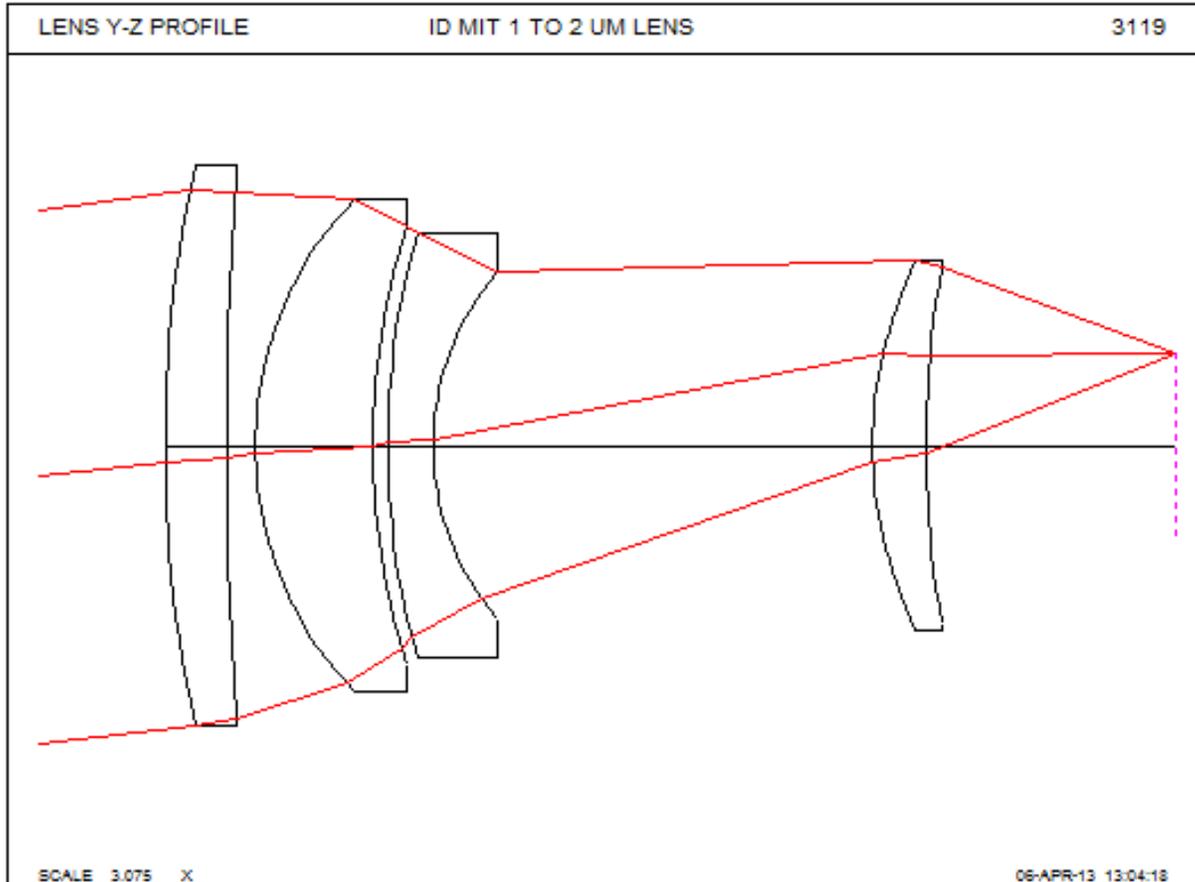


Lesson 29: The Annotation Editor

In this lesson you will learn how to use the Annotation Editor of SYNOPSIS. With this tool you can add many kinds of symbols and text to a graphics drawing. Get out the lens saved as 1.RLE, and make a drawing.

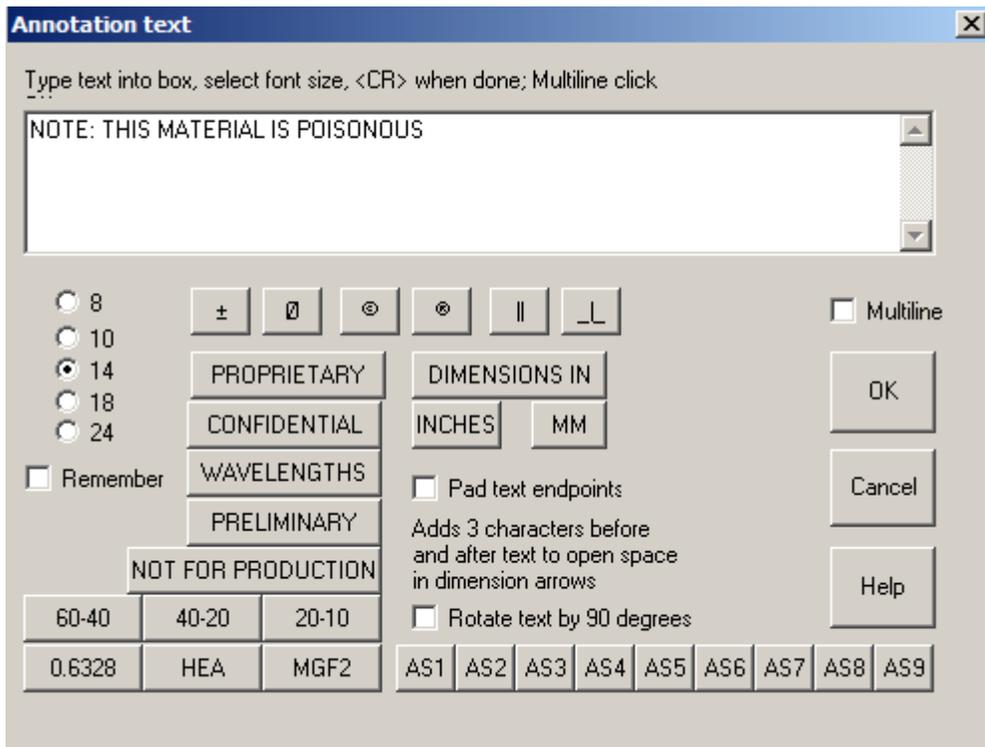
**FETCH 1
DWG**



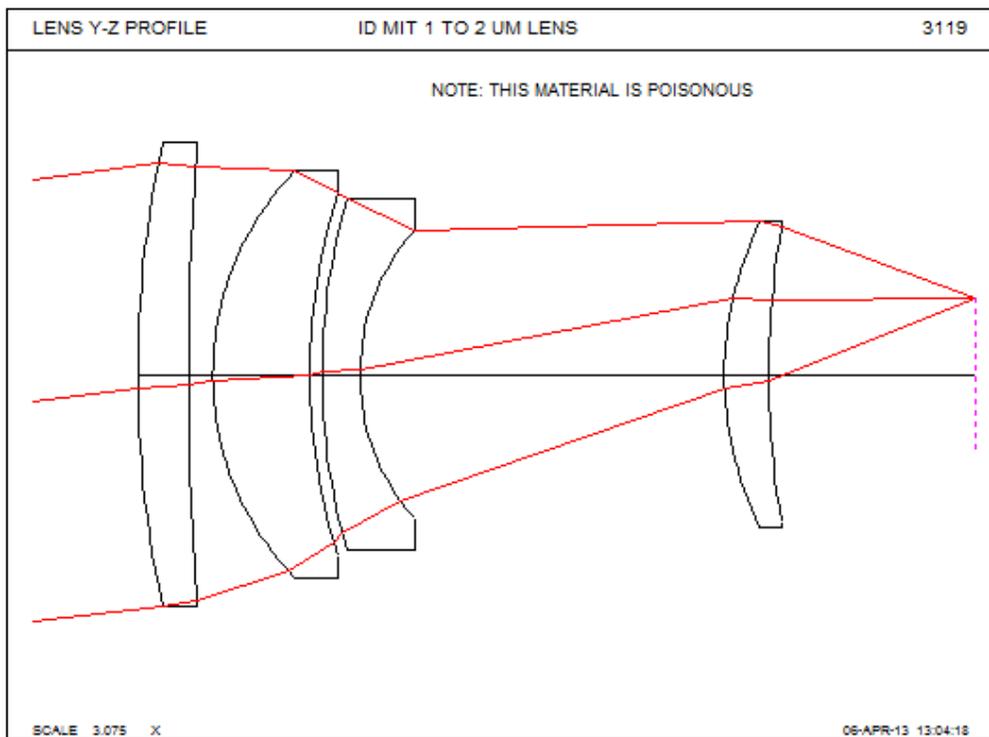
Let's add a warning message on the drawing. Click the Annotate button **Ab** on the Graphics Window toolbar. The Annotation editor toolbar opens up. Click the leftmost button



and then click in the drawing above element 3. Enter the text shown below, select size 14, and click OK.



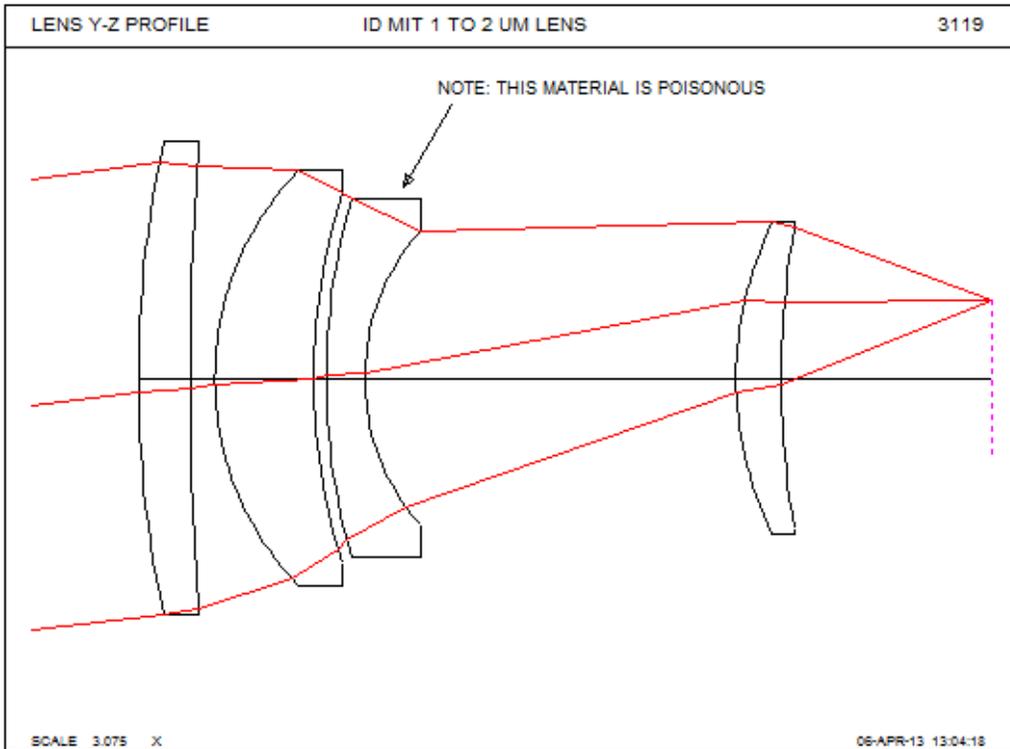
Now the text shows up on your drawing.



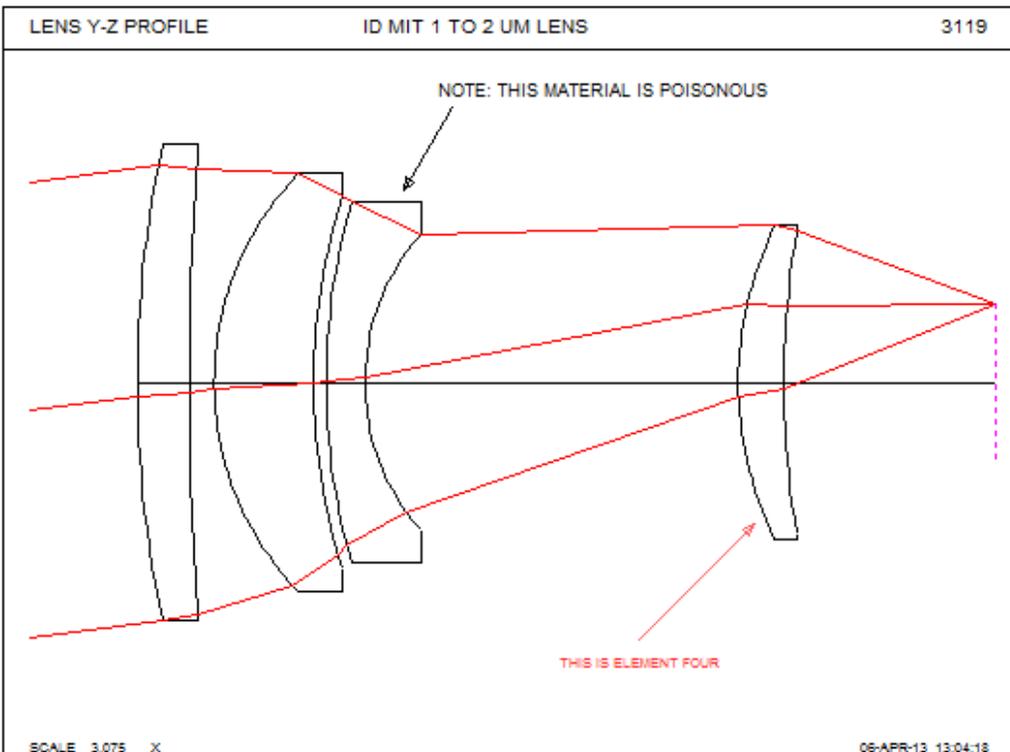
We're not quite done. Click on the arrow button.



And then click below the text line and drag down to element 3. You have added an arrow.



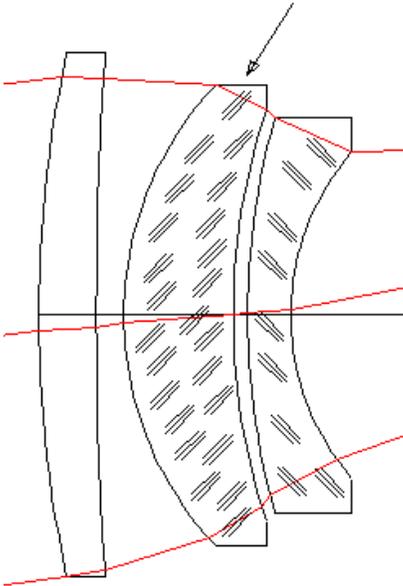
Now click the red box on the toolbar and draw another arrow pointing at the last element, and add some more text there.



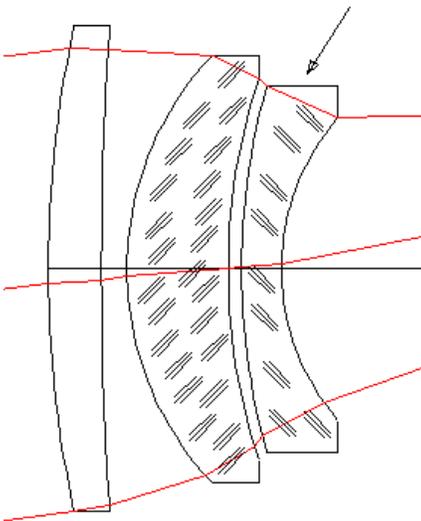
Now click the red box again (to turn it off), and click the leftmost hashmark button



Click several times in the area showing element 2.



Try the right hashmark button and add the marks to element 3. If you hold down the <Ctrl> button when you click the element, the hash marks are smaller, which would be appropriate for smaller elements.



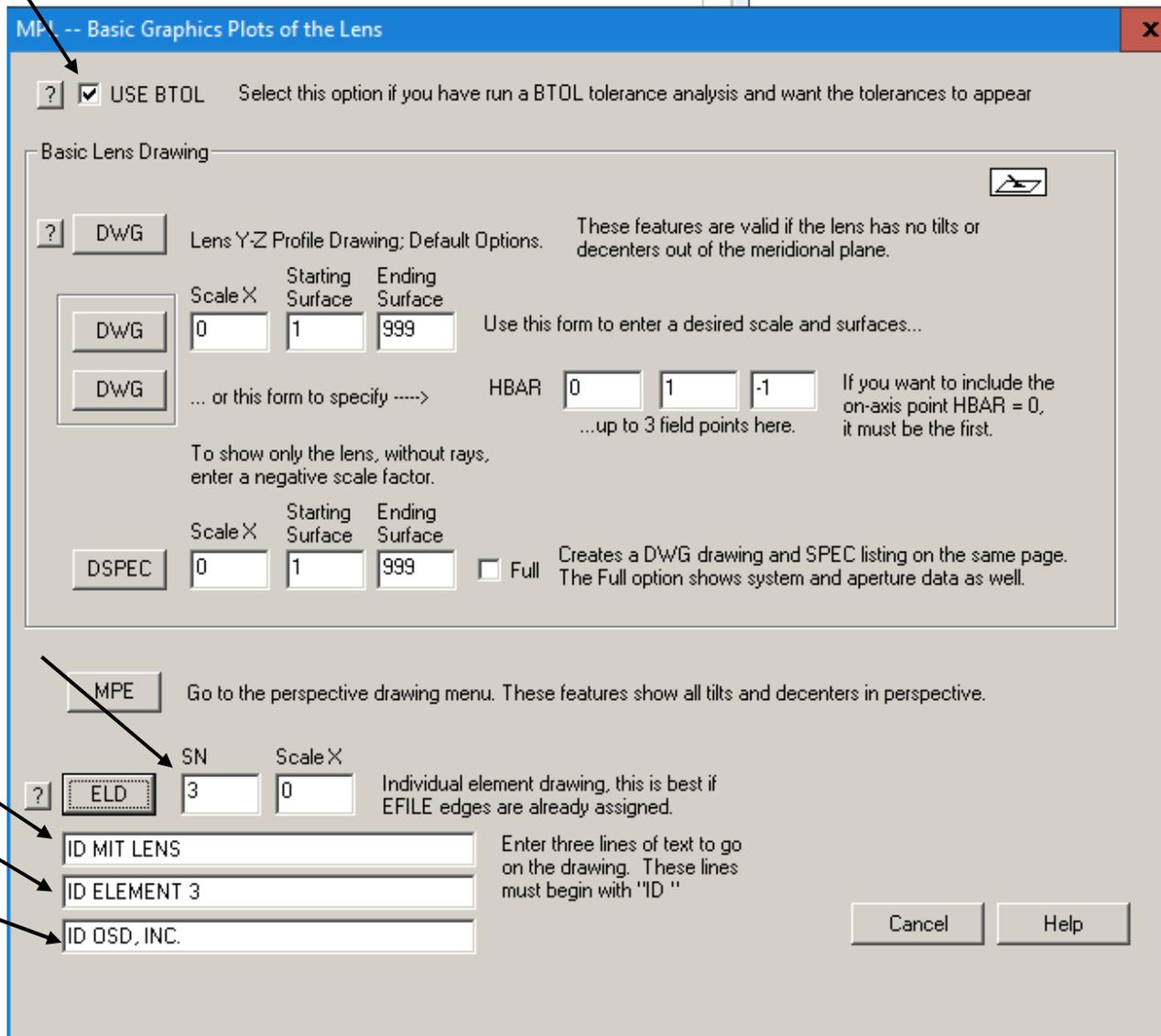
You can probably figure out how to use the line, circle, and rectangle buttons. Give them a try. Those all let you drag in the drawing to set the size and position of the annotation. What if you change your mind? Simple: click on the Edit button.



All of the annotation you have added grows an edit handle. Click on one and it turns black. You can then press the <Delete> key to remove it – or drag it to a different location. All of this is pretty simple. Now we'll get more advanced. Make a MACRO as follows, run it, and then open the **MPL** dialog and enter the data below.

```

CCW
FETCH 1
BTOL 2
TPR ALL
DEGRADE WAVE 0.2
GO
  
```



The program has made a tolerance budget for the lens, and the ELD command makes a drawing for element 3.

Click the ELD button. The drawing shows up, complete with the tolerances for that element produced by BTOL. That is the function of the **USE BTOL** command.

PARAMETERS	SIDE 1	SIDE 2
RADIUS OF CURVATURE	R1 23.3200	R2 46.0900
RADIUS TOLERANCE	TESTPLATE	TESTPLATE
FRINGE TOLERANCE	1.84	1.42
CYLINDER FRINGES	0.39	0.50
EDGE ROLL FRINGES	0.31	0.33
FINISH		
COATING		
CLEAR AP. DIAMETER	32.2420	28.7170
SAGITTA		S2 ± 0.0131 2.73059
DIA. TO FACE		Y2 31.2570
DIA. TO BEVEL	B1 35.2900	B2 34.7820
FACE WIDTH TO BEVEL		D2 1.7625
BEVEL WIDTH	C1 0.0	C2 0.2540
FACE ANGLE		
THICKNESS	TH 7.6487	
TH. TOL.	0.0131	
WEDGE TOL.	1.58 MIN.	
FLAT TIR	0.0162	
DIAMETER	DIA 35.2900	
DIA. TOL.	0.0096	
MATERIAL	ZNS	
GRADE		
ANNEAL		
SLOPE	0.069 FR/MM	

SCALE	NUMBER	
2.000 X		
DATE	REV.	
06-APR-13		
DESIGNER	APPROVED	
CHECKER		
TEST WAVL		
DIMENSIONS		SYNOPSYS LOG 119
MM		

MIT LENS ELEMENT 3		
OSD, INC.		

All of the tolerances are added by the program as *annotation* rather than graphics text. So if you want to change or customize anything, you can do it with the Edit button.

Here's a nice trick: We often want to add a comment or note to every element drawing. Here's how you can type it only once. There are 9 annotation strings that you can define with a command. We will define the first one (note the quotation marks; the program needs to know that those characters are not commands):

AS1 "GET MELT DATA FOR ALL ELEMENTS"

Now, open the Annotation text editor, click in the drawing, and then click the AS1 button . Your string pops up in the text window. Click OK and it's on the drawing.

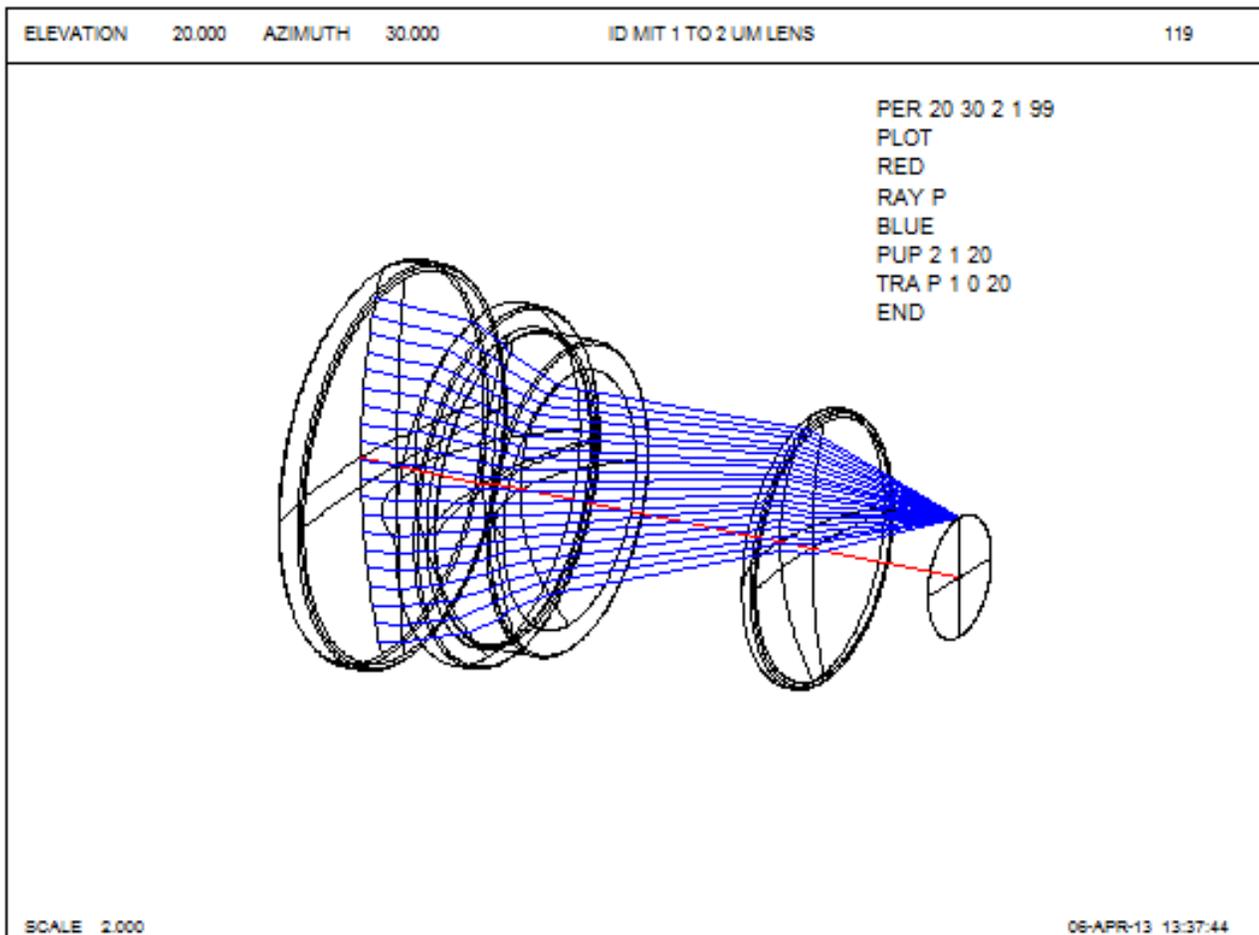
PARAMETERS	SIDE 1	SIDE 2
RADIUS OF CURVATURE	R1 23.3200	R2 46.0900
RADIUS TOLERANCE	TESTPLATE	TESTPLATE
FRINGE TOLERANCE	1.84	1.42
CYLINDER	0.39	0.50

GET MELT DATA FOR ALL ELEMENTS

Here's another nice trick. Sometimes you would like to record the MACro that produced a particular drawing. Make a MACro as follows:

```
PER 20 30 2 1 99
PLOT
RED
RAY P
BLUE
PUP 2 1 20
TRA P 1 0 20
END
```

Select the text and press <Ctrl>+C to put a copy on the clipboard. Now run the MACro, and when the picture shows up, open the Annotation Editor, select Text, and click in an empty space. Now paste the clipboard into the edit pane, with <Ctrl>+V, select size 14 and click OK.



If you save your picture (with the Save button ) , the annotation is saved too. Once you have saved a picture, you can easily copy the annotation and put it on a new picture. Just make the new picture, and then, in the Annotation Editor, click the Fetch button  . Then select the file you wish to copy. All the annotation comes back. That button erases any annotation that was previously there, but if you want to *add* to what was there before, use the Copy button  instead.

