

Keck SSC Meeting

April 15, 2016

Caltech

Co-chairs: Crystal Martin & Judy Cohen

Update on Strategic Plan

- New Keck strategic plan reflects changes since Oxnard meeting: TMT delay, JWST on track, WFIRST started:
Keck is poised to continue first-rank science
- 57 people contributed to the 7 task force reports and integrated strategic plan
- The current draft is not yet finished and will be revised:
 - Claire, Judy, and Crystal are working on an executive summary and introduction
 - Will include more rationale from task force reports to explain recommendations
 - Will to distinguish between needed capabilities and specific near-term proposals
 - Appendices on progress reports, KI/II balance, and new ideas will be revised
- Strategic plan will impact the 5 year plan in driving new instrument / technology design studies; we need to solicit & fund these soon

Keck SSC Discussion on Strategic Plan

- Integration Panel
 - Had a great discussion but ran out of time
- Need
 - To understand our audience; two versions of document
 1. Post document on WMKO web pages for the Keck community
 2. Produce a glossy flyer for foundations and non-technical audience
 - Invite more people to contribute (Keck SSC & select others)
 - What is the elevator pitch & introduction
 - Framing need to position Keck as a technology & scientific leader and in particular the impact on the world of knowledge (discovery!) (AG to help)
 - Context (maybe we can point to some initial ways in which Keck is leading in this changing landscape; Jason's GRB work (extra-galactic) ... S/N & Dark Energy) (TG to help)
 - Vision for the future (Exec. Sec. from study groups to help)

KI/KII Instrument Balance

- Observatory has studied the feasibility of instrument moves from one telescope to the other in order to reduce pressure on KI. OSIRIS will move KI → KII with new AO.
- SSC is sensitive about creating new problems in the future (when new instruments arrive) by trying to solve today's problems now. Anticipate KII pressure will increase.
- In the short term, some programs are successfully moved from KI to KII (e.g. LRIS request → DEIMOS allocation).
- Palatable option could be OSIRIS KI → KII now
- Action: ask SHREK and NIRES teams to consider implications of changing plans to KII, and re-assess possibilities. SHREK is a precision instrument that we don't want to move after it *begins operations*.
- Observatory has documented Keck capabilities in the parameter space of spectral resolution vs wavelength.
- Question to consider the number of instruments the observatory should support - currently 8 and soon 11 on two telescopes.

New Call for Whitepapers

- We plan to issue a call for white papers due in time for the June 21 SSC meeting
 - Several will be selected for further study, with some funding provided to UC and CIT teams
- The call will be very broad:
 - Ideas for new instruments, operations improvements, technologies, or other ideas that enhance Keck to implement the high priorities in the new strategic plan are welcome
- SSC encourages all members of the Keck community to apply
- Call will highlight specific areas of interest identified by the strategic planning process. Proposals addressing these topics should receive added weight during the review process.
- We encourage cross-institutional collaborations with teams optimized for the proposed effort
- SSC Recommends WMKO set up a GLAO study group and provide a budget.
 - Need to state what this group's charge will be in the whitepaper call to avoid duplication.

K1DM3 Report

- Science Case
 - Bolstered by recent LIGO detection!
- Technical
 - Design is complete
 - Retired risk in all key sub-systems
 - Ordering/fabricating all major assemblies
- Schedule
 - Successful Preliminary Design Review (March 7, 2016)
 - Recommendation
 - move to full-scale development
 - Add another month of lab testing
 - Commissioning planned for March 2017 (3 month slip from original plan)
- Budget
 - Requested supplemental funding from NSF for over-run
- Schedule 3 month slip since start

KCWI

- Significant cost & schedule overruns led to Project Closeout Plan review in Jan 2016, attended by KCWI team, JPL, Caltech & WMKO. Results:
 - New bottoms-up cost estimate, detailed schedule & status tracking, & work agreement signed by PI.
 - New schedule: ship Oct-Dec 2016, first-light Jan 2017, shared-risk science in 2017B.
 - Substantial I&T completed, so major risks reduced.
 - KCWI Science Advisory Team involved in planning for final I&T, commissioning, and science verification.
- Thus far progress and expenditures cost consistent with re-plan.

TDA

- Mike Liu taking a look at ToO while on sabbatical at UCSC
- Issue
 - Imbalance between partners in mode (ToO/Cadence)
 - NASA more interested in cadence than ToO
 - Caltech more interested in ToO than cadence
 - UC/UH interested in both
- Solution
 - One observatory model
- Comments
 - ToO should have a “price” as only good weather is used (2:1?)
 - ToO can impact significant fraction of night if calibration must be done at night immediately after or before observation
- Will circulate a draft for ToO & cadence? prior to June SSC meeting

ToO and Cadence Among Partners: One Observatory Concept

- Caltech and UC have agreed to support ToO and cadence within agreed upon limits
- What about UH? NASA?
- What about the partners? Yale? Australia?
- Should all future partner agreements require supporting TDA activities?