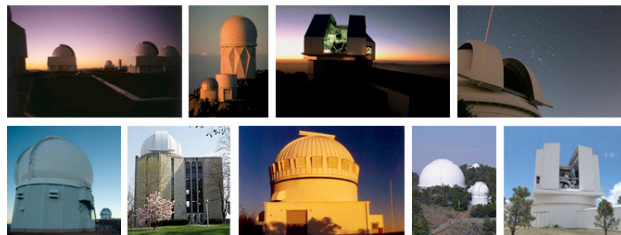


# ReSTAR

Renewing  
Small  
Telescopes for  
Astronomical  
Research



The NSF Senior Review report urged NOAO to ensure that the astronomical community has access to facilities that remain scientifically balanced over all apertures.

To accomplish this, NOAO has chartered a new committee, called Renewing Small Telescopes for Astronomical Research (ReSTAR), to develop a prioritized, quantitative, science-justified list of capabilities appropriate to telescopes with apertures less than 6 meters, together with estimates of the number of observing nights needed. The committee must both address current needs and uses of such telescopes, and attempt to predict how these needs will evolve over the next ten years into the era of Pan-STARRS, LSST, JWST, ALMA, GSMT and the NVO.

**To complete its challenging task, this committee needs input from you and your colleagues on the telescope performance and instrument capabilities that you need to accomplish your science!**

NOAO will respond to the recommendations of this committee in several ways. Modernization of the existing national facilities is already under way. The development of new capabilities and the goal of establishing a real system involving federal and non-federal facilities will be guided by the report from this committee. The NSF has stated their support for this process and their interest in finding resources to address these community needs.

## **ReSTAR Members**

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## ***Charge to the Small and Mid-Sized Telescope System Science Committee***

- 1) Over the next 6-12 months, develop a report on the instrumental capabilities needed by the U.S. community on ground-based optical/infrared telescopes less than 6.5 meters in aperture, based on the recommendations of the Senior Review (section 5.2.2.2). The list of capabilities should flow from community scientific aspirations and should represent all areas of astronomical research, wavelengths, and types of observations.



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2) For each capability, the report of the committee should comment on (and justify):

- a) a description of the science enabled by each capability
- b) the telescope aperture range
- c) the site characteristics, including whether north or south or both
- d) the instrumental characteristics
- e) the number of nights needed
- f) the desired modes of access (including, for example, queue, remote, service, classical, Target of Opportunity...)
- g) the minimum operational support requirements to achieve the scientific goals

3) With support from NOAO, establish a rough costing for the capabilities that do not currently exist.

4) Present the report in enough detail that it can be used as input to a subsequent discussion with the NSF and among the operators of small and mid-sized telescopes. The goal of this discussion is to develop a national program that creates the optimized suite of capabilities in the report, provides appropriate access to them by the entire community, and supports them at an adequate level.

## MEETING SCHEDULE

May 14-15, 2007 – Tucson ✓

July - Washington DC

September - Chicago

December - Tucson

For more information, see

[www.noao.edu/system/restar/](http://www.noao.edu/system/restar/)



NGC 1333 with the Mayall 4-meter telescope  
Credit: T.A. Rector/University of Alaska Anchorage,  
H. Schweiker/WIYN and NOAO/AURA/NSF

Planetary Nebula Abell 39 taken with  
the WIYN 3.5-meter telescope  
Credit: WIYN/NOAO/NSF

Barred Spiral Galaxy NGC2242  
taken with PROMPT  
Credit: SSRO/PROMPT and NOAO/AURA/NSF

Interacting binary studied with several  
medium-sized telescopes  
Artist's Concept: P. Marenfeld and NOAO/AURA/NSF



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