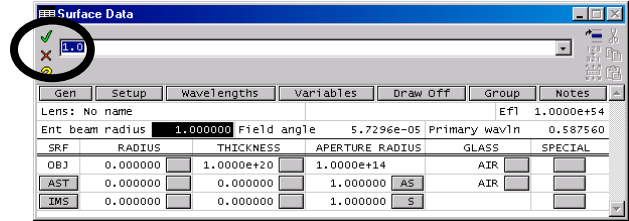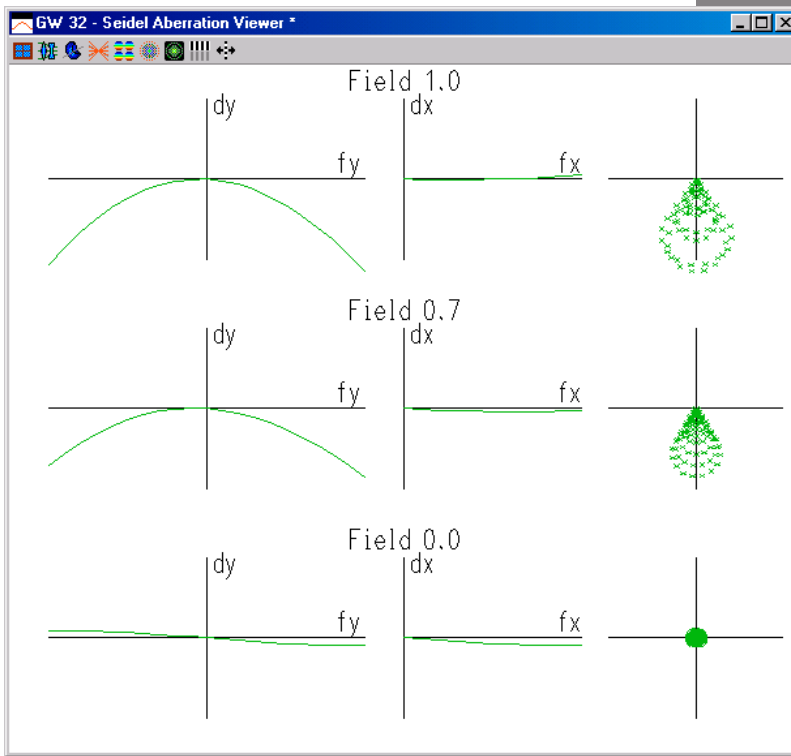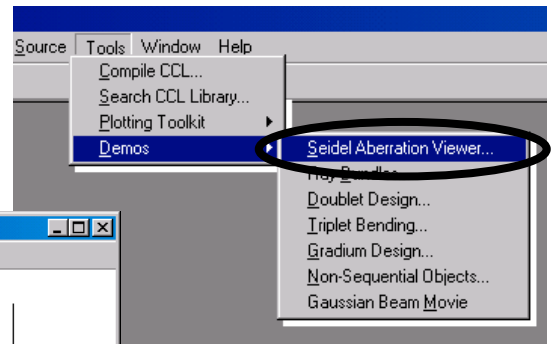*Interactive OSLO Classroom Demonstration:*
Seidel Aberration Viewer

Make sure that the surface data spreadsheet is closed before starting any demo...
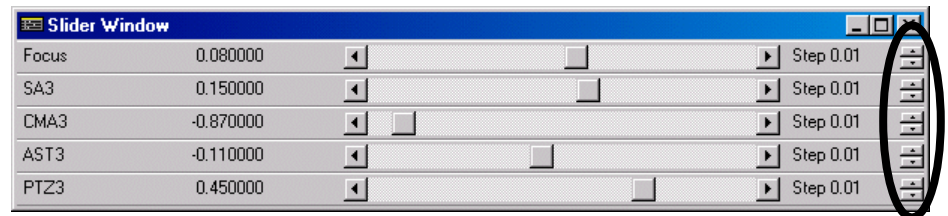*Simply click on the green check or the red X.*

Choosing Tools>>Demos>>Seidel Aberration Viewer from the OSLO LT menu brings up a self contained demo consisting of two windows.

The aberration plot window shows the results of transverse ray aberration plots when third order (Seidel) aberrations are applied.

Note that the aberrations displayed in this demo are not connected to any real optical system. The aberrations are simply calculated from Seidel aberration polynomials based on the inputs from the slider window.

The slider window (like the aberration window) can be resized to make better use of real estate on the screen.

The up/down arrows on the right hand side of the slider bar window adjusts the precision and range of the sliders themselves.

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Interactive OSLO Classroom Demonstration:
Triplet Bending

Make sure that the surface data spreadsheet is closed before starting any demo...
Simply click on the green check or the red X.
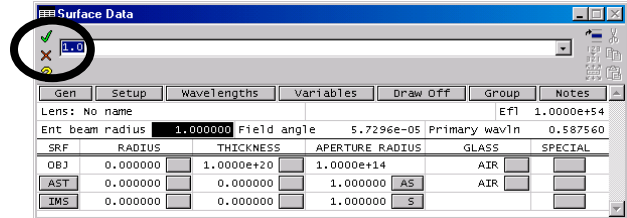
Choosing Tools>>Demos>>Triplet Bending from the OSLO LT menu brings up a self contained demo consisting of three windows.

This demo allows the student to virtually bend the lenses of a triplet. By adjusting the sliders, the student can switch which lens is being controlled and attempt to re-balance the system aberrations by observing the ray intercept curves (a.k.a. transverse ray aberration plots).

The key to this demo is that the opposing curvature of each lens is automatically controlled during the bending so that the overall power of each lens is maintained.
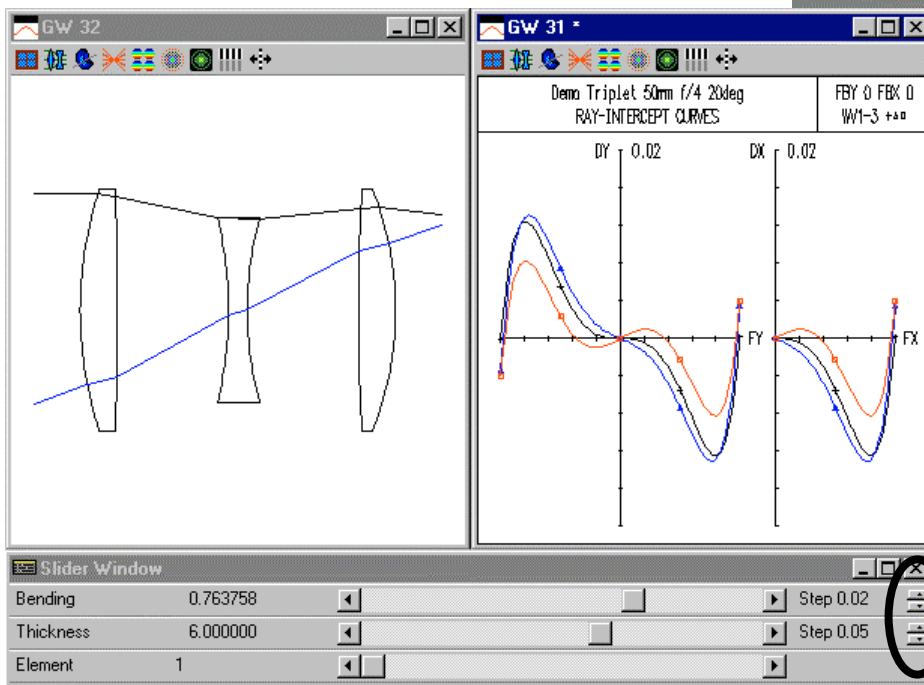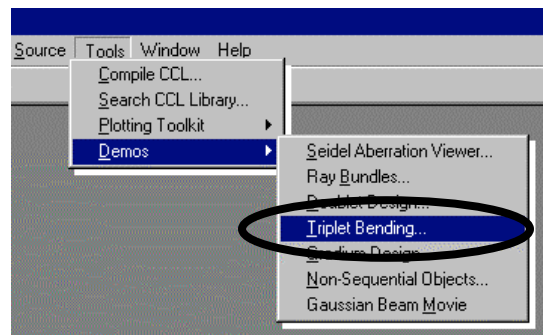
Once again, the up/down arrows on the right hand side of the slider bar window adjusts the precision and range of the sliders themselves.

Interactive OSLO Classroom Demonstration:
Apply Sliders to Control Any System Parameter

In the previous slider demonstrations, the demonstrations were "canned" so that a special CCL program was used to open the correct system and configure the sliders appropriately. Similarly, any user of OSLO LT can write their own CCL programs to control specific system parameters in a pre-determined way. Unfortunately, this involves a working knowledge of the OSLO CCL programming language, and this may involve more time than a user would like to devote. Fortunately, OSLO also provides a simple *Slider Wheel Design* wizard that makes it easy to set up almost any system parameter to be controlled with a slider.

For an example, open the file "ebert.len" from the OSLO\Light61\public\len\demo\LT directory.
As you can see, this lens file contains an Ebert grating monochromator. It might be interesting to see how a change in groove spacing or tilt of the grating might affect the performance of this system.
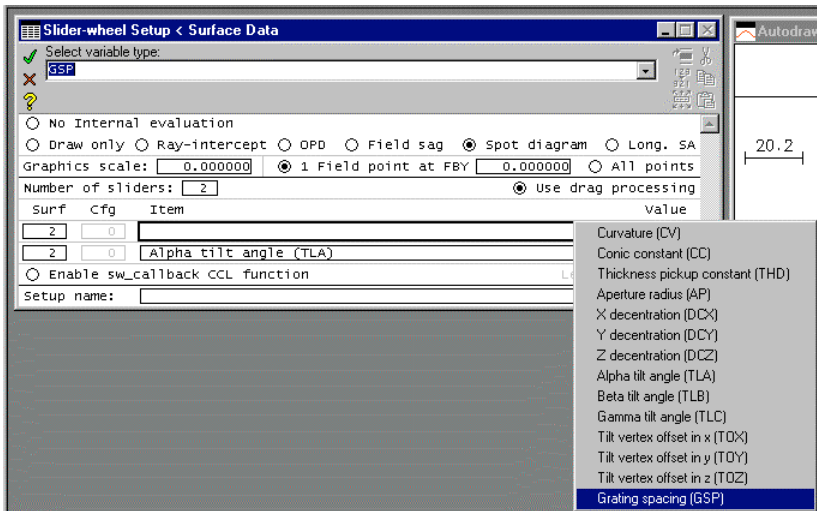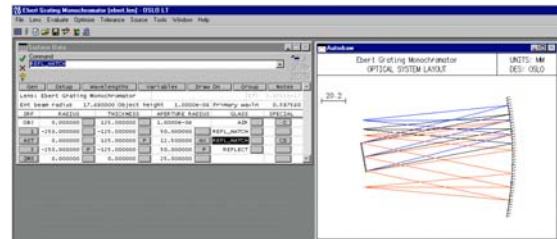
To set up the appropriate sliders, choose Optimize>>Slider Wheel Design… from the OSLO menu.

In the resulting "Slider-wheel Setup" dialog, choose to view the "Spot Diagram" analysis and create two sliders linked to surface 2 - one will control "Grating Spacing (GSP)", and the other "Alpha Tile Angle (TLA)". To get the pop-up list shown in the accompanying graphic below, click on the cell in the "Item" column and the pick list will pop up.

Clicking on the green check mark in the upper left hand corner of the Slider-wheel setup window accepts the choices you made and displays the resulting three window set of *side view layout*, *spot diagram* and *slider* windows shown here.

Experimenting with systems and slider combinations can open up a whole new way of looking at the interaction of different system parameters in an intuitive way that was impossible before OSLO.

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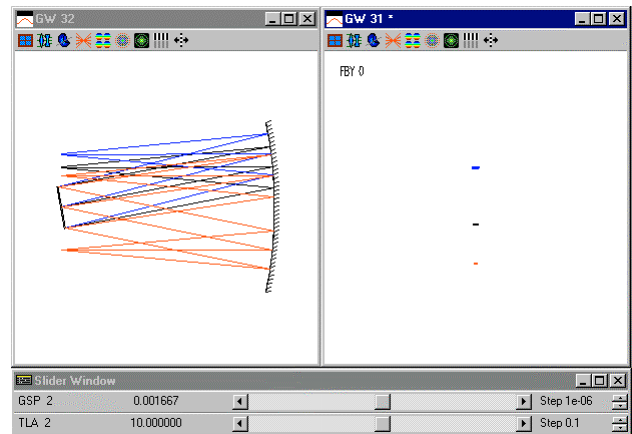
Classroom Reference Materials:
OSLO Optics Reference

On the OSLO CD-ROM is an electronic version of the OSLO Optics Reference that you may find useful for classroom use *(the hardcopy version ships with the paid versions of OSLO: OSLO Light, Standard and Premium)*. This electronic reference (over 400 pages) contains quick start information (chapter 1), background on optical concepts (chapters 2-9) and almost 200 pages of specific OSLO based examples (chapter 10).
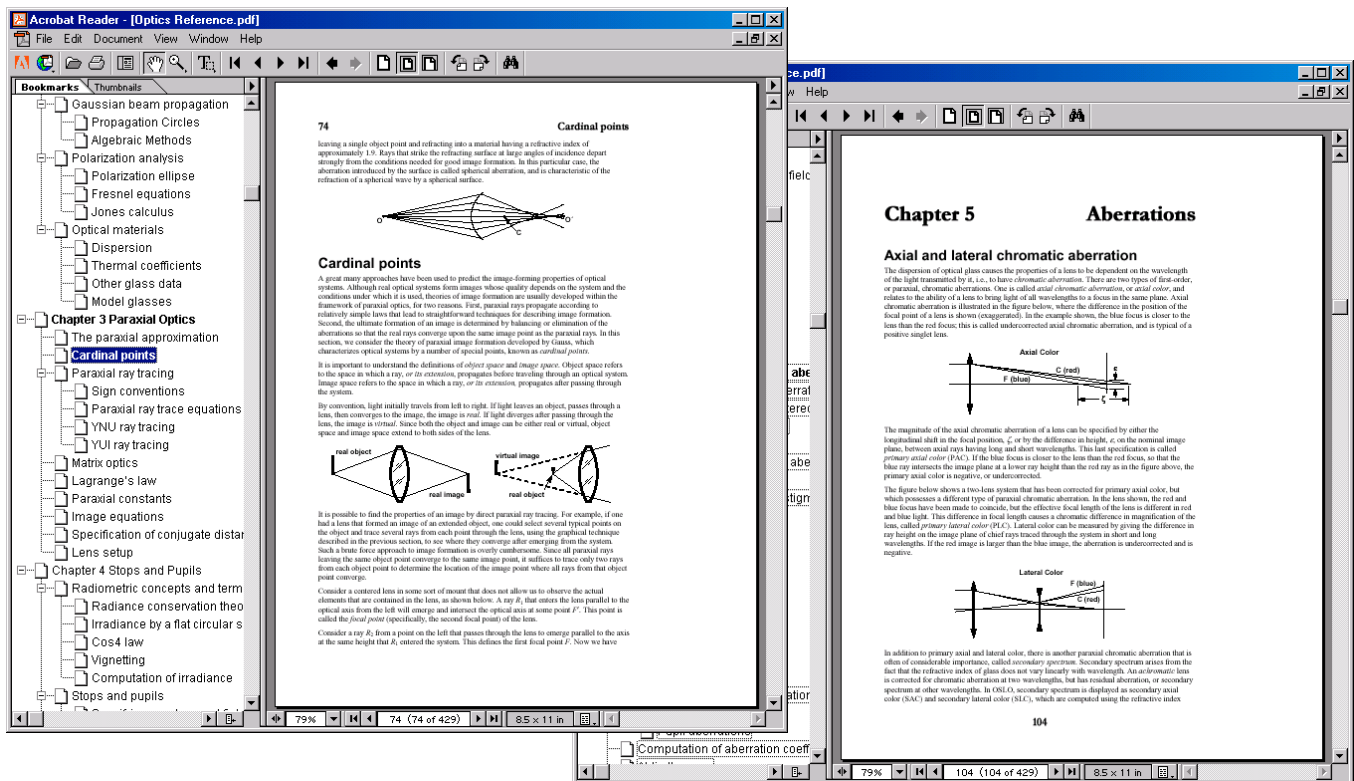
The file is in Adobe Acrobat format (*.pdf format) which you can read with the Adobe Acrobat Reader (the Adobe Acrobat Reader is download-able for free from the Adobe web site - http://www.adobe.com/). The file ("Optics Reference.pdf") can be found in the "…\docs" folder on the CD-ROM. When you launch the PDF file, grab the leftmost sidebar and it will expand to reveal a Window's like Table of Contents. You can click on a topic and it should take you to that section of the manual. You can also choose Edit>>Find… from the Adobe Acrobat Reader menu to search on a specific word or phrase anywhere in the document. This file is also available from our website in the same area where you can download the latest version of OSLO LT: http://www.lambdares.com/downloads/index.phtml.

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