

# **SARA OBSERVATORY DIRECTOR'S REPORT**

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*by*

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## **I. Introduction.**

The fall 2004 hurricanes took their toll by forcing a cancellation of the Fall 2004 board meeting, but they didn't affect the operation the SARA observatory. The observatory has been operating full schedule since the last report. We did have to put the possibility of adding a new member on the back burner until this meeting however. The REU selection is in full swing, and the FIT people have opened their new building and student observatory. Congratulations to the FIT contingent for their new facilities. As will be discussed later, we are finally preparing to take possession of a new large format CCD. It's about time!

A person from the Research Corporation visited FIU and wanted to discuss SARA with me. I told him of the great use we have made of the CCD they bought us in 1995 and that it is still on the telescope and being used for science. I showed him some of Bev's galaxy images and he was very impressed. I mentioned we still needed to upgrade the optics on SARA. At first he was not encouraging, since they are pretty much committed to several expensive astronomy projects already. I mentioned that the cost would be tens of thousands, rather than hundreds of thousands and he became very interested and supportive. This might be a good opportunity to get funding for the optics!

## **II. Research at SARA.**

The current setup with the AP7 CCD continues to yield high quality publishable data. Once again, a variety of research projects are carried out at the SARA observatory. Research is currently being done at every institution in SARA. No new papers have been added to Bev's list, but I am sure there are many out there that haven't been reported to her.

### **III. Telescope Usage.**

The telescope is fully subscribed and ROA coverage is adequate, although not as comprehensive as we would like. Out of 177 nights signed up for in the Sept 04- March 15/, 2005 time period, 63 nights were first halves, and 114 were fully covered. The weather, however, was very poor this winter, with nearly all of the January nights (18+ of the 28 nights) closed due to clouds or humidity.

Our policy of staying open if weather permits after the ½ ROA coverage has presented no documented problems, while allowing much more efficient use of clear dark time. It is a pleasure that no one has abused the privilege.

Observers have been very conscientious about filling out observing reports and I stress once again the importance of this. CCD problems, such as the lines in the bias of the CCD in October were rapidly dealt with since everyone knew what was going on.

### **IV. Telescope Problems.**

Very few telescope problems were reported. We are still experiencing some double image problems (Bev Smith) at certain hour angles, but the success of the auto-guider has erased many of the tracking complaints. Pointing has been excellent with the new pointing model.

### **V. Instrumentation.**

- **Cameras**

1. The small format AP7 Apogee camera remains the workhorse of the observatory. We had bias problems with the AP7 in October, but with the cooperation of Apogee and ACE the problem was rapidly diagnosed, sent to Apogee and fixed. We lost less than a week of observing time.
2. The Apogee Alta U55 has finally been delivered! YEAH! It is currently installed and operating. Also, ACE has finished the scripting code and that should be operating soon as well.

- **Computing facilities**

The computers continue to work well. We are purchasing a new computer for the U55 CCD, and some new flat screen monitors.

- **Weather Station**

The new weather station has worked very well. The display is excellent, much better than the previous weather station. The graphical representations are a nice touch. A good functioning weather station is necessary since CONCAM has been down much of the time lately.

- **Auto guider**

The autoguider continues to be an excellent tool for us.

- **ISTeC** – Apparently the ISTeC site is still down due to a hard-drive crash. We need to get this up and running again, or perhaps decide to discontinue it.

- **REU Program** -

We are once again gearing up for the summer REU program. Again over 100 applications for only 11 spots, so we get excellent students.

- **ROA's** - Our current group of ROA's are exceptional! There have been no problems noted in the log sheets, only praise for the ROAs.

## **VI. Future.**

Here is a list of important action items I feel we need to address in order of urgency.

1. ***New member and/or telescopes for SARA.*** We will once again discuss and debate the positive aspects of adding a new institution or two to the SARA consortium, and again discuss possible acquisition of a new instrument at perhaps a Southern location.
2. ***Secondary mirror fabrication and image quality improvements.*** Research Corporation is a possible funding source for Secondary mirror fabrication. This is a major project and someone who has the time needs to be the driving force behind this project if we really expect developments.

### **SUMMARY**

In Summary, this has been another great six months for SARA (sounds familiar huh) . The smooth operation of SARA and the lack of technical difficulties is primarily due to Peter Mack and the expertise of ACE. They continue to provide excellent service, virtually 24-hours a day. Thanks Peter, Matt, Josie and the rest of the ACE crew.

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