AUI is a non-profit educational institution founded in 1946 that operates facilities throughout the US and Internationally.

AUI specializes in the design, construction, and management of Research and Development (R&D) institutions, including Federally Funded Research and Development Centers (FFRDCs); space situational awareness through radio astronomy technology; cybersecurity and microelectronics; workforce development and STEM education; and technology transition innovations.

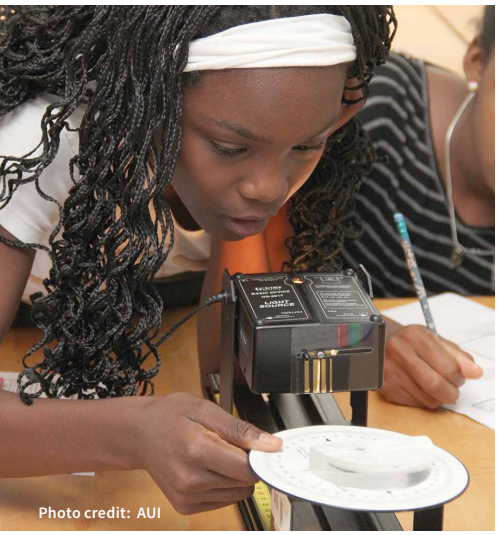
Photo credit: AUI

Education and public engagement (EPE) has long been a component of AUI's mission and goals. AUI continues to engineer a better future through excellence in STEM education and public engagement. In achieving success, AUI continues to partner domestically and abroad with educators, government, and institutions. We believe good education and engagement anywhere is good for education and engagement everywhere.

EPE's focuses on:
Astronomy | Big data in earth-space sciences | Making STEM accessible for all | Innovative projects of opportunity

AUI EDUCATION AND PUBLIC ENGAGEMENT

Check out our current projects below, as well as the EPO programs at NRAO (www.public.nrao.edu/) and GBO (www.greenbankobservatory.org/).

INNOVATORS DEVELOPING ACCESSIBLE TOOLS FOR ASTRONOMY (IDATA)

IDATA is a $2.5M National Science Foundation funded project that works to advance knowledge of best practices in teaching and learning related to computation and computational thinking in astronomy. The project aims to understand how participation influences students' attitudes and beliefs about who can engage in STEM and computing. The project brings together blind and visually impaired (BVI) and sighted high school and middle school students and their teachers to create a fully accessible astronomy data retrieval and analysis software tool. The IDATA team utilizes user-centered design processes and the iterative method for the development and testing of software and the modules—improving access to our amazing universe for those with BVI related disabilities. AUI partners with TERC—STEM Education Evaluation Center, Geneva Lakes Astrophysics and STEAM, Linder Research and Development Inc., University of North Carolina –Chapel Hill, University of Nevada – Las Vegas, and others to make IDATA possible.

Photo credit: Tim Spuck

ASTRONOMY IN CHILE EDUCATOR AMBASSADORS PROGRAM (ACEAP)

The Astronomy in Chile Educator Ambassadors Program (ACEAP) is a collaboration between AUI, NRAO, AURA, NOAO, and Gemini Observatory, and is supported by the National Science Foundation. The program brings amateur astronomers, planetarium personnel, and K-16 astronomy educators to US astronomy facilities in Chile where they receive extensive training about the facilities' instruments, data products, and methods for communicating STEM. When they return home, the Ambassadors share their experiences and observatory resources with schools and community groups across the US through a variety of outreach activities reaching approximately 400,000 people annually. *Photo credit: John Blackwell*

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AUI EDUCATION AND PUBLIC ENGAGEMENT

AUI-NSBP PARTNERSHIP

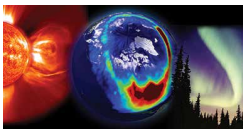
AUI partners with the National Society of Black Physicists (NSBP) to design and implement various programs. Examples include the NSBP Annual Conference, Physicists Inspiring the Next Generation (PING): Exploring the Cosmos with NRAO, and the National Astronomy Consortium (NAC). AUI's role in its partnership with the NSBP varies with each initiative. In some cases, personnel from AUI or our facilities collaborate with the NSBP on the design and implementation of the programs themselves. In other cases, AUI works collaboratively with the NSBP to submit funding proposals to secure the necessary resources for projects. Most recently, AUI worked with NSBP to secure a $377K NSF award to support the 2019 NSBP Annual Conference. *Photo credit: The White House*

BIG ASTRONOMY IN CHILE THROUGH DOME+ (BIG-ACT)

The Big-ACT project explores a new model to deliver a unique learning experience for planetarium visitors around the world. The team of AUI, Michigan State University, California Academy of Sciences, Astronomical Society of the Pacific, and Association of Universities for Research in Astronomy (AURA) brings together experts in astronomy, STEM education and planetarium show production to create a digital planetarium production with a targeted release in 2020. Big-ACT introduces audiences to the diverse people and careers employed by big observatories today who each play an important role in making astronomical discoveries possible. The Dome+ model also supports engagement beyond the planetarium show through a dynamic web portal that includes learning activities, interviews with observatory personnel, and a schedule of live virtual sessions with those working at the observatories. The curricular resources and planetarium show will be made available in both English and Spanish for dissemination in the US and Latin America.

Photo credit: Matthew Dieterich

NETWORK FOR EARTH-SPACE RESEARCH EDUCATION AND INNOVATION WITH DATA (NEREID)



Currently the world creates about 2.5 quintillion bytes of data daily, and a large portion of this data is in the earth-space sciences domain. This massive influx of data is fundamentally changing existing methods of experimental design, and the skills required to do this new kind of research are increasingly needed. NEREID advances research and innovation through education and engagement with big data in earth-space sciences. This growing network representing academia, industry, nonprofits, and government organizations a) explores the challenges of big data in earth-space science, and implement solutions across learning, b) builds an interdisciplinary community of practice in earth-space data science learning, c) develops and disseminates research-based best practices and curricular resources in teaching and learning with earth-space data, and d) brings together industry, academia, and policy makers to build and grow a data literate workforce and invent new tools and techniques for the benefit of society. *Photo credit: NASA*

ASTRONOMERS WITHOUT BORDERS PARTNERSHIP

Both Astronomers Without Borders (AWB) and AUI recognize that astronomy is an effective tool to engage the public in science and engineering and to introduce students to STEM fields. AWB and AUI are working together to connect people worldwide through various aspects of astronomy, particularly in public outreach and education. Most recently, AWB and AUI are working together to disseminate eclipse glasses and educational resources globally to benefit children and educators most in need. *Photo credit: Astronomers Without Borders*

NA-ROAD

International Astronomical Union – North American Regional Office of Astronomy for Development (NA-ROAD) is a collaboration with AUI, Adler Planetarium, Association of Universities for Research in Astronomy, and Geneva Lake Astrophysics and STEAM Education. The mission of the Office of Astronomy for Development is to help further the use of astronomy, including its practitioners, skills and infrastructures, as a tool for development by mobilizing the human and financial resources necessary to realize the field's scientific, technological and cultural benefits to society. *Photo credit: Tim Spuck*

RADIO ASTRONOMY OBSERVING PROGRAM

The Radio Astronomy Observing Program (RAOP) is a collaboration between the Astronomical League (AL), AUI, and its facilities. There are many parts of the electromagnetic spectrum that our eyes are not able to observe, but with a different type of sensor we can observe in an entirely different realm, that of the radio spectrum. This program is designed to introduce and encourage the construction and operation of radio telescopes or other detectors. RAOP includes five types of observing that can be done with various types of radio equipment which introduces learners of all ages to a variety of earth, space, physics, and engineering concepts, practices and processes. *Photo credit: NRAO*

STEM EDUCATION INCUBATOR (SEI)

Individuals and smaller organizations often have great ideas but can lack the experience to develop competitive funding proposals, or the expertise on staff to deal with complicated financial rules associated with managing large awards. The STEM Education Incubator (SEI) brings together AUI's expertise in education, fund development, and fiscal management to create an "umbrella" initiative under which individuals, organizations, and teams can successfully develop and manage innovative projects in the STEM landscape. Do you have a great idea to improve STEM education but lack fund development experience or resources to manage a large award? *Photo credit: Tim Spuck*

SEI may be what you're looking for!

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