

Observatory Report

- Telescope Updates
 - Good progress with free-space telescope launch for K1 LGS-AO
- New possible state law on light pollution in process. Addresses direction of light not the type of light, but will cover State sources of light that are important contributors to light pollution (airports and ports).
 - SSC notes that this is good news, but that existing county ordinance enforcement hasn't been rigorously enforced and that energy efficient LEDs may become an issue.
- Current Instrument Development
 - MOSFIRE had a successful Pre-ship Review on April 11, 2011.
 - KCWI Preliminary Design Review will occur prior to next SSC meeting. Needs \$3.5M to complete project

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- Future Federal Funding
 - 3 out of 4 Keck-related proposals have survived triage at NSF (PSF determination, New OSIRIS Grating, TOPTICA laser for Keck II), which total \$1.6M for WMKO (FY12)
 - SSC concerned that FY12 draft plan assumes that all of these will go forward.
- FY12 plan
 - Planned operations expenses are very close to 5 year plan (<1%)
 - Compared to FY11 actual:
 - Procurements are up (largest piece is electricity costs)
 - Labor cost is up (from filling vacant positions)

Coatings

- Drew Phillips reported on the ongoing efforts at UCO to develop new wide-band, highly reflective, and durable coatings
- Ag-protected
 - Ag must be protected from oxidation
 - UCO is developing recipes with high performance from 340nm to 10+microns
- AR coatings (sol gel)
 - Successful multi-layer coatings with >97% transmission
 - 1m spin table; large dip tank used for coating large LRIS ADC prisms in the past
- NSF/ATI funded upgrades
 - Swing arm for excellent uniformity
 - New cryopump and magnetrons
- SSC+WMKO should establish a coating priority list for telescope+instrumentation needs
 - WMKO would support the hosting and analysis of witness samples at the summit

MOSFIRE

- The Observatory reported on the results of the highly successful MOSFIRE Preship Review
 - “Hardware development generally complete... meets all critical requirements”
 - *“We believe MOSFIRE is ready to become a unique and scientifically productive instrument”*
- The review identified minor issues which are presently being resolved
 - Completion of a small number of control software issues
 - Rotator drive problem whereby motor shows excess current at some angles
 - The commissioning task plan is still being developed
- Cool down #9 demonstrated all aspects of MOSFIRE performance
 - All Cryo mechanisms are fully operational.
 - Slit positioning highly precise and repeatable at the 20 mas level across entire field.
 - Refurbished Configurable Slit Unit (CSU) 100% operational
- All Level 1 requirements met or exceeded (see MOSFIRE website)
- GUI software is ready to design+configure masks
- First light June/July 2011, pending resolution of rotator drive issue
- Commissioning observations through the Fall

The SSC warmly congratulates the MOSFIRE team on the delivery of this challenging instrument. We look forward to first light results and many years of compelling scientific results

Deployable Tertiary Mirror For Keck I

Concept provides important enhancement helping to enable TOO and cadence observations

Based on white paper from last year, SSC funded small study (PI J.X. Prochaska) at Lick, but little progress made to date due to lack of engineering manpower for this project; ~2/3 of funds not yet spent.

Next steps – construct a full optical model of the Keck I focal plane to check clearances. Present updated science case and technical feasibility to SSC in July 2011.