

UCOAC MEETING MINUTES

MARCH 20, 2020

ATTENDEES: Aaron Barth (UCI), George Becker (UCD), Mike Bolte (UCSC), Michael Cooper (UCI), Michael Fitzgerald (UCLA), Alex Filippenko (UCB), Andrea Ghez (UCLA), Anna Korrosy (UCSC), Claire Max (UCSC), Ben Mazin (UCSB), Ian McLean (UCLA), Andy Skemer (UCSC), Tommaso Treu (UCLA), David Wittman (UCD), Shelley Wright (UCSD)

Due to COVID-19 the UCOAC meeting was held remotely from 9:30 – 4:30 pm.

UCO BUSINESS

At the time of the meeting (20 March 2020), both Lick and Keck were both still operational with limited crews. Since then, Keck has ceased operation and Lick has ceased operation except for fully automated facilities (APF, PANOSSETI, KAIT, CAMS). Observing from home was allowed briefly before the observatories were closed due to the ongoing COVID-19 pandemic. The labs at UCSC and UCLA have changed to remote operations and are focusing on design work. At the time of the meeting the UCSC shops had ceased all build projects with the exception of KCRM and completing testing of an adaptive secondary for TNO.

A change to the structure of the Keck LMAP was proposed. There have only been 3 LMAP proposals since 2014, and only one has been approved. Two LMAP proposals were submitted in 2020B. The proposed changes include allowing for the submission of small proposals by Co-Is on LMAPs, clarifying the minimum number of nights that qualify for LMAP status, and requiring a management section. The UCOAC voted to make these changes known to the TACs for the 2020B proposal review. The committee also voted to approve a change to the Lick small telescopes proposals from a quarterly schedule to a semester schedule, with dates offset from the Keck semesters. There was some discussion about moving to an annual schedule instead with a mid-year supplementary option to decrease administrative overhead.

UCO submitted a 5 year progress report to UCOP and gave a presentation to the review committee. The committee did not know much about UCO, but the presentation was well-received.

WKMO UPDATE

An update was provided on the Keck operations (which have now ceased) and instrument suite. There was concern about cryogenics while operations were at a minimum or halted. There is also no training of new staff. There are currently 10 instruments in operation (4 on K1 and 6 on K2). OSIRIS is being serviced to fix its inner filter wheel. NIRSPEC was serviced to install a new worm gear to reduce vibrations and install a new pupil stop and a new window. The NIRES guider was upgraded. DEIMOS has a failed detector (CCD5). Evan Kirby is leading a study to replace the detectors. LRIS has an intermittent problem on the red side. There is an upgrade plan for LRIS in the process of being drafted.

There was a discussion of the current model of instrument development, which was developed between 2003-2005. WKMO is refreshing this guide, and will roll it out in July or August. This includes more gating upfront with early reviews, more flexibility and gating throughout, and better alignment with NSF and NASA guidelines. Participation in the

development of this model was welcomed.

There was an update on the new instruments in the planning phases. There are a number of instruments in the development phase - if all are funded, there will be 8 new instruments in the next 15 years. The two new instruments that have nearly full funding are KPF and KCRM. There are four instruments in the design phase - Liger (AO-fed IFS, PI Wright); FOBOS (multi-object optical spectrograph, PI Bundy); SCALES (AO-fed thermal IFS, PI Skemer); and HISPEC (AO+fiber fed high resolution NIR spectrograph, PI Mawet). Each of these has some funding for early design phases.

KECK SSC UPDATE

Jean Brodie is stepping down as the UC SSC Co-Chair. Aaron Barth has now taken over as UC SSC co-chair. There was discussion of enhanced communication between the SSC and the instrument development teams. There was an update on operations, which were normal prior to the current shutdown. A total of 9 ToOs were executed in 2019B. The last few primary mirror segment repairs will be completed soon, but photovoltaics suffered damage in 140 mph winds on the summit. An update on the status of Maunakea included a discussion of the UH Regents' new resolution on combining Maunakea stewardship and operations. Community outreach and engagement activities are continuing modulo COVID-19.

The WMKO 5-year plan includes maintaining current operation service level, with enhanced support for ToO. Identified risks include secondary mirrors - blanks are in house, and if a replacement is required the down time would be a few weeks. There is funding for the KI azimuth pier, safety enhancements, and renewal of the Maunakea master lease. There is not currently funding for seismic upgrades and worst case pier costing. For instrument development, the top instrument priority is KPF. The next priority is to seed funding for other instruments to help secure NSF funding. KPF and FOBOS have been selected for the next round of MSIP proposals. WMKO will submit small MRIs every year to support instrument refurbishment and upgrades.

There was discussion of the new policy to offer nights in exchange for NSF funding in MSIP and MRI proposals. The CARA board approved a cap of 28 nights/year in November, to be managed through the NOAO TAC process. These were included in the last round of MSIP and MRI funding, with variations in the number allocated to each instrument. There is ongoing discussion about the best way to allocate these nights in proposals. The SSC would prefer to have flexibility to exceed the 28 night cap in a given year in the expectation that not all proposals will be awarded, and instead work on a ~5 year rolling average. Instrument teams can make suggestions about the number of nights, in consultation with the project manager. There is some distinction between the number in MSIP versus MRI proposals, since MSIPs are supposed to offer something for the community. The UCOAC discussed forming an instrumentation working group to facilitate strategic planning and provide inputs to the SSC.

There will be a 2020 call for White Papers and Phase A funding from the Keck SSC. The call will be released after the May 22 SSC meeting. The expectation is ~\$150,000 for white paper instrument concepts and ~\$250,000 for phase A.

TMT UPDATE (*EXECUTIVE SESSION*) - ABBREVIATED

There has been good progress on the technical side of TMT. The TMT staff has switched to remote operations due to Covid-19.

The presentation on the US-ELT program (TMT+GMT) was well-received by the Astro2020 review panel. The program is also receiving good advice from the NSF. Since the GMT+TMT projects include many states, there are many congressional delegates with interest in the program. There was a fair bit of discussion of the backup site, ORM. A suggestion was made to arrange a telecon in the future about ORM site quality. The TMT SAC has mostly been focused on presentations for Astro2020, but has also been looking at the designs and status of the three first light instruments. Updates were provided on IRIS, WFOS, and MODHIS. The next TMT forum in 2021 will be in Canada.

LICK UPDATE

There was an update on a new proposal for Nickel ToO interrupts. The Nickel community was fine with the proposal, except for concerns about the co-authorship policy (guaranteed co-authorship on papers). Currently this is left up to the overriding PI. There was discussion of changes to the APF queue scheduling in light of the number of programs now being conducted on the telescope. It will take a significant amount of effort to implement the proposed changes, which will be hard with time constraints on Brad Holden. There is a proposed low resolution imaging spectrograph on APF (DARTS), currently in design phase with funding from Heising-Simons Foundation. An assessment of the impact of Lick from papers between 1965 and 2018 is ongoing. The Shane has relatively few papers per year, but the impact per paper is high. The highest impact papers are on exoplanets and supernovae, and usually include data from other telescopes too (like Keck). The highest impact Lick-only paper is from the AGN reverberation mapping project. The conclusion was that observers should be strongly encouraged to publish more of their data from Lick. The ongoing AO upgrade has been hampered by COVID-19.

COMMITTEE (*EXECUTIVE SESSION*) - ABBREVIATED

UCOAC members will make a concerted effort to disseminate meeting minutes to their respective campuses and solicit input before meetings. Primary committee actions are to (1) generate a sub-committee to address Keck LMAP proposal policy and (2) plan an information and discussion meeting with TMT members and UCOAC on technical details of site measurements at Mauna Kea and Observatorio del Roque de los Muchachos.