

**Postdoctoral Research Scholar in 21cm Cosmic Dawn
School of Earth and Space Exploration (SESE)
Arizona State University**

We invite applications for a postdoctoral research scholar in redshifted 21cm observations of Cosmic Dawn. The successful candidate will work with Professors Danny Jacobs and Judd Bowman on self-directed projects with redshifted 21cm telescopes, including HERA, MWA, EDGES, and/or OVRO-LWA. HERA is currently operating and has begun regular data releases. OVRO-LWA and MWA are completing upgrades which will significantly improve systematic floors. Opportunities are available to analyze 21cm power spectra, including to fit models for galaxy evolution and fundamental physics to observations, identify and remove foregrounds from observations, develop simulations and tests to validate pipelines, and forecast results for current and upgraded instruments, among other investigations. Additional potential topics include development of advanced instrument concepts and hardware solutions to address systematic limits in 21cm observations. The successful candidate will work in close collaboration with partner institutions in these projects and have numerous opportunities for travel to team meetings and conferences. The position is a full-time, fiscal year appointment with benefits and relocation allowance. It will be renewed annually for up to a total of three years, contingent upon satisfactory performance, the needs of the university, and availability of resources.

Essential duties of the position: The successful applicant will analyze astrophysical observations, contribute to software development, conduct original research, document results, write journal articles, and present at scientific meetings.

Minimum Qualifications: (1) Ph.D. in a relevant field by the time of appointment, but no earlier than five years before the start date, (2) demonstrated record of research accomplishment in a related field.

Desired Qualifications: (1) Relevant experience in astrophysics research, radio instrumentation and observations, signal processing, statistical data analysis, and/or software development, (2) a record of prior achievement and experience that shows the applicant's potential to accomplish research and/or development objectives, (3) evidence of strong verbal and written communication skills, (4) evidence of ability to work well independently and in team.

Arizona State University is one of the most dynamic institutions of higher learning in the United States. Its astrophysics research program is based in the School of Earth and Exploration and benefits from a variety of state-of-the-art facilities, including high performance computing and access to the 2x8.4m Large Binocular Telescope, 6.5m MMT telescope, 6.5m Magellan telescopes, and a host of 2m-class telescopes owned and operated by the State of Arizona. The university is a founding member in the Giant Magellan Telescope and a partner in the Hydrogen Epoch of Reionization Array (HERA), the Long Wavelength Array Swarm, and the Owens Valley Radio Observatory Long Wavelength Array (OVRO-LWA). ASU is participating in the Murchison Widefield Array (MWA) U.S. consortium and the CMB-S4 consortium. It is a member of the Simons Observatory (SO), the Toltec project, and several astrophysics sub-orbital class programs.

To apply, please submit to <http://apply.interfolio.com/100036> to include the following: 1) a cover letter, 2) a research statement not longer than five pages including figures and references; 3) a statement addressing how your past and/or potential contributions to diversity and inclusion will advance ASU's commitment to inclusive excellence, 4) a current CV; and 5) the names and contact details of three references.

Deadline for initial review of complete applications will be January 22, 2022. Applications will continue to be accepted on a rolling basis for a reserve pool. Applications in the reserve pool may then be reviewed in the order in which they were received until the position is closed.

A background check is required for employment.

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/ Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law. ASU's full non-discrimination statement (ACD 401) is located on the ASU website at:

<https://www.asu.edu/aad/manuals/acd/acd401.html> <https://www.asu.edu/titleIX>

Under the recent executive order issued by President Biden requiring all employees of federal contractors to receive COVID-19 vaccinations, ASU expects all employees, including new hires, to be vaccinated unless they have an approved medical or religious accommodation. Proof of vaccination will be required by January 4, 2022. For questions about medical or religious accommodations, please [visit the Office of Diversity, Equity and Inclusion's webpage](#)

In compliance with federal law, ASU prepares an annual report on campus security and fire safety programs and resources. ASU's Annual Security and Fire Safety Report is available online at <https://www.asu.edu/police/PDFs/ASU-Clery-Report.pdf>. You may request a hard copy of the report by contacting the ASU Police Department at 480-965-3456.