

# SAO 1.2m Primary Mirror Monthly Report

*December 2011*

# 1. General Status

- The repaired mirror polishing cell tangent arms and pressurization seal system are functioning in support of mirror aspherizing.
- More than three weeks of grinding has occurred since the cell repair has occurred. The aspherizing is more than 50% complete with most of the work left on the outside of the mirror. Progress has been slow due to the long cycle time between grinding, measuring and data reduction.
- Additional resources are being added to reduce the time required for grinding. The optician is fully time and he has two part time support people to help with data reduction and fabrication of new tooling.
- A driven rotating lap is being fitted to the machine. The COS has a request to SOML for additional optician. SOML is evaluating what can be done to support the request. Work is limited at COS due to delays in two major projects that were in the shop prior to the SAO mirror.
- Schedule details and discussion is in section 3.

## 2. Pictures

### Photographs I.



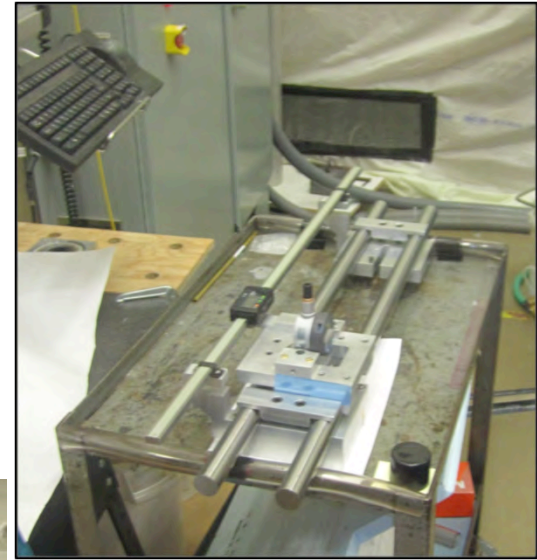
SAO 1.2m primary mirror during a grinding run on December 14, 2011

## 2. Pictures

### Photographs II.



Grinding tool to be fit to the machine



Aspherizing measuring tool



Inspecting surface of the mirror

## 3. Schedule

- Progress is moving slower than planned and resources are being added to mitigate schedule slippage.
- The aspherical grinding is expected to extend into the month of February 2012.
- The next step is then to polish the mirror out on the Draper or the CCP machine and it is planned to take about one month and be completed by the end of March 2012.
- The final figuring and acceptance is also expected to take one month to complete. This task is planned to be completed in early May 2012.
- Optical fabrication of this type must be done very carefully in order to reduce the risk of damage or a set back in schedule. It is prudent to apply a month of contingency to cover unexpected delays. The completion date would then be early June 2012.
- Steward Observatory and the College of Optical Science are doing what they can to apply additional resource to minimize the schedule impact.
- A no-cost schedule request will be submitted to SAO this month.