ABSTRACT

The design of a wavefront sensor may be determined by the lenslet array and camera selection. There are numerous different applications for these sensors, requiring widely differing dynamic range and accuracy.

Performance metrics are needed to evaluate candidate designs and to compare results. We have developed a standard methodology for measuring the repeatability, accuracy and dynamic range of different wavefront sensor designs, and have experimentally applied these metrics to a number of different sensors.

Keywords: Shack-Hartmann, Hartmann-Shack, wavefront sensor, Hartmann sensor, adaptive optics, aberrometer, interferometer, wavefront sensing, error analysis