

Science Steering Committee

NGAO Report

February 18, 2009

Waimea

P. Wizinowich for
the NGAO Team

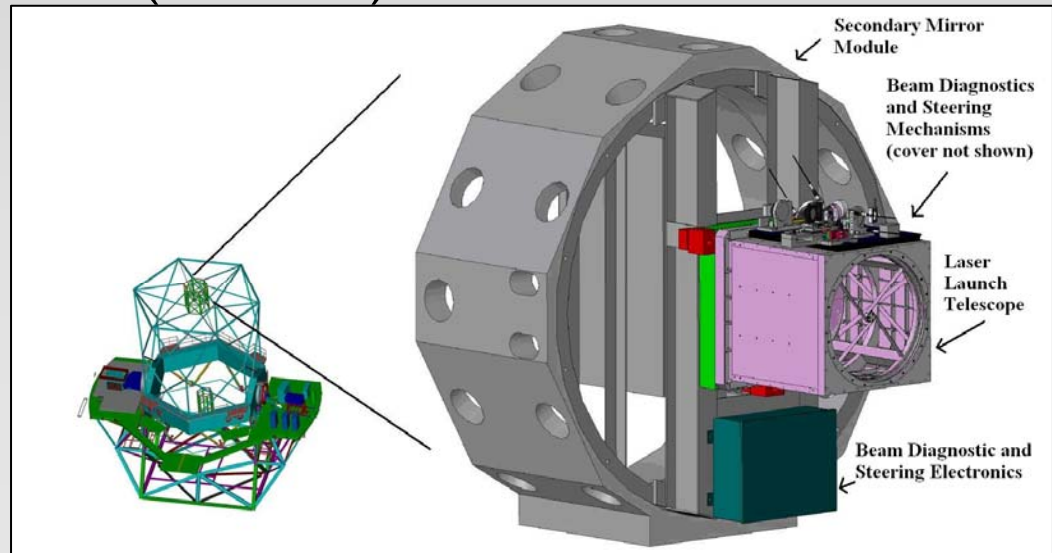


NGAO Report Topics

- NSF MRI proposal
- Build-to-cost
- Risk reduction
 - Laser collaboration
 - MASS/DIMM
- Monthly progress reports at
http://www.oir.caltech.edu/twiki_oir/bin/view/Keck/NGAO/PDTracking

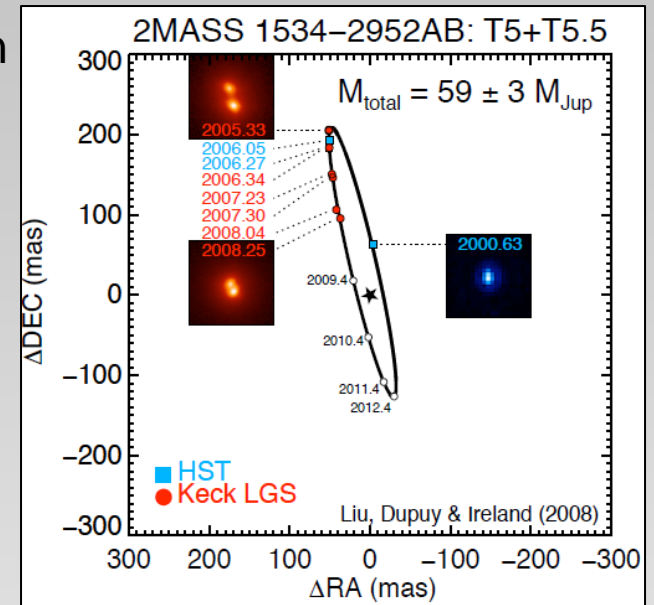
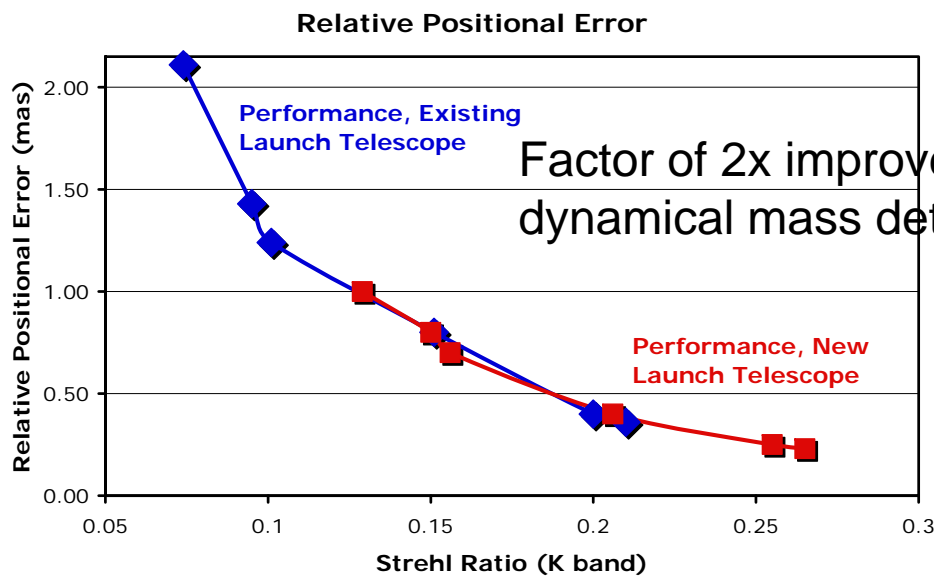
NGAO MRI Proposal

- Title: “Development of an Improved Keck II Laser Launch Facility – Enhancing the Scientific Return of Keck LGS AO”
- Key Personnel: P. Wizinowich (PI), J. Chin (PM), T. Stalcup (SE)
- Science Personnel: M. Liu (PS), A. Ghez, C. Max
- Purpose: 1) Implement launch telescope for NGAO; 2) Improve Keck II LGS AO performance in near-term
- Amount: \$1355k NSF & \$580k (i.e., 30%) WMKO
- Period: Aug/09 – Sept/11

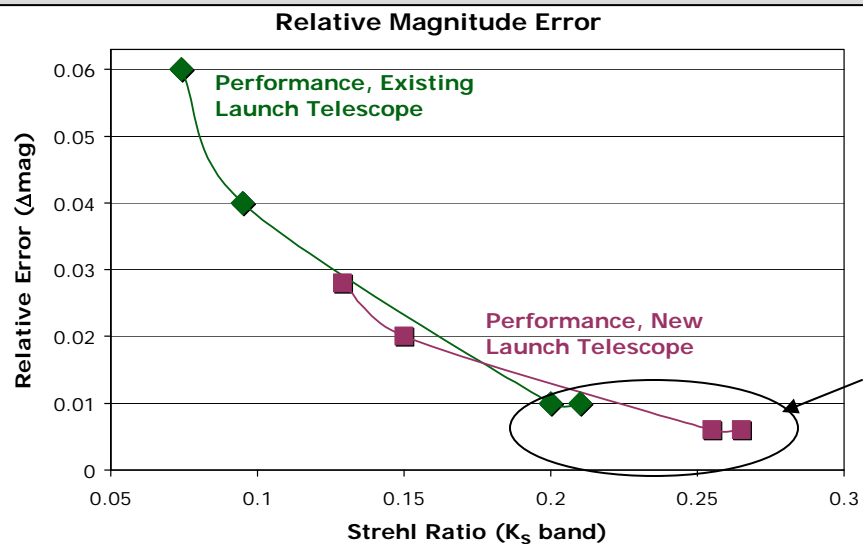


NGAO MRI Proposal

Predicted Performance for T Dwarf Binary Case



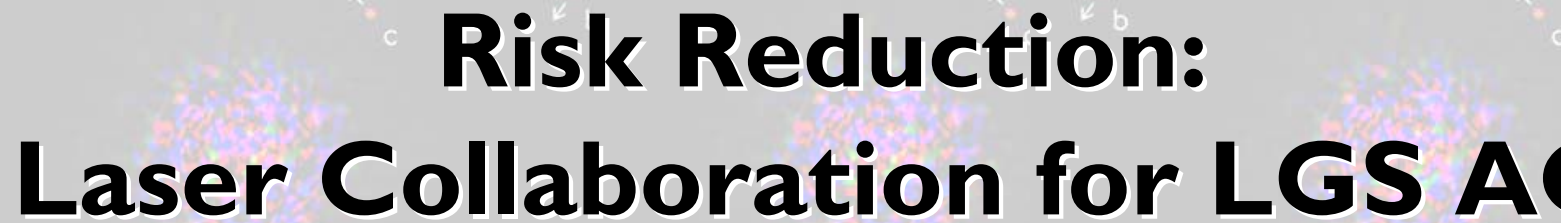
R = 16.2 NGS 31" off-axis
50° zenith angle





Build-to-Cost


- Potential cost saving ideas identified (16+ items) & initial \$ estimates made
 - Evaluation continuing
- Keck Strategic Plan 2008 reviewed for science priorities impact
- On track to reduce estimate from ~\$67M (without multi d-IFS) to \$60M



Risk Reduction: Laser Collaboration for LGS AO

Goal: Leverage community funds/interests to produce an affordable commercial laser & to complete laser preliminary designs

- Adkins & Wizinowich participated in ESO evaluation of 5 bids for laser preliminary designs (NDA in place)
- Unanimous recommendation to be submitted to ESO Finance Committee for approval on Feb. 17
 - Likely to fund two 250k Euro preliminary designs
- U.S. consortium likely to provide a total of 250k Euros for additional risk reduction in collaboration with ESO
 - \$300k NOAO sub-award to WMKO (PI: Wizinowich) in place from NSF GMT & TMT funds
 - By Feb. 17: Initial risk reduction statement of work for discussion with vendors
- Intention is to share all preliminary design results
 - By Feb. 17: Draft MOU with ESO, GMT, TMT, AURA & WMKO



Risk Reduction: MASS/DIMM Collaboration

Goal: Implement an atmospheric profiler in support of NGAO off-axis PSF calibration (without using NGAO funds)

- MOU for TMT donation of MASS/DIMM complete
- MOU with CFHT & UH nearly complete
- OMKM approval complete
- Requirements, validation plan, project plan, etc. in place
- CFHT providing PM & staff, with IfA & TMT support, to implement at weather tower site
- Wizinowich & Goodrich put collaboration in place
 - Lewis negotiated TMT donation
 - Goodrich attending bi-weekly meetings



Conclusion

- Good progress on build-to-cost, risk reduction activities & proposals (ATI & MRI)
- Looking forward to being able to focus on the preliminary design, & to ramping up the team, once the build-to-cost concept review is complete