



## SARA-CTIO Observatory Director's Report

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### I. Introduction

The SARA-CTIO telescope this semester has been very reliable in large part due to two trips by Peter Mack down to CTIO last observing semester (and the beginning of this semester). Most problems that resulted in lost time were due to local observer connections and CTIO network problems.

### II. Telescope Usage

The table below indicates that observations were made on 31% of the scheduled nights. This number is a lower limit because reports were not submitted for 77 nights. If we consider only nights for which reports were posted the percentage of observed nights rises to 57% though this is almost certainly too high since cloudy nights are less likely to have reports filed than clear nights. Unfortunately the large number of unreported nights makes these numbers far less useful. Frankly, a reporting percentage of 55% is completely unacceptable. We go through this every semester and the percentage seems to be going down rather than up. It is my intent to start querying users for their nightly report when I don't see one. I will likely not do this every day, but will give it a start and see how things go. The board could potentially consider some type of disciplinary action for a large number of non-submitted reports.

Month	Nights reported/ Nights scheduled	Nights observations were made <sup>1</sup>	Nights lost to weather	Nights lost computer or network problems	Nights lost to dome or telescope problems	Nights lost for other reasons
April	10.5/21	6.8	1.6	0	0.9	1
May	20/31	8.7	6.2	0.1	0	5
June	19/29	14.4	4.4	0.1	0.1	0
July	14/31	7	7	0	0	0
August	14/28	6.3	3.7	3	0	1
September	15.5/30	10	4.8	0.2	0.5	0
Totals (% of scheduled nights)	93/170 55%	53.2 31%	27.7 16%	3.4 2%	1.5 0.9%	7 4%

### **III. Usage by others**

Lowell and Chilean observers continue to make use of their time allotments.

### **IV. Observatory Problems**

Pointing accuracy continues to be an issue with the telescope. If the telescope does not point accurately two solutions are often utilized, and both appear to work consistently: 1) Move telescope to zenith and resend, 2) Offset telescope -720 arcsec in declination. Gear backlash is the most likely culprit.

Computer problems have been effectively eliminated. Three of the seven nights reported as "Lost to other" were simply due to a miscommunication about the shuffling of computers during Peter's last visit. This was partially my fault. The Lowell observers had three nights shortly after Peter installed new computers and were not copied on an e-mail describing which computer was running the ACE software. Therefore the observers were still trying to run it from the Observatory computer rather than the new Telescope computer.

All other issues appear to have been transient in nature, with the possible exception of some communication difficulties with the Guide camera. The culprit here appears to be the unintentional resetting of some of the communication ports. If this becomes a more common issue we may have to look into ways of protecting those settings (if possible).

One other issue has been the password settings for the power rack, dome cameras, etc. All of those passwords were reset during Peter's last visit and now *all* should be the same as the log-in username and password.

The weather station and all-sky camera have been functioning properly to my knowledge.

In general the observatory seems to be running well again and a new commitment to having Peter down there once a year rather than once every two to three years should make a big difference in reliability.

### **V. Instrumentation**

#### **1. Camera**

The ARC (Leach) CCD camera has been working very well (finally). The sensitivity is a great improvement over previous cameras. I would like to see the quad readout mode operational for faster read-out, which may be crucial for some projects. If this is the case for any of the observers at your institution please let me know.

Using the QSI as the guide camera provides a much larger field and is a great improvement.

## **2. Spectrograph**

The spectrograph has been essentially non-existent at SARA-CTIO. The front plate and fiber were installed successfully in April, but there were serious issues with the CCD camera. The cooler was not working properly and eventually stopped working entirely. It is not clear why we needed to purchase an entirely new cooler when this one never worked on the CCD, though it is likely that the system was sitting so long that any warranty was over.

I am waiting for a summary from Peter of his work down at CTIO and a plan and time for his next visit. The primary purpose should be getting the spectrograph up and running.