

MINUTES
SARA Board of Directors Meeting

(See Attachment 1 for Agenda)

Note: Board actions recorded in *italics*.

TIME: 10:00 AM (EDT), October 25, 2025

PLACE: Madren Conference Center, Clemson University, SC & Zoom

PRESENT: Board Chair T. Oswalt (ERAU); Board Members: G. Henson (ETSU), J. Provencal (UDEL), M. Leake (VSU), R. Berrington (BSU), A. Shaw (Butler), K. Williams (TAMUC), W. Keel (UA), T. Hillwig (Valparaiso), R. Alonso (IAC), J. Webb (FIU), S. Gilliam (ERAU), M. Ajello (Clemson), M. Fauerbach (FGCU), H. Hubbard-James (ASC)
Guest: P. Mack (ACE), S. Levine (Lowell)

AGENDA

- I. Welcoming Comments**
- II. Review/Approval of the April 12, 2025 Board Meeting Minutes**
- III. SARA Observatory Directors' Reports**
- IV. ACE**
- V. SARA Business**
- VI. Other Business**
- VII. Next Meeting Date and Location**

I. Welcoming Comments

Oswalt welcomed all to the meeting and asked Ajello for any welcoming remarks. Ajello briefly welcomed everyone present in person and on Zoom and indicated those present should enjoy all the amenities of the conference center as it was an excellent place to host such meetings.

II. Review/Approval of the April 12, 2025 Board Meeting Minutes

Henson asked members for any corrections or comments. He noted he had already corrected section I and II titles. Shaw asked to correct his and Murphy's status as he was already the Board representative last spring. Fauerbach requested the same change for his status as Buzasi had also left FGCU before the meeting. No other corrections were put forth so

S. Williams moved to approve the minutes with a second by M. Ajello. The motion passed with unanimous approval.

III. SARA Observatory Directors' Reports

**** NOTE: As P. Mack joined the meeting at this point, all relevant content from the various reports was bundled within the Mack discussion of the status of each site and with Q&A from Board members.**

A. SARA-KP

See below. Report is Attachment 2.

B. SARA-CT

See below. Report is Attachment 3.

C. SARA-RM

See below. Report is Attachment 4.

IV. ACE (Mack joined by Zoom at 10:15)

A. Status Report and visitation schedule for all sites

Mack started with KP; he described the ccd cooler repair status and delays. He also commented on the Andor camera coming up from CT, but it takes a long time for paperwork and shipping. Mack suggested we wait to hear from ARS about the cooler before committing to any major decision. There was discussion on various options for a new camera, getting spare cards for the Leach camera, getting a spare cooler / new cooler, and getting a temporary loaner camera. It was noted that the price of a new, comparable camera will be expensive and possibly out of budget range for the immediate future. After further discussion, it was decided to have Mack go ahead and arrange to have the CT spare Andor camera shipped up to Tucson. It will then be available if needed based on cooler repair status and/or if Leach camera itself has issues.

Discussion continued on the possibility of a future new camera. This could extend to all sites as current cameras will age and new technology does develop. Mack noted he had a fairly recent quote from the US Andor contact of ~100K for new Andor model. Others noted Teledyne had a new CMOS design and Princeton still has E2V chip cameras. Observatory directors were asked to investigate new camera options and vendors and report back to the Board online.

Henson asked about the dome UPS restart failures. Mack stated that problem was fixed. Henson also asked about possible dome tracking mis-alignment. Mack stated he has not installed the planned dome encoder tape for absolute positioning yet, but he had not observed such mis-alignment behavior. He does recommend that observers should rehome the dome each night and keep an eye on it with the PTZ camera to see if issue still appears.

Henson asked about mirror resurfacing at KP and whether internal issues had been resolved yet. Mack stated that it appeared likely that February is a possible time frame for getting in the queue. However, there were still some paperwork issues to get completed, some pricing details and procedures to work out. Once the above is settled, Mack can establish an exact date so we can finalize our plans and he can put the work in the ACE calendar.

For CT, Mack began with the mirror resurfacing problems for CT. There are similar red tape issues to KP, but the process CT staff uses puts on a very thin coat so it may only last 2-3 years versus a good thick layer and overcoat. Mack suggested looking at shipping the mirror to the US for aluminizing (much cheaper, perhaps even with shipping cost added in). We would likely have to add the cost of an ACE trip down and some insurance as the mirror would be moving within Chile, even if the work is done in Chile rather than back in the US.

From Steve Heathcote (9/30/25 Tenant meeting presentation: See SARA Business section below): CT coating service is still a work in progress. Several tasks and red tape to complete before they could even begin to consider doing tenant mirrors. In the meantime, CT does offer a “cleaning” service, CO2 spray plus washing of the surface. The Board decided to pursue the cleaning option for now, but Hillwig noted the pressure from other duties on CTIO staff means such work could not be scheduled until towards the end of next year.

Mack is willing to go down to CT to assist with the cleaning as he will need a trip down to replace computers (upgrade to Win 11), install a new spectrograph camera, and fix/replace the guide camera. The new computers would likely stabilize the internet timing issue, keeping clocks in sync with UT time. Mack can also check on the GPS unit which should also feed time to the computers (one is down there but maybe the software is not working).

There was further discussion on internet connectivity at CT versus cost given the continuing VPN saga. CT does have a cheaper service option (again plans presented at 9/30/25 tenants meeting), but it would come with less bandwidth and slower speed. Possibly we could try Starlink (to assist with data download primarily), in addition to a cheaper service level for control communication. Hillwig will look at the CT plan options, but the discussion leaned towards going with the cheaper service as it seems likely the bandwidth is still sufficient for our needs. The discussion on upload speeds (for file transfer) was key as that is the possible bottleneck for us. Several members will check to see if their local IT can monitor individual machine speeds while observing. We need the actual numbers to help with a decision but do hope to save money on the very high monthly service cost.

For RM - Mack commented on his 3 trips this year and all the work that was done beyond the massive effort to repair the dome shutter. New computers, new monitoring cameras, etc. were installed. The issue with Mac computer connectivity is also solved for now. The mystery of spurious shutter openings is not solved! Mack has placed a set of new notes on the desktop for observers to follow for opening/closing procedures aiming to ensure the dome remains closed when unattended. He emphasized the importance of parking the dome at 235 Az! Mack noted the external PTZ camera was not currently working; he’s checking on it. New connection software for Macs for RM appears to be working for observers now.

B. Q&A from Board

This was mostly done in real time as Mack was reporting on each site above; additional comments are presented here.

Oswalt asked if Mack had any contacts for possible new SARA members and encouraged him to query anyone of interest and direct them to contact any Board members for details about SARA.

It was noted that there remained an RM tracking issue (for large West HA). Mack found that the telescope was significantly out-of-balance on his last trip but he thinks there may also be

a binding issue with the drive gears. He plans to be on La Palma for a personal trip in about a month and could check on it again then.

Henson asked about CT trip timing. Mack stated he would like to go down in February (late summer there) if he can get the items needed together by then. There should be time to get spectrograph items, computer items, etc. ready by around first of the year.

V. SARA Business

A. Summary of September 30, 2025 NOIRlab Tenant Open House Meeting

Most of the items of relevance were discussed with KP, CT mirror issues, but Oswalt noted there was mention of a KP visitors center idea for placing a new telescope in “our” parking area. From our viewpoint, we would not want this to happen as the lot area is small and needed for ACE and KP service vehicles. The already limited access to the dome should not be constrained any further. He noted most of the meeting was about the cost determination algorithms for the two sites and details of charges to tenants.

B. Budget Report

The ERAU Budget Status Report (Attachment 5) shows a current balance of ~\$597K, noted as a somewhat healthy figure but Oswalt emphasized for how long? There are still some sizeable spending commitments to come within this fiscal year. Oswalt pointed out the new FY payments summary spreadsheet (Attachment 6) which he had supplied to the Board. He described the typical payments for each observatory site. He primarily noted the Final Summary Tab showing on the order of \$212K to \$214K per year for operating expenses versus the annual dues bringing in only \$180K per year! Thus, we will be eating up any budget excess without new members (and the lump sum buy-in fee) as we lose ~\$30K every year due to the difference noted above!

C. FY 26 budget commitments

Oswalt directed the Board to view the projected expenses spreadsheet. He led the discussion for each site (with the site Director’s input) to look at discretionary items beyond the committed items at each observatory. Noted were the specific major items of mirrors, computers, and cameras. Oswalt updated the spreadsheet list at each site with current cost estimates so we could estimate the additional total expenses for this FY (until summer 2026 dues arrive). There was discussion over various items as the spreadsheet was updated. After the updates were completed, Oswalt went over the summary for ending FY 26 which would put us at ~\$440K. This does not represent a huge reserve, but we would still be Ok for the time being, just clearly on a downward slope trend. Oswalt then switched to the “projections” tab and noted the current dues income vs expenses plot has us reaching an annual net “zero” balance (break-even point) around 2029 but quickly going negative thereafter. However, even before then we are at risk for no reserve funds to cover emergency repairs, required upgrades, etc. which will always happen.

There was discussion on possible solutions for this long-term problem as some possibilities could take a few years to develop. The Board could look to “belt-tighten”; save on internet fees, postpone non-critical purchases, work around upgrades, etc. but that would likely have minimal impact. The real need is for new members to replace those that have withdrawn and potentially to

expand. Two new members should be the initial goal, and there was lengthy discussion on making the buy-in fee pro-rated, perhaps a few yearly installments. It was recognized that the large fee amount was a hurdle to many institutions so the Board was looking at ways to help someone afford it, but not eliminate it entirely. Current members have too much invested in SARA and new members should respect the history. The possibility of “in-kind” purchases of major equipment (could be from grants) was noted as well. First, however, the Board needs to identify potential members. All members noted their institutions recognize the annual dues are somewhat minimal and that the return on that investment is well worth it.

Oswalt asked if each institution could submit to him a brief summary of their SARA related productivity, activities, connections, collaborations, etc. We might look to producing a public relations type presentation to show the engagement, worth, value, etc. of SARA to the institution and individuals as we contact prospective new members.

Leake asked about selling time on an hourly or nightly basis. It was noted that such efforts could only produce minimal income, not enough to overcome the expected deficits of the scale described above. The Board was still willing to consider any such request to purchase time on a case-by-case basis.

Shaw asked if we might advertise the ability for ToO, WebT campaigns, transient events, etc. as part of the effort to entice membership. A few members commented on the history of such programs in the past. The Board was willing to investigate this in general, but if SARA needs to control scheduling, then resources to make that happen become an issue. The “capability” for such programs to be established can certainly be noted. S. Levine offered very useful comments as Lowell has had such a program and experience in running it with the LSST at CTIO. He did describe some complexities in doing the actual observations; again, a resource issue. The Board stated it was ok, in general, with investigating the possibilities and staying updated with any potential for such programs to be developed..

D. Comments on FIT servers

Oswalt just noted that the old servers seem to be active still, **BUT DON'T USE THEM!** Members should get the word out if they have local observers still not on the current TAMUC servers.

E. SARA AAS Agents idea

Oswalt described a new concept of local or regional agents put forth by the AAS. SARA could serve for the southeast region perhaps. The idea is that such agents would help support and engage smaller institutions and/or individuals. Institutions with maybe one astronomer and no facility access. Hillwig noted he is such an agent, but he stated you still need one person as the point of contact. He is trying to build contacts from small places near him, create an email contact list, a way to send out news bulletins, forward info, point out opportunities, etc. relevant to the group he serves. Participation through SARA could be another way to advertise our existence although such institutions are not likely to be able to afford membership. Hillwig said he might consider acting in such a role on SARA's behalf and will look into it.

F. Access by non-SARA members

Oswalt commented on the possible presence of actual “non-SARA” persons fully performing observations versus maybe less-qualified, or partially supervised observers. The question was if anyone may have persons who collaborate with SARA faculty but are not at the institutions themselves. His intent was to bring up any possible liability issues, any concerns for lack of investment in the facilities leading to more irresponsible behavior? No member brought up any current concerns, but Keel noted all observers need to follow the calendar updates, communicate with him about any changes, and certainly be respectful of other observers on the schedule, etc.

G. Update from VSU for membership

Leake noted that she is the only formal astronomer at VSU now. The program there has changed, no longer a strong emphasis on the astronomy curriculum. She stated her Dean is still open to maintaining membership, but she is not certain about how it would be funded. She has tried going the “data science” route, as astronomy can be considered part of that (though more so with huge archive data bases) to keep his interest. The dean had asked for a billing statement so may see dues coming from VSU, perhaps looking at cost to benefit like in the earlier new member discussion? She does not see chances as very promising at the current time.

H. New SARA member prospects

See previous discussion in the budget section above. All members were encouraged to investigate, pursue, advertise to their colleagues in any venue as the formal process can easily take a year or more to get a new member onboard.

VI. Other Business

A. Future of SARA

Oswalt noted that both the 2.1m and 0.9m at KP are currently out of service. They could be available at some point in the near future, but do we have the resources and the initiative to acquire or perhaps just change over operations to either one. Noting that both telescopes are equally as “old” as the current KP telescope and the cost/time to refurbish such a facility, there was no real interest from the Board at this time.

The Board was reminded that P. Mack’s retirement is on the horizon. We have no recent update from him on the status of the ACE business plan in that case. Oswalt stated he will feel him out offline, at least try to get some potential timeline for the change.

Oswalt also noted that he has set the end of next year for his official retirement date. The Board will need to identify a new Chair well before then which would likely require a change in the financial home for SARA as well. There was some discussion on the “overhead” costs for the account if it is moved to a new institution, also possible differences in how “private” versus “public” institutions may have different financial policies more or less favorable to SARA.

B. New Items

No other items were brought forth for the Board’s attention.

VII. Next Meeting Date and Location

As has been the process for many years, the spring Board meeting will be virtual. ERAU will likely host with date plans not made until after the first of year.

The meeting was adjourned by acclamation at 1:45 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 Budget Details Spreadsheet