.9	25.1	25.1	23.9
03	[illegible]	[illegible]	25.5	[illegible]	25.1	25.0	25.0	25.1	25.2	24.1
04	27.1	25.7	25.5	25.2	25.0	24.9	25.0	[illegible]	25.1	24.0
05	27.1	25.7	25.4	25.1	24.9	24.7	[illegible]	24.9	25.0	23.8
06	27.2	25.2	25.2	24.8	[illegible]	[illegible]	[illegible]	24.6	24.7	23.6
07	27.1	25.5	25.5	[illegible]			[illegible]	25.1	25.2	24.2
03	27.4	27.4	[illegible]	27.2	[illegible]	[illegible]	27.0	27.0	27.0	25.6
09	27.6	26.4	26.2	25.9	25.9	[illegible]	25.9	26.1	26.3	25.2
10	27.9	27.7	27.8	27.8	27.8	27.8	28.1	28.0	28.3	27.5
11	30.5	28.9	29.4	29.7	29.9	29.9	30.1	30.0	30.2	29.2
12*	32.2	31.0	31.3	[illegible]	31.5	31.4	31.5	31.4	31.6	31.0
13*	33.6	33.5	33.5	33.0	33.1	33.0	33.1	33.0	33.2	32.4
14	35.2	35.5	35.6	[illegible]	35.5	35.4	35.3	35.2	35.4	34.7
15	36.1	36.2	36.5	36.4	36.3	36.2	36.1	36.2	36.1	35.5
16	36.9	37.0	37.3	37.1	37.0	36.8	36.7	36.8	36.8	35.5
17	37.2	37.2	37.6	37.4	37.2	37.1	36.8	37.0	37.1	34.9
18	37.0	37.5	37.9	37.6	37.4	37.3	37.1	37.2	37.3	35.7
19	37.3	37.9	38.5	38.2	38.0	37.8	37.6	37.7	37.7	36.7
20	37.9	38.5	38.9	38.6	38.5	38.4	38.2	38.4	38.5	38.8
21	38.6	38.9	39.3	39.0	39.0	38.8	38.6	38.7	38.8	39.2
22	39.0	39.1	39.8	39.5	39.4	39.2	39.0	39.1	39.2	38.7
23										
Number of Obs	429	428	429	429	428	429	428	429	429	429
Daily Mean	31.7	31.1	31.3	31.0	31.0	30.8	30.8	30.9	31.0	30.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
17 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10*	40.0+	37.4+	37.8+	37.7+	37.8+	37.6+	37.7+	37.5+	37.9+	36.7+
11*	40.4	39.9	39.5	38.1	38.4	38.3	38.1	38.1	38.3	38.2
12*	41.4+	40.7+	40.4+	39.7+	39.6+	39.6+	39.5+	39.5+	39.5+	39.4+
13										
14	43.4-	42.8-	43.0-	42.5-	42.6-	42.4-	42.2-	42.8-	42.6-	42.0-
15	43.6	43.8	43.8	43.2	43.3	43.2	43.0	43.0	43.3	42.5
16*	44.3	44.6	44.8	44.8	44.8	44.6	44.5	44.5	44.8	44.4
17*	44.8	45.0	45.3	45.2	45.3	45.0	44.9	45.0	45.2	44.8
18	43.1	43.0	43.0	42.9	42.7	42.5	42.3	42.4	42.6	42.0
19	42.2	42.2	42.4	42.3	42.2	42.1	42.1	42.2	42.2	42.0
20	42.1	42.3	42.5	42.5	42.6	42.5	42.5	42.8	42.8	42.7
21	41.7	41.8	42.3	42.1	42.1	42.0	41.9	42.2	42.2	41.8
22	41.3	41.4	41.9	41.8	41.8	41.7	41.6	41.8	41.8	41.5
23	40.6	40.7	41.2	41.1	41.1	41.0	40.9	41.2	41.2	40.9
Number of Obs	221	221	221	221	220	221	221	221	221	221
Daily Mean	42.2	42.1	42.2	41.9	42.0	41.8	41.7	41.9	42.0	41.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
18 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	40.5	40.5	41.0	40.8	40.8	40.6	40.5	40.9	40.9	40.7
01	40.2	40.2	41.1	40.6	40.5	40.3	40.2	40.5	40.7	40.3
02	39.2	39.0	39.4	39.0	38.9	38.8	38.7	39.0	39.1	38.7
03	38.5	38.3	38.3	38.2	38.1	37.9	37.9	38.2	38.3	37.9
04	38.5	38.4	38.4	38.3	36.3	38.2	38.1	38.4	38.5	38.2
05	38.7	38.8	39.0	38.9	38.9	38.8	38.7	38.9	39.1	38.6
06	38.2	37.9	38.0	37.9	37.8	37.7	37.6	37.7	37.6	35.9
07	38.0	37.7	37.2	35.9	37.0	36.8	36.6	36.6	36.2	34.3
08	38.0	37.7	37.5	36.7	36.8	36.9	36.7	37.0	37.0	35.4
09	37.8+	37.0+	36.4+	35.8+	35.6+	35.8+	35.5+	35.8+	36.1+	34.2+
10										
11										
12										
13										
14										
15										
16										
17										
18										
19	32.9	30.5	30.2	29.9	29.8	29.0	28.5	28.2	27.7	25.3
20	32.8	30.6	30.2	29.7	29.4	28.6	28.1	27.3	27.3	25.8
21	31.5	29.2	29.1	28.8	28.5	28.0	27.7	27.4	26.9	25.3
22	31.4	29.4	29.2	28.8	28.4	27.9	27.4	27.1	26.7	25.4
23	31.8	29.9	29.6	29.1	28.5	28.0	27.4	27.0	26.7	25.5
Number of Obs	274	274	272	274	274	274	274	274	273	274
Daily Mean	36.5	35.7	35.6	35.3	35.1	34.9	34.6	34.7	34.5	33.5

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
19 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	32.8	30.9	31.1	30.5	30.1	29.3	28.3	27.2	26.7	25.7
01	32.7	31.7	31.5	31.2	31.0	30.8	30.5	30.1	28.5	26.3
02	31.4	30.3	29.9	29.5	29.6	29.5	29.5	29.7	29.6	28.4
03	31.5	30.4	30.1	29.8	29.8	29.7	29.6	29.8	29.8	29.3
04	32.2	31.6	31.6	31.3	31.1	31.0	30.9	30.9	30.8	29.9
05	31.4	30.9	30.9	30.7	30.5	30.4	30.4	30.5	30.5	29.7
06	30.3	30.0	29.7	29.4	29.5	29.4	29.3	29.5	29.6	29.3
07	30.6	30.3	29.6	29.6	29.7	29.6	29.7	29.8	29.9	29.7
08	31.0	30.8	30.0	29.8	30.0	29.8	30.0	30.0	30.1	30.0
09	31.7	31.6	31.6	30.8	30.7	30.5	30.7	30.6	30.8	30.4
10	32.1	31.9	31.6	31.0	30.7	30.5	30.8	30.7	30.7	30.2
11	32.2	31.6	31.2	30.4	30.2	29.9	30.1	30.0	30.0	29.4
12	32.2	31.7	31.4	31.1	30.9	30.7	30.8	30.9	30.9	30.6
13	32.3	31.7	31.6	30.6	30.5	30.2	30.2	30.2	30.2	30.0
14	32.7	32.7	32.7	32.0	31.8	31.6	31.6	31.5	31.5	31.0
15	33.5	33.5	33.7	33.4	33.3	33.2	33.1	33.1	33.0	32.4
16	33.3	33.3	33.5	33.3	33.1	33.0	32.9	32.8	32.8	32.6
17	34.7	34.8	35.0	34.9	34.8	34.7	34.7	34.7	34.7	34.5
18	35.8	35.9	36.2	36.2	36.2	36.1	36.1	36.1	36.1	36.0
19	36.4	36.5	36.9	36.8	37.1	36.9	36.8	36.8	36.8	36.5
20	37.0	37.0	37.3	37.2	37.4	37.3	37.3	37.3	37.3	37.1
21	35.9	35.8	36.5	36.3	36.3	36.1	36.1	36.2	36.2	35.9
22	34.1	33.7	33.6	33.4	33.3	33.2	33.2	33.3	33.3	33.3
23	34.2	33.7	33.7	33.3	33.1	33.0	33.0	33.1	33.1	32.9
Number of Obs	446	446	444	446	443	446	442	445	444	446
Daily Mean	33.0	32.6	32.5	32.2	32.1	31.9	31.9	31.9	31.8	31.3

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
20 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	32.9	32.0	32.0	31.7	31.6	31.4	31.3	31.5	31.5	31.2
01	30.2	28.9	28.7	28.5	28.3	28.1	28.1	28.3	28.2	27.8
02	29.3	28.3	28.2	27.9	27.7	27.6	27.6	27.6	27.6	27.4
03	28.7	27.4	27.2	27.1	26.8	26.7	26.6	26.6	26.5	26.2
04	28.0	26.7	26.6	26.4	26.1	25.9	25.8	25.8	25.7	25.6
05	27.4	25.9	25.9	25.7	25.4	25.2	25.1	25.1	25.0	24.6
06	26.8	25.6	25.5	25.2	25.0	24.9	24.8	24.8	24.8	24.4
07	26.6	25.6	25.6	25.3	25.1	25.0	25.0	25.0	25.0	24.9
08	26.7	26.1	25.7	25.6	25.5	25.5	25.4	25.4	25.4	25.3
09	27.3	26.9	26.2	26.2	26.2	26.1	26.0	26.0	26.0	26.0
10*	26.7	26.4	26.0	26.0	25.8	25.7	25.6	25.5	25.5	25.2
11*	26.7	26.5	26.0	25.9	25.8	25.7	25.7	25.6	25.6	25.5
12	27.6	27.3	26.7	26.7	26.6	26.5	26.4	26.4	26.4	26.4
13	28.2	27.7	27.7	27.3	27.2	27.0	26.9	26.9	26.9	26.8
14	28.5	28.0	27.9	27.6	27.3	27.1	27.1	27.1	27.1	27.0
15	29.3	28.7	28.8	28.5	28.3	28.1	28.1	28.1	28.1	28.0
16	30.6	30.6	31.0	30.5	30.5	30.4	30.3	30.3	30.3	30.0
17	31.7	31.7	31.6	31.3	31.3	31.2	31.2	31.2	31.2	30.7
18	33.2	33.3	33.5	33.6	33.6	33.6	33.6	33.6	33.6	32.9
19	33.4	33.5	33.7	33.8	33.7	33.6	33.6	33.6	33.6	33.3
20	34.0	34.0	34.1	34.1	34.0	33.8	33.6	33.5	33.3	31.9
21	34.5	[illegible]	34.5	34.4	34.4	34.2	34.1	34.1	33.9	33.0
22	35.7	35.6	35.8	35.6	35.5	35.3	34.9	34.7	34.2	31.8
23	36.9	36.5	36.6	36.3	36.0	35.4	34.5	34.0	33.0	31.4
Number of Obs	446	444	446	443	446	445	446	445	446	445
Daily Mean	30.0	29.5	29.4	29.2	29.1	28.9	28.9	28.8	28.7	28.2

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
21 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	37.5	37.2	37.3	36.9	35.5	35.5	34.1	33.6	33.0	32.0
01	37.8	37.1	37.0	36.8	36.3	35.3	33.8	33.1	32.1	31.1
02	38.1	37.6	37.5	37.0	36.6	35.2	34.1	33.4	32.9	32.0
03	38.6	38.2	38.0	37.7	37.3	36.0	34.8	34.5	33.7	32.2
04	39.0	38.3	38.2	37.7	36.9	35.1	33.9	33.7	33.6	32.5
05	38.0	37.2	37.0	36.5	35.9	34.7	33.9	33.3	33.0	32.0
06	37.5	37.4	36.8	36.7	36.5	36.1	35.2	34.3	33.3	33.1
07	37.1	36.6	35.6	35.2	35.3	35.2	35.0	35.0	35.0	34.5
08	36.1	36.0	35.2	34.9	34.9	34.9	34.9	35.0	35.0	34.3
09	34.7	34.6	34.0	33.8	33.9	33.9	34.0	34.1	34.4	34.0
10	34.6	34.4	33.7	33.6	33.9	34.0	34.0	34.1	34.7	34.6
11	34.7	34.6	34.2	34.3	34.3	34.4	34.4	34.5	35.0	34.7
12	34.9	35.7	35.7	33.9	34.1	34.3	34.0	34.4	35.1	33.5
13	35.8	36.3	36.7	34.7	34.8	34.8	34.5	34.6	34.7	32.8
14	36.2	36.0	36.4	34.6	34.6	34.4	34.2	34.2	34.4	33.2
15	38.0	37.8	37.7	37.1	36.9	36.7	36.6	36.6	36.6	35.7
16	38.7	38.5	38.5	38.1	37.9	37.8	37.6	37.7	37.8	37.5
17	40.5	40.4	40.3	40.2	40.1	40.0	39.9	39.9	40.2	39.9
18	41.6	41.6	41.6	41.6	41.5	41.4	41.2	41.3	41.5	40.1
19	41.7	41.7	41.8	41.6	41.5	41.4	41.3	41.3	41.5	41.2
20	41.6	41.6	41.9	41.6	41.4	41.3	41.2	41.2	41.4	41.0
21										
22										
23										
Number of Obs	391	391	391	391	391	391	391	391	391	391
Daily Mean	37.7	37.6	37.4	36.9	36.7	36.3	35.8	35.7	35.7	34.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
22 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13*	38.8+	38.3+	38.0+	37.7+	37.4+	37.4+	37.3+	37.4+	37.6+	37.0+
14*	38.9	38.7	38.6	38.0	37.8	37.7	37.6	37.7	37.9	37.3
15*	39.6	39.5	39.5	39.0	38.9	38.7	38.6	38.7	38.9	38.4
16*	40.2	40.2	40.4	39.9	39.7	39.5	39.4	39.4	39.6	39.1
17*	40.8	40.7	40.8	40.6	40.4	40.2	40.1	40.1	40.3	39.9
18	41.2	41.2	41.4	41.1	41.0	40.8	40.7	40.7	40.8	40.5
19	41.0	41.1	41.5	41.2	41.1	40.9	40.8	40.8	40.9	40.5
20	39.4	39.4	39.6	39.6	39.5	39.3	39.3	39.3	39.3	38.9
21	38.1	38.0	38.0	37.8	37.6	37.3	37.2	37.2	37.1	36.6
22	39.1	39.1	39.0	38.9	38.8	38.6	38.4	38.4	38.3	37.4
23	39.8	39.9	40.0	39.8	39.6	39.4	39.3	39.2	39.2	38.7
Number of Obs	202	202	202	202	202	202	202	202	202	202
Daily Mean	39	39.7	39.8	39.5	39.3	39.1	39.0	39.0	39.1	38.6

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
23 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	40.4	40.5	40.8	40.5	40.3	40.2	40.0	40.0	40.1	39.7
01	40.4	40.4	40.6	40.5	40.2	40.0	39.8	39.8	39.8	38.7
02	39.2	38.9	38.8	38.4	38.2	37.9	37.7	37.5	37.1	35.4
03	39.5	39.4	39.3	39.1	38.8	38.6	38.3	38.2	38.0	36.3
04	39.1	38.8	38.7	38.5	38.2	37.9	37.6	37.4	36.8	34.7
05	39.2	39.1	38.7	38.7	38.6	38.5	38.4	38.4	38.2	36.9
06	38.9	38.5	38.3	38.2	38.1	38.1	38.0	37.7	37.6	35.3
07	38.7	38.4	37.9	37.7	37.8	37.8	37.8	37.7	37.8	37.0
08	37.1	36.8	36.7	36.3	36.2	36.0	36.0	35.4	35.5	30.7
09	36.9	36.5	36.1	35.6	35.4	35.1	35.1	34.3	34.4	30.1
10										
11										
12*	38.3=	36.4=	35.7-	34.8=	34.4=	34.3=	34.4=	34.3=	34.8=	33.4=
13	38.5	36.7	36.1	35.1	34.8	34.7	34.6	34.4	33.7	27.9
14*	38.5	37.8	37.1	36.2	36.2	36.1	35.8	35.7	34.5	27.7
15*	39.8	39.4	39.0	38.2	38.0	37.6	36.9	36.1	29.5	26.6
16*	39.8	39.0	38.8	38.3	37.7	36.8	35.5	32.0	28.3	26.2
17*	38.9	38.0	37.9	37.7	37.3	36.6	35.8	33.5	26.7	24.9
18*	36.5	34.7	34.3	33.7	33.1	32.5	31.9	30.4	27.6	23.9
19	38.5	37.2	35.4	35.5	33.4	30.2	29.7	28.3	27.0	23.6
20*	36.5	36.1	35.9	35.5	35.0	34.1	33.5	30.3	27.0	24.1
21	33	32.[illegible]	32.2	31.9	31.3	30.5	30.0	27.9	25.0	22.8
22	31.0	30.9	30.6	30.3	29.8	29.3	28.6	27.2	24.9	22.9
23	30.9	30.2	30.0	29.8	29.4	29.1	29.0	27.7	25.1	23.1
Number of Obs	400	400	400	400	400	400	400	400	400	399
Daily Mean	37.7	37.1	36.8	36.4	36.0	35.6	35.2	34.3	32.7	30.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
24 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	30.0+	29.1+	28.8+	28.3+	27.7+	27.2+	26.6+	25.4+	24.2+	22.6+
01	28.6	27.3	26.8	26.2	25.3	24.3	23.6	22.7	22.0	21.1
02	27.8	26.3	26.0	25.5	24.7	23.7	22.9	22.4	21.7	20.8
03	27.8	27.0	26.6	26.1	25.4	24.8	24.4	23.4	22.7	21.7
04	27.7	26.7	26.4	26.1	25.4	24.6	24.1	23.3	22.3	21.2
05	26.9	26.0	25.5	25.1	24.9	24.1	23.7	22.4	21.5	21.5
06	25.8	24.5	24.1	23.4	22.8	22.1	21.8	21.2	20.7	20.2
07	24.8	23.6	23.0	22.5	22.0	21.7	21.6	21.3	21.1	20.4
08	25.2	25.0	23.9	23.9	23.7	23.5	23.6	23.5	23.6	23.0
09	24.8	24.6	73.3	23.0	22.8	22.6	22.9	22.7	22.6	21.3
10	24.4	24.2	22.6	22.6	22.5	22.4	22.8	22.7	22.9	21.9
11*	24.2	24.1	22.7	22.4	22.3	22.1	22.8	22.7	22.5	21.1
12	23.6	22.8	21.4	21.4	20.9	20.6	21.1	20.8	20.5	19.9
13*	23.4	22.7	21.5	21.3	21.1	20.6	20.9	20.6	20.4	19.9
14	24.5	24.6	24.4	24.1	24.0	23.9	24.3	24.1	24.2	23.8
15	25.3	25.4	25.2	25.2	25.1	25.0	25.2	25.3	25.4	25.3
16*	25.6	25.5	25.6	25.4	25.2	25.2	25.4	25.4	25.6	25.2
17	25.8	25.5	25.8	25.3	25.1	25.1	25.1	25.2	25.3	24.6
18	25.9	25.7	26.0	25.6	25.3	25.2	25.3	25.4	25.7	25.2
19	26.4	26.4	26.4	26.2	26.0	26.0	26.0	26.1	26.3	26.2
20	26.9	26.7	27.1	26.6	26.4	26.3	26.4	26.5	26.7	26.5
21	27.4	27.3	27.5	27.2	27.0	26.9	27.0	27.2	27.4	26.9
22	27.8	27.8	28.0	27.8	27.6	27.5	27.6	27.8	28.0	27.7
23	27.0	26.9	27.2	26.9	26.6	26.5	26.6	26.7	27.0	26.7
Number of Obs	441	440	440	439	441	440	440	441	441	441
Daily Mean	26.1	25.6	25.2	24.9	24.6	24.2	24.2	23.9	23.8	23.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
25 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	28.1	28.4	27.9	28.4	28.3	28.3	28.4	28.5	28.9	28.[illegible]
01	28.3	28.5	28.6	28.5	28.4	28.3	28.4	28.6	28.9	28.6
02	28.0	27.9	28.3	27.9	27.7	27.6	27.7	27.8	28.1	27.7
03	31.4	31.9	31.7	31.5	31.4	31.3	31.3	31.5	31.7	30.8
04	34.6	34.8	34.7	34.7	34.7	34.7	34.4	34.6	34.6	32.6
05	35.6	36.1	36.6	36.8	37.0	37.1	36.9	37.1	37.4	34.5
06	35.8	35.7	36.1	36.5	36.7	36.8	36.9	37.0	37.3	33.1
07	34.7	35.1	36.8	37.2	37.0	37.2	37.5	37.3	38.1	36.5
08	33.6-	35.3-	35.9-	36.5-	36.0-	36.2-	36.8-	36.4-	37.1-	37.2-
09										
10										
11	39.1-	38.4-	38.1-	37.7-	37.6-	37.6-	38.1-	38.0-	38.5-	38.2-
12	39.3	38.3	37.8	37.4	37.3	37.3	37.6	37.5	38.0	37.9
13*	39.6	38.8	38.0	37.8	37.6	37.6	37.9	37.9	38.3	38.0
14*	40.0	39.6	39.1	38.4	38.5	38.4	38.5	38.5	39.0	38.7
15*	40.5	40.3	40.4	39.7	39.7	39.5	39.5	39.6	39.9	39.3
16	41.1	40.7	40.8	40.4	40.3	40.2	40.1	40.2	40.4	39.7
17	41.7	41.4	41.5	41.3	41.2	41.0	40.9	41.0	41.0	39.9
18	41.7	41.5	41.8	41.4	41.2	41.1	41.0	41.0	41.1	40.2
19	41.9	41.7	41.8	41.6	41.5	41.3	41.2	41.2	41.4	40.6
20	42.8	42.7	42.8	42.7	42.5	42.5	42.3	42.3	42.5	42.0
21	43.4	43.4	43.5	43.3	43.2	43.1	43.0	43.0	43.1	42.3
22										
23	44.4-	44.4-	44.6-	44.5-	44.4-	44.3-	44.2-	44.3-	[illegible]	42.5-
Number of Obs	367	367	367	367	366	367	366	366	365	366
Daily Mean	37.2	37.3	37.3	37.2	37.1	37.0	37.1	37.1	37.4	36.[illegible]

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
26 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	44.7	44.7	44.9	44.7	44.6	44.5	44.4	44.5	44.6	41.7
01	45.0	45.1	45.2	45.1	45.0	44.9	44.7	44.8	44.3	42.7
02	44.9	44.9	45.1	44.9	44.8	44.6	44.4	44.4	43.7	38.7
03	44.8	44.7	44.9	44.6	44.5	44.3	44.1	44.1	43.9	38.6
04	44.4	44.6	44.6	44.5	44.3	44.1	44.0	44.1	43.7	39.5
05	43.3	43.7	43.8	41.6	43.7	43.6	43.5	43.5	42.6	38.1
06	41.2	41.9	41.7	41.5	41.7	41.7	41.8	41.4	39.6	35.7
07	41.1	40.7	40.6	40.1	40.1	40.1	40.4	40.3	38.8	34.3
08	38.8	40.1	40.3	40.0	40.0	39.9	40.2	40.2	40.6	38.2
09	36.7	37.7	37.9	37.5	37.5	37.4	37.6	37.5	38.0	37.0
10	34.9	35.8	35.8	35.5	35.4	35.3	35.6	35.6	36.0	35.0
11	34.1	34.9	34.9	34.7	34.6	34.5	34.7	34.5	35.1	34.6
12*	33.1	33.6	33.6	33.5	33.4	33.2	33.4	33.4	33.6	33.2
13*	33.9	34.5	34.5	34.4	34.3	34.2	34.3	34.4	34.7	34.6
14*	34.2	34.7	34.7	34.7	34.5	34.4	34.6	34.6	34.9	34.9
15*	35.4	35.9	36.0	36.0	35.9	35.8	35.9	36.1	36.4	36.4
16	35.7	36.1	36.2	36.2	36.1	36.0	36.1	36.3	36.5	36.5
17	36.1	36.6	36.8	36.8	36.7	36.6	36.7	36.9	37.3	37.2
18	36.9	37.3	37.5	37.4	37.3	37.3	37.3	37.4	37.8	37.7
19										
20										
21										
22										
23										
Number of Obs.	358	358	358	357	358	358	358	358	358	358
Daily Mean	38.9	39.3	39.4	39.2	39.2	39.1	39.2	39.2	39.1	37.1

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
27 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12*	39.8	38.8	38.6	38.2	37.8	37.9	38.2	38.3	38.6	38.4
13*	38.0	38.2	38.1	37.9	37.6	37.6	37.8	37.9	38.2	38.1
14*	36.2	36.8	36.7	36.7	36.5	36.5	36.7	36.8	37.2	37.1
15	34.4	34.9	34.9	34.8	34.7	34.6	34.8	34.9	35.3	35.2
16	33.9	34.3	34.3	34.2	34.0	33.9	34.0	34.2	34.6	34.5
17	33.3	33.7	33.8	33.7	33.6	33.5	33.6	33.8	34.1	34.1
18	32.4	32.6	32.7	32.6	32.5	32.4	32.5	32.7	33.0	32.9
19	31.7	31.4	31.5	31.3	31.2	31.0	31.1	31.3	31.7	31.5
20	31.1	30.8	31.0	30.7	30.6	30.5	30.6	30.7	31.1	31.0
21	30.7	30.3	30.5	30.2	30.1	29.9	30.0	30.2	30.4	30.3
22	32.7	31.9	31.8	31.6	31.4	31.2	31.1	31.2	31.3	30.9
23	31.4	30.9	31.1	30.8	30.7	30.6	30.6	30.7	31.0	30.8
Number of Obs	224	224	224	224	224	224	224	224	224	224
Daily Mean	33.8	33.7	33.7	33.5	33.4	33.3	33.4	33.5	33.8	33.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
28 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	31.4	30.7	30.9	30.5	30.4	30.2	30.2	30.3	30.5	30.1
01	31.0	29.9	29.8	29.6	29.4	29.2	29.2	29.2	29.4	28.8
02	32.7	31.6	31.5	31.2	30.9	30.7	30.6	30.6	30.5	29.6
03	34.2	33.0	33.0	32.7	32.3	32.0	31.9	31.7	31.5	30.4
04	33.4	31.8	32.0	31.4	31.0	30.7	30.4	30.2	29.7	27.8
05	30.6	29.0	28.8	28.2	28.0	27.7	27.5	27.3	27.0	25.4
06	28.5	27.3	27.1	26.7	26.4	26.2	26.3	26.3	26.3	25.7
07	28.3	28.0	28.0	27.6	27.5	27.4	27.6	27.6	28.0	27.8
08	27.9	27.6	27.7	27.1	27.0	26.9	27.1	27.2	27.6	27.4
09	26.7	26.3	26.4	25.8	25.7	25.5	25.7	25.7	26.1	25.8
10	24.7	25.0	25.0	24.6	24.4	24.2	24.4	24.5	24.8	24.4
11*	24.0	24.4	24.4	23.9	23.7	23.5	23.7	23.7	24.0	23.7
12*	23.7	24.1	24.0	23.6	23.5	23.3	23.5	23.5	23.7	23.4
13*	24.2	24.7	24.6	24.3	24.2	24.1	24.3	24.3	24.6	24.3
14	24.6	25.1	25.1	24.7	24.6	24.6	24.7	24.8	25.0	24.8
15	24.9	25.2	25.2	25.0	24.9	24.8	24.8	24.9	25.1	24.9
16	25.4	25.5	25.5	25.4	25.2	25.1	25.1	25.1	25.3	25.2
17	25.5	25.5	25.6	25.4	25.2	25.1	25.1	25.2	25.4	25.2
18	25.8	25.8	25.9	25.8	25.7	25.6	25.6	25.6	25.8	25.7
19	25.7	25.7	25.8	25.7	25.6	25.5	25.5	25.6	25.7	25.6
20	25.7	25.7	25.8	25.7	25.6	25.4	25.4	25.5	25.6	25.6
21	25.8	25.8	25.8	25.7	25.6	25.5	25.5	25.6	25.7	25.6
22	25.4	25.4	25.4	25.2	25.1	25.0	25.0	25.0	25.2	25.1
23	24.6	24.5	24.6	24.3	24.2	24.1	24.1	24.1	24.3	24.1
Number of Obs	447	447	447	447	447	447	447	447	447	447
Daily Mean	27.3	27.0	27.0	26.7	26.5	26.3	26.4	26.4	26.5	26.1

LITTLE AMERICA V

Hourly Mean Temperatures (-°C)

29 September 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	24.2	24.0	24.1	23.9	23.7	23.6	23.6	23.6	23.7	23.6
01	24.0	23.8	23.9	23.6	23.4	23.2	23.3	23.4	23.5	23.4
02	24.0	23.9	24.0	23.7	23.5	23.4	23.4	23.5	23.6	23.5
03	24.1	24.0	24.2	23.9	23.7	23.6	23.6	23.7	23.9	23.8
04	24.2	24.2	24.3	24.1	23.9	23.8	23.8	23.9	24.1	23.9
05	24.3	24.3	24.5	24.3	24.1	24.0	24.0	24.1	24.3	24.2
06	24.0	24.1	24.3	24.2	24.0	23.9	23.9	24.0	24.2	24.0
07	23.8	23.9	24.1	23.9	23.7	23.6	23.7	23.8	23.9	23.8
08	23.2	23.4	23.6	23.4	23.2	23.0	23.1	23.2	23.4	23.2
09	23.0#	23.3#	23.4#	23.3#	23.1#	22.8#	22.9#	23.1#	23.2#	23.1#
10										
11*	24.3+	24.5+	24.6+	24.5+	24.5+	24.4+	24.5+	24.6+	24.9+	24.7+
12	24.4	24.5	24.6	24.6	24.5	24.4	24.5	24.6	24.8	24.7
13	24.6	24.8	24.8	24.8	24.7	24.7	24.7	24.8	25.0	25.0
14*	25.4	25.5	25.7	25.6	25.5	25.4	25.5	25.6	25.8	25.7
15*	26.0	26.0	26.2	26.2	26.1	26.0	26.0	26.1	26.3	26.3
16*	26.8	27.0	27.1	26.9	27.0	26.9	26.9	27.0	27.1	27.1
17	28.0	28.1	28.3	28.3	28.3	28.2	28.2	28.3	28.4	28.3
18	28.8	28.9	29.1	29.1	29.1	29.1	29.0	29.1	29.2	29.2
19	30.6	30.7	30.8	30.8	30.7	30.7	30.6	30.7	30.8	30.7
20	33.5	33.4	33.5	33.4	33.2	33.1	33.0	33.0	33.1	32.8
21	35.3	35.0	35.0	34.9	34.7	34.6	34.5	34.5	34.5	33.6
22	36.7	36.6	36.5	36.5	36.3	36.2	36.0	36.0	36.0	35.5
23	38.4	38.3	38.3	38.2	38.2	38.1	38.0	38.0	38.0	37.8
Number of Obs	411	411	411	411	411	411	411	411	411	411
Daily Mean	27.2	27.2	27.3	27.2	27.1	27.0	27.0	27.0	27.2	27.0

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
30 September 1957

Hr \ cm	Sfc	1	6	12	25	50	100	200	400	800
00	38.9	38.7	38.7	38.6	38.5	38.4	38.3	38.3	38.3	37.9
01	39.4	39.3	39.3	39.2	39.1	39.0	38.8	38.8	38.7	38.4
02	39.3	39.2	39.2	39.1	38.9	38.7	38.5	38.4	38.3	37.6
03	39.3	39.2	39.2	38.9	38.8	38.7	38.4	38.3	38.1	37.5
04	39.6	39.6	39.6	39.5	39.4	39.3	39.1	39.2	39.2	39.0
05	39.7	39.7	39.6	39.6	39.7	39.7	39.6	39.7	39.9	39.8
06	39.5	39.1	39.1	39.0	39.0	39.0	39.0	39.1	39.4	39.2
07	38.5	38.3	38.2	38.1	38.1	38.1	38.2	38.2	38.6	38.4
08	37.7	37.4	37.2	36.9	36.9	36.9	37.0	37.1	37.6	37.4
09	37.5	36.9	36.9	36.5	36.4	36.4	36.5	36.5	37.0	36.7
10*	37.2	36.1	35.6	35.0	35.1	35.1	35.2	35.2	36.0	35.6
11*	37.2	36.5	36.4	35.8	35.8	35.7	35.8	35.8	36.0	35.8
12*	36.5	35.9	34.6	34.1	34.0	34.0	34.1	34.2	34.3	34.1
13*	37.0	37.0	37.0	35.1	35.1	35.0	35.1	35.6	36.1	34.8
14	37.8	38.4	38.1	37.4	37.3	37.2	37.2	37.6	38.0	36.7
15	39.2	39.5	39.3	38.8	38.7	38.7	38.6	38.5	38.2	37.8
16	40.9	40.8	40.9	40.6	40.4	40.3	40.2	40.3	40.2	38.9
17	42.1	42.0	42.1	41.9	41.8	41.7	41.6	41.8	41.9	40.9
18	43.1	42.9	43.0	42.9	42.8	42.6	42.4	42.6	42.6	40.9
19	43.8	43.6	43.7	43.5	43.4	43.2	43.0	43.3	43.1	40.9
20	44.5	44.3	44.4	44.3	44.2	44.1	44.0	44.1	44.1	43.3
21	45.1	45.0	45.2	45.0	44.9	44.8	44.7	44.9	45.0	43.7
22	45.4	45.4	45.4	45.4	45.4	45.3	45.1	45.1	45.1	44.9
23	46.0+	46.0+	46.1+	46.0+	46.0+	46.0+	45.9+	45.9+	45.9+	45.8+
Number of Obs	441	439	439	441	441	441	441	441	440	441
Daily Mean	40.2	40.0	39.9	39.6	39.5	39.5	39.4	39.5	39.6	38.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
1 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	46.6	46.5	46.5	46.3	46.3	46.3	46.1	46.1	46.2	46.0
01	46.4	46.3	46.4	46.2	46.2	46.2	46.1	46.1	46.1	45.7
02	46.7	46.6	46.6	46.5	46.4	46.3	46.2	46.1	46.1	44.9
03	46.5	46.4	46.4	46.2	46.2	45.9	45.6	45.3	44.9	43.4
04	46.1	46.2	46.2	46.2	46.1	46.0	45.8	45.9	45.9	44.7
05	45.7	45.8	45.7	45.7	45.9	45.9	45.9	46.2	46.2	45.8
06	45.0	44.8	44.8	44.7	44.8	44.8	44.9	45.3	45.5	43.8
07	43.7	43.6	43.6	43.4	43.4	43.4	43.5	43.9	44.1	40.9
08	42.4	42.2	42.0	41.5	41.5	41.6	41.8	41.7	41.4	39.8
09	41.1	40.3	40.2	38.7	38.8	38.9	39.1	39.6	40.0	37.2
10	41.0	40.4	39.8	38.7	38.8	38.8	39.1	39.5	39.8	36.5
11	39.8	38.8	38.3	37.7	37.5	37.4	37.7	37.8	37.8	37.3
12	40.6	38.9	37.7	37.2	37.0	37.1	37.6	37.9	38.1	37.3
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	243	243	243	243	243	243	243	243	243	243
Daily Mean	44.0	43.6	43.4	43.0	43.0	43.0	43.0	43.[illegible]	43.2	41.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
2 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13*	31.0+	29.8+	29.3+	28.7+	28.3+	28.0+	28.1+	28.2+	27.1+	25.6+
14	30.9	30.0	29.4	28.9	28.6	28.3	28.0	28.1	26.9	25.1
15	30.8	30.3	29.9	29.3	28.7	28.3	27.8	27.7	27.0	25.3
16	28.6	28.3	28.2	27.6	27.2	26.9	26.8	26.8	26.7	25.7
17*	28.5	27.9	27.5	27.0	26.7	26.2	25.9	25.8	25.4	24.2
18*	30.5	30.3	30.4	29.2	28.6	28.0	27.6	27.2	26.5	25.1
19	31.0	30.8	31.0	30.6	30.3	29.9	29.5	28.7	27.4	25.4
20	29.8	29.8	30.0	29.5	29.3	29.0	28.9	28.2	25.1	23.5
21	28.8	28.7	28.8	28.2	27.7	27.1	26.4	23.9	22.9	21.7
22	26.6	25.8	25.6	24.7	23.8	22.9	22.2	21.7	21.7	20.9
23	25.4	24.6	24.6	23.7	23.2	22.5	22.0	21.6	21.4	20.5
Number of Obs	201	201	201	201	201	201	201	201	201	201
Daily Mean	29.2	28.7	28.6	27.9	27.5	27.0	26.6	26.2	25.3	23.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
3 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	26.6	26.2	26.2	25.3	24.7	23.9	23.4	22.8	22.4	20.8
01	[illegible]	25.9	25.9	25.1	24.7	24.1	23.6	22.9	22.6	20.9
02	24.2	24.1	.1	23.6	23.2	22.7	22.4	22.1	21.8	20.7
03	23.1	22.9	22.9	22.4	21.9	21.6	21.4	21.2	20.8	19.9
04	22.9	22.7	22.7	21.8	21.4	21.1	21.0	21.1	20.8	20.0
05	21.8	21.1	21.1	20.6	20.2	19.9	19.9	19.8	19.7	19.2
06	20.4	.9	19.9	19.3	18.9	18.7	18.6	18.7	18.6	18.2
07	19.3	19.1	19.0	18.6	18.1	17.9	17.9	18.0	17.9	17.5
08	18.8	18.7	18.6	18.1	17.8	17.7	17.6	17.7	17.7	17.4
09	19.5	19.0	19.0	18.0	18.3	18.2	18.2	18.4	18.4	18.1
10	19.7	19.2	19.2	18.7	18.5	18.4	18.4	18.6	18.5	18.3
11	19.5	19.1	19.1	18.7	18.4	18.4	18.4	18.5	18.5	18.4
12	20.2	19.5	19.5	19.1	18.9	18.8	18.8	18.9	18.9	18.7
13	20.2	20.0	20.0	19.8	19.6	19.4	19.4	19.4	19.5	19.3
14	20.0	20.0	20.0	19.7	19.5	19.4	19.4	19.4	19.4	19.0
15	20.1	20.1	20.1	19.8	19.6	19.4	19.4	19.4	19.5	19.2
16	20.2	20.1	20.1	19.9	19.7	19.5	19.5	19.5	19.5	19.2
17	20.3	20.2	20.2	19.9	19.7	19.6	19.5	19.5	19.5	19.2
18	20.7	20.6	20.6	20.3	20.0	19.9	19.7	19.7	19.7	18.6
19	20.9	20.6	20.7	20.3	19.9	19.7	19.5	19.4	19.3	18.0
20	21.4	21.2	21.2	21.0	20.7	20.4	20.2	19.8	19.5	17.9
21	21.1	20.8	20.8	20.2	19.8	19.5	19.4	19.2	19.3	18.1
22	21.5	21.4	21.4	20.8	20.2	19.6	19.2	18.7	18.9	17.6
23	22.0	22.0	22.0	21.4	20.9	20.3	19.9	19.5	19.5	18.0
Number of Obs	446	445	446	446	446	446	446	446	446	446
Daily Mean	21.2	21.0	21.0	20.5	20.2	19.9	19.8	19.7	19.6	18.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
4 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	21.9	21.6	21.7	21.2	20.8	20.3	19.7	19.1	19.2	17.8
01	21.7	21.5	21.6	21.0	20.5	20.1	19.7	19.2	19.0	18.0
02	21.6	21.4	21.5	21.1	20.8	20.4	20.1	19.5	19.0	17.3
03	21.8	21.7	21.8	21.4	21.1	21.0	20.9	21.2	21.0	20.3
04	23.0	23.0	23.1	22.8	22.6	22.5	22.6	23.0	22.9	22.2
05	24.8	25.0	25.2	25.2	25.1	25.0	25.2	25.7	25.7	25.3
06	24.5	24.8	25.0	24.9	24.8	24.7	24.8	25.3	25.4	25.0
07	24.5	24.8	24.9	24.8	24.8	24.8	24.9	25.4	25.4	24.9
08	24.4	24.7	24.7	24.7	24.7	24.7	24.7	25.2	25.2	24.8
09	22.4	22.5	22.6	22.5	22.3	22.3	22.3	22.6	22.6	22.1
10	20.1	20.1	20.2	19.2	19.1	19.0	19.1	19.6	19.4	18.8
11	19.3	19.3	19.5	18.4	18.4	18.4	18.4	19.2	18.8	18.3
12	19.8	19.8	19.9	19.1	19.0	19.0	19.1	19.9	19.5	18.1
13	20.6	20.6	20.6	20.4	20.2	20.1	20.1	20.5	20.5	18.7
14*	21.0	21.1	21.1	21.0	20.8	20.7	20.7	20.8	21.0	20.7
15*	20.9	20.9	21.0	20.8	20.7	20.6	20.7	20.7	20.8	20.6
16*	22.0	22.1	22.2	22.0	21.8	21.7	22.0	21.9	22.1	21.8
17*	22.5	22.9	23.2	22.7	22.4	22.3	22.7	22.8	23.1	22.5
18										
19										
20										
21										
22										
23										
Number of Obs	336	336	336	336	336	336	336	336	336	334
Daily Mean	22.0	22.1	22.2	21.8	21.7	21.5	21.5	21.7	21.7	20.9

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
6 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14*	16.7#	16.3#	16.9#	16.5#	16.1#	16.2#	16.5#	17.1#	16.9#	15.9#
15*	17.8	17.4	17.5	17.4	17.0	17.0	17.2	17.7	17.6	16.9
16*	17.6	17.7	17.5	17.1	16.8	16.7	16.8	17.0	17.0	16.4
17*	17.7	17.8	17.7	17.5	17.3	17.2	17.3	17.4	17.5	16.6
18*	20.5	20.0	21.0	21.2	21.2	21.3	21.5	21.7	21.8	20.7
19	21.5	21.3	22.0	22.6	22.7	22.6	22.8	23.1	23.2	21.8
20	21.8	21.7	22.2	22.5	22.5	22.5	22.6	22.8	23.0	22.2
21	21.5	21.5	21.6	21.5	21.4	21.3	21.3	21.4	21.5	20.9
22	21.3	21.6	21.9	21.8	21.7	21.6	21.6	21.7	21.9	20.8
23	22.2	21.9	22.3	22.2	22.1	21.9	22.0	22.1	22.3	21.5
Number of Obs	172	172	172	172	172	172	172	172	172	172
Daily Mean	20.2	20.0	20.3	20.3	20.2	20.2	20.3	20.5	20.6	19.7

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
7 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	22.5	22.3	22.5	22.5	22.4	22.4	22.4	22.4	22.5	22.5
01	22.6	22.5	22.5	22.5	22.4	22.4	22.4	22.4	22.5	22.4
02	22.3	22.4	22.4	22.3	22.1	22.0	22.0	22.0	22.2	20.1
03	22.8	22.6	22.9	22.7	22.5	22.5	22.5	22.6	22.7	21.2
04	23.6	23.1	23.8	23.7	23.5	23.3	23.3	23.4	23.5	23.4
05	23.2	23.2	23.2	23.0	22.7	22.5	22.5	22.6	22.6	22.5
06	22.9	22.7	22.3	22.1	21.7	21.6	21.6	21.9	21.8	21.7
07	23.0	22.6	21.3	21.0	20.5	20.7	20.8	21.4	21.2	21.1
08	23.2	22.3	22.0	20.7	19.8	20.0	20.4	21.2	20.9	20.8
09	22.3	21.4	20.5	19.0	18.0	18.5	19.0	19.4	19.6	19.5
10	21.3	20.[illegible]	20.2	19.2	18.8	18.8	19.0	19.3	19.5	19.6
11	20.1	19.5	19.5	17.8	17.7	17.9	18.2	18.4	18.6	18.9
12	19.4	19.2	19.2	17.3	17.5	17.6	17.9	18.4	18.3	18.1
13	19.7	19.5	19.4	18.7	18.7	18.6	18.6	18.8	18.8	18.8
14	20.5	20.3	20.3	19.8	19.7	19.6	19.6	19.7	19.7	19.5
15	21.6	21.5	21.5	21.0	20.8	20.7	20.7	20.7	20.8	19.8
16	21.4	21.4	21.4	21.1	20.9	20.8	20.7	20.7	20.7	20.1
17	21.2	21.2	21.2	21.0	20.8	20.8	20.7	20.7	20.7	20.6
18	21.0	21.0	21.0	20.9	20.7	20.6	20.5	20.5	20.6	20.1
19	20.4	20.5	20.5	20.3	20.1	20.0	20.0	20.0	20.0	19.9
20	20.1	20.1	20.1	19.9	19.8	19.7	19.7	19.7	19.7	19.3
21	20.5	20.6	20.3	19.9	19.3	19.2	19.5	19.6	19.7	19.5
22	21.2	21.2	19.9	19.6	19.0	18.9	19.2	19.1	19.2	19.0
23										
Number of Obs	427	427	427	425	427	427	427	427	427	423
Daily Mean	21.6	21.4	21.2	20.7	20.4	20.4	20.5	20.7	20.7	20.4

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
15 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	20.7	19.4	19.2	19.1	18.8	18.6	18.4	18.6	18.6	15.5
21	19.9	18.8	18.7	18.5	18.1	18.0	17.9	18.0	17.9	15.4
22*	18.7	18.0	17.8	17.7	17.5	17.4	17.3	17.5	17.5	15.0
23*	18.2	17.4	17.3	17.1	17.0	16.9	16.8	16.9	16.9	14.4
Number of Ob	78	78	78	78	78	78	78	78	78	78
Daily Mean	19.4	18.5	18.3	18.2	17.9	17.8	17.7	17.8	17.8	15.1

LITTLE AMERICA V
Hourly Mean Temperatures ($-^{o}C$)
16 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	18.4	17.7	17.5	17.4	17.3	17.2	17.2	17.4	17.5	15.7
01	19.3	18.6	18.4	18.2	18.2	18.1	18.1	18.3	18.4	17.5
02	19.9	19.2	19.0	18.9	18.9	18.8	18.7	18.9	18.9	17.9
03	20.1	19.7	19.4	19.2	19.2	19.1	19.0	19.3	19.4	17.9
04	20.3	19.9	19.7	19.5	19.5	19.4	19.4	19.5	19.6	18.5
05	20.3	19.9	19.6	19.3	19.4	19.3	19.3	19.5	19.6	19.0
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	113	113	113	113	113	113	113	113	113	113
Daily Mean	19.7	19.2	19.0	18.7	18.7	18.7	18.6	18.8	18.9	17.8

LITTLE AMERICA V
Hourly Mean Temperatures (-°C)
18 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13	27.2+	26.5+	24.3+	23.0+	24.2+	24.0+	24.5+	25.6+	25.2+	24.8+
14	27.1	27.1	24.0	23.8	24.6	24.6	25.0	26.1	25.6	25.1
15	28.5	28.5	26.3	25.9	26.3	26.3	26.5	27.5	27.1	26.2
16	28.2	30.4	29.6	29.2	29.2	29.1	29.1	29.4	28.7	27.5
17										
18										
19										
20	35.9+	35.1+	34.9+	34.7+	34.6+	34.4+	34.1+	33.5+	32.1+	29.0+
21	35.7	34.8	34.7	34.5	34.5	34.3	34.0	33.6	32.9	30.6
22	36.2	35.7	35.5	35.3	35.2	35.1	34.8	34.6	34.2	31.7
23	37.9	37.0	36.9	36.6	36.6	36.4	36.1	35.9	35.6	33.0
Number of Obs	142	142	142	142	142	142	142	142	142	142
Daily Mean	32.0	31.9	30.8	30.4	30.7	30.5	30.3	30.5	30.2	28.6

LITTLE AMERICA V
Hourly Mean Temperatures ($-^{o}C$)
19 October 1957

Hr \ cm	Sfc	3	6	12	25	50	100	200	400	800
00	37.9-	36.7-	36.6-	36.4-	36.2-	36.2-	35.9-	35.8-	35.7-	33.9-
01										
02	37.1	36.4	35.8	35.3	35.7	35.5	35.5	35.9	35.8	35.4
03	37.6	36.9	36.7	36.3	36.4	36.2	36.1	36.3	36.4	36.1
04	36.5	35.9	35.5	35.0	35.2	35.0	35.0	35.3	35.4	35.2
05	35.0	34.9	34.5	34.1	34.2	34.1	34.2	34.3	34.5	34.4
06	33.5	33.5	33.0	32.5	32.7	32.5	32.7	32.9	33.1	33.0
07	32.5	32.8	32.4	31.9	32.1	32.0	32.2	32.4	32.6	32.6
08	31.3	31.4	31.1	30.6	30.7	30.6	30.8	31.0	31.2	31.2
09	29.1	29.0	28.5	28.1	28.2	28.0	28.2	28.4	28.6	28.6
10	27.8	27.5	27.1	26.7	26.8	26.6	26.8	27.0	27.2	27.3
11	27.4	27.0	26.6	26.2	26.2	26.1	26.0	26.4	26.6	26.4
12	27.1	26.7	26.3	26.0	25.9	25.9	25.8	26.1	26.4	26.3
13	27.2	26.8	26.3	26.0	25.9	25.9	25.7	26.2	26.3	26.3
14	27.8	27.3	26.7	26.4	26.4	26.5	26.3	26.6	26.7	26.6
15										
16										
17										
18										
19										
20										
21										
22										
23										
Number of Obs	248	248	248	248	248	248	248	248	248	248
Daily Mean	31.7	31.4	31.0	30.6	30.6	30.5	30.6	30.8	31.0	30.8

QMC WIND PROFILE DATA

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
31 March 57										
1600-1700	25	175.3	100	268.3	200	302.8	400	322.1	800	336.8
1801-1901	25	143.8	100	211.0	200	234.2	400	261.8	800	275.0
1901-2001	25	164.9	100	225.9	200	264.0	400	290.3	800	314.3
2001-2101	25	157.2	100	221.1	200	258.0	400	302.3	800	370.1
2102-2202	25	163.1	100	226.5	200	255.5	400	291.0	800	363.0
1 April 57										
0500-0700	25	231.4	100	300.4	200	327.2	400	335.1	800	353.7
5 April 57										
1900-2000	25	808.5	100	959.4	200	1020.6	400	1074.9	800	1141.8
6 April 57										
0300-0515	25	433.5	100	520.0	200	549.1	400	574.4	800	619.8
0702-0802	25	596.5	100	714.7	200	757.8	400	796.5	800	866.9
1200-1300	25	396.0	100	493.6	200	528.1	400	559.7	800	641.2
7 April 57										
0700-0805	25	302.7	100	376.2	200	404.4	400	437.7	800	503.5
1107-1307	25	340.1	100	418.4	200	448.4	400	480.9	800	549.2
8 April 57										
1000-1100	25	607.1	100	754.3	200	802.8	400	847.2	800	909.0
1400-1530	25	412.2	100	511.5	200	543.5	400	572.4	800	608.8

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
9 April 57										
1210-1310	25	237.3	100	307.6	200	333.1	400	366.7	800	447.7
10 April 57										
1000-1145	23	645.4	98	813.4	198	864.8	398	946.0	798	1016.7
1555-1655	23	929.2	98	1217.5	198	1335.2	398	1458.8	798	1559.8
1700-1800	23	939.1	98	1259.8	198	1378.9	398	1508.4	798	1612.6
12 April 57										
1601-1704	25	335.6	100	414.7	200	441.4	387	466.0	787	519.6
13 April 57										
0700-0800	25	205.8	100	262.2	200	275.2	387	282.4	787	299.7
17 April 57										
1702-1808	50	279.0	100	322.3	200	346.5	400	399.5	800	448.8
19 April 57										
2025-2225	48	95.3	98	103.5	198	107.5	398	118.8	798	130.0
20 April 57										
1030-1130	48	110.8	98	122.5	198	133.6	392	151.4	798	168.7
2055-2205	48	93.1	98	98.2	198	100.9	392	100.1	798	91.2

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
21 April 57										
1400-1505	48	269.5	98	292.7	198	303.5	398	338.9	798	342.4
22 April 57										
0705-0805	47	446.4	97	487.9	197	509.2	397	542.3	797	562.7
1500-1600	47	339.0	97	371.0	197	388.9	397	421.6	797	436.2
1704-1804	47	427.0	97	471.6	197	481.4	397	522.4	797	533.3
23 April 57										
1604-1704	49	441.9	99	481.3	199	526.8	399	593.9	799	671.2
2010-2110	49	299.9	99	324.8	199	344.9	399	376.8	799	418.4
25 April 57										
0810-0910	49	332.3	99	367.0	199	392.5	399	426.8	799	482.6
26 April 57										
0800-0910	49	379.6	99	415.8	199	451.5	399	486.3	799	542.1
27 April 57										
0700-0830	49	187.6	99	211.5	199	234.1	399	267.3	799	326.8
1701-1801	49	180.5	99	200.0	199	218.0	399	235.6	799	254.8

*Ht (cm)

LITTLE AMERICA V

Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>28 April 57</u>										
0700-0800	49	241.4	99	270.1	199	297.0	399	321.8	799	358.9
0801-0901	49	260.3	99	285.8	199	311.8	399	340.2	799	371.6
0902-1002	49	258.9	99	287.3	199	312.8	399	333.1	799	378.7
1200-1300	49	230.6	99	255.6	199	278.7	399	303.7	799	334.2
<u>29 April 57</u>										
0605-0705	48	306.2	98	335.1	198	363.9	398	382.1	798	401.5
1400-1500	48	119.8	98	128.4	198	133.8	398	130.1	798	133.3
<u>30 April 57</u>										
0702-0802	49	323.6	99	356.1	199	371.5	399	394.6	799	409.6
0803-0903	49	299.7	99	330.9	199	343.4	399	363.8	799	373.4
0904-1004	49	277.8	99	310.1	199	320.6	399	341.1	799	347.1
<u>3 May 57</u>										
0700-0759	49	447.5	99	472.8	199	506.7	399	554.1	799	619.6
0800-0900	49	313.1	99	339.8	199	369.5	399	415.5	799	492.8
0901-1000	49	289.4	99	322.7	199	351.2	399	400.2	799	480.0
1000-1159	49	243.6	99	268.7	199	292.8	399	332.0	799	399.1

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>4 May 57</u>										
0700-0800	49	451.1	99	550.3	199	589.5	399	635.3	799	715.9
<u>8 May 57</u>										
0800-0900	50	364.6	100	403.0	200	439.5	400	478.6	800	526.2
<u>9 May 57</u>										
0801-0859	45	855.3	95	933.8	195	1012.1	395	1071.3	795	1128.7
1900-1959	51	893.2	101	980.8	201	1071.6	401	1135.9	801	1197.1
2000-2059	51	832.4	101	908.6	201	989.4	401	1052.7	801	1120.8
2240-2340	51	1380.9	101	1506.1	201	1664.8	401	1755.2	801	1843.4
<u>10 May 57</u>										
0800-0859	41	463.6	91	574.2	191	704.9	391	778.3	791	823.3
0900-0959	41	410.7	91	574.9	191	787.6	391	955.6	791	1067.9
1000-1059	41	409.4	91	571.4	191	707.9	391	793.8	791	857.0
1500-1603	46	696.0	96	760.7	196	834.3	396	883.7	796	953.1
1604-1659	49	580.9	99	629.6	199	689.8	399	728.4	799	784.5
1700-1833	49	319.6	99	353.9	199	385.0	399	403.0	799	431.4
1834-2038	49	115.7	99	139.1	199	163.6	399	183.1	799	203.2

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
12 May 57										
1200-1259	41	667.7	91	813.9	191	951.3	391	1068.6	791	1207.5
1300-1359	41	1086.8	91	1264.3	191	1372.1	391	1484.8	791	1655.6
1400-1459	41	1240.1	91	1394.4	191	1518.3	391	1656.3	791	1882.7
1500-1559	41	1305.9	91	1495.5	191	1637.8	391	1799.3	791	2029.7
1600-1659	41	1286.7	91	1499.1	191	1644.5	391	1804.0	791	2013.0
1700-1759	41	1236.3	91	1482.1	191	1618.7	391	1774.7	791	1973.8
1800-1859	41	1006.2	91	1316.5	191	1387.1	391	1485.8	791	1629.5
13 May 57										
0000-0059	41	1120.6	91	1241.5	191	1375.4	391	1514.0	791	1672.1
0100-0159	41	1045.3	91	1152.0	191	1292.6	391	1419.4	791	1440.4
0200-0259	41	973.4	91	1060.8	191	1163.8	391	1271.0	791	1351.1
0300-0359	41	754.9	91	809.8	191	882.3	391	963.2	791	1056.3
0400-0459	41	519.6	91	557.8	191	610.1	391	670.4	791	759.2
0500-0559	41	408.2	91	463.5	191	491.8	391	537.9	791	626.0
0600-0659	41	407.0	91	499.0	191	503.7	391	521.5	791	575.8
0800-0859	41	419.7	91	547.6	191	594.0	391	640.2	791	698.1
0900-0959	41	469.0	91	628.1	191	735.8	391	852.5	791	955.7
1000-1101	41	656.0	91	896.9	191	971.1	391	1033.5	791	1147.0
1101-1159	41	663.2	91	925.6	191	1033.1	391	1137.8	791	1270.2
1500-1559	48	410.7	98	523.9	198	698.8	398	390.4	798	1033.2
1600-1659	48	351.3	98	474.7	198	522.8	398	582.2	798	648.5
1700-1759	48	257.0	98	335.5	198	386.1	398	438.3	798	494.2
1800-1859	48	114.1	98	136.6	198	163.0	398	195.1	798	235.3

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>14 May 57</u>										
0300-0359	48	847.5	98	957.5	198	1037.3	398	1120.8	798	1218.0
0400-0459	48	703.3	98	784.8	198	849.8	398	922.7	798	1011.2
0500-0559	48	821.8	98	897.1	198	974.8	398	1055.2	798	1149.3
0600-0659	48	1007.7	98	1100.0	198	1210.5	398	1308.2	798	1434.6
<u>15 May 57</u>										
0100-0159	49	1080.6	99	1182.1	199	1303.4	399	1423.8	799	1482.8
0200-0259	49	1017.5	99	1112.0	199	1226.8	399	1339.9	799	1410.2
0400-0459	49	741.9	99	913.2	199	968.1	399	1024.4	799	1120.3
0500-0559	49	542.6	99	719.6	199	915.8	399	1089.7	799	1223.4
0600-0659	49	607.0	99	747.6	199	984.7	399	1212.9	799	1374.2
0700-0759	49	621.1	99	792.5	199	1036.0	399	1267.6	799	1451.5
0800-0859	49	1033.3	99	1256.6	199	1575.5	399	1887.7	799	2140.5
0900-0959	49	1214.0	99	1460.9	199	1786.7	399	2112.8	799	2379.7
<u>19 May 57</u>										
2200-2259	47	790.2	97	821.0	197	909.0	397	984.7	797	1051.3
2300-2359	47	599.4	97	631.0	197	698.1	397	750.4	797	809.9
<u>20 May 57</u>										
1500-1559	40	512.4	90	548.7	190	604.7	390	658.9	790	734.7
1600-1659	40	603.7	90	652.5	190	732.2	390	803.3	790	887.9
1700-1805	40	613.4	90	657.0	190	734.7	390	808.8	790	897.5
2100-2200	40	582.4	90	629.9	190	705.2	390	770.1	790	850.7

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
21 May 57										
0800-0859	44	713.6	94	760.5	194	844.0	394	909.4	794	994.7
1100-1159	44	652.5	94	692.4	194	762.2	394	819.6	794	901.9
1200-1259	44	529.3	94	560.8	194	623.1	394	677.7	794	761.8
1300-1359	45	562.3	95	600.3	195	666.6	395	730.5	795	821.7
1600-1659	45	415.6	95	430.2	195	490.1	395	541.9	795	631.7
1800-1859	45	373.8	95	392.4	195	443.8	395	496.2	795	585.6
22 May 57										
1405-1500	45	450.6	95	478.5	195	534.2	395	593.6	795	667.5
1500-1559	45	515.1	95	546.1	195	598.5	395	651.0	795	739.8
1600-1659	44	650.2	94	691.6	194	763.8	394	829.1	794	928.5
1700-1759	44	581.5	94	617.0	194	678.9	394	736.7	794	830.4
1800-1859	44	696.0	94	736.1	194	804.7	394	864.4	794	966.3
23 May 57										
0900-0959	43	288.4	93	317.9	193	360.1	393	410.2	793	513.6
1000-1102	43	321.9	93	356.7	193	406.9	393	465.1	793	563.2
1103-1200	43	175.6	93	197.4	193	226.3	393	257.1	793	310.1
1200-1259	43	160.2	93	184.7	193	221.5	393	263.1	793	354.0
1300-1359	43	303.1	93	329.6	193	391.1	393	435.9	793	484.0

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>24 May 57</u>										
0900-0959	43	298.4	93	322.2	193	353.2	393	382.8	793	430.0
1000-1059	43	233.9	93	255.0	193	279.8	393	298.2	793	336.3
1100-1200	43	223.0	93	240.1	193	264.3	393	287.2	793	324.2
1201-1259	43	133.7	93	146.0	193	161.7	393	180.4	793	221.4
1500-1559	43	342.6	93	379.0	193	417.0	393	436.4	793	480.3
1600-1659	43	405.1	93	453.2	193	504.0	393	539.1	793	600.5
<u>25 May 57</u>										
0800-0900	43	393.2	93	429.9	193	471.1	393	500.1	793	546.9
0900-0959	43	341.9	93	370.6	193	402.6	393	426.0	793	481.9
1000-1106	43	376.2	93	408.4	193	441.1	393	467.2	793	546.7
<u>26 May 57</u>										
1300-1359	43	261.0	93	266.4	193	311.2	393	351.3	793	419.1
1500-1600	43	349.9	93	374.8	193	413.6	393	449.3	793	517.4
1600-1700	43	397.4	93	429.8	193	471.9	393	508.6	793	591.4
1700-1800	43	404.3	93	442.6	193	488.7	393	529.3	793	631.6
<u>27 May 57</u>										
0900-0959	43	216.6	93	238.2	193	261.0	393	276.5	793	295.4
1000-1059	43	315.2	93	347.5	193	373.1	393	383.6	793	411.2
1500-1559	43	397.0	93	443.4	193	484.8	393	509.0	793	539.7
1559-1659	43	414.6	93	469.5	193	512.2	393	536.4	793	570.2
1700-1759	43	472.5	93	537.9	193	585.8	393	612.3	793	645.8

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
28 May 57										
1100-1200	43	591.3	94	657.5	194	716.7	394	781.7	794	828.9
1200-1259	43	651.6	94	725.4	194	788.7	394	860.5	794	908.4
1300-1359	43	671.5	94	753.9	194	829.6	394	903.9	794	953.5
1400-1459	43	710.4	94	795.8	194	868.6	394	962.4	794	999.5
1500-1559	43	744.3	94	834.6	194	909.2	394	992.7	794	1045.7
1600-1659	43	784.2	94	878.7	194	959.5	394	1054.8	794	1118.1
1700-1759	43	831.3	94	937.1	194	1024.7	394	1125.0	794	1186.4
1800-1859	43	830.4	94	991.7	194	1080.3	394	1187.4	794	1255.8
29 May 57										
0000-0059	43	834.9	94	950.8	194	1033.3	394	1137.0	794	1206.9
0100-0159	43	800.8	94	906.2	194	982.4	394	1084.1	794	1154.3
0200-0259	43	757.5	94	853.5	194	924.6	394	1022.8	794	1083.8
0300-0359	43	688.4	94	773.2	194	837.3	394	924.0	794	990.6
1200-1259	43	598.1	94	668.4	194	717.3	394	783.6	794	835.0
1300-1359	43	511.0	94	567.9	194	610.4	394	663.9	794	702.3
1400-1459	43	482.8	94	532.8	194	574.9	394	633.5	794	676.4
2300-2359	48	445.0	98	491.2	198	535.0	398	586.0	798	627.3
30 May 57										
1100-1159	48	365.6	98	411.3	198	457.0	398	509.0	798	566.5
1800-1859	48	443.8	98	500.8	198	553.3	398	612.7	798	669.9
2100-2159	48	135.9	98	152.7	198	160.4	398	183.6	798	215.8
2200-2259	48	305.7	98	339.9	198	379.7	398	427.8	798	482.1

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
31 May 57										
1000-1059	48	195.0	98	222.0	198	250.7	398	305.1	798	376.4
1300-1359	48	219.8	98	235.3	198	291.2	398	339.5	798	407.7
1800-1901	48	192.6	98	220.5	198	260.9	398	309.5	798	324.4
1 June 57										
1000-1100	48	479.0	98	528.3	198	587.8	398	592.3	798	585.0
1100-1200	48	503.7	98	555.1	198	619.4	398	623.5	798	609.7
1200-1259	48	536.2	98	592.6	198	664.7	398	665.7	798	618.5
2 June 57										
1200-1300	48	860.2	98	1001.4	198	1084.2	398	1175.0	798	1257.1
1301-1401	48	849.6	98	992.7	198	1079.1	398	1172.3	798	1255.7
4 June 57										
1700-1800	48	114.5	98	141.9	198	178.8	398	216.4	798	210.4
8 June 57										
1000-1100	46	78.7	96	88.3	196	103.9	396	107.6	796	120.6
11 June 57										
1000-1059	46	588.0	96	651.7	196	708.6	396	748.5	796	811.3
1100-1205	46	619.8	96	686.8	196	745.6	396	784.6	796	841.6
1601-1701	46	651.0	96	718.8	196	777.4	396	809.8	796	856.0
1702-1802	46	665.6	96	737.6	196	800.0	396	834.0	796	876.2

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>12 June 57</u>										
1000-1059	51	450.4	101	500.7	201	549.2	401	585.8	801	654.9
1100-1205	51	366.9	101	405.0	201	445.0	401	478.8	801	538.7
1206-1300	51	432.7	101	471.4	201	517.1	401	555.3	801	613.4
<u>14 June 57</u>										
0702-0759	51	1197.9	101	1374.6	201	1527.6	401	1769.0	801	1811.9
<u>26 June 57</u>										
1700-1800	50	447.0	100	489.2	200	523.6	396	568.9	796	622.2
1800-1901	50	406.5	100	444.6	200	482.2	396	520.4	796	573.1
1902-2002	50	552.5	100	604.6	200	658.2	396	701.1	796	757.3
<u>27 June 57</u>										
1000-1100	50	284.1	100	304.5	200	325.3	396	349.3	796	370.9
1300-1400	50	467.8	100	505.5	200	527.2	396	569.1	796	581.3
1401-1501	50	440.5	100	474.4	200	503.4	396	532.5	796	544.1
1501-1601	50	483.3	100	516.7	200	544.5	396	584.3	796	604.8
1601-1701	50	542.7	100	567.4	200	584.6	396	620.5	796	632.9
<u>28 June 57</u>										
1457-1557	50	323.8	100	334.1	200	336.4	396	389.3	796	415.0
1558-1700	50	297.0	100	311.4	200	368.7	396	442.1	796	506.8
1700-1800	50	269.7	100	288.6	200	336.5	396	392.0	796	449.1
1800-1901	50	260.3	100	231.5	200	291.4	396	368.0	796	407.9

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speed: (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
2 July 57										
1000-1100	49	684.2	98	760.1	198	803.2	394	850.9	794	923.3
1100-1200	49	765.9	98	853.3	198	902.3	394	956.4	794	1037.3
1200-1300	49	827.3	98	921.2	198	978.0	394	1039.7	794	1130.7
1500-1600	50	891.8	99	975.4	199	1033.4	395	1096.0	795	1163.4
1600-1700	50	893.0	99	996.1	199	1056.0	395	1119.8	795	1213.9
1700-1800	50	911.8	99	1011.4	199	1075.4	395	1140.3	795	1237.2
4 July 57										
1659-1759	50	163.2	100	192.3	200	229.3	400	292.2	811	365.5
1759-1859	50	168.3	100	194.5	200	229.9	400	293.8	811	369.1
1900-2000	50	180.8	100	198.9	200	241.2	400	271.6	811	327.2
2000-2100	50	154.6	100	168.2	200	211.2	400	221.7	811	257.6
5 July 57										
0859-0959	50	124.7	100	150.6	200	168.3	400	193.5	800	161.4
1000-1100	50	114.8	100	141.4	200	155.7	400	150.5	800	113.0
1100-1200	50	102.3	100	121.5	200	125.2	400	113.8	800	81.1
1200-1300	50	101.6	100	125.9	200	138.1	400	137.9	800	111.6
1358-1458	50	250.3	100	275.3	200	315.7	400	346.7	800	393.5
1458-1558	50	346.0	100	378.5	200	416.1	400	446.0	800	491.5

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>6 July 57</u>										
0859-0959	50	242.2	100	261.7	200	281.5	400	307.1	800	347.8
0959-1100	50	210.6	100	231.2	200	255.1	400	284.7	800	317.4
1101-1201	50	214.4	100	236.5	200	261.2	400	295.3	800	332.8
1201-1301	50	204.5	100	228.9	200	252.0	400	282.6	800	321.4
<u>8 July 57</u>										
2100-2200	50	745.0	100	814.6	200	857.9	400	909.5	800	972.1
<u>9 July 57</u>										
1000-1100	50	547.6	100	597.0	200	634.3	400	688.2	800	761.1
1400-1500	50	456 9	100	499.7	200	529.3	400	579.0	800	657.9
1700-1800	50	339.9	100	371.2	200	394.0	400	437.2	800	510.7
<u>10 July 57</u>										
0859-0959	50	508.1	100	561.0	200	608.1	400	660.2	800	703.9
1100-1200	50	422.6	100	469.1	200	515.1	400	574.6	800	626.6
1200-1300	50	464.3	100	515.9	200	560.0	400	614.1	800	673.1
1300-1400	50	598.1	100	675.5	200	728.6	400	790.6	800	858.5
1401-1501	50	502.5	100	558.7	200	604.1	400	667.0	800	737.5
1601-1701	50	427.9	100	482.7	200	529.[illegible]	400	592.7	800	665.2
2100-2200	50	325.8	100	364.9	200	396.5	400	413.3	800	514.8

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>11 July 57</u>										
0958-1058	50	172.2	100	204.2	200	235.1	400	281.1	800	221.7
1058-1158	50	181.9	100	211.4	200	241.1	400	296.4	800	259.4
1359-1459	50	167.8	100	204.6	200	246.4	400	291.5	800	277.8
1500-1600	50	167.3	100	201.3	200	241.9	400	294.9	800	284.6
1600-1700	50	173.7	100	207.6	200	246.0	400	294.8	800	329.1
<u>12 July 57</u>										
0858-0958	50	436.2	100	484.8	200	512.2	400	550.6	800	584.2
0958-1058	50	458.7	100	511.3	200	542.1	400	584.8	800	613.5
1259-1359	50	555.6	100	615.3	200	652.7	400	709.5	800	747.6
1459-1559	50	591.3	100	651.8	200	691.8	400	747.5	800	779.9
<u>13 July 57</u>										
2101-2201	50	274.6	100	294.6	200	298.8	400	313.5	800	318.9
<u>14 July 57</u>										
1159-1259	50	742.1	100	813.1	200	868.3	400	930.1	800	965.5
1459-1559	50	760.7	100	833.6	200	890.3	400	958.6	800	999.0
1800-1900	50	687.6	100	753.9	200	804.5	400	865.0	800	901.7
1901-2001	50	649.3	100	708.8	200	751.1	400	800.9	800	827.7
2001-2101	50	603.2	100	655.8	200	695.0	400	744.0	800	778.2
2201-2311	50	529.2	100	572.4	200	607.1	400	650.9	800	683.4

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
15 July 57										
1459-1559	50	580.8	100	608.5	200	653.3	400	700.8	800	772.4
1559-1659	50	453.8	100	506.0	200	552.2	400	603.9	800	690.9
1700-1800	50	358.8	100	422.0	200	471.6	400	504.3	800	581.0
1800-1900	50	236.5	100	258.1	200	236.2	400	320.2	800	367.4
1900-2002	50	244.2	100	270.7	200	298.3	400	335.6	800	396.7
2002-2058	50	247.9	100	275.9	200	304.1	400	342.6	800	405.4
16 July 57										
1059-1159	50	422.0	100	459.7	200	498.3	400	552.5	800	651.0
1159-1259	50	427.2	100	465.1	200	502.7	400	557.8	800	659.5
1259-1349	50	311.4	100	351.2	200	394.2	400	457.3	800	563.2
17 July 57										
0959-1059	50	313.4	100	343.1	200	396.3	400	472.6	800	460.9
1059-1159	50	348.2	100	389.6	200	444.7	400	502.3	800	517.3
1200-1300	50	424.4	100	459.1	200	516.5	400	578.0	800	559.2
1301-1401	50	466.3	100	497.8	200	552.2	400	513.4	800	551.6
1402-1502	50	385.9	100	413.8	200	467.1	400	533.0	800	435.7
18 July 57										
1359-1459	50	592.2	100	639.7	200	686.7	400	753.0	800	827.7
1459-1559	50	525.8	100	566.2	200	610.8	400	677.6	800	765.1
1559-1659	50	561.5	100	600.8	200	652.3	400	720.2	800	802.0
1700-1800	50	570.3	100	611.1	200	658.7	400	728.5	800	815.7

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
21 July 57										
1159-1300	50	1073.5	100	1151.7	200	1245.4	400	1335.2	800	1415.9
1502-1602	50	910.2	100	972.0	200	1048.6	400	1117.0	800	1185.8
1602-1700	50	853.6	100	907.8	200	978.0	400	1046.5	800	1102.3
1802-1902	50	725.0	100	771.9	200	843.1	400	911.5	800	949.9
1903-2003	50	650.7	100	687.8	200	752.0	400	810.5	800	843.2
22 July 57										
1830-1930	50	617.8	100	710.6	200	775.8	400	816.4	800	743.3
24 July 57										
1400-1500	50	872.2	100	915.4	200	996.2	400	1058.7	800	1140.4
1500-1600	50	1114.3	100	1189.0	200	1295.7	400	1390.4	800	1499.3
1601-1701	50	937.1	100	1003.3	200	1090.0	400	1164.0	800	1250.0
25 July 57										
1600-1700	50	156.6	100	183.3	200	189.0	400	190.9	800	203.1
27 July 57										
1602-1702	50	248.7	100	278.8	200	332.4	400	409.0	800	579.2
1702-1802	50	201.6	100	234.3	200	275.3	400	319.8	800	408.0
1802-1904	50	168.5	100	200.3	200	241.4	400	298.8	800	395.1

*Ht (cm)

LITTLE AMERICA V

Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
29 July 57										
0758-0902	50	666.8	100	719.2	200	764.6	400	809.8	800	849.9
0902-0958	50	673.1	100	730.7	200	776.9	400	824.2	800	884.7
1359-1459	50	701.7	100	762.1	200	811.2	400	858.6	800	933.1
1500-1600	50	719.3	100	779.8	200	827.3	400	874.0	800	944.0
1600-1700	50	729.4	100	790.6	200	838.9	400	885.7	800	959.2
30 July 57										
0859-0959	50	514.9	100	566.4	200	595.0	400	633.6	800	687.0
0959-1059	50	456.0	100	500.3	200	526.0	400	554.6	800	611.3
1059-1259	50	413.0	100	447.3	200	471.4	400	495.5	800	552.6
1300-1400	50	474.5	100	509.7	200	530.6	400	545.9	800	590.8
31 July 57										
1059-1159	50	126.5	100	144.2	200	155.7	400	173.1	800	204.6
1159-1259	50	122.8	100	146.8	200	173.7	400	183.9	800	153.9
1259-1359	50	112.0	100	135.2	200	150.9	400	117.0	800	96.1
1359-1459	50	182.1	100	213.0	200	268.2	400	337.1	800	341.0
1500-1600	50	226.4	100	258.2	200	309.0	400	398.6	800	471.2
1600-1700	50	331.7	100	363.7	200	401.2	400	467.1	800	589.7
1700-1800	50	434.7	100	468.7	200	504.7	400	563.3	800	623.6

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
1 August 57										
1359-1459	50	1045.2	100	1172.9	200	1262.8	400	1343.3	800	1452.9
1500-1600	50	1121.1	100	1244.6	200	1333.5	400	1410.0	800	1524.5
1600-1700	50	859.9	100	953.1	200	1022.5	400	1077.1	800	1164.2
1701-1801	50	759.1	100	842.2	200	902.5	400	955.6	800	1041.1
1801-1901	50	546.8	100	605.2	200	648.4	400	678.1	800	742.2
2 August 57										
1059-1159	50	371.4	100	406.9	200	455.6	400	520.5	800	553.4
1159-1259	50	429.5	100	467.2	200	516.8	400	590.2	800	675.1
1259-1359	50	567.3	100	609.6	200	664.8	400	751.7	800	841.9
1559-1659	50	259.1	100	290.9	200	337.1	400	420.3	800	537.2
5 August 57										
1259-1359	50	1258.8	100	1374.3	200	1468.8	400	1596.5	800	1639.3
1359-1459	50	1316.2	100	1446.8	200	1549.9	400	1682.3	800	1725.3
6 August 57										
0059-0159	50	1368.0	100	1511.2	200	1617.3	400	1761.4	800	1807 2
0159-0259	50	1244.1	100	1364.6	200	1461.8	400	159[illegible].3	800	1640 6
0300-0400	50	1092.5	100	1189.0	200	1271.1	400	1379.6	800	1427.3
0601-0701	50	902.4	100	972.3	200	1035.7	400	1123.5	800	1178.1

*Ht ([illegible])

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
9 August 57										
1100-1203	50	175.4	100	196.4	200	224.0	400	269.4	800	280.6
1203-1300	50	140.7	100	161.2	200	184.3	400	219.1	800	197.6
10 August 57										
1600-1700	50	319.7	100	352.1	200	380.1	400	418.0	800	460.9
1700-1800	50	310.0	100	334.5	200	364.5	400	403.4	800	443.6
1801-1901	50	269.9	100	287.7	200	310.7	400	341.4	800	374.8
1901-2001	50	265.4	100	289.3	200	314.7	400	346.5	800	386.5
11 August 57										
1259-1406	50	414.4	100	453.4	200	485.2	400	526.9	800	563.5
1458-1600	50	434.3	100	468.8	200	498.0	400	536.5	800	573.7
1601-1701	50	523.4	100	564.0	200	598.8	400	646.2	800	687.3
1902-2002	50	577.5	100	620.8	200	654.7	400	692.8	800	703.7
2002-2102	50	641.6	100	691.0	200	728.1	400	768.1	800	770.1
12 August 57										
1005-1055	50	814.2	100	891.6	200	954.0	400	1023.8	800	1122.9
1056-1156	50	792.0	100	958.0	200	914.5	400	980.7	800	1062.6
1157 1257	50	912.2	100	995.3	200	1063.9	400	1137.8	800	1216.7
1600-1700	50	1049.0	100	1136.6	200	1208.1	400	1281.7	800	1367.3
1700-1802	50	1036.3	100	1120.1	200	1189.9	400	1259.4	800	1347.0

*Ht (cm)

LITTLE AMERICA V

Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>13 August 57</u>										
1059-1159	50	438.5	100	464.9	200	502.6	400	541.9	800	603.1
1159-1259	50	438.1	100	463.0	200	502.9	400	542.2	800	598.9
1259-1359	50	425.2	100	453.0	200	489.7	400	528.3	800	595.1
1400-1500	50	401.6	100	439.2	200	467.4	400	507.1	800	570.0
1500-1600	50	358.7	100	394.1	200	423.9	400	464.6	800	531.4
<u>14 August 57</u>										
0858-0959	50	484.6	100	547.7	200	589.7	400	638.0	800	694.2
0959-1059	50	376.7	100	417.4	200	447.6	400	489.1	800	548.2
1059-1159	50	358.0	100	395.3	200	423.3	400	462.4	800	507.7
1159-1259	50	298.0	100	321.4	200	340.2	400	364.3	800	390.9
1300-1400	50	290.6	100	308.3	200	326.2	400	351.4	800	369.7
<u>15 August 59</u>										
0959-1059	50	673.0	100	742.7	200	800.6	400	873.6	800	935.8
1059-1159	50	665.8	100	732.3	200	734.5	400	846.0	800	895.1
1159-1259	50	651.5	100	714.3	200	760.4	400	827.2	800	870.1
1259-1359	50	619.4	100	677.8	200	720.9	400	780.7	800	815.6
1400-1500	50	639.1	100	698.6	200	742.6	400	798.5	800	837.3

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
16 August 57										
0958-1058	50	509.6	100	552.3	200	595.2	400	632.5	800	688.1
1058-1158	50	482.4	100	522.8	200	567.3	400	606.8	800	652.7
1158-1300	50	474.9	100	513.9	200	553.5	400	585.8	800	627.0
1501-1601	50	443.8	100	487.3	200	536.2	400	582.9	800	634.5
1601-1701	50	417.5	100	458.4	200	504.2	400	552.4	800	601.0
17 August 57										
0958-1058	50	557.6	100	623.3	200	678.9	400	731.3	800	762.1
1058-1158	50	525.9	100	594.4	200	644.3	400	696.2	800	722.4
1158-1258	50	516.2	100	582.2	200	634.3	400	683.1	800	704.9
1259-1359	50	492.3	100	554.7	200	601.2	400	645.4	800	666.1
19 August 57										
1700-1800	50	135.7	100	169.6	200	201.9	400	246.5	800	291.8
1904-2005	50	102.0	100	194.6	200	229.5	400	275.3	800	307.0
2005-2105	50	104.6	100	153.0	200	168.4	400	199.1	800	229.0
20 August 57										
1059-1159	50	447.4	100	488.2	200	528.5	400	574.4	800	617.9
1159-1259	50	315.1	100	338.9	200	377.3	400	423.8	800	460.2
1500-1600	50	108.5	100	131.1	200	155.8	400	179.6	800	196.9
1600-1700	50	135.2	100	170.4	200	241.5	400	275.3	800	244.0

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
21 August 57										
1158-1258	50	569.3	100	704.3	200	884.8	400	937.0	800	1142.3
1400-1500	50	541.1	100	603.1	200	672.8	400	733.5	800	809.4
1500-1600	50	396.2	100	416.9	200	441.4	400	485.3	800	511.4
23 August 57										
1400-1500	50	591.6	100	633.0	200	678.9	400	748.5	800	806.9
1500-1600	50	714.9	100	768.2	200	822.3	400	905.9	800	956.3
1600-1700	50	884.4	100	950.7	200	1013.4	400	1106.8	800	1154.5
1700-1800	50	994.3	100	1072.4	200	1144.6	400	1246.5	800	1297.2
1901-2001	50	1036.8	100	1135.2	200	1211.5	400	1310.9	800	1358.2
2001-2101	50	1069.9	100	1168.9	200	1246.9	400	1350.0	800	1405.9
2302-2359	50	1135.3	100	1222.1	200	1297.9	400	1410.5	800	1496.0
24 August 57										
0000-0100	50	1014.9	100	1094.1	200	1162.2	400	1257.8	800	1327.9
0200-0300	50	860.4	100	923.7	200	981.3	400	1071.7	800	1125.6
1405-1459	50	142.6	100	168.4	200	210.9	400	242.0	800	163.6
1459-1559	50	144.1	100	166.3	200	198.0	400	276.6	800	272.8
1559-1659	50	165.4	100	191.7	200	230.3	400	288.9	800	342.7

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
26 August 57										
0959-1059	50	220.3	100	256.5	200	291.3	400	359.5	800	440.7
1059-1159	50	283.3	100	321.8	200	358.3	400	425.1	800	543.1
1159-1259	50	267.1	100	305.2	200	345.5	400	420.2	800	539.9
1259-1400	50	393.6	100	438.2	200	479.1	400	534.5	800	612.0
27 August 57										
1500-1600	50	733.5	100	805.7	200	857.8	400	923.2	800	1001.3
2102-2202	50	825.0	100	941.7	200	1013.2	400	1088.6	800	1167.1
2202-2300	50	891.6	100	1015.9	200	1095.9	400	1177.2	800	1261.2
2301-2400	50	979.6	100	1121.1	200	1215.1	400	1302.3	800	1400.8
28 August 57										
0000-0100	50	1035.9	100	1157.8	200	1255.5	400	1340.5	800	1436.3
29 August 57										
1559-1659	50	456.8	100	502.0	200	531.2	400	575.2	800	620.2
1659-1759	50	528.9	100	581.5	200	619.7	400	672.8	800	730.9
1800-1900	50	629.1	100	689.8	200	732.6	400	793.6	800	851.9
1900-2000	50	720.8	100	791.0	200	841.2	400	910.7	800	970.6
30 August 57										
0800-0830	50	1016.9	100	1634.8	200	2000.0	400	2125.1	800	2751.4
0830-0900	50	933.2	100	1542.3	200	1842.4	400	1986.1	800	2585.4
1001-1101	50	771.7	100	1353.1	200	1583.9	400	1669.9	800	2147.1

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
<u>31 August 57</u>										
0000-0055	50	1482.8	100	1576.3	200	1706.6	400	1843.3	800	1911.8
0100-0155	50	1280.5	100	1362.4	200	1468.5	400	1592.0	800	1636.3
0304-0359	50	1080.4	100	1203.7	200	1332.2	400	1333.6	800	1527.6
0405-0500	50	984.1	100	1086.3	200	1197.0	400	1253.9	800	1391.1
0505-0605	50	664.5	100	714.2	200	770.6	400	836.5	800	900.7
2200-2300	50	307.9	100	341.9	200	362.6	400	387.5	800	417.5
<u>2 September 57</u>										
1501-1601	50	459.8	100	499.8	200	526.0	400	574.0	800	648.2
1601-1701	50	551.6	100	599.0	200	629.6	400	679.9	800	764.1
<u>3 September 57</u>										
1459-1559	50	288.2	100	321.1	200	350.2	400	391.5	800	458.3
1600-1700	50	322.6	100	355.7	200	387.9	400	431.0	800	483.9
1700-1800	50	359.5	100	398.9	200	436.0	400	482.3	800	536.3
<u>6 September 57</u>										
1859-1959	50	342.0	100	378.2	200	415.3	400	476.9	800	550.7
1959-2101	50	356.2	100	393.4	200	433.0	400	499.4	800	578.8
2101-2200	50	357.4	100	395.1	200	434.9	400	500.3	800	570.1
2200-2300	50	333.8	100	369.8	200	410.8	400	476.4	800	552.7

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
8 September 57										
1457-1557	50	699.6	100	766.6	200	819.4	400	873.6	800	938.8
1558-1658'	50	659.5	100	722.1	200	770.2	400	821.5	800	880.6
1659-1805	50	620.5	100	676.9	200	720.1	400	768.1	800	831.5
9 September 57										
1259-1359	50	375.1	100	409.6	200	439.1	400	488.0	800	582.4
1459-1559	50	349.5	100	380.0	200	410.6	400	457.2	800	546.1
1600-1700	50	281.5	100	308.2	200	334.6	400	378.2	800	446.5
1700-1800	50	262.6	100	286.4	200	308.9	400	343.9	800	408.5
11 September 57										
1600-1700	50	145.3	100	159.1	200	174.0	400	194.0	800	209.1
1700-1800	50	226.3	100	246.7	200	267.6	400	296.5	800	332.6
1800-1900	50	234.2	100	260.2	200	289.6	400	337.2	800	405.3
1901-2001	50	491.8	100	528.5	200	558.4	400	609.2	800	655.6
2001-2101	50	582.2	100	623.8	200	660.8	400	722.4	800	779.8
12 September 57										
1702-1759	50	604.5	100	656.4	200	694.4	400	739.1	800	795.2
1759-1900	50	599.2	100	667.7	200	711.4	400	756.5	800	805.1
1900-2000	50	601.3	100	672.6	200	718.9	400	764.4	800	817.8

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
13 September 57										
1458-1558	50	207.0	100	239.3	200	277.7	400	331.6	800	390.8
1558-1658	50	249.4	100	280.2	200	314.8	400	366.6	800	431.9
2000-2102	50	270.8	100	307.5	200	339.5	400	372.7	800	416.3
2103-2159	50	266.1	100	302.7	200	332.1	400	357.4	800	382.8
2200-2300	50	268.9	100	303.7	200	332.1	400	356.6	800	379.5
14 September 57										
1201-1258	50	362.5	100	395.0	200	421.1	400	450.1	800	472.9
1459-1559	50	318.3	100	347.8	200	373.4	400	406.5	800	442.1
1559-1700	50	250.9	100	275.1	200	300.8	400	349.1	800	397.7
1801-1901	50	218.9	100	242.7	200	275.7	400	322.5	800	378.2
16 September 57										
1159-1259	50	498.8	100	554.2	200	599.0	400	653.4	800	731.8
1259-1359	50	588.9	100	648.9	200	697.2	400	749.6	800	818.8
17 September 57										
0959-1059	50	323.4	100	355.2	200	387.6	400	432.7	800	528.4
1059-1159	50	233.3	100	256.1	200	276.1	400	301.7	800	346.0
1159-1259	50	260.9	100	285.5	200	306.0	400	328.8	800	368.4
1559-1659	50	463.6	100	511.3	200	552.4	400	599.5	800	651.0
1659-1759	50	452.9	100	503.1	200	543.2	400	587.7	800	644.3

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
20 September 57										
1020-1100	50	545.0	100	593.7	200	635.0	400	688.0	800	742.1
1100-1200	50	530.3	100	581.9	200	622.4	400	678.1	800	735.4
22 September 57										
1258-1358	50	585.7	100	638.7	200	682.7	400	733.5	800	814.3
1358-1458	50	554.9	100	603.7	200	647.2	400	698.3	800	783.3
1459-1559	50	582.7	100	635.5	200	680.9	400	732.5	800	814.5
1559-1659	50	543.1	100	591.2	200	633.9	400	684.2	800	770.0
1700-1800	50	503.2	100	554.5	200	598.0	400	649.5	800	728.3
23 September 57										
1058-1158	50	184.6	100	208.1	200	243.4	400	310.7	800	382.6
1158-1303	50	169.4	100	190.0	200	216.7	400	252.8	800	312.2
1358-1458	50	196.7	100	222.9	200	260.4	400	327.6	800	305.6
1458-1600	50	148.2	100	173.9	200	210.3	400	267.0	800	181.1
1600-1700	50	126.9	100	153.6	200	193.1	400	163.7	800	149.0
1701-1801	50	138.9	100	166.3	200	219.8	400	248.1	800	213.3
1801-1901	50	106.2	100	126.7	200	166.8	400	224.0	800	249.5
2018-2118	50	86.8	100	96.0	200	103.9	400	88.1	800	59.3
24 September 57										
1100-1200	50	195.3	100	212.0	200	235.8	400	273.1	800	290.4
1301-1401	50	107.3	100	124.6	200	138.8	400	145.1	800	135.4
1601-1705	50	282.9	100	312.7	200	339.2	400	371.3	800	403.1

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
25 September 57										
1302-1402	50	253.6	100	281.5	200	306.7	400	333.4	800	374.7
1402-1502	50	327.3	100	361.1	200	397.4	400	438.0	800	496.9
1502-1602	50	406.2	100	451.4	200	499.2	400	547.2	800	606.7
26 September 57										
1159-1259	50	325.5	100	351.6	200	375.5	400	405.7	800	432.4
1259-1359	50	352.3	100	377.5	200	397.7	400	415.4	800	408.7
1359-1459	50	287.1	100	305.9	200	321.2	400	333.4	800	323.0
1500-1600	50	306.6	100	326.8	200	343.6	400	356.9	800	342.8
27 September 57										
1158-1258	50	371.2	100	411.9	200	448.1	400	488.8	800	547.4
1259-1359	50	478.5	100	529.0	200	574.3	400	618.7	800	761.1
1359-1504	50	527.1	100	580.2	200	628.4	400	670.8	800	708.3
28 September 57										
1058-1158	50	314.1	100	330.6	200	349.5	400	367.1	800	386.9
1158-1258	50	298.3	100	311.9	200	328.9	400	342.2	800	361.3
1259-1359	50	294.6	100	306.1	200	318.8	400	320.6	800	318.7

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
29 September 57										
1104-1159	50	571.7	100	620.9	200	662.1	400	699.3	800	738.3
1400-1505	50	514.8	100	562.7	200	601.0	400	635.5	800	671.6
1505-1600	50	432.1	100	470.3	200	502.6	400	531.5	800	558.6
1600-1701	50	397.1	100	433.7	200	465.1	400	492.0	800	519.2
30 September 57										
0958-1059	50	259.1	100	275.2	200	292.8	400	306.3	800	337.5
1059-1159	50	300.7	100	319.8	200	340.5	400	361.1	800	404.3
1159-1259	50	176.3	100	188.0	200	207.7	400	227.6	800	275.3
1300-1400	50	175.3	100	188.7	200	210.7	400	227.7	800	258.6
2 October 57										
1258-1400	50	315.4	100	346.9	200	387.8	400	449.1	800	552.6
1701-1801	50	124.0	100	143.7	200	172.6	400	217.1	800	296.1
1801-1901	50	69.6	100	89.7	200	107.6	400	138.6	800	161.3
4 October 57										
1401-1501	50	737.2	100	805.2	200	867.0	400	923.2	800	1000.7
1501-1601	50	841.2	100	919.1	200	986.8	400	1049.9	800	1137.2
1601-1701	50	962.8	100	1063.8	200	1152.1	400	1226.1	800	1316.1
1701-1801	50	1087.8	100	1203.5	200	1302.9	400	1388.7	800	1486.8

*Ht (cm)

LITTLE AMERICA V
Hourly Wind Speeds (cm/sec)

Date - Time	Ht*	Speed	Ht	Speed	Ht	Speed	Ht	Speed	Ht	Speed
15 October 57										
1901-2000	50	640.3	100	695.0	200	804.9	400	762.1	800	746.3
2200-2300	50	976.1	100	1029.0	200	1096.5	400	1148.4	800	1254.2
2300-0000	50	803.0	100	847.8	200	923.6	400	941.8	800	1001.1
19 October 57										
1700-1800	50	1228.7	100	1372.6	200	1532.2	400	1668.5	800	1774.7
1800-1900	50	1258.2	100	1413.9	200	1584.5	400	1725.9	800	1837.1
1900-2000	50	1234.9	100	1377.1	200	1528.8	400	1663.0	800	1771.7
20 October 57										
0102-0202	50	1138.8	100	1270.8	200	1417.4	400	1540.7	800	1635.9
0202-0302	50	1098.7	100	1228.2	200	1365.2	400	1482.3	800	1568.2
0302-0402	50	931.2	100	1017.8	200	1111.3	400	1201.4	800	1277.8
21 October 57										
1558-1701	50	714.4	100	783.8	200	856.1	400	921.3	800	977.8
1701-1801	50	605.2	100	660.2	200	719.0	400	770.0	800	831.9
1802-1902	50	537.1	100	588.0	200	643.9	400	691.1	800	748.9

*Ht (cm)

Unclassified
Security Classification

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13. ABSTRACT

At Little America V the temperature range of each of the 9 coldest months is large, as is the annual range. Minima are controlled by advection of cold air from the interior and maxima by advection of warmer air from the Ross Sea area. The winter lacks a distinct temperature minimum, and mid-winter reversals of temperature trend occur.

Micrometeorological wind and temperature profiles in the lowest 8 m of the atmosphere were recorded at Little America V in 1957, and hourly means of temperature for about 3,000 hours and wind speed for about 500 hours are published as Appendix B of this report. Procedures used to analyze the 1958 micrometeorological data from the South Pole Station are followed in this analysis and results compared with the less complex relationships at the South Pole.

The curvature characteristics of wind and air temperature profiles (as measured by Deacon numbers) are analyzed in great detail, employing Richardson number computation (which takes into account wind shear as well as temperature lapse rate) to express stability and its change with height. The structure of the observed profiles is difficult to interpret in detail. Attempts to do so, by considering such diverse factors as wind fetch, sky cover, advection or katabatic effects, were not entirely satisfactory. Stable conditions predominated, and cases of maximum stability were more extreme than at the South Pole. The maximum inversion in the lowest 8 m amounted to 15.8 C°. Variations of wind speed and temperature with stability were similar to those at the South Pole, but solar radiation from sun and sky can

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Abstract (continued)

contribute to instability at Little America V, while overcast skies indicate that instability at the South Pole can be caused by long-wave radiation from the base of stratus cloud. The seasonal shift toward less stable conditions, as well as the rise in temperature, was delayed until October.

Air temperature profile data during winter frequently showed that the minimum temperature occurred at the 6 or 12 cm level, producing an "anomalous" profile. A study of this phenomenon, by Dr. H. H. Lettau, is included as Appendix A.

Values of the roughness length were small and erratic. Wind profile structure also was distinctly less regular than at the South Pole. In spite of this, Richardson numbers changed quite systematically with height below 4 m, suggesting a tendency for compensation. Conditions indicate that a common surface layer for momentum and heat transfer, if it existed, was often so shallow that the levels of profile observations were above it.

Eddy heat flux was computed for the hours of profile data on the basis of a similarity assumption using both estimated surface stress (with Karman's constant equal to 0.428, and Deacon-number-corrected wind shear) and vertical differences of temperature and wind speed in the lowest layers. To obtain representative climatological means of eddy heat flux, a statistical relationship was established between quartermaster observations (concerning profile structure versus bulk stability) and regular synoptic or standard observations supplied by the U. S. Weather Bureau. It is shown that it is permissible to employ constant coefficients of transfer of momentum and heat at Little America V, since variation of individual coefficients with stability was quite erratic because of the complicated profile structure. Average eddy heat flux varied from zero near neutral stability to -0.0693 ly/min at extreme stability, and average surface stress from 1.6 dynes/cm^2 to 0.4. Averages for 5-day periods show peaks of surface stress accompanying the passage of low pressure areas at this coastal station, in contrast with a lower average and smaller range at the continental South Pole Station.

The annual variation of heat flux at 2 m depth was computed by Fourier analysis, using once-a-day subsurface temperature observations by Chappell. The surface heat flux was obtained by adding the heat exchange between 2 m and the surface, computed by layer-by-layer integration of day-to-day temperature changes, to the heat flux at 2 m. The energy budget at the snow-air interface is discussed. Computations were based on hourly values of net radiation supplied by Hoinkes and heat fluxes into air and snow as described above. The latent heat flux, obtained as a remainder, indicates deposition in the 6-month period in 1957 equivalent to condensation of about 40 mm of water, 1.2 times as much as that reported for Maudheim during corresponding months in 1950 and 1951. Increased deposition in the milder winter months may be due to an accompanying increase in available moisture.

14. KEY WORDS	LINK A ROLE	LINK A WT	LINK B ROLE	LINK B WT	LINK C ROLE	LINK C WT
Measurement	8					
Analysis	8					
Comparison	8					
Range (Extremes)	8,9					
Wind	9,1		8			
Temperature	9,1		8			
Hoarfrost	9,1		8			
Data	9,1		8			
South Pole	9		9			
Little America V	9		9			
Maudheim	9		9			
Climatology	4					
Micrometeorology	4					

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13. ABSTRACT: Enter an abstract giving a brief and factual summary of the document indicative of the report, even though it may also appear elsewhere in the body of the technical report. If additional space is required, a continuation sheet shall be attached.

It is highly desirable that the abstract of classified reports be unclassified. Each paragraph of the abstract shall end with an indication of the military security classification of the information in the paragraph, represented as *(TS)*, *(S)*, *(C)*, or *(U)*.

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