SARA - RM OBSERVATORY DIRECTOR'S REPORT

April 21, 2023
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I. Summary

This report covers the time from mid-October 2022 through mid-April 2023. The two primary continuing issues that will at some point have to be resolved are the mirror petals and the dome shutter. At present they are not stopping us from using the telescope. Peter Mack plans on visiting La Palma in August/September further address these issues. During this visit he suspects that the telescope will need to be down for 3 to 4 weeks to address all the needed maintenance. At present the mirror petals are in semi-permanent open position and the dome is still having issues, though the dome issues are much better than before Peter Mack's last visit in 2022. More recently we've had differing issues that I discuss below.

II. Telescope Usage

During the first 3 month of the reporting period the telescope/observatory was preforming relatively well. But then there were several issues plaguing the observatory some that were beyond our control. During the latter half of January connection issues to the computers seemed to be a recurrent theme. Initially we thought someone was turning off the circuit breaker in the dome, then it was thought that it was our (or someone else's) equipment tripping the breaker. At this point I'm still not sure where the fault lies. We then had high humidity and icing that took out most of the latter half of February. Then after briefly being back in use the telescope was out of commission during all of March and the first 3 weeks of April due to a failure in the mirror support system. So basically, we've lost 3 months of observing to weather and equipment issue thus far in 2023. Given our present reporting systems it is somewhat harder for us to tabulate the complete statistics. Under the revised reporting system, the observer does have an option to send the report to the observatory directors. That does not seem to be occurring.

Many of the issues that users have had with SARA-RM is in understanding the software, it's reboot procedures, etc. I'd like to stress to all the graduate student mentors in SARA to please ensure that your students fully understand the basic troubleshooting and rebooting processes for SARA-RM. If they have issues, they should first contact you for help, then the directors. The reboot

instructions are on the desktop. By following the instructions, the telescope typically comes back online 90% of the time.

III. Observatory Issues During Reporting Period

On-site Assistance

Terry Oswalt, Peter Mack, and I had a productive meeting with Juan Carlos Perez (IAC) to discuss issues with on-site services that were (or needed to be) being provided by IAC or ING. This seems to have opened the lines of communication and proper billing to SARA.

Mirror Support System

During late February/early March the mirror support system failed. After Inspection it was found that the power supply was out. P. Mack had a power supply shipped to La Palma on March 8th. The shipment arrived at sea level on March 13th. Then after a lot of red tape of clearing the shipment with customs the shipment finally arrived at ORM on April 14th. The telescope appears to be functioning properly again.

Mirror Aluminization

Peter Mack is working with ORM to try to get the mirror aluminized in August/September of 2023.

Issues and advice from prior meeting (that still need to be resolved):

Dome – The SARA-RM dome cabling had worked done on it by a private contractor. This remedied many of issues we were having in early 2022. The dome and telescope have been relatively well behaved since Peter Mack's visit in early July 2022. Unlike the SARA-KP and SARA-CT this dome is quite old and will continue to have issues. According to Peter it will have to have maintenance during every visit due to its age. After 40 years of use the drum is so smooth the that it can be frictionless at times depending on the tension (see picture above). This causes the cable to slip and the dome to occasionally get stuck in the dreaded 'ajar'mode. The fix appears to be to just reverse the dome shutter in the opposite direction for a short period and then stop and try to close again. Some observers have reported tracking issues with the dome, often this is due to the dome needing to be homed.

Mirror Petals – The mirror petals have not been working since mid-August and been put in an open state (with the telescope being parked at roughly -25 Dec, 0 HA). Peter fixed the chain that controls the mirror petals but within a month the mirror petals stopped working. For now, we are keeping the mirror petals open, and telescope parked at a low altitude.

IV. Reminders:

ACE Software – A reminder that are running a new version of the ACE software at SARA-RM. It is similar to the previous version except that all the GUIs are self-contained in a dedicated window on the telescope PC. I suggest that observers use:

1) camera-related windows only on the camera PC,
2) and telescope-related windows such as position, dome, etc. on the telescope PC.

It is also highly suggested that at the beginning of the evening observers reboot the PCs and the ACE cabinet. I know when I have not done this I usually run into issues. Typically, these issues are the (auto)focus not working or autoguiding not working.

Dome Camera –The SARA-RM dome has a camera that is zoomable and steerable. You can run it on your local computer. The IP address is http://161.72.91.222/. Username SARA with typical RM password.

Dome Lighting – And since we have a dome camera it is often useful have to have dome lighting. The dome lighting can be found on the JKT DOME PDU. The lights are labeled "NIGHT LIGHT." Do not turn the lights on when the dome shutter is open!

Not secure | 161.72.91.8/index.htm

JKT WARMROOM P... JKT DOME PDU NW Camera Live view - AXIS 21... NOT Weather page ControlCabinetCam...

#	Name	State	OFF / ON	CYCLE
1	SMART DOME (ON)	ON	Switch OFF	Cycle
2	SHUTTER DOOR (ON)	ON	Switch OFF	Cycle
3	AZIMUTH RECYCLE (OFF)	OFF	Switch ON	
4	ANDOR COOLER	ON	Switch OFF	Cycle
5	NIGHT LIGHT	OFF	Switch ON	
6	Outlet 6	ON	Switch OFF	Cycle
7	Outlet 7	ON	Switch OFF	Cycle
8	Outlet 8	ON	Switch OFF	Cycle

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