
Initial results from the new Robo-AO 2.0 adaptive optics system

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Abstract

The Robo-AO 2.0 automated AO system is in the early stages of deployment on the University of Hawaii 2.2m telescope on Maunakea. It is the new, improved version of Robo-AO, which was able to observe some of the largest high resolution surveys to date. The new instrument includes many improvements in the optical system to increase throughput and AO system performance, a new wavefront reconstructor software system based on an expandable threaded architecture, and a natural guidestar channel that will allow tests of hybrid AO operations. Robo-AO 2.0 will also operate robotically, with an eye towards rapid follow up of interesting time domain targets as well as large surveys of targets of interest from instruments such as TESS. This presentation will discuss the new instrument, improved AO control software, and early on sky performance and science results.

Keywords: robotic, hybrid AO

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