

Minutes of the UCOAC Meeting

December 5, 2019, at UCLA

Welcome – Matthew Shetrone, new Deputy Director of UCO

Keck SSC Report – Aaron Barth report

Mentioned Data Services initiative; and Calibration data are to have no proprietary period

K1 Pier degradation issue – oil leak, but not into the ground – so not environmental yet

Segmented Mirror repair work is going well, and will finish on budget

Mauna Kea Blockade: Operations are more or less at full capacity – but morale is impacted

- 23 observing nights were lost
- There has been an added cost for security, and outreach

Keck AO Focus Study Group formed – Mike Fitzgerald is co-chair with Peter Wizinowich.; Claire suggests including Phil Hinz.

There was a ToO discussion: significant overheads with instrument changes occur in some cases

Twilight programs are continuing and expanding

Discussion of Community Telescope Time for NSF Proposals to MSIP and MRI: This was a major UCOAC discussion, with a lot of back and forth commentary that could not be captured easily.

According to investigations by John O’Meara, NSF *wants access to Keck* if they are to fund facilities and instrumentation for Keck. It seems that we really need something like TSIP, but not at the cost level of the original TSIP. We need a new model. Board proposal is:

- a. At the time of the proposal, Keck nights for any Keck instrument can be promised; essentially gives NSF immediate access to Keck.
- b. Or, we can commit Keck nights “on the proposed instrument” to give NSF access when the instrument is operational. Could include other promises, e.g. data products, a large community project.

The UCOAC feels that this model requires more discussion.

Board Proposal: 12 nights/year from UC, and 12 per year from Caltech, and 4 from UH; cap = 28.

The SSC recently chose to *only include* KPF (10 nights/year), FOBOS (10), SCALES (5); LIGER was *not* included despite the fact that a vetted and approved proposal was ready to go. The UCOAC membership was outraged by this capricious decision. It makes no sense. All proposals to NSF should contain the same or very similar access to Keck, otherwise it is a death sentence to that proposal. While this may *seem* to result in overbooking, no such thing will happen in reality. NSF will not fund all of these proposals.

The UCOAC noted that the current plan adds up to a commitment of only 25 nights, when in fact 28 nights are available. Moreover, feedback from the unsuccessful MRI for SCALES indicated that community access was desired for the actual instrument, and therefore it was not necessary to allocate 5 nights per year up front in the upcoming revised SCALES proposal.

Many in the UCOAC agree that the omission of Liger is a mistake. The argument about prioritization is false. Tommaso points out that TMT strategic planning is also relevant here; e.g. LIGER is a pathfinder for TMT. Claire also points out that we must keep teams together.

Claire feels that LIGER *should* get nights as well.

The UCOAC's advice to Claire is that the table of allocations should be reshuffled.

Shelley: must give our proposals – all of them – the best shot. That means all of them must look essentially the same to the NSF.

UCOAC concludes that LIGER must be rescued.

Claire is suggesting a “backstop” but with the understanding that if other instruments fail to get funded, then WMKO will pick up the nights instead of UC. Claire says that WMKO is receptive to this. It may be too hard to “change” the SSC discussion before the LIGER deadline (Monday).

We NEED GENERIC TEXT for all of these instruments. The words should be the same as for KPF, FOBOS, and SCALES. The UCOAC worries that we need to compare the allocations to the *cost* of the proposal. LIGER is as expensive as KPF and should get the same time allocation! The UCOAC agrees that the SSC has the right to prioritize WMKO needs. On that basis, only KPF should be pushed forward. But do we really want to do that when other proposals are ready?

Shelley: this process was dysfunctional at SSC. Just need some help right now.

Tommaso: UCOAC should plan to support UC nights for LIGER, with appropriate text, and ask Claire to renegotiate all of this with SSC and the Board later. UCOAC agrees that LIGER should not have received zero nights when the LIGER proposal was ready to submit.

VOTE on LIGER backstop: 10 nights/year for 5 years, without specifying the source – UC or WMKO. (Why, because the budget is similar to that of KPF, and LIGER is a major strategic plan instrument, which leverages TMT work on IRIS already paid for.) The UCOAC will recommend support for the Preproposal.

This VOTE was APPROVED by the UCOAC.

The actual words in the proposal should not use the terminology of a UC backstop.

Discussion of Nights for SCALES: Andy talked about what the MRI reviewers said last year. The question of nights was raised. SCALES has been asked to apply for \$1M to Heising-Simons – remember that LIGER already received \$1M from HS - and the SCALES project got another MRI spot from the campus. Clearly, WMKO/UC nights will bolster the proposal. The argument is similar to LIGER, but there are two issues: the number of nights, and the timing of the nights.

For an MRI proposal, it is the use of *that* instrument that matters. The SSC table is therefore wrong to front-load the nights. The nights should come later, when the instrument is finally available for use. Claire thinks this can be changed in the SSC table. But Andy also wants more nights.

Claire: perhaps we fill in the out years, which might work with an MRI time scale.

Bottom line: Andy is asking for more nights (from UC) to increase the SSC-allocated community nights, and will include something in his proposal to involve outsiders in SCALES science.

Claire: let's think through the following scenario. 1) move the SCALES nights to the out years; and 2) try to add more SSC (not UC) nights later.

Tommaso: we had to save LIGER with a backstop, but don't want to set a precedent. We can push out SCALES to the out years, and then the WMKO allocation is undersubscribed. In addition, a modest oversubscription is acceptable to all because all four proposals will *not* succeed simultaneously.

A backstop for SCALES sends a VERY strong and different message to the SSC.

Claire: I think I can probably argue to move SCALES back to 2024 in the SSC Table, and *also* argue for more nights in the outer years. That way, Andy can go ahead. Just needs a few days.

TMT: Tommaso

1. TMT now has a legal permit to build on ORM in the Canary Islands.
2. TMT-GMT-NOAO working together – material submitted to ASTRO 2020
3. A proposal to NSF is being developed now in the hope that the 2020 Decadal Survey will support TMT/GMT development.
4. SAC has started worked on “first decade” instrumentation – i.e. post “first light” instruments
 - a. Subcommittee on Exoplanet roadmap (Fitzgerald, UC Rep)
 - b. Subcommittee on near infrared multi object spectroscopy (Treu, UC Rep)

Claire: NOAO involvement has brought a huge benefit to TMT partnership, especially in the area of data products, data reduction pipelines, calibrations, and archives.

(Northern Hemisphere sites: In Hawaii there is a 71% overlap with LSST; this is ~50% for Canary Islands.)

Ryan Foley: DARTS spectrograph for APF

DARTS is a Low-Res spec to go on opposite side of Levy Hi-Res spec; will be completely automated, even with preliminary data reduction. Motivated by transit astrophysics. Makes good use of Mt. Hamilton. Discovery rate of supernovae is over 15,000 per year and that is before LSST. New Spectrograph, R~700-1000. Very high throughput 20% at 1 micron to a peak of 70% at 0.65 microns; Kast peaks at 20%. Good additional science has been suggested by many Kast users.

Full completion/commissioning August 2021. Critical path is mechanical design, also software. Idea is to build the K mirror and Guide Camera first and get it going to help reduce risk. Budget (mainly labor) is still under development – depends on access to local engineers. Would need at least 5%-10% of the time to be worthwhile.

Most UCOAC members had never heard of this proposal prior to this meeting.

Director's Report

New two-fold fundraising advisory structure for Lick Observatory, and substantial new endowment gift for Lick. Broader UCO fundraising too. Very good progress. La Noche de las Estrellas – second annual event – covering seven high schools. Support from NSF and FOLO. Everything carried out in Spanish. Many VIPs came. Going for more funding, extend to other events throughout the year: La Puerta al Cielo. Claire encourages broad participation.

UCO 5-year review update: report was submitted to UCORP last summer. Scheduled to talk to them in January. Hearing from UCOP that these reviews can be constructive and helpful. It is not a budget review.

Budget issues for next year. Since the Beckwith era, the funding source for UCO has not been index-linked. Next year the UCOP allocation to UCO will be too low given cost of living increases. Claire is in discussions with the Provost and Chancellor about the budget impact UCO will be facing next year. Minimum goal is to cover the annual cost of living increases. Clearly have some work to do!

Matthew Shetrone – described a revised Lick ToO Policy for APF and Nickel telescopes, which didn't really have clear policies.

For the APF we will have two instruments. APF is mainly queue scheduled. Suggestion: Number of ToO nights allocated by the TAC should be limited to about 5% of the total.

Notes by Ian McLean