

**MINUTES**  
**SARA Board of Directors Meeting**

(See Attachment 1 for Agenda)

Note: Board actions recorded in *italics*.

TIME: 10:00 AM (EDT), April 22, 2023

PLACE: Zoom Meeting hosted by ERAU

PRESENT: Board Chair T. Oswalt (ERAU); Board Members: G. Henson (ETSU), J. Provencal (UDEL), M. Leake (VSU), R. Berrington (BSU), D. Buzasi (FGCU), E. Perlman (FIT), B. Murphy (Butler), K. Williams (TAMUC), W. Keel (UA), T. Hillwig (Valparaiso), R. Alonso (IAC), J. Webb (FIU), T. Otani (ERAU), M. Ajello (Clemson)  
Guest: P. Mack (ACE)

**AGENDA**

- I. Review/Approval of the October 22, 2022 Board Meeting Minutes**
- II. SARA Observatory Directors' Reports**
- III. ACE**
- IV. SARA Business**
- V. Operations**
- VI. Other Business**
- VII. Next Meeting Date and Location**

**I. Review/Approval of the October 22, 2022 Board Meeting Minutes**

Henson had emailed minutes of the meeting to the Board. Oswalt asked for members to suggest corrections and/or move to approve the minutes. Oswalt presented a correction to change the origin of discussion on "SOFIA" to E. Perlman and not to himself. Henson noted the change. There were no other corrections forthcoming so Murphy moved to approve with a second by Berrington.

*The minutes were approved unanimously with the above correction.*

**II. SARA Observatory Directors' Reports**

**A. SARA-KP**

Henson reviewed his report (Attachment 2) going over current issues with the focus, filter wheel sticking, guider stage, UPS status, etc. He noted the need to aluminize the mirror was a priority. In addition, he initiated discussion on the possibility of an FLI camera failure (for the cooler, not imaging) and possible replacement options for it. He noted there are newer CMOS designs that are more affordable, but needs Peter to confirm the specifications will match up with the bench spectrograph optical design. Further discussion was delayed until the call

with Peter later in the meeting.

Williams asked about access to the weather station. Henson was not sure if it always connects to send data and if it was an issue with the station or with the computer. Again, Peter will be asked to update the status. Keel noted issues with inconsistent guide camera QSI errors. Henson described the situation with multiple cameras connected and glitchy communications with Maxim. He also reminded observers about the potential for the spectrograph guide camera to be connected instead of the QSI upon startup. He will make sure notes to address this are on the computer desktop to help observers.

## B. SARA-CT

Hillwig summarized his report (Attachment 3) and noted the usage statistics and observer report percentages. He noted some nights were lost to camera connection issues, but that overall the operation has been more stable. He also noted a new NUC on the telescope has made connections to equipment there reliable now. He described other less chronic problems noted in his report, mainly with the telescope computer turning off or locking up and recurring old VPN issues. He also noted the issues with trying to get the mirror re-aluminized. There was a long discussion on the administrative/insurance problems that are preventing it from happening. A similar situation appears to be the cause of delays with action on the VPN for the dome in regard to dealing with the CTIO administration and IT staff.

He did report the good news that the spectrograph is finally installed and appears to be working nominally according to Henson.

## C. SARA-RM

Murphy summarized his report (Attachment 4) noting the old issues of the dome shutter and mirror cover that will need further addressing. A new major issue is the continual communications failure related to the internal dome switch but with an uncertain cause. A long down time was necessitated due to the mirror support power supply failure and the long delay in getting a part through customs. The above issues, along with an extended extreme winter weather period, resulted in the observatory being offline for most of the last 3 months.

Murphy stated he has had contact with IAC support people about on-site services and billing issues from the IAC administration. The support staff interaction is Ok, it is the admin billing/financial side that is the problem.

Murphy stated Mack is planning an August/September 2023 trip for dome/mirror petal work but is also trying to plan for the mirror to be re-aluminized at that time. All the work involved would require perhaps 3+/- weeks of down time.

There was some discussion by Oswalt, Murphy, and Alonso about communication with IAC personnel amid concerns about keeping good relations with staff tech support, the billing issues, and with concerns for next MOU.

## P. MACK joined meeting at this time:

### III. ACE

Mack began with a status report for RM. He acknowledged communication issues with ORM and did note that when we get support/service it is fine. He always tries to remind them to bill us for services and that we expect to pay for them. He commented on the shipping issues with customs for our typical SARA packages and the delay for RM parts. He has discussed with ING about mirror aluminization for September to coordinate with his trip. He has not heard back from them yet. Murphy asked about the dome communication failure problem; that should now be fixed as IAC replaced a breaker and wiring connections that were the issue causing the router to be inaccessible.

Mack commented on a fix for the dome shutter. He thinks the cable system can be replaced with a chain drive system and has a local vendor that can help do the job. It could possibly require up to 4 weeks to replace, but if the mirror aluminization was done at the same time at least only one extended down time period would be needed. He needs to hear back from ING and then set up plans for the trip as soon as possible. Mack provided a detailed discussion of the mirror petal operation and possible fixes. Work would be done at the same time the mirror is taken out and coincide with the shutter fix. He noted all of this work is critical for stable future operation. Oswalt asked about the potential cost, but work needs to be done regardless and we will budget for it. Mack also noted the all-sky camera for RM is at Tucson and had been repaired so he would take it out to re-install during the September trip.

For CT, Mack revisited the mirror aluminization issues. He noted the staff that were the last to aluminize it are all gone. He made a new rig to use for our mirror handling for the process so everything should be in place to do it, just needs the administration approval.

Henson asked about the spectra FLI camera cooling procedure since it is on the floor of the dome. Mack stated -30 was typically ok, go lower only if very dry conditions to avoid condensation within the camera head.

For KP, Henson asked about the current UPS status. Mack noted there are two UPS units; one in the dome for shutter/rotation and one for downstairs/computers. The dome UPS was new but failed. He is getting a replacement under warranty for it. In the meantime, downstairs has failed also so currently no UPS for either location. Henson made a note to inform all observers as this is a safety issue under poor weather conditions.

Mack noted he is making plans to schedule the mirror aluminization down in Tucson. However, we need the KP crane to take the mirror out of the cell as using a Tucson contractor would be prohibitively expensive! He needs to ask KP if crane use is now or would be possible in the future (operations still not back to full normal after pandemic). He did not have a current quote but estimated around \$15K for total expenses involved.

Mack stated the all-sky camera is still there, but the communication conduit has fire damage. He noted there is a wireless communication option, but he needs to test and then install the hardware for that. Henson mentioned the FLI cooler limitations, weather station, focus, and filter wheel sticking. Mack will check on those as soon as possible. Some items can be checked remotely, others will require onsite visit. Henson will work to stay in communication with ACE

on the status of these items and update observers. Perlman asked about any possible remaining fire damage issues. Mack noted that only the power meter pole and conduit at the small concrete pad to the rear of the observatory showed any current scorching evidence. He described the power issues for the mountain as a whole after the fire and noted he has investigated getting the dome connected to the mountain power network (and thus their generator). It can be done but he needs to get details and a quote from them for connecting us to a junction box just down the road from the dome. Oswalt reminded him of the previous “sky-high” cost, but Mack said maybe not as exorbitant now with all the work being done after the fire.

Oswalt asked about changing CT communications link to perhaps a Starlink like satellite connection. Mack thought that might create more problems and he was unsure of possible bandwidth limitations. It is also possible CT would still charge for services even if we don't use them. He suggested just a strong request to CT staff to fix the problems as we are paying for their services. He will try to help with a contact person to identify to work on the problem and then Hillwig and Oswalt can follow up.

Mack also mentioned there is a new AI type software for telescope collimation. He described its capabilities and suggested we might try it for KP as it only costs a few hundred dollars. It would be worth it to try when the mirror is re-aluminized and re-installed as the ideal time with the backplane free of instrumentation.

#### **IV. SARA Business**

##### **A. Budget report**

Oswalt had emailed both the ERAU budget status report (Attachment 5) and his personal spreadsheet tracking expenses (Attachment 6) to the Board. He noted that the bills and payments are currently in constant flux with issues on both the vendors side and internally with ERAU financial offices and software changes. He stated the overall balance with the ERAU status report should be accurate for its date which shows ~\$657K as the current balance.

##### **B. Proposed budget for remainder of FY22**

Oswalt noted that his budget sheets basically reflect the amount in the ERAU report and he reminded the Board of the typical annual commitments for each observatory as well as the discretionary amounts. There was discussion about the potential extra costs for each observatory (mirror aluminization, dome repair, etc.) and Oswalt updated the spreadsheet to reflect the estimated costs for each item proposed. There was also discussion on possible future expenses and whether such expenses would be critical needs versus just wishful items. Oswalt updated the proposed and committed expenses on his spreadsheet, made viewable to the Board, and asked for further discussion or approval.

*A motion to approve the budget as described above was made by Keel with a second by Webb. The Motion was approved unanimously.*

##### **C. Reminder on FY24 dues**

Oswalt just noted dues invoices would be mailed/sent in May and members should let him know if contact information for them has changed.

#### D. University of Tampa proposal

Oswalt initiated discussion of the proposal (Attachment 7). Lovell noted her contact and employment of Gordon at ASC. Henson and Lovell noted she was an REU alumni under Henson. The Board was overall impressed by the number of astronomers and several Florida members had visited the campus and knew of the recent work and activities they had done. There was a prolonged discussion on their proposal with a very positive overall opinion and assessment of what their potential as a member could be. The discussion led to an agreement to invite the University of Tampa with a motion created as follows:

J. Webb moved with a second by E. Perlman that:

*SARA grants provisional admission to the University of Tampa subject to the procurement of the buy-in fee and its payment to SARA along with the initial first annual dues. The motion was approved unanimously.*

The Board then directed Oswalt to send a letter to Tampa stating that we are accepting them provisionally as per the motion above, and that access to the SARA observatories would be arranged upon receipt of the necessary payments.

#### E. F. G. Status of Member Institutions

Leake described the situation at Valdosta and the status of their department and different majors that umbrella under it. Georgia had dictated that they must graduate 10 majors per year so there is every indication they will soon have no reason or ability to support membership in SARA. It was noted that the consortium agreement requires a one year notice of withdrawal, but Leake noted that she is also very near retirement and is the only regular SARA user. Thus, it is very likely VSU will not be renewing membership with the summer 24 dues cycle. Leake will inform the Board of any "official" status change as she is made aware.

Keel updated the Board on the UA status. His department chair wants to maintain membership until the next new hire cycle is complete at least. However, there are some complications in the upper administration process for the hire. He will make them aware of the one year requirement for the withdrawal in the consortium agreement and see if that changes any potential timeline for them. Henson did note SARA had no real power to enforce the one year withdrawal notice requirement and there was no effective penalty if a member institution chose to ignore it!

Lovell noted she is the only ASC observer now and that she is retiring next year. ASC has a new faculty member who would use SARA but she asked about the possibility of a ½ membership arrangement. Perhaps she and Leake could look at a joint membership (as both are Georgia schools) but both are still in weak financial shape. The Board in general prefers full member institutions but would work with both ASC and Valdosta as much as possible to accommodate long-term members versus someone new.

Oswalt noted a continuing problem at ERAU in that other faculty (primarily one) would like to see ERAU withdraw from SARA. That faculty is making the case of it not being worth it within the department and could push the discussion to higher administration. Oswalt stated this has been going on for months and he does not see the situation improving. He stated 3 faculty and several students do use SARA regularly, but numerous other faculty do not use it. However, it is primarily the “one” member pushing for withdrawal. Oswalt noted there are internal politics with the accounting and business support and now senior department leadership among the astronomers. Also, sponsored research is complaining about no overhead for servicing the SARA accounts. Oswalt mainly wanted the Board to know there may be a need for a new financial institution for managing the SARA accounts and that he is in this situation and feeling in dire straights for the future role of ERAU in SARA.

There was a long general discussion about the overall financial administration of accounts for all member institutions and the problems, potential issues, and legal concerns if another institution were to become the financial home for SARA. The Board recognized it needs to be aware of future changes all around that could come within the next year in terms of retirements, membership changes, administration changes, etc. Such changes could require significant effort and time for Board actions.

## **V. Operations**

W. Keel had no information or items to discuss for this agenda item. He just noted a request for time allocation would be sent out to the Board when he was ready to process it.

## **VI. Other Business**

No other items were offered for discussion by members.

## **VII. Next meeting Date and Location**

Henson looked at the old rotational order for meetings list he had on file. Several members had left or were in a situation of about to leave and he noted the location should be in the south after the trip to Valpo last fall. Thus, he stated FIU would be next in line to host a face-to-face meeting. Such a meeting was tentatively set at FIU for September but the details will be firmed up in late summer.

The meeting adjourned by acclamation at 1:56 pm.

Gary Henson  
Secretary, SARA Board of Directors

Attachments (to original only):

1. Meeting Agenda
2. SARA-KP Observatory Director's Report
3. SARA-CT Observatory Director's Report
4. SARA-RM Observatory Director's Report
5. ERAU Budget Status Report
6. SARA FY 21-22 Budget Details Spreadsheet
7. University of Tampa Membership Proposal