

Abstract Submitted
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KAPAO: Implementing a Camera for Atmospheric Correction on the Table Mountain 1-meter Telescope¹ DANIEL CONTRERAS, Pomona College — Adaptive optics (AO) is a technology used on ground based telescopes to correct for atmospheric aberration in astronomical images. KAPAO, a Pomona College Adaptive Optics instrument, is currently in its third and final year of development. This dual-band (optical/IR) AO instrument is based on custom optics, a tip-tilt mirror, a 140 actuator microelectromechanical deformable mirror (MEMS DM) and a 1kHz wavefront sensor (WFS) camera. The system will be integrated onto the remote access Table Mountain Observatory (TMO) 1-meter telescope. Recent work on KAPAO has focused on characterization of on-sky closed loop performance of the prototype system, Alpha. Special attention has been given to investigating the intensity and optical throughput of the system, researching improvements to the WFS component of the instrument, as well as improving the software control loop. This is all in preparation for the construction of the final system, Prime. Building the final system is set to begin in winter 2012-2013.

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