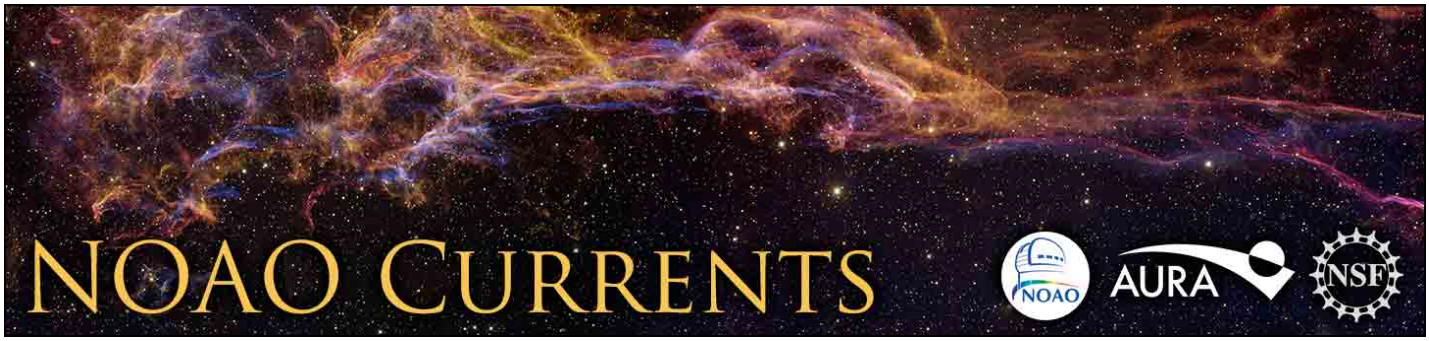

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Currents

In this Issue…

2020 Decadal Survey Community Input Invited, Deadline Approaches: NOAO welcomes your input into our planning for the coming decade. Please visit our Decadal Survey Planning website to upload your white paper or to contribute a science-based comment on areas in which NOAO can provide critical resources and/or areas that will strengthen the US ground-based OIR system in the coming decade. A "Dear Colleague" letter describes the request and our planning process. The deadline for initial input and comments is **30 September 2017**. A follow-on community workshop will be held 20-21 February 2018 in Tucson, AZ. Read more…

TMT Science Forum: This year's gathering of the international Thirty Meter Telescope community, "TMT: Beyond First Light," will be held in Mysore, India 7-9 November 2017. The registration deadline is **18 September 2017**. Limited travel support is available for US astronomers. To be considered for support, write to tmt@noao.edu. Read more…

NOAO in the News:

House-Sized Near Earth Objects Rarer Than We Thought: A study with Dark Energy Camera at CTIO finds surprisingly few Near Earth Objects in the size range of the meteoroid that exploded over Chelyabinsk in 2013. The result lends new insight into the nature and origin of small meteors.

In this Issue

2020 Decadal Survey Community Input Invited

Dear Colleague,

In preparation for the 2020 Decadal Survey of Astronomy and Astrophysics, NOAO invites community input regarding scientific opportunities for the coming decade in areas in which NOAO can play a role in providing critical resources and/or areas that offer opportunities to strengthen the US ground-based OIR system.

We welcome a broad range of science ideas that motivate the need for resources such as:

- *Large science programs that use existing facilities at KPNO, CTIO, Gemini Observatory, and LSST*
- *Community access to observing time on non-NOAO facilities*
- *Community access to archival datasets not currently in the public domain*
- *Resources for the exploration and analysis of large datasets and the time domain*
- *New investigations and instrumentation at the mid-scale level ($2M-$100M)*
- *New observing facilities*
- *Other*

The scientific opportunities may build on the science and resources described in the recent studies "Optimizing the US Ground-based OIR Astronomy System" (the Elmegreen report) and the report from the Kavli Futures Symposium "Maximizing Science in the Era of LSST: A Community-based Study of Needed OIR Capabilities", but they are by no means restricted to these. Concepts may include NOAO as a major or minor partner with universities and/or other federal agencies. To stimulate the flow of ideas, example items from the 2010 Decadal Survey and the above recent reports are listed below this letter.

To participate in this planning process, please visit our website where you can:

Submit a brief white paper. Upload a brief description (not more than 3 pages) in pdf format of your science concept and resource needs. Include a brief description of how your concept fits in with the NOAO mission and the NOAO Strategic Plan.

Contribute to the development of community-based white papers. Suggest a white paper topic and/or contribute to topics suggested by others.

The deadline for initial input and comments is **30 September 2017**.

We will hold a community workshop on **20-21 February 2018** to discuss the input received and to work toward an integrated development program that NOAO will present to the Decadal Survey committee. Please contact me (najita@noao.edu) with questions or suggestions. We look forward to hearing from you!

Sincerely,
Joan Najita
NOAO Chief Scientist

Examples from the Astro2010 Report

- Advanced technologies and instrumentation development
- Data archiving programs
- Highly multiplexed spectroscopy for a big baryon oscillation spectroscopic survey
- Large Synoptic Survey Telescope
- New instrumentation for exoplanet initiatives
- Next generation adaptive optics systems
- Open observing time on existing facilities
- Participation in a Giant Segmented Mirror Telescope (GSMT)
- Telescope System Instrument Program

Examples from "Maximizing Science in the Era of LSST"

- Highly multiplexed, 8-m wide-field optical multi-object spectroscopic capability
- Broad wavelength coverage, moderate-resolution (R = 2000 or larger) OIR spectrograph on Gemini South
- Development and early deployment of an alert broker, scalable to LSST
- Support into the LSST era for existing high-priority capabilities (wide-field imaging, multi-color imaging, spectroscopy, AO-fed diffraction limited imaging)
- OIR system infrastructure developments that enable efficient follow-up programs[1]
- Data exploration and analysis tools that work at the scale of LSST
- Training for scientists at all career levels in LSST-related analysis techniques and computing technologies

Contact Us

We welcome your input on this issue of *Currents*. Please contact us at currents@noao.edu. We look forward to hearing from you!

Currents is a spark plug for communication between NOAO and our community. It provides updates—and solicits community input—on NOAO observing opportunities and NOAO programs and policies on a more rapid timescale than is possible with the *NOAO Newsletter*.

NOAO is the national center for ground-based nighttime astronomy in the United States and is operated by the Association of Universities for Research in Astronomy (AURA), Inc. under cooperative agreement with the National Science Foundation.