June 2014 • Issue 30

Currents

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TMT Science Forum in Tucson: The Thirty Meter Telescope International Observatory and NOAO will host the second TMT Science Forum on **17 to 19 July 2014 in Tucson, Arizona**. The NSF is offering **travel support for US astronomers to attend this meeting** (contact tmt@noao.edu for information). **Registration Deadline: 10 June, 2014**

The LSST Cadence Workshop: NOAO and LSST will host an inaugural workshop on the LSST cadence during the week of **August 11 - 14, 2014, in Phoenix, AZ,** in conjunction with the larger LSST Project and Community Workshop, with the goal of engaging the community to provide input for optimizing the ultimate LSST observing cadence. **Hotel and registration deadline: 11 July, 2014**

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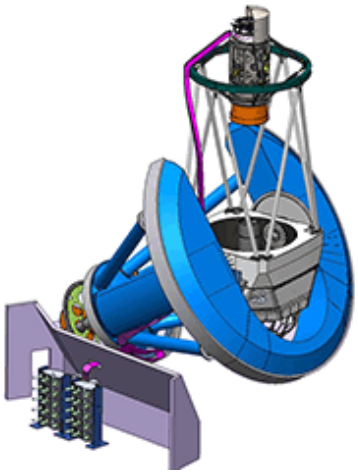
In this Issue

Good News for DESI and the KPNO Mayall Telescope

The Department of Energy (DOE) Particle Physics Project Prioritization Panel (P5) just completed their review of the full DOE portfolio of science initiatives, which included the Dark Energy Spectroscopic Instrument (DESI) as a "small" project. DESI is a collaborative project being led by the Lawrence Berkeley National Laboratory (LBL) that would use the NOAO 4m Mayall telescope to map baryon acoustic oscillations (BAO). In their report (released on 22 May 2014), P5 recommended that DESI be started in all but the leanest budget scenario that P5 was asked to consider. Even in that case, however, P5 urged DOE to find a path forward for DESI construction and operations. DESI is thus not a "done deal", but DOE is optimistic enough for its prospects that LBL has been directed to continue developing the project with the goal of beginning operation on KPNO sometime after 2018.



CAD model of DESI fully installed at the Mayall telescope showing new prime focus corrector with the 5000 fiber positioning robots installed at the top end of the telescope. Ten spectrographs are installed in the Coudé lab on the main floor level. The purple ribbon is

the bundle of ten fiber cables transporting photons from the focal plane to the spectrographs.

In 2010, an opportunity was created for external groups to propose partnerships with NOAO and the National Science Foundation (NSF) to pursue a large science program with the KPNO Mayall 4-meter telescope and to develop a major observing capability (instrument, software, and archival plans) for the community. The goal was to attract a major project for the Mayall 4-m similar to Dark Energy Survey (DES) and Dark Energy Camera (DECam) at the Blanco 4-m. At the end of an open proposal process that included a review by a non-advocate panel of external scientists, the Big Baryonic Oscillation Spectroscopic Survey (BigBOSS) project led by LBL was selected by NOAO in early 2011 for further development as a Large Science Program for the Mayall. A subsequent multi-step process involving the Department of Energy (DOE), National Science Foundation (NSF) and several community-based panels ultimately led to the creation of the DESI project led by LBL targeted for the NOAO/KPNO Mayall 4-m from the merger of two existing concepts known as Dark Energy Spectrograph (DESpec) (led by Fermilab) and BigBOSS (LBL). DESI will be a powerful instrument for probing evolution of the dark energy equation of state through the use of BAO, as well as an excellent machine for wide-field spectroscopic surveys in general.

What does this mean for the NOAO user community in the near term?

For FY14 and FY15, multi-user, multi-instrument open access Mayall operations will continue without significant changes. Beyond that, NOAO and NSF are discussing how to continue such operations in the period FY16 - FY18 until DESI is ready for deployment. As discussed in a recent NSF Dear Colleague letter, Mayall operations during that interim period are likely to be a mix of open access nights funded by NSF and institution (or collaboration) specific nights funded through limited-term partnerships with external organizations. If NSF and NOAO decide to proceed with such a mixed model, an announcement of opportunity for limited-term partnerships will be released during the second half of 2014. Looking further into the future, once DESI is operational, NOAO has argued that time should be reserved for community-led survey projects to be executed in concert with DOE-funded BAO experiment. In summary, plans are afoot to maintain the KPNO Mayall 4-m as a world-class research platform for the community well beyond 2020.

The Mayall and DESI situations are rapidly evolving in these days. Stay tuned!

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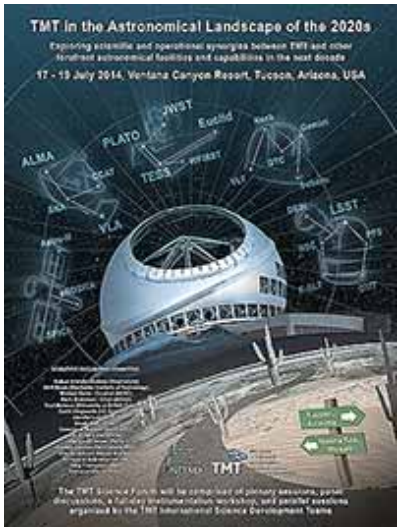
TMT Science Forum in Tucson, 17-19 July 2014 — NSF travel support available — Registration deadline: 10 June 2014

Conference information, program, registration and hotel information

The Thirty Meter Telescope International Observatory and NOAO will host the second TMT Science Forum on 17 to 19 July 2014 in Tucson, Arizona. The Forum is an annual gathering of astronomers, educators, and observatory staff, who meet to explore TMT science, instrumentation, observatory operations, archiving and data processing, and education, outreach and workforce development issues. It is an opportunity to learn about the observatory status, to discuss and plan cutting-edge science, to establish collaborations, and to help shape the future of TMT.

The theme of this year's Forum is "TMT in the Astronomical Landscape of the 2020s". The meeting will explore the synergy between TMT and other facilities in the next decade, including space- and ground-based observatories operating at all wavelengths. In addition to invited talks and panel discussions, there will be topical science sessions with opportunities for contributed talks, working meetings of the TMT International Science Development Teams (ISDTs) that are open to everyone,

and a TMT Instrumentation Workshop, which will present information on all aspects of the TMT instrumentation program for astronomers and instrument builders.



TMT Science Forum Poster

The Forum is open to attendance by all scientists, and astronomers from the US community are invited and strongly encouraged to participate. The NSF is providing funding to support travel and attendance by US astronomers outside the TMT partner institutions. If you would like to request financial support to attend the Forum, please write to tmt@noao.edu with your name, institutional affiliation, and a brief description of your research interests and how they relate to TMT.

The TMT Science Forum will be held at Loews Ventana Canyon Resort, a breathtaking desert sanctuary located in a lush, 100-acre desert garden at the foothills of the magnificent Santa Catalina Mountains. The deadline for registration and hotel reservations is 10 June 2014.

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The First LSST Observing Cadences Workshop

August 11-14, 2014 • Phoenix, AZ

- Conference information and program
- Registration and hotel information

NOAO and LSST will host an Observing Cadences Workshop during August 11 - 15, 2014, in Phoenix, AZ, in conjunction with the larger LSST Project and Community Workshop. This is the first workshop devoted to the subject of the LSST cadence. Its goal is to engage the community to provide input for optimizing the ultimate LSST observing cadence. Please join us for this inaugural workshop on the LSST cadence, and become involved with LSST!

A critical innovation of LSST is the expansion of its All Sky Survey into the time domain. The timing of observations – the cadence – will have major impact for nearly all science done with LSST, but particularly for science involving variable and moving targets. The LSST science requirements leave considerable flexibility for optimizing the cadence, making it an area where community input is both valuable and of potential high scientific impact.

In this first LSST cadence workshop, our focus will be on deriving metrics that quantify the performance of model LSST cadences. In support of this, the LSST project has developed cadence simulations as well as a software environment for incorporating the metrics. It is up to the community of future LSST users to develop the metrics themselves for their specific science topics. Future workshops will provide further input aimed at optimizing the ultimate LSST observing cadence and scheduling tools. The Observing Cadences Workshop will also be an excellent

opportunity to learn more about the LSST Project, as all of the Project-organized sessions will be open to Cadence Workshop attendees.

Registration and lodging information is being handled through the LSST Project and Community Workshop web page. The workshop will be held at the centrally located Hyatt Regency Phoenix. A single modest registration fee of $100 covers all activities and includes all lunches. Applications for partial travel support will be considered. An application form and instructions are also available on the Observing Cadences Workshop webpage. Please note the **July 11 hotel and registration deadline**.

Don't miss this inaugural discussion of the LSST cadence!

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Contact Us

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