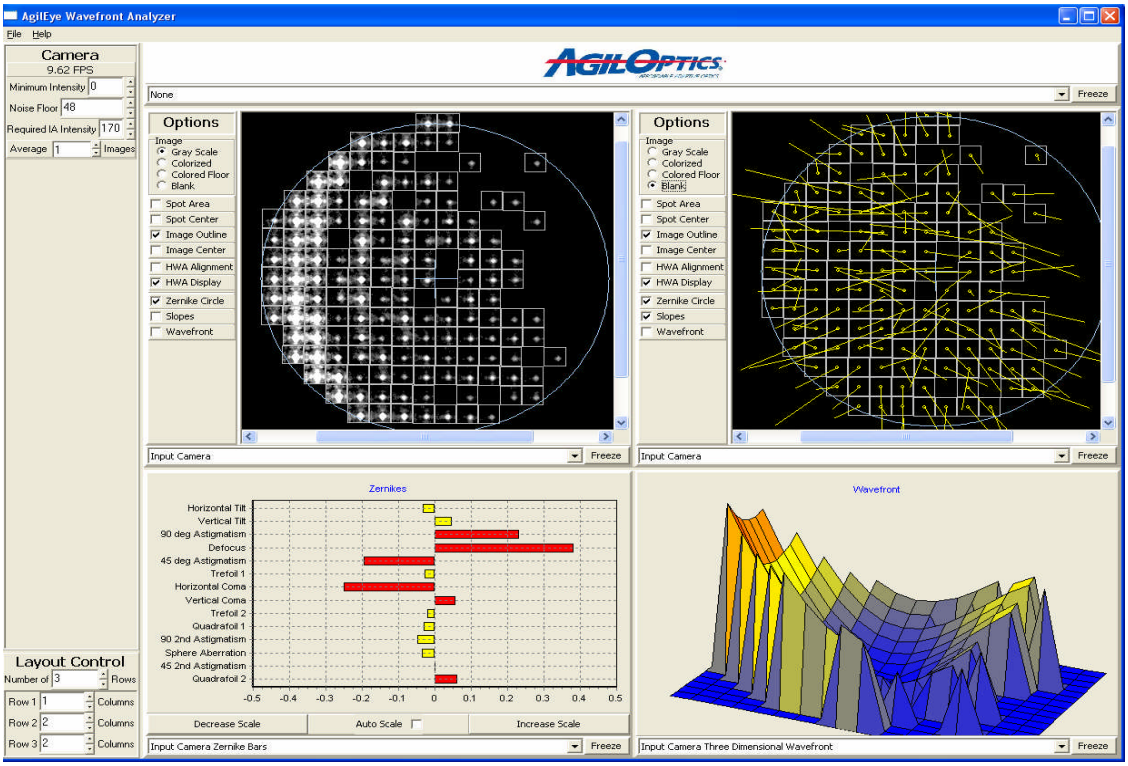
AGILEYE™ WAVEFRONT ANALYZER

A STATE OF THE ART, LOW-COST WAVEFRONT SENSOR

Key Features:

- **Reasonable Speed on 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**

AgilOptics, Inc. 1717 Louisiana, NE Albuquerque, NM 87110 505-268-4742



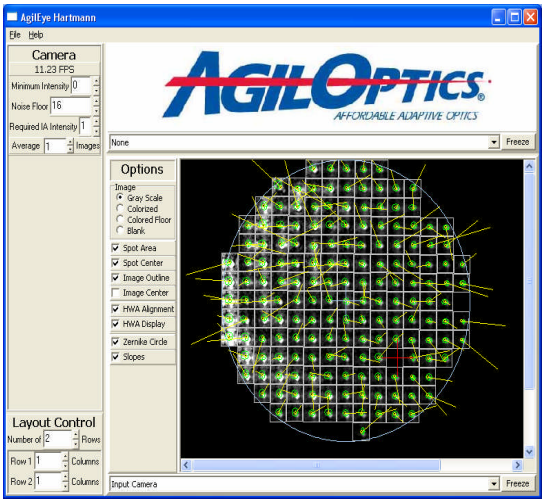
The AgilEye Graphical User Interface is well-thought-out and easy to use

- **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**

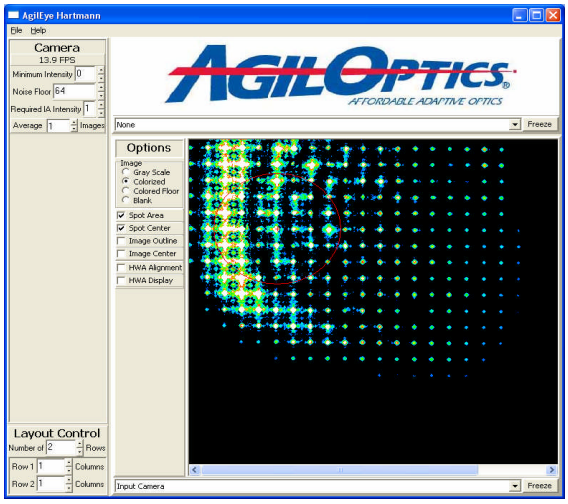
- **Multiple Sensors and User's Optional Far Field Cameras**
- **User Friendly GUI**
  - **All data windows are printable and freezable**
  - **User can select custom GUI window layouts**

- **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

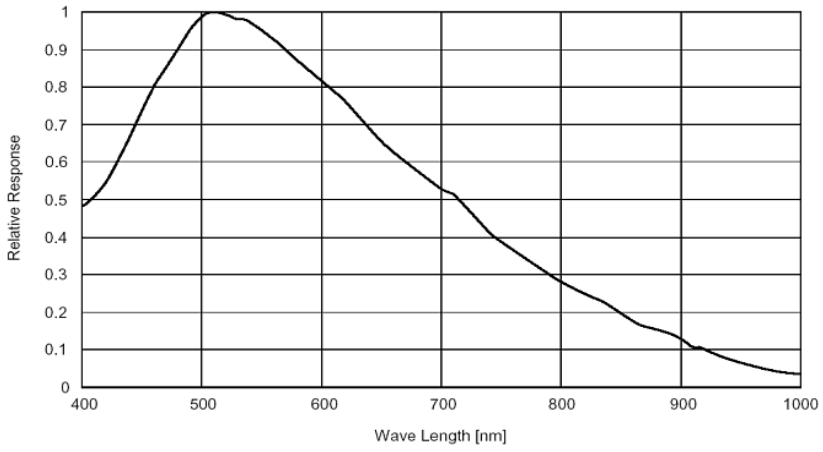


"Input Camera" with Color scale and minimum Options

- **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**
    - **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**

Shack-Hartmann Sensor Specifications

- **Uses 5.7 mm Focal Length Fused Silica Lenslet Array**
- **24 x 24 Integration Areas**
- **110 µm Integration Area Spacing**

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.