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## Currents

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### NOAO at the January AAS Meeting

NOAO invites you to attend these events at the upcoming AAS meeting, to be held at the Gaylord Palms Resort and Convention Center in Kissimmee, FL, on 4-8 January 2016:

- **NOAO Transformed: A Status Report (a.k.a. NOAO Town Hall)**  
(Wednesday, 6 January, 6:30 - 7:30 pm, Sun D)
- **US National Gemini Office Workshop on Adaptive Optics**  
(Wednesday, 6 January, 2:00 - 3:00 pm, St. George 108)
- **Thirty Meter Telescope (TMT) Open House**  
(Wednesday, 6 January, 5:30 - 6:30 pm, Orange Blossom Ballroom)
- **TMT Thermal IR Science & Instrumentation Workshop**  
(Thursday, 7 January, 5:30 - 7:30 pm, St. George 108)
- **RESOLVE (NOAO Survey Project) and ECO Special Session**  
(Thursday, 7 January, Talk at 10:00 - 11:30 am, Sarasota room;  
Data Release at 5:30 - 6:30 pm, posters)
- **Light Pollution at Campus/University Observatories**  
(Friday, 8 January, 9:30 - 11:30 am, Orange Blossom Ballroom)
- **Special events at the NOAO Booth in the NSF Pavilion (Exhibit Hall A):**
  - **ANTARES: An Event Broker for LSST** - Gautham Narayan  
(daily, Tuesday-Friday, at 12:30 pm)
  - **The US National Gemini Office: What We Can Do For You** - Dara Norman (Tuesday, 5 January at 5:30 pm)
  - **AAS student event** - (Wednesday, 6 January, noon - 2:00 pm)
  - **News from Kitt Peak National Observatory** - Lori Allen  
(Thursday, 7 January at 10:00 am)
  - **Hunting Dwarf Galaxies: A Preview of the NOAO Data Lab** - Knut Olsen (Friday, 8 January at 10:00 am)
  - **A Kit for Exploring Light Pollution Issues and Solutions** - Connie Walker (Friday, 8 January at 1:00 pm)

[Read more below.](#)

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## **NOAO Events at the 4-8 January 2016 AAS Meeting, Gaylord Palms Resort and Convention Center, Kissimmee, FL**

### **US National Gemini Office Workshop on Adaptive Optics**

*Wednesday, 6 January 2016 2:00 - 3:30 pm, St. George 108*

The [NOAO US National Gemini Office](#) will offer a mini-workshop on "Adaptive Optics: from planning observations through data reduction". This second-in-a-series workshop is aimed at community members who are interested in or currently carrying out AO observations on 4-m to 8-m class telescopes. The workshop will start with a presentation on the fundamentals of AO by Dr. Claire Max (University of California, Santa Cruz), with a focus on data taking and reduction. Presentations by Dr. Tim Davidge (Herzberg Inst. of Astrophysics) and Dr. Franck Marchis (SETI) will feature results from AO science. The speakers will address the observational setup and data reduction challenges of working with AO data, how these were resolved, and lessons learned. Audience interaction is encouraged.



### **NOAO Transformed: A Status Report (a.k.a. NOAO Town Hall)**

*Wednesday 6 January 6:30 - 7:30 pm, Sun D*

NOAO is deploying a new suite of research capabilities for the community-at-large in partnership with NSF, DOE, NASA, and various major science collaborations. Instrumentation capabilities available now include the ultra-wide field optical imager [DECam](#) as well as new optical and infrared medium-resolution spectrometers. Capabilities available in the near future include the [Dark Energy Spectroscopic Instrument](#) (DESI), an ultra-wide-field, 5000-fiber optical spectrometer destined for the Mayall telescope, and the [Extreme Precision Doppler Spectrometer](#) (EPDS) for the WIYN telescope. Wide-field optical surveys with DECam in the South and [Mosaic 3](#) in the North are delivering major new data products to the NOAO Science Archive for community use. In support of those new data products, NOAO is developing catalog exploration, exploitation, and visualization tools within the [Data Lab](#) project. Meanwhile, NOAO remains active as the [US Gateway to Gemini](#) and its recently improved instrument suite. NOAO may also be poised to act as the US OIR System coordinator. Join us for a presentation by the NOAO Director. There will be ample opportunity for community discussion.

### **TMT Open House**

*Wednesday 6 January 5:30 - 6:30 pm, Orange Blossom Ballroom*

With an order of magnitude more collecting area than today's 8-10m telescopes, and nearly 5 times better angular resolution than JWST at similar infrared wavelengths, the Thirty Meter Telescope will make fundamental contributions to most areas of astronomy and astrophysics, from planetary systems (in and out of our own solar system) to galaxy formation and cosmology. This Open House will describe the status of TMT, highlighting new developments in instrumentation, adaptive optics, and science planning. Michael Bolte (UC Santa Cruz) will present the latest news about the project and the TMT partnership. Mark Dickinson (NOAO) will discuss [US community liaison activities](#) being carried out as part of a cooperative agreement with the NSF



to develop a model for possible US national participation in TMT. Members of the [US TMT Science Working Group](#) (SWG) will attend the Open House, and there will be ample time for questions and discussion. Complimentary refreshments and hors d'oeuvres will be served.

### **TMT Thermal IR Science & Instrumentation Workshop**

*Thursday 7 January 5:30-7:30 pm, St. George 108*

This workshop will discuss concepts and science cases for a thermal-infrared instrument for TMT, focused on imaging and low- and high-resolution (up to  $R = 120,000$ ) spectroscopy. In preparation for an anticipated call for proposals for TMT second generation instrumentation, a group of scientists based mostly in the USA and Japan have been studying an instrument concept optimized to operate at approximately 7.5 to 25 microns, and are now exploring additional science cases made possible by changing the optimization to the 3 to 14 micron range [see [summary sheet](#) (.docx file) for details]. This AAS workshop aims to engage US and Canadian astronomers in this process, and will focus on the development of science cases that will help guide the technical drivers for such an instrument. There will be presentations about TMT second-generation instrumentation planning in general, specific thermal-infrared instrument concepts, science drivers ranging from disks and young stellar objects to exoplanets to AGN, and scientific and operational synergies with JWST. If you are interested in giving a presentation at the workshop, please contact Chris Packham (UT San Antonio; [Chris.Packham@utsa.edu](mailto:Chris.Packham@utsa.edu)).

### **RESOLVE (NOAO Survey Project) and ECO Special Session**

*(Thursday, 7 January, Talk at 10:00 - 11:30 am, Sarasota room; Data Release at 5:30 - 6:30 pm, posters)*

The RESOLVE/ECO teams will have a [special talk session](#) at the AAS meeting in Kissimmee on Thursday, January 7th from 10-11:30am, featuring results from recent and forthcoming data releases. The public release of the RESOLVE/ECO online searchable database will occur at the associated RESOLVE/ECO special poster session, with demos from 5:30-6:30pm at the posters. The RESolved Spectroscopy Of a Local VolumeE (RESOLVE) survey and its Environmental CONTEXT (ECO) catalog are companion  $z \sim 0$  surveys with volume-limited selected into the dwarf galaxy regime, encompassing multiple connected large-scale environments. ECO spans  $>500,000$  cubic Mpc with value-added reprocessed multi-wavelength archival data, while RESOLVE spans  $>50,000$  cubic Mpc with additional new 3D optical and 21cm spectroscopy, providing a census of galaxy dynamics, HI masses, gas and stellar metallicities, and star formation and AGN activity. For more information, visit <http://resolve.astro.unc.edu>.

### **Light Pollution at Campus/University Observatories**

*Friday, 8 January, 9:30 - 11:30 am, Orange Blossom Ballroom*

NOAO EPO staff will be co-hosting a session on light pollution mitigation at university and college campuses. Panelists include Jeff Hall (Lowell Observatory), James Lowenthal (Smith College), Doug Arion (Carthage College), and examples from the Mayland Community College IDA Dark Sky Park and from a light pollution monitoring program at Colorado State University. Discussion follows the panel presentations. For more information, contact Connie Walker at [cwalker@noao.edu](mailto:cwalker@noao.edu).

### **AAS student event**

*Wednesday, 6 January, noon - 2:00 pm*

The NOAO booth in the NSF Pavilion is participating in the AAS student event on Wednesday, January 6, from noon – 2:00 p.m. Local middle and high school students visit the AAS exhibit hall. They are organized in small groups and go

around to the various participating exhibits for a structured hands-on science activity. This year NOAO will be featuring a polarization activity disguised as “tape” art. For more information, please contact Connie Walker at [cwalker@noao.edu](mailto:cwalker@noao.edu).

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### Contact Us

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