

**UCO Project Council  
Sep. 3. 2013, 10 AM-noon  
Minutes, final**

**Summary of major action items and decisions:**

- 1) \*\* Sandy prepare resolution for CARA Board permitting UC to retain ownership of Keck instrumentation. STARTED.
- 2) \*\* Item for next PCouncil agenda: detailed discussion of ATI proposals.
- 3) Connie, Sandy, and Mike Bolte will start meetings with Rebecca, Bruce, and Matt to plan UCSC proposal for MOBIE. DONE: first meeting this week.
- 4) Who is in charge of reviewing Shane AO and making sure we are on budget and schedule?
- 5) Will needs project planning software.
- 6) Attachments to the pcouncil alias need to be enabled. \*\* Sandy and Paula check to see that they are allowed.

**Items for Sep. 10 agenda:**

- 1) Sandy: bring proposed standard agenda for PCouncil meetings.
- 2) Instrument reports (round the table)
- 3) All: Discussion of ATI proposals. Come with a description of your project and estimated budget. See list from Aug. 13 PCouncil at end of these minutes.

Postponed: Discussion of Dave Cowley's shop schedule through Dec. 31.

**Ongoing projects in the UCSC shops: \*\* means follow up.**

- K1DM3 met for the first time, with Keck participants.
- Requirements document is in progress. Preliminary Design to begin Oct. 1.
- \*\* Myra talk to Larry Castro to finalize the overhead plan for K1DM3. DONE.  
Implications for future Keck instruments?
- \*\* Myra make a set of cost codes for K1DM3.
- \*\* X check with NSF to verify that project is approved.

Note added later: Caltech's policy has been to charge normal overhead on instruments where unavoidable but to retain ownership of instruments and ship them to CARA with a property tag. This is possible because Caltech owns Keck, so this does not conflict with Keck's policy of owning all instruments (including AO). For UC to do this is going to require a resolution and change of policy from the CARA Board permitting UC to retain title. \*\* Sandy, bring this resolution up at next CARA Board meeting.

- KCWI: test assembly planned of first half of camera barrel, metal only
- Har is concerned that assembly plan should have independent check. \*\* Connie will ask Bob Weber at Caltech.
- Har is concerned that coating plan is deficient. He doubts that ECI bid of \$65 K is really serious. Long discussion of this. First coated lenses are needed for assembly on Oct. 15.
  - Har requests budget of \$125 k to properly engage ECI.
  - \*\* Connie, Drew, and Har meet to discuss coating plan.
  - \*\* Myra to prepare a cost estimate for the solgel and reflective coatings to be done by our Coatings Lab. One week?
  - KCWI assembly now conflicts with Shane AO bipods (see below). \*\*Dave C will send work to UCLA. OK?
  - Various small software jobs for KCWI are on track.
- Shane AO:
  - Don G says that Shane AO bipods should be done in-house and are needed for Sept. Jim Ward will be needed. Take him off KCWI. This is the new plan.
  - Off-axis parabola received from problematic vendor proved to be junk. Second vendor can supply with little schedule loss.
  - Goal is to complete fabrication of optical bench by Nov. 1 and send to MH on Nov. 21.
  - Some work needed from software. Motors are now going forward. \*\* Don check with Will about schedule.
  - Science case: X asked Burgasser to head the AO science team. He declined but agreed to prepare a science case. ATI proposal in Fall 2014. \*\* Connie will look at old UCOAC minutes to see who else was interested in Shane AO.
  - Refurbished Shane AO camera is called SHARCS; based on IRCAL. Has been on hold all summer. IRCAL comes off the telescope in December, at which point rework starts.
- DEIMOS blue grating: Connie is getting specs for it. \*\* Quote ready by end of Sept.
- Procuring LBL CCDs to test: Connie is working this. \*\* Request to the by end of Sept.
- Possible ATI proposal: high-speed CMOS project. ??For this year or next?
- The Bullard will soon leave the shop, netting \$43 K. \*\* Dave C. will prepare plan for purchasing new CNC equipment with this money.
- NGAO proposal is in progress.
  - Gavel, Max, and Myra working with Wizinowich.
  - Max is very concerned that the proposal needs external readers – Red Team.
  - \*\* Sandy, Don, Claire to discuss options. DONE.
  - \*\* Sandy talk to Keck and CARA Board about NGAO overhead. DONE.

- Coatings/Drew:
  - New magnetron installed and tested with silver. Went well. Two new magnetrons are being ordered.
  - Test of ADL moisture barrier over silver looks good. Well positioned for ATI proposal.
- Drew: workpackage in the amount of \$40 K being prepared for the ADC in NEFARIUS.
- Drew: small \$5 K job to assess VPH grating for LRIS.
- Drew: ATI proposal: \$100 K. Co-PI Kobayashi. Atomic-layer deposition on 0.5 m optics. Aim: demonstrate ALD coatings applied to large optics  
Could lead to Small Business Innovation Research proposal (\$up to 0.8 M); proposal would be to develop suitable coatings on witness samples.
- TMT motor control software will start soon.
- The MOBIE review has been altered to be more of a hand-off workshop than a full CoDR.
  - TMT wants a finished document library with catalog.
  - Bruce thinks there is several hundred \$\$\$ of work to get ready for the PDR, and UCSC should make a proposal for this. Note added later: Bruce sent an extensive set Of tasks to be done for the PDR.
  - Myra: TMT is pushing back on our proposed budget to complete the CoDR.  
\*\* Sandy and Mike: check this.
- APF continues to have daily problems.
  - Currently the secondary won't home.
  - Many software problems have been caused by converting Kibrick software suite to a proper installation. Hopefully this is temporary.

---

### **New proposal ideas (from Aug. 13):**

- X: ATI proposal for Kast red spectrograph CCD. Holden, PI. Due Nov. 15? \*\* Get a postdoc to help write this?
- X: Keck NIRSPEC detector? Proposal was turned down by NASA. \*\* follow-up?
- Gavel: NGAO proposal at Keck will have strong UCSC involvement. Writing is underway.
- Gavel: ATI proposal to convert ShaneAO to usable science instrument (postpone to 2014, when we can show results from FY13)
- Gavel: ATI proposal: high-speed wavefront sensor for multiple laser guide stars
- Drew: ATI proposal: \$100 K. Co-PI Kobayashi. Atomic-layer deposition on 0.5 m optics.  
This could lead later to a Small Business Innovation Research: up to \$0.8 M.
- CMOS detector testing (Gavel, Rockosi): Too nebulous for NSF? Maybe Small Business IR? Moore Foundation?
- \*\* Think about Moore and Keck Foundation ideas. Keck might like the ShaneAO upgrade.

### **Discussion topics for future PCouncil meetings (from Aug. 13):**

- UCO detector strategy: in-house technologies and skills vs. outsourcing. What technology development do we want to support? Short term? Long term? Funding ideas.
- Detailed presentations of major projects:
  - ShaneAO + SHARC/IRCAL

- AO laser mounts for Keck 2
- KCWI-blue camera
- Coatings research program
- K1DM3
- APF