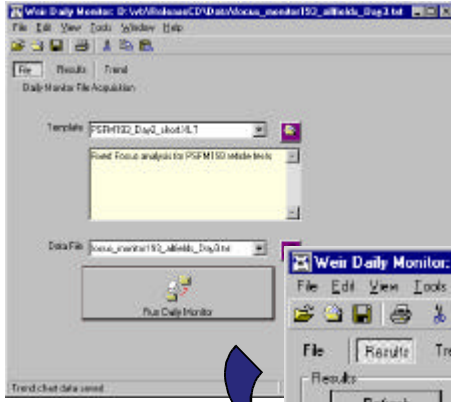


# Weir Daily Monitor

## Analysis automation, data warehousing and trend charting of the semiconductor process from the Weir Wavefront Engineering Software Suite

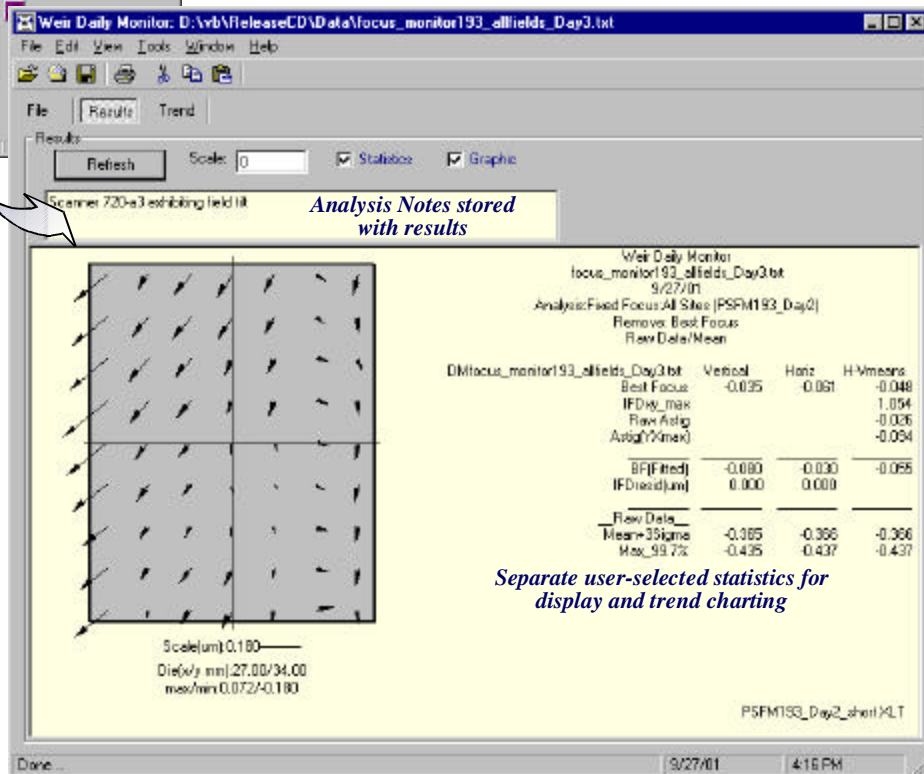


- pre-selected templates in drop-down listings
- Template notes and information
- ASCII data files, sorted and pre-selected in a drop-down listing.

“One-Click Analysis”

### Versatile Data Access

The Weir Daily Monitor handles overlay, registration, critical dimension, feature height, period and Phase Shift Focus Monitor? (PSFM) data all in one easy to use engineering interface. Built-in import routines allow you to work with metrology vendor ASCII files and Microsoft? Excel workbooks. Raw data, model results, intermediate files residuals and setup files as well as process trend histories are all stored in convenient Excel Workbooks that can be accessed and supplemented with custom Excel functions and programs.



Separate user-selected statistics for display and trend charting

*The Weir Daily Monitor one-click analysis of Raw, converted Phase Shift Focus Monitor and modeled data is customized by the user and stored in Weir DM Templates.*

### Power of the Analysis

The Weir Wavefront Engineering Suite provides extensive tools for the analysis of lens aberrations and tool performance. However, if you are not an optics expert or if you have analyses that must be performed on an on-going basis, the Weir Daily Monitor is the tool for the job no matter how complex.

Now you can automatically monitor and trend applications such as:

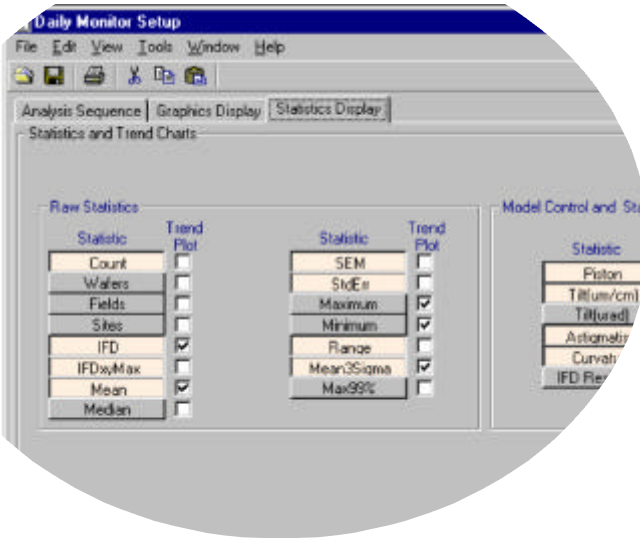
- ▶ Reticle Chucking
- ▶ Focus
- ▶ Lens and Stage Tilt
- ▶ Depth of Focus
- ▶ Astigmatism
- ▶ Curvature
- ▶ Scanner Noise
- ▶ Auto-focus
- ▶ Wafer Leveling
- ▶ Overlay, Registration and Feature uniformity.

All of the complexities of a sophisticated Weir Wavefront analysis can be incorporated into a one-click daily monitor analysis by simply manually performing the Weir analysis one time and then saving the worksheet as a Weir Daily Monitor Template. Thereafter, one click of the mouse will perform to your specifications data import, calibration, conversion, modeling along with the automated pre-model removal of reticle distortions, mean-field and fixed-value settings.

## TEA Systems

# Weir Daily Monitor

Date	Time	Data	Count	Best Focus	IFDxy_max	Raw Astig	Astig(YXmax)	BF(Fitted)	IFDresid(um)	Mean+3Sigma	Max_99.7%	Comments
09/25/2001	16:33:02	DMfocus_monitc	566.0000	-0.0270	1.1380	-0.0240	-0.0930	-0.0490		-0.8290	-0.5450	testUserComments
09/25/2001	19:34:27	DMfocus_monitc	567.0000	-0.0330	1.1820	-0.0220	-0.0940	-0.0560		-0.8410	-0.5510	
09/25/2001	19:46:00	DMfocus_monitc	1807.0000	-0.0300	0.6840	-0.0230	-0.0830	-0.0420		-0.2310	-0.3850	Comment:3rd Time
09/25/2001	20:16:52	DMfocus_monitc	1807.0000	-0.0300	0.6840	-0.0230	-0.0830	-0.0420		-0.2310	-0.3850	testUserComments
09/25/2001	20:24:11	DMfocus_monitc	566.0000	-0.0090	1.2130	-0.0200	-0.1030	-0.0270		-0.8190	0.5650	testUserComments
09/26/2001	07:10:44	DMfocus_monitc	567.0000	-0.0330	1.1820	-0.0220	-0.0940	-0.0560		-0.8410	-0.5510	testUserComments
09/26/2001	08:22:21	DMfocus_monitc	566.0000	-0.0270	1.1380	-0.0240	-0.0930	-0.0490		-0.8290	-0.5450	testUserComments
09/26/2001	09:05:07	DMfocus_monitc	1796.0000	-0.0480	1.0540	-0.0260	-0.0940	-0.0550		-0.3660	-0.4370	testUserComments
09/26/2001	09:13:42	DMfocus_monitc	566.0000	-0.0090	1.2130	-0.0200	-0.1030	-0.0270		-0.8190	0.5650	testUserComments
09/26/2001	09:56:11	DMfocus_monitc	567.0000	-0.0330	1.1820	-0.0220	-0.0940	-0.0560		-0.8410	-0.5510	testUserComments
09/26/2001	10:04:15	DMfocus_monitc	567.0000	-0.0330	1.1820	-0.0220	-0.0940	-0.0560		-0.8410	-0.5510	testUserComments
09/26/2001	12:30:44	DMfocus_monitc	566.0000	-0.0270	1.1380	-0.0240	-0.0930	-0.0490		-0.8290	-0.5450	
09/26/2001	12:39:41	DMfocus_monitc	567.0000	-0.0330	1.1820	-0.0220	-0.0940	-0.0560		-0.8410	-0.5510	Comment added at 9/26 12
09/27/2001	16:04:23	DMfocus_monitc	1796.0000	-0.0480	1.0540	-0.0260	-0.0940	-0.0550		-0.3660	-0.4370	Scanner 720-a3 establishing E



## Trend Chart Specification and Analysis

Data is stored in the Daily Monitor Template workbook. The workbook will contain all data for the template. Current analysis data model results are stored in a separate workbook for each data set. If desired, these datasets can be individually examined using the full engineering suite. Trend Chart setup is easily accomplished with a point-and-click interface specifying the variables you wish to display and those you wish to save for the historic record.

## Graphics Supported

One graphic and/or associated statistics can be displayed at the end of an analysis. Most of the full engineering graphics are available including wafer and field vector, histogram and contour plots.

Any number of trend analysis can be observed at any time using the "TrendPlot" tab.

## Specifications, Template and Plot Limits

- ▶ The number of automated analyses and Trend Plots supported are limited only by your system resources.
- ▶ Weir Daily Monitor will run stand-alone or as a sub-process of the Weir Wavefront Engineering Suite. The full suite is needed for template setup.
- ▶ All software runs on Windows NT, 98, 2000 and XP. Pentium IV and 256 megabytes of RAM minimum recommended.

