

Minutes of the UCOAC meeting
SETI Institute, 2014 Feb. 20

Attending in person: Sandra Faber (UCSC; Interim Director), Aaron Barth (UCI; Chair of UCOAC), Chris Fassnacht (UCD), Alex Filippenko (UCB), Garth Illingworth (UCSC), Connie Rockosi (UCSC), Raja Guahthakurta (UCSC), David Cowley (UCSC), Drew Phillips (UCSC), Paula Towle (UCSC), Anna Korossy (UCSC). Attending remotely: Ian McLean (UCLA), Andrea Ghez (UCLA), Crystal Martin (UCSB), Brian Siana (UCR), Ben Mazin (UCSB), Lori Lubin (UCD), Tommaso Treu (UCSB), Graeme Smith (UCSC), Alice Shapley (UCLA), Alison Coil (UCSD), Mike Rich (UCLA).

Director Search (Faber). UC Provost Dorr is responsible for initiating the search for a UCO Director, and UCSC chancellor Blumenthal will play a consulting role. All parties have agreed to an open, international search. Some parameters of the director's job still need to be specified, and the Provost's office has not yet taken steps to initiate the search. UCOAC members generally agreed that the search committee should contain members from all UC campuses that have astronomy groups, and that while not all search committee members need to be astronomers, the committee should have a majority of astronomers in order to broadly represent the interests of UC astronomy faculty. Meanwhile, UCO will need an interim director starting in summer 2014.

Technical manpower in UCO. Faber presented a list of UCO faculty, researchers, and technical staff who have recently left or are expected to leave UCO in the near future due to retirements or other separations. This represents a major loss of technical expertise. Faber presented a plan for UCO to search for an optical designer to join the UCO technical staff, and described efforts to obtain permission from UCSC to search for new instrumentation faculty as retirement replacements. The optical designer could potentially work at any UC campus; this is not necessarily a UCSC-located position. UCOAC members voiced support for the hiring of new faculty members working on technology and instrumentation in areas directly related to UCO's strategic goals, and that UCO financial support (teaching release and/or summer salary) could potentially be provided for those faculty members but the offer of support would need to be made on an equal basis to faculty from any campus who work on UCO instrumentation and technology, and should be done on a term-limited (not permanent) basis, following the guidelines of the UCO Strategic Planning Committee report.

Keck Director Search. Crystal Martin (Keck SSC Co-Chair) updated the UCOAC on plans for the search for a new director of Keck Observatory, following the announcement that current director Armandroff will be leaving to become the Director of McDonald Observatory.

UCO Budget. Faber gave a report on the upcoming submission of a UCO budget to UCOP. UCOP has capped the budget request at \$5M and there is no expectation that this will change. This presents major difficulties for UCO to maintain its instrumentation efforts as well as maintaining Lick Observatory. The \$5M budget will need to include funding for the new Director's salary, as well as other new technical personnel such as an optical designer, and new initiatives including the distributed faculty support recommended by the Strategic Planning

Committee, and an expanded travel budget to support UC participation in partnership activities such as the TMT science meetings. Faber presented three possible different budget options to illustrate the trade-offs between technical staff funding and Lick operations, and explained that the most sensible option would be for UCOP to postpone decisions about making any major cuts until the outcome of major NSF instrumentation proposals is known, since that will inform the level of technical staff needed. Regardless, the \$5M budget cap will make it increasingly difficult over time to maintain the UCSC shops as a full-fledged instrument integration center. Faber noted that the flat \$5M budget with no inflation adjustments through 2019 will represent a 50% cut to UCO's total effort compared with the past year.

Congressional Letter about Lick Observatory. During the meeting, UCOAC members learned that several members of Congress from the California delegation had just submitted a letter to Janet Napolitano urging continued support for Lick Observatory. UCOAC members remarked that this was a very positive development and were very impressed with the text of the letter.

Kavli Futures Initiative. Illingworth and Faber described a recent meeting organized by the Kavli Foundation which brought together observatory directors and astronomers from multiple institutions to describe challenges and opportunities for future large ground-based astronomy projects. A major area for Keck and TMT will be conducting follow-up for LSST discoveries, and it will be important to set up collaborations and infrastructure to enable that work to proceed optimally. Follow-up observations with AO will be of particular interest for some types of targets. Ideas were suggested for future workshops to spur science planning for Keck in the LSST era.

Keck Observatory (Martin). Keck recently announced that a modest amount of funding will be available to support white papers for new instruments. A somewhat larger amount should be available in future years. Keck will be initiating a strategic planning process soon, but this may be delayed until a new director is hired.

The K1DM3 project is under way at UCSC and expected on sky in 2016. This will require new policies and procedures for scheduling time-domain science across partner institutions. A working group is being formed, led by Josh Bloom (UCB) and Lynne Hillenbrand (Caltech) to plan strategies for implementing observations with K1DM3. Participation from other UC faculty is encouraged.

Brief updates:

MOBIE: Matthew Radovan has taken over technical leadership of the MOBIE project at UCSC. A search committee has been formed to hire a new project manager. UCSC will be holding a MOBIE planning meeting on March 20. Additional UC participation is encouraged, and Paula will send out additional announcements to the community.

NGAO: the NSF proposal is due on March 12 and a draft is nearly ready for distribution to the team.

KCWI-Red. An NSF proposal was recently submitted. The plan is for UCSC to lead work on components including the mechanical barrel, coatings, and detector system.

APF: the telescope is working more regularly now and problems are becoming less frequent and less severe. The spectrograph is working well and delivering excellent radial velocity precision. The APF web site will be updated with more information, and the telescope may be ready for shared-risk community observing in 2014B.

ShaneAO: More volunteers are needed to participate in selecting targets for commissioning observations, and forming a science committee to help plan and enable large projects.

UC Portfolio Review Group: The PRG findings and recommendations report was released on January 7. The PRG concluded that the program (including UCO and Keck) "substantially aligns with the principles" for systemwide investment and that "UCO returns systemwide value commensurate with the current systemwide funding through world class astronomical facilities and important public outreach...". The PRG report makes three recommendations regarding (1) planning for long-term investment priorities, (2) that any savings from repurposing Lick should remain with UCO, and (3) that the program should be reevaluated for alignment with systemwide principles in 3-5 years, corresponding to the mid-point of the UCO action plan timeline.

UCO Coatings Lab Report. Drew Phillips presented an overview of work being done in the UCO Advanced Coatings Lab. The presentation described the lab personnel and facilities, and the various programs being pursued. A major goal is to produce durable coatings for silvered mirrors in order to improve blue reflectivity and prevent tarnishing and corrosion. Protected silver coatings sold by commercial vendors generally do not perform well in real-world situations in the field. Accelerated aging tests have identified a design that seems to hold promise and has significantly better blue/UV performance than the Gemini coating. Other field tests involve placing coating samples in the dome environments at Lick and Keck for 1-2 years to examine the level of corrosion. Pilot studies of atomic layer deposition are very promising, and an NSF ATI proposal was recently submitted to develop methods for ALD coatings on large substrates. Other work involves depositing sol-gel coatings on optics for instruments including the LRIS ADC, the LRIS-R dewar window, the MOSFIRE guider filter, and APF components. Future research will focus on improvements to the sol-gel coating process and development of improved sol-gel coatings for near-IR optical components.

Lick Observatory (Smith). A recently hired mechanic left unexpectedly after only two months on the job, in part due to uncertainty over the long-term budget outlook for Lick. The goal is to hire a replacement in early spring. Staff are very concerned that if Lick is removed from the UC portfolio, they could lose UC retirement benefits. A long-serving telescope operator plans to retire later this year, and a replacement will need to be hired in order to maintain full operations at the 3-m. The 3-m primary was washed recently, producing a 10% reflectivity improvement. News and updates are regularly posted on the Lick Facebook page. Unfortunately, a sale of telescope time to Lockheed has fallen through due to lack of funding.

Faculty roles in UCO. Faber led a discussion of future systemwide faculty roles and possible

funding available from UCO to support faculty activities. Input was solicited on how much of UCO's constrained budget should be allocated toward distributed faculty support. UCO should send out an announcement of opportunity listing possible roles and duties that could be supported, in order to solicit interest from faculty and researchers.

TAC Policies. Alison Coil led a discussion of suggestions for changes to Keck TAC policies and procedures, based on a list of recommendations made by her and by James Bullock.

Suggestions regarding proposal submission included (a) clarification of the policy on whether LMAP PIs can also submit other proposals during the same semester, (b) a request for PIs to rank the priority order of their proposals since this would be helpful information for the TAC, and (c) various suggestions for how (or whether) to handle issues of individual PIs asking for very large amounts of Keck time. The current policy states that LMAP PIs are not forbidden from submitting other proposals for smaller projects. Some UCOAC members agreed with the idea of having PIs rank proposals by priority, as is done by Caltech as part of their Keck proposal coversheets. Regarding (c), some UCOAC members argued that there should be no specific restrictions on number of proposals or nights for a PI, and the UCOAC did not recommend any policy changes on this.

Suggestions were also made on TAC procedures and grading methods, in particular the way that the TAC separately ranks proposal grades and number of nights allocated; it was proposed that the TAC should rank proposals by grade, and then subsequently examine the number of nights allocated to each proposal after the grading has been completed for all proposals. Graeme Smith pointed out that the final number of nights ultimately allocated to a program depends on other factors including moon phase and available instrumentation, and that it is not always possible to allocate nights in a way that would perfectly match the TAC's recommendations. After much discussion, no specific recommendations were reached, but UCOAC members favored the idea that the TAC should carefully look at the number of nights allocated to proposals in order to ensure that highly ranked proposals receive enough time to accomplish their goals.

UCOAC members strongly agreed that it would be very helpful to get more information out to the community including the number of proposals submitted per semester, the distribution of nights requested and nights awarded per proposal, etc. This would be particularly helpful for junior faculty to calibrate their expectations in terms of how much Keck time they might expect to obtain.

These minutes were prepared by UCOAC chair Aaron Barth.