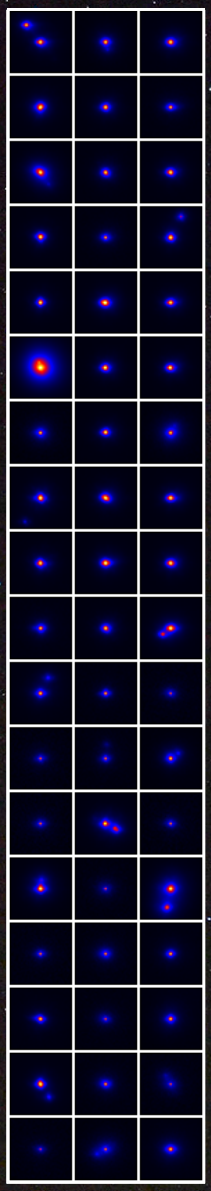
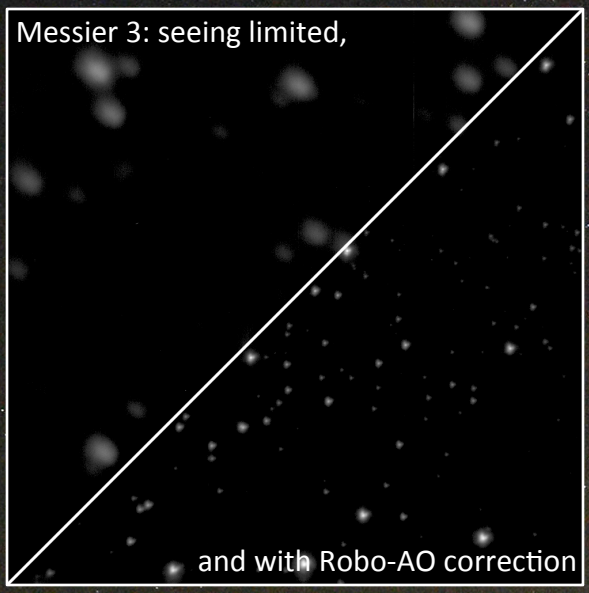
# Robo-AO

## The world's first robotic laser adaptive optics system



Robo-AO is the world's first robotic laser adaptive optics system, designed to routinely and very efficiently perform visible-light imaging - with resolutions approaching that of the Hubble Space Telescope. Robo-AO sends a high-powered ultraviolet laser beam into the atmosphere to probe the turbulence above the telescope, and then corrects for the blurring effects of the atmosphere in real time - all without human assistance - and can complete up to 200 observations in a single night. The first of many envisioned systems has just finished 41 nights of science observing at the Palomar Observatory 60-inch telescope, with over 4,400 robotic observations executed.




Astronomers are using Robo-AO to perform the largest-ever adaptive optics surveys of a huge variety of targets, perform long-term monitoring of the orbits of nearby stars and planets, search for black holes in nearby stellar clusters, and to see what's going on in the close neighborhood of nearby supernovae.

http://robo-ao.org

IUCAA

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# Robo-AO

## Presentations related to Robo-AO at the 221st American Astronomical Society meeting

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|---|---|---|---|
| Tue 3:40 PM | Grand Ballroom | John Johnson *(Caltech)* | **Newton Lacy Pierce Prize**: Hot on the Trail of Warm Planets Orbiting Cool M Dwarfs |
| Wed 10:00 AM | 103A | Reed Riddle *(Caltech)* | 305.1: Rise of the Machines: Automated Laser Guide Star Adaptive Optics Observations of Thousands of Objects with Robo-AO |
| Wed 10:20 AM | 103A | Shriharsh P. Tendulkar *(Caltech)* | 305.03D: Robo-AO: Performance and Characterization at Palomar Observatory |
| Wed 2:10 PM | 102B | Tim Morton *(Caltech)* | 334.02D: Enabling the Kepler Exoplanet Census |
| Wed 2:40 PM | 102B | Philip Muirhead *(Caltech)* | 334.04: Characterizing the Cool KOIs: Sub-Earth-Sized Planet Candidates Around Mid M Dwarfs |
| Wed 3:10 PM | 102B | Nicholas M. Law *(U. Toronto)* | 334.06: Robotic Transit Follow-up: Adaptive Optics Imaging of Thousands of Stars |
| Mon 9:00 AM | Poster | Kristina Hogstrom *(Caltech)* | 149.06: Minerva: A Dedicated Observatory for the Detection of Small Planets in the Solar Neighborhood |
| Wed 9:00 AM | Poster | Lorcan McGonigle *(Pomona College)* | 345.25: KAPAO Prime: Design and Simulation |
| Wed 9:00 AM | Poster | Daniel Contreras *(Pomona College)* | 345.26: On-sky Characterization of KAPAO-Alpha, A Prototype Adaptive Optics Instrument |

Contacts at the 221st AAS meeting:

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