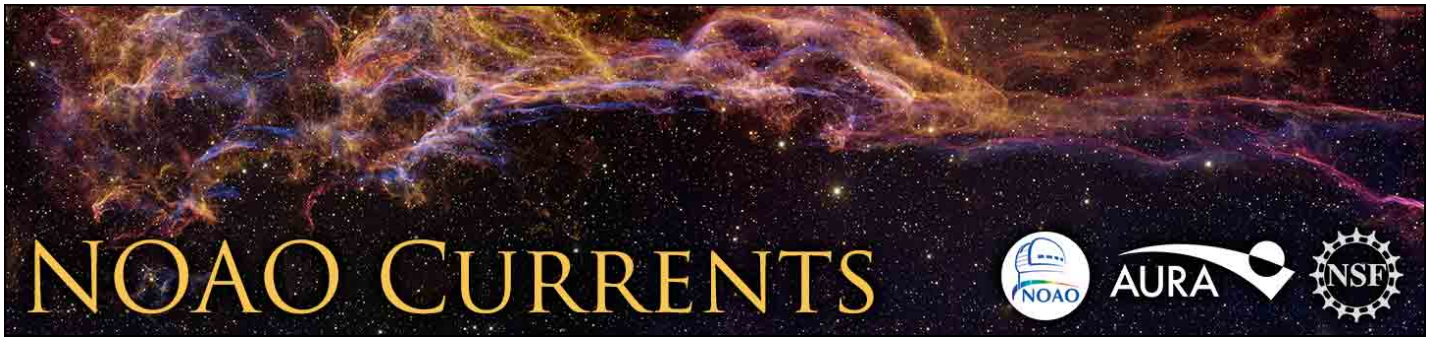



**March 2019 • Issue 58**

## *Currents*

### In this Issue...

**Observing Opportunities at SOAR in 2019B:** The TripleSpec infrared imaging spectrograph is now being commissioned and will be offered in shared-risk mode in 2019B. A modest fraction of SOAR observing nights is expected to be available in queue mode in 2019B for observations with the Goodman Spectrograph. SOAR also expects to participate in the upcoming TOM Toolkit Workshop and Observing Program; a joint initiative with LCOGT, ZTF, LSSTC, and Gemini, it has the aim of building a community of expert LSST alert users. Read more…

**Exoplanet Proposals Invited for WIYN, CTIO 1.5m, and AAT in 2019B:** Approximately 25 nights on the WIYN telescope, 40 nights on the CTIO SMARTS 1.5m telescope with the CHIRON high resolution spectrograph, and 5 nights on the AAT 3.9m telescope with the Veloce precision radial velocity spectrometer will be available for exoplanet research through the NASA/NSF NN-EXPLORE partnership. Read more…

**NEID Proposals Solicited, AAS Presentations Available:** Proposals to use NEID, the high-precision radial velocity spectrograph at the 3.5m WIYN telescope, are solicited for the 2019B semester. Interested proposers may wish to register to participate in an informational telecon on **14 March 2019** at 12:00 EDT. Presentations from the NEID Splinter Session at the January AAS meeting are also available online. Read more…

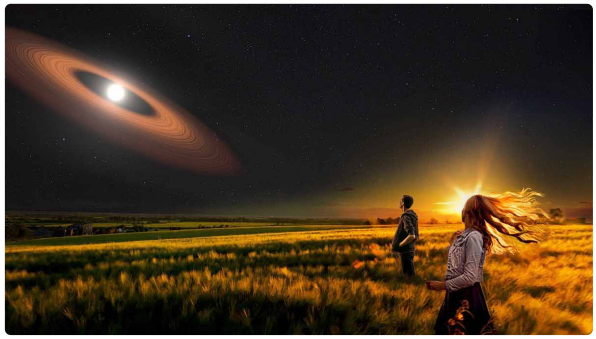
**Meeting Announcement — "Extremely Big Eyes on the Early Universe":** Registration is open for the last of a three-part international conference series that will review the current state of the art in studying the high redshift universe and discuss how to best use giant telescopes to go beyond. The **9-13 September 2019** event, to be held in Rome, Italy, at the Accademia dei Lincei has an abstract submission deadline of **15 April 2019**. Read more…

### In this Issue



### NOAO in the News

**Citizen Scientists Invited to Join Quest for New Worlds:**
"Backyard Worlds: Planet 9" re-launched last month, with a call to volunteer citizen scientists to join the search for cold worlds near the Sun—both planets lurking in the outer reaches of the Solar System as well as nearby brown dwarfs. The re-launch coincides with the publication of the project's latest discovery: a record-setting

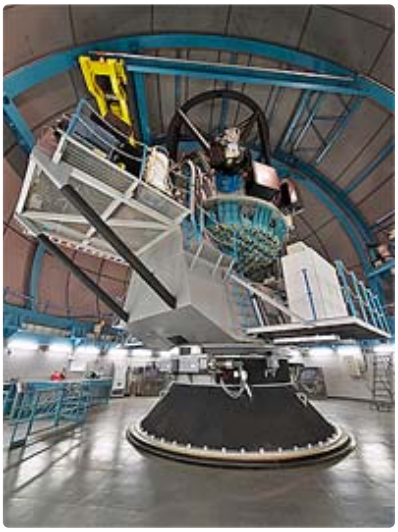


white dwarf star whose mysterious dusty rings challenge our understanding of the long-term evolution of planetary systems. NOAO astronomer Aaron Meisner is a co-founder of Backyard Worlds and a science team member. Read more in NOAO press release 19-04.



## Observing Opportunities at SOAR in 2019B

*Jay Elias, Sean Points, & Cesar Briceño (NOAO)*



SOAR Telescope

Several special opportunities are available with the SOAR telescope in the 2019B semester. Interested parties are invited to visit the links below for details beyond the summary provided here:

**TripleSpec 4.1 Available.** The TripleSpec infrared imaging spectrograph (formerly ARCOIRIS, now re-baptized as TripleSpec 4.1) is being commissioned in March 2019, with possible science verification in April and June. Time granted in 2019B will be shared-risk. Interested proposers may use the instrument performance information obtained at the Blanco telescope. Updates and further details will be available at the SOAR TripleSpec 4.1 web page. Questions should be directed to the TripleSpec instrument scientist, Sean Points (spoints@ctio.noao.edu).

**Queue Scheduling Opportunity.** SOAR is actively engaged in developing the Astronomical Event Observatory Network (AEON), a follow up system for synoptic surveys. As part of this effort, we hope to schedule a modest fraction of SOAR nights in queue mode in 2019B. Suitable proposals for this program **must meet the following conditions:**

- Programs must be feasible in SOAR's current remote/classical mode.
- The required cadence of observations is 2-4 weeks (or less frequently), set by the range of scheduled queue nights.
- Proposers can use the Goodman spectrograph with the red camera and 400 l/mm grating and/or imaging mode.
- Proposers have prior experience with the telescope and instrument.

If you think your proposal may be suitable for participation, please contact the SOAR AEON Project Scientist, Cesar Briceño (cbriceno@ctio.noao.edu). All proposals are subject to approval through the standard time allocation process. This mode will be available only if we are confident that it is working reliably, which is why suitable proposals must also be feasible without queue scheduling.

SOAR may also participate in a second AEON-related activity in 2019B, the TOM Toolkit Workshop and Observing Program. A joint initiative with Las Cumbres Observatory, the Zwicky Transient Facility, the LSST Corporation, and Gemini Observatory, the program has the aim of building a community of expert LSST alert users. A final decision on whether SOAR observing time will be offered in the 2019B semester through this program will be made no later than June; otherwise we expect to begin participation in the 2020A semester.


## NN-EXPLORE Proposals Invited for WIYN, the CTIO 1.5m with CHIRON, and the AAT with Veloce in 2019B

NASA and NSF have entered into a Partnership for Exoplanet Research to support community use of the NOAO share of WIYN telescope time, the CTIO SMARTS 1.5m telescope with the CHIRON high-resolution spectrograph, and the AAT 3.9m telescope with the Veloce precision radial velocity spectrometer. In the 2019B semester, approximately 25 nights on WIYN, 40 nights with CTIO 1.5m/CHIRON, and 5 nights with AAT/Veloce will be available through the NASA-NSF Exoplanet Observational Research (NN-EXPLORE) program. Additional information is available in the 2019B Call for NASA Exoplanet Proposals.

Further details about the opportunity with the CTIO 1.5m and CHIRON are available in the previous issue of *Currents*. Details on proposing to use the NEID spectrograph on WIYN are provided below.

## NEID Proposals Solicited, Presentations Available

*Heidi Schweiker, Jayadev Rajagopal (WIYN)*

The NN-EXPLORE Program is soliciting proposals to use NEID, a new cutting-edge, high-precision spectrograph at the 3.5m WIYN telescope. Designed for radial velocity measurements of exoplanet host stars, NEID aims to deliver a velocity precision of 27 cm/s per data point and is expected to provide the US exoplanet community with the high-precision radial velocity measurements needed to detect Earth and super-Earth mass planets orbiting bright host stars over a wide range of spectral type. NEID will help fulfill needs foreseen at the time of the 2010 Decadal Survey and will provide timely follow-up observations in support of NASA's TESS Mission. NOAO will operate NEID in a queue-scheduled mode and NExScI will provide pipeline data reductions of all observations in order to deliver high-level data products to PIs, including high-precision radial velocities.

Further information on proposing to use NEID can be found here: http://ast.noao.edu/observing/wiyn-exoplanets-2019b

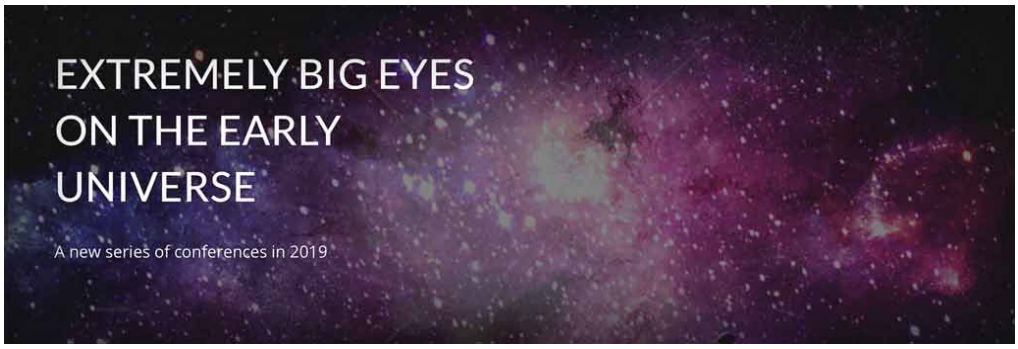
### Teleconference for Proposers

A teleconference open to all proposers or potential proposers for the NEID queue will be held on **14 March 2019** at 12:00 EDT/09:00 PDT (Daylight Savings Time). The telecon will be an opportunity to ask questions of the teams involved with NEID and NN-EXPLORE before proposals are due. The best way to have your questions answered is to submit your questions in advance! To receive notification and updates about this teleconference, please register by writing to neid_info@noao.edu with your email contact information and stating that you wish to participate in or are submitting questions for the teleconference.

### NEID Splinter Session at the January AAS

Presentations from the NN-EXPLORE NEID Splinter Session at the January 2019 AAS meeting in Seattle are now available online. The session included the following presentations:

- Suvrath Mahadevan, the NEID PI at PSU, presented an overview and current status of the instrument.
- Jason Wright, Project Scientist at PSU, focused on the exciting science NEID can deliver.
- Jayadev Rajagopal, WIYN Scientist, summarized the Operations plan (including the queue).
- Rachel Akeson from NEXScI presented the data archive and pipeline capabilities.
- John Callas, Project Manager at NASA/JPL, concluded with a policy overview.




## Extremely Big Eyes on the Early Universe III: Rome

*9-13 September 2019*

"Extremely Big Eyes on the Early Universe" is a three-part international conference series focusing on the capabilities of a new generation of Extremely Large Telescopes for studying galaxy formation and evolution. The first episode of Big Eyes was a smashing success, playing at UCLA from 28 January to 1 February 2019. The second episode will run at the Kavli Institute for the Physics and Mathematics of the Universe, in Tokyo, 25-29 March 2019.

Registration and abstract submission is now open for Big Eyes III, to be held in Rome, Italy, at the Accademia dei Lincei on **9-13 September 2019**.

- Abstract submission deadline: **15 April**
- Registration deadline: **15 June**

In the next decade, the commissioning of Extremely Large Telescopes (20-40m class) will allow us to see the high redshift universe using new eyes of unprecedented power. By themselves or in combination with other facilities, these new eyes will have the potential to transform our understanding of the formation and early evolution of galaxies and black holes, first light and cosmic reionization, as well as the evolution of the intergalactic and circumgalactic media.

The Big Eyes conferences will bring together an international group of experts to review the current state of the art in the study of the high redshift universe and to

discuss how best to use giant telescopes to learn about it. These meetings will address the following questions:

- What potentially transformative observations will be enabled by giant telescopes? What capabilities are required?
- What are the key synergies between giant telescopes and other facilities? What are the areas and topics where a concerted effort will yield far superior results than the sum of all parts?
- What theoretical or observational work is needed in preparation for first light? What are the limitations in our understanding that need to be overcome?
- What calculations are required in order to make testable predictions and interpret the results of future astronomical observations?

It is important to consider these questions now, while the plans for giant telescopes can still be influenced, and there is still sufficient time to carry out preparatory theoretical and observational work that will be needed to make the most of the large investments in these facilities.

**For more information, please visit:**

- Conference series
- Big Eyes III in Rome



## 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!