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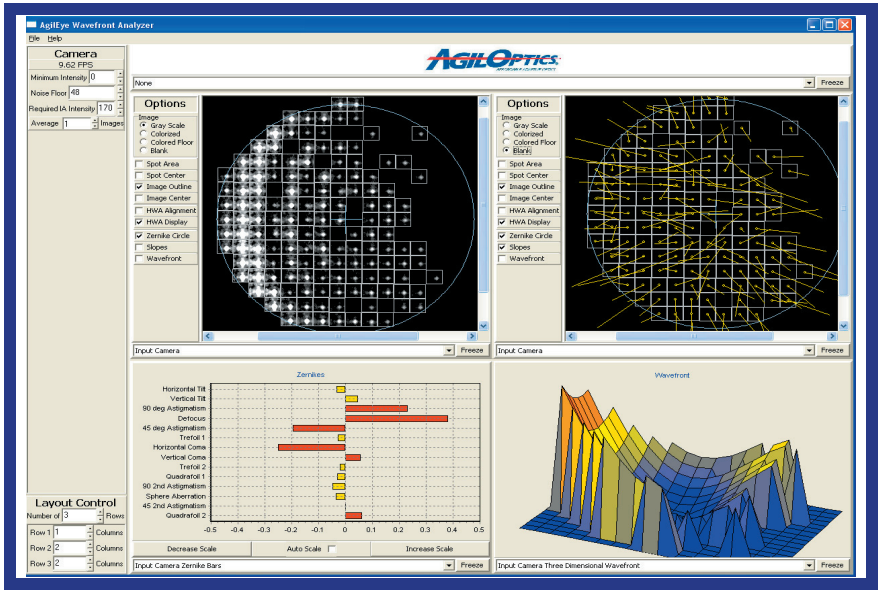
# AGILEYE™ WAVEFRONT ANALYZER

## A STATE OF THE ART, LOW-COST WAVEFRONT SENSOR

**Key Features:**

- **576 slopes or 14 Zernikes at 15fps into your PC or laptop**
- **Easy to integrate with your C++ codes**
- **Powerful, configurable GUI windows**
- **Does Zernike Analyses in near real-time**
- **Signals carried over USB**
- **Powered by USB**



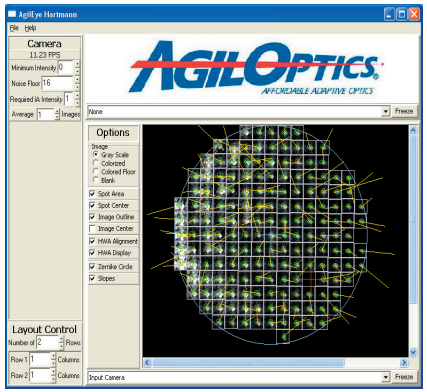

*The AgilEye Graphical User Interface is well-thought-out and easy to use*

- Low cost (< $6000)
- Hartmann or Shack-Hartmann Sensors available (same cost)
  - Bandwidth 400-700nm (Useable to over 1000nm)
  - Optimum beam input size is ~2.7mm by 2.7 mm

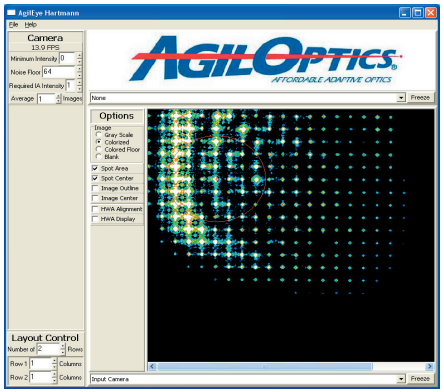
- Multiple sensors and user's optional far-field cameras
- User-friendly GUI
  - All data windows are printable and freezable
  - User can select custom GUI window layouts

- Uses Acosta Algorithms to do Zernike analyses (up to order 50)
- Real-time measurement and display
  - > 15 frames-per-second (typical, some variance depending on display options selected)

- User-configurable data output and logging
  - Continuous, time interval (every n frames), user action (push button)
  - Slopes at every integration area (comma separated values format)
  - Zernikes (comma separated values format)
  - Establishes and updates shared files for external program access and ingestion (i.e., drive your own hardware)




*"Input Camera" with Grey scale and full Options*




*"Input Camera" with Color scale and minimum Options*

- Flexible GUI displays are user selectable:
  - Raw image (from CCD camera)
  - Spot centers
  - Spot RMS size
  - Integration areas outlines
  - Integration areas slopes
  - Zernike Circle
    - All of the above are user-selectable inside up to 12 display windows in the GUI

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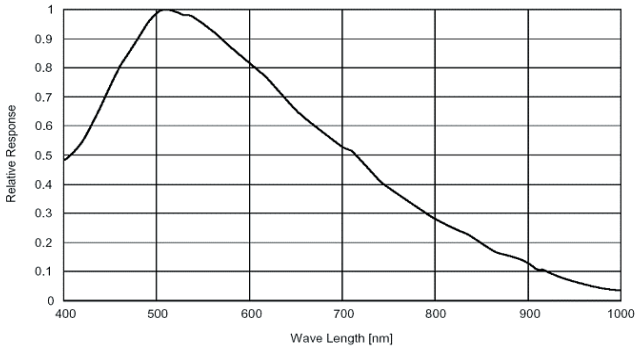
- Each GUI window is:
  - Scrollable
  - Resizable
  - Printable
  - Freezable

## Wavefront Sensor Specifications

**Spectral Sensitivity Characteristics** (excludes lens characteristics and light source characteristics)




## Hartmann Sensor Specifications

- Uses 120 µm pinholes
- 20 x 20 integration Areas
- 134.4 µm integration area spacing
- "Focal Length" ~6.0 mm at 633 nm
- Resolution > 100 µrad

## Shack-Hartmann Sensor Specifications

- Uses 5.7 mm focal length fused silica Lenslet Array
- 24 x 24 integration areas
- 110 µm integration area spacing
- Resolution > 100 µrad

## Data Output Mode and Interfaces

Log Files are written in shared mode so that a user may open the files in Read Only Mode on the same master computer and access the data in pseudo real time. A sample C++ program is included. The typical user would read the Zernike files from storage and use them to drive external hardware such as a deformable mirror to close an adaptive optics loop. Data is available to user <3msec after each frame.

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