

Weir Software Features

Import

- ▶ Any vendor-based metrology
- ▶ Storage: Weir Microsoft Excel workbooks

Graphics

- ▶ Integrated interface for lot and data sets
- ▶ Single Click access to graph types, data selection & culling.

The Weir analysis supports interactive charts and user-sensitive analyses. The user can use automated or interactive data point culling, single or selected- wafer and field viewing, aberration scaling and specific aberration removal. Graphics of the lot, wafer and field can be easily viewed as vector, range, radial, axial, histogram, color-contour and 3D surfaces.

2D Graphs

- ▶ Line, Scatter, XY, BoxPlot, Histogram, Population Density, Field Contour, Wafer Contour, Range and Vector
- ▶ Mouse-interactive data selection, culling, viewing and plotting.
- ▶ plus all Excel based graphics of raw and modeled data.

3D Graphs

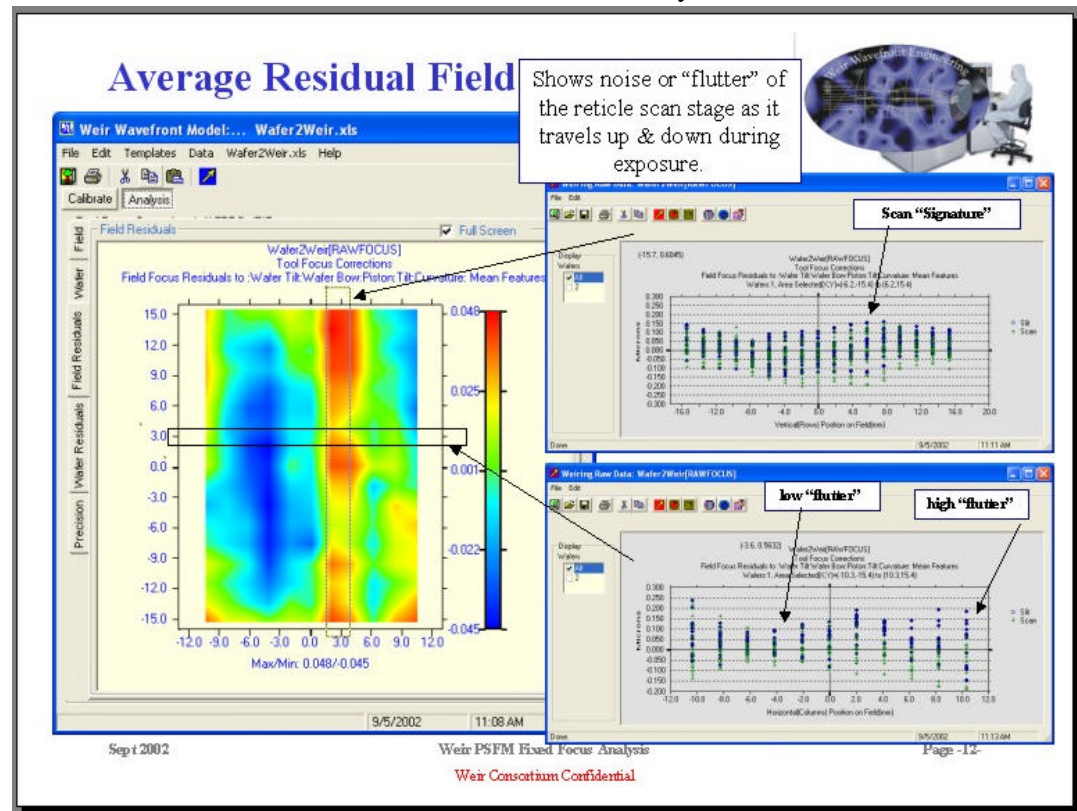
- ▶ Field 3D Surface
- ▶ General response surfaces

Analyses

- ▶ Raw data of any type including overlay and CD.
- ▶ Calibration of Reticle and/or data
- ▶ Modeled "Best Focus" of field
- ▶ Raw and Modeled Focus Uniformity across field, wafer and lot.
- ▶ Automated Precision of error budget.

Data Tools

- ▶ View raw data and statistics
- ▶ Modeled Wafer Tilt and Bow
- ▶ Modeled Field Piston, Tilt and Curvature
- ▶ View Astigmatic values
- ▶ View modeled values with single row/column resolution
- ▶ Scanner-slit oriented analyses



- ▶ Whole Field analyses
- ▶ Whole Wafer Analysis
- ▶ View Field Mean, Maximum, Minimum, MinMax, IFD, Range

Retention

- ▶ Excel Spreadsheet storage of:
 - ▶ Raw Data
 - ▶ ALL intermediate modeling
 - ▶ ALL calculated surfaces
- ▶ Open environment

TEA Systems

System Requirements

- ▶ Windows Windows NT, 2000 or XP
- ▶ 2 Gigabyte of Hard Disk Space
- ▶ 256 Megabytes of RAM
- ▶ Monitor 1024x780 or greater
- ▶ Microsoft Excel
- ▶ Pentium III or greater processor

Weir Software Features

The collage displays various software features and data outputs:

- Field Residuals:** A 3D surface plot showing the distribution of field residuals across a range of -10.0 to 10.0 on the X-axis and -0.0223 to 0.0223 on the Z-axis.
- Water Focus Residuals:** A 2D heatmap showing residuals for water focus, with a color scale from -0.0223 to 0.0223.
- Water Aberrations:** A circular vector plot showing the distribution of water aberrations, with a data table listing parameters like Microns, Vertical, Horiz, H-Waves, Count, Wires, Size, #Dax, Best Focus, IFD, PFD, Raw Astig, and Astig/Corrected.
- Aberration Data Table:** A table with columns for X, Y, Z, and various optical parameters. The table includes data for different aberrations and their corrected values.
- Field Aberrations:** A grid of color-coded maps showing field aberrations, with a data table listing parameters like Microns, Vertical, Horiz, H-Waves, Count, Wires, Size, #Dax, Best Focus, IFD, PFD, Raw Astig, and Astig/Corrected.
- Focus Variations:** A line graph showing focus variations across a range of -10.0 to 10.0 on the X-axis and -0.0223 to 0.0223 on the Y-axis.
- Water Focus Residuals (Area Selected):** A plot showing water focus residuals for a specific area, with a data table listing parameters like X, Y, Z, and various optical parameters.

- Reticle stage scanning errors
- Focus variation for scan-oriented features
- Astigmatism is 14 nm
- Scan variation is 250 nm