

# Minutes of the Spring 2018 UCOAC Meeting

May 7th 2018  
Physics & Astronomy Building  
UCLA, Los Angeles, CA

Attending in person: Claire Max (UCO Director, UCSC), Gillian Wilson (UCOAC Chair, UCR), Marusa Bradac (UCD), Alex Filippenko (UCB), Ben Mazin (UCSB), Michael Fitzgerald (UCLA), Shelley Wright (UCSD), Michael Cooper (UCI), Andy Skemer (UCSC), Jean Brodie (UCSC), Aaron Barth (UCI), Andrea Ghez (UCLA), Tommaso Treu (UCLA), Lori Lubin (UCD), Ian McLean (UCLA), Brad Holden (UCSC), Anna Korossy (UCSC), James Larkin (UCLA), Matt Malkan (UCLA), Michael Rich (UCLA)

Attending remotely: Michael Bolte (UCSC), Connie Rockosi (UCSC), Ilse Ungeheuer (UCSC), Kevin Bundy (UCO)

Absent: Garth Illingworth (UCSC)

## **Keck Observatory:**

**New Partnership:** A new partnership has been agreed between UC and Caltech and signed by their Presidents. The most important aspects of the MOU were summarized by the Director

- The guiding principle is the concept of a fully equal partnership.
- Annual Operating Expenses are shared equally.
- Decommissioning costs are included for the first time.
- There is increased clarity about ownership of instruments, facilities, and data rights
- Guidelines have been agreed upon for the unlikely event that an institution temporarily defaults or chooses to withdraw from the MOU.

A good summary can be found [here](#), prepared as background material for the UC Regents.

The UCOAC thanked Director Max for her hard work in developing, negotiating and shepherding the new partnership.

**General Updates:** Jean Brodie (SSC co-chair), Aaron Barth (SSC) and Andrea Ghez (SSC) presented news and updates from the most recent Keck Science Steering Committee meeting held in February 2018 and discussed issues likely to arise at the upcoming SSC meeting to be held later in May 2018.

- Judy Cohen (SSC co-Chair) and Shri Kulkarni (COO Director) are stepping down as Caltech Science Steering Committee (SSC) representatives. They will be replaced by Chuck Steidel and Jonas Zmuidzinas respectively.

- In 2018, Keck will again release its annual call for White Papers. It is anticipated that the call will be both for new white papers and system design proposals, with a deadline of June 8<sup>th</sup>. A total of \$100K will be available.
- The 2018 Keck Science Meeting will be held on September 20<sup>th</sup> and 21<sup>st</sup> at Caltech.
- A new model for instrumentation, the “Instrument Incubation Cycle (IIC)”, is being developed, spearheaded by Marc Kassis. This process is intended not only to ensure that instruments are adequately budgeted and funded, but also to provide timing, guidance, and mentorship to instrument teams by the Observatory and SSC. It is anticipated that the IIC will be presented at the September Keck Science Meeting. While it is expected that the default will be for the SSC to provide multiple points of approval over a 2.5-year period, there will be opportunities for instruments to enter at later stages or to fast-track through the approval process.
- 2018 winter weather losses have been far in excess of long term trends (50% loss over last 6 months; 76% in March and April)
- K1 DM3 commissioning has been ongoing through 2018A with significant weather problems plus hardware/software issues. It is expected to be ready for operations in 2018B.
- KCRM is a proposed second phase involving extending the capabilities of the Keck Cosmic Web Imager (KCWI) into the red. To oversee this process, a KCRM Science Oversight Committee (KSOC) has been set up, with Shelley Wright as chair. The charge to the KSOC is to review the requirements, evaluate and optimize the science case within the cost cap, report to the SSC and make recommendations to the KCRM team.
- Lynn Hillenbrand is leading an effort to organize a workshop on precision radial velocities in August. There is active discussion of Keck follow-up strategies to support the fall 2018 LIGO run. This includes how groups leading Gravitational Wave Target of opportunity (GW ToO) programs at Keck should discuss how to plan for triggers and possible data sharing, within the framework of the current ToO policies. A separate question is whether there is a need to revise ToO policies or data rights policies in order to take full advantage of the science opportunities in GW follow-up. Keck has designated a committee to consider these matters and recommend a new policy.
- Twilight observing trial: To date UC has approved one Twilight Observing Program. In the 2018A semester, there were 6 instances of this program being attempted. So far in 2018B, it was attempted 3 times.
- There is some concern about the impact of quarter night observing on the Support Astronomers (SAs). Under current policy, the SAs have to be present when there is a new observer.
- There has been significant turnover recently in WMKO staffing (50% in last 5 years). Many key positions that were open have now been filled. A recruitment for the Chief Scientist position is ongoing.
- The Keck Visiting Scholars Program is reviewing applications for Year 2, and expects to fund about 7 scholars. 21 applications were received.
- Multiple minor accidents this year (KCWI Cryo Spill, K1 DM3 installation, glycol leak onto K1 primary mirror) have motivated a major new push to improve overall safety. A new safety officer has been appointed.

Mainland-only observing now constitutes of about 55% of nights. The technology and infrastructure to support remote observing is aging and is being reviewed. This includes likely transitioning from Polycom to Zoom, transitioning to Linux servers for VNC

sessions, and the current requirement for ISDN backup is being reviewed.

A clarified policy for Keck PI eligibility has been drafted. It can be found at the bottom of [this](#) web page.

It is planned that the new 3-TAC process will be continued in Semester 2019A. The TACs are: Galactic, Nearby Universe, and Distant Universe.

Public Records from Keck SSC meetings are available from this website: <http://www.ucolick.org/keckssc/public/index.html>

## **UCOP Annual Report**

Connie Rockosi presented an overview of the 2017 UCO MRU annual report, which was very well received by the University Committee on Research Policy (UCORP). The 2018 annual report will cover the period July 1, 2017 through June 30, 2018 and will be due at the end of September. Email will be sent to individual users in June. UCO will make a best effort to compile publications and UCO-related grants. Users will be asked to verify their own group's publication list and UCO-related grants, and also provide additional information about students and junior researchers who have used UCO telescopes, awards and press-releases, multi-campus collaborations etc.

The UCOAC discussed the importance of the annual report to continued funding for UCO. Concerns were raised that not all who benefit from UCO are willing to share in the collective burden of reporting. To encourage participation, the 14 voting members of the UCOAC passed a resolution empowering the Director to revoke UCO observing rights in extreme cases of non-cooperation (12 in favor; 0 against; 1 abstention; 1 absence).

## **UCLA Infrared Lab**

Ian McLean presented the 2018 UCLA Infrared Lab report. The group currently comprises three professors, eight professional staff, and four graduate students. Two students graduated in J2017 (Anna Boehle and Sarah Logsdon, currently postdoc at ETH Zurich NASA Goddard Space Flight Center respectively). The status of ongoing projects is summarized below:

**IRIS** (PI: James Larkin) is a 1-2.5 micron AO camera and integral field spectrograph for TMT. IRIS passed Preliminary Design Review (PDR-Part 2) for electronics, software, and cost review in September of 2017. The TMT Project has approved IRIS to enter a three-year Final Design Phase (Nov. 2017 – Nov. 2020).

**OSIRIS Imager Replacement** (PI: Mike Fitzgerald). The new camera and detector installation were completed in January 2018. Characterization is in progress and final adjustments are planned to be made in 2018B.

**NIRSPEC Detector Upgrade** (PI: Mike Fitzgerald, co-IMcLean). Critical Design Review (CDR) was passed in October of 2017. Delivery and multi-step installation are anticipated to begin in August of 2018. Installation of the Fiber Extraction Unit (FEU) of the Keck Planet Imager and

Characterizer (KPIC) which will reimage the output of a single-mode fiber bundle onto the NIRSPEC slit is being coordinated with the main upgrade of NIRSPEC.

## **UCO Business**

- The UCO budget is stable at a higher level, partly due to start-up funds negotiated by Director Max
- UCOP have provided one-off funds for Lick infrastructure projects (roads, vegetation management etc.)
- An offer has been made in the Senior Director of Development Search
- The ad has been finalized and a new search for a permanent Deputy Director will begin shortly. Emphasis will be placed on the candidate's ability to work closely with all UC campuses. There will be the option of a tenured faculty member at a UC campus to serve as Deputy Director.
- Repairs on the Lick Shane 3-m telescope infrared camera and dye laser are underway.
- Several internal projects are being planned to bring Lick observatory infrastructure up to date.

**Communications:** Ilse Ungeheuer gave an update on UCO communications. UC Observatories is enjoying an increasingly high profile on social media. 2018 will see the 38<sup>th</sup> annual summer series consisting of six "Evenings with the Stars" and six "Music of the Spheres" evenings (200 tickets per evening). Tickets are hugely in-demand and sell out within days of becoming available. 20 public evening tours (40 tickets per evening) and 2 (120 visitors per evening) have also been offered in 2018.

**Automated Planet Finder (APF):** Brad Holden gave an update on APF which was oversubscribed by a factor of 1.4 in 2018B. A high priority continues to be creating a unified queue. Funded by a 2018-2019 UCO mini-grant (co-PI's Dressing, Kane, Konopacky and Robertson), an optical designer and a mechanical engineer are working to identify upgrades that could yield the largest improvements to both the radial velocity precision and the limiting magnitude.

## **TMT**

Mike Bolte summarized recent news about the project.

A report on the most recent Science Advisory Committee (SAC) meeting was presented by Tommaso Treu

- Garth Illingworth has stepped down as UC SAC co-Chair of the TMT. The UCOAC thanks Garth for his decade of service to the project and welcomes Tommaso Treu as the new UC

SAC co-Chair.

- Eight White Papers proposing second-generation instruments were received in response to the call by TMT. They will be reviewed “TAC style” at a SAC telecon in May to discuss them. Next steps will depend on the availability of funding for second generation instrumentation.
- The third in the series of “Shedding Light on the Dark Universe with Extremely Large Telescopes” conferences will be held in Trieste, Italy from July 2<sup>nd</sup> -6<sup>th</sup> 2018.
- The 2018 TMT Forum will be held in Pasadena from December 10<sup>th</sup>-12<sup>th</sup>.

The UCOAC received updates on IRIS and WFOS, the two TMT first-light instruments, from their PIs James Larkin and Kevin Bundy.

**IRIS** passed PDR-1 Level A review in September 2016 (optical and mechanical design) and PDR-2 review in September 2017 (software, electronics, budget, schedule). Over 100 documents were delivered, and 400 questions were answered in open forum before the reviews. IRIS is now in final design phase which is expected to last three years. The goal is to produce designs ready for fabrication for all components including software.

**WFOS:** The instrument team has been working hard to develop three concepts (Fiber, Xchange and Slicer). Due to the tight overall TMT budget, the Board has reduced the budget for WFOS as well as imposed a higher contingency than previously envisioned. The SAC has decided to focus on the Fiber and Xchange designs and expects to make a final design selection by the time of their October meeting.

### **2018 Fall Meeting**

The fall (northern California) UCOAC meeting will be held in northern California on a date yet TBD.

*These minutes were prepared by UCOAC chair Gillian Wilson*