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Currents

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Membership opportunity for TMT International Science Development Teams

The Thirty Meter Telescope (TMT) Observatory has established [International Science Development Teams \(ISDTs\)](#) to provide scientific input and feedback to the TMT project, to stimulate planning for future TMT science programs, and to build connections within and beyond the international TMT partnership. ISDT membership is open to all Ph.D. scientists, both from the current TMT partners and from the astronomical community at large.



Thirty Meter Telescope

Eight ISDTs have been formed, each focused on a different scientific topic:

- Fundamental physics and cosmology
- Early universe, galaxy formation and the intergalactic medium
- Supermassive black holes
- Milky Way and nearby galaxies
- Formation of stars and planets
- Exoplanets
- Our solar system
- Time domain science

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These ISDTs kicked off their activities earlier this year with small groups of initial members, and held breakout sessions at the [2013 TMT Science Forum](#) that were attended by many more interested scientists, including many from the US-at-large astronomical community.

TMT has now issued [a call for ISDT membership](#). For US astronomers unaffiliated with one of the US TMT partners (i.e., Caltech and the University of California), this is an opportunity to get involved in TMT and to provide scientific input that will help shape the observatory's capabilities, operations plans, and future directions. The ISDTs will help to update and maintain the [TMT Detailed Science Case](#), the highest-level guiding document for scientific guidance of the TMT project. They have also been asked to formulate science cases and observing strategies for possible TMT key programs, as input to help shape TMT instrumentation and operations planning. Membership in an ISDT provides an opportunity to become better informed about TMT and its capabilities, allows you to meet potential collaborators, and to form teams that may carry out future TMT science programs. The NSF and TMT have established a cooperative agreement to explore potential future federal investment in TMT (see below), and the ISDTs are one way in which members of the astronomical community outside the current TMT partners can become involved in TMT activities.

Membership applications are due 17 January 2014, with instructions available at [the TMT ISDT web site](#), where you can also find more detailed information about the ISDTs, their organizers, and their activities. ISDT membership entails a commitment of time and effort. Applications will be evaluated by the ISDT organizers and the TMT Science Advisory Committee (SAC), based on the candidate's scientific qualifications, the activities that he or she proposes to carry out in support of the ISDT and TMT, and the level of effort that he or she can commit to investing in ISDT activities. These considerations are described in more detail on the TMT ISDT web site. Membership is annual, and there will be regular calls for new members in the future, and potentially for new ISDT science themes as well.

The US TMT Liaison office

The TMT Observatory is an international partnership between Canada (ACURA), Japan (NAOJ), India (DST), China (NAOC), the University of California, and Caltech. NOAO is participating in a 5-year cooperative agreement between the NSF and TMT to engage the US community and to explore potential NSF partnership in the observatory (see also [the April 2013 issue of Currents](#)). The NOAO TMT Liaison office is now led by Mark Dickinson, after being established by Todd Boroson, who is now director of the Las Cumbres Observatory Global Telescope Network. [An NOAO web page describes these liaison activities](#) and lists the members of the US TMT Science Working Group, and the US-at-large representatives to the TMT Science Advisory Committee (SAC) and the Collaboration Board of Directors.

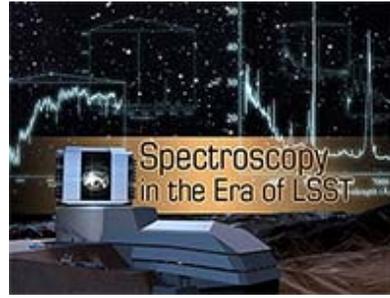
You can contact the NOAO TMT Liaison office and the SWG members at tmt@noao.edu. Your ideas and perspectives will inform US community input to the TMT SAC, and to the US TMT Participation Plan, a report being developed by the SWG that will guide future NSF-TMT interactions.

Future TMT events and opportunities open to broad participation by US astronomers will include a Town Hall session at the January 2014 AAS meeting (on Tuesday 7 January), and the 2014 TMT Science Forum. Stay tuned to Currents for more details as they become available.

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A Report on the Spectroscopic Observations Needed to Support LSST Research

NOAO hosted a workshop, 'Spectroscopy in the Era of LSST', earlier this year to explore the requirements for the likely kinds of spectroscopic capabilities needed to follow-up or complement the LSST imaging research program. Four broad science topics were considered: time domain science, Galactic structure and stellar populations, galaxies and AGN, and dark energy and cosmology. The conclusions of the workshop are presented in a report now available at [the conference website](#) and the [arXiv astrophysics preprint archive](#).



Spectroscopy in the Era of LSST

The report is framed as a synthesis of highly desired spectroscopic capabilities that meet needs across all four topics. A table presents requirements in a format that provides a framework for discussing their future development. NOAO will be working with the community in the months ahead on prioritizing and implementing an approach to developing the spectroscopic capabilities needed to support LSST research. Please contact Tom Matheson (matheson@noao.edu) for further information.

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Contact Us

Your input is welcome on any of these issues. Please send your thoughts to: currents@noao.edu.

Currents is a sparkplug 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.

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