

## **Astronomy/Astrophysics-Related Summer Undergraduate Research Opportunities**

(including NSF Research Experiences for Undergraduates (REUs) and other programs)

The programs below, listed in order of deadline, vary in their requirements. Some have GPA cut-offs, some are only for sophomores and above, some are open to all undergraduates who have taken at least one semester of physics, international students may apply for some of these but not others, etc. Before applying, read each website carefully to understand what the program requires and if you are eligible.

**Note:** You may need to copy and paste links into your browser for the pages to open.

*\* This list is in progress and not comprehensive – please also check:*

Full list of Astronomy REU programs from the National Science Foundation:

[http://www.nsf.gov/crssprgm/reu/list\\_result.jsp?unitid=5045](http://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5045)

Full list of Physics REU programs from the National Science Foundation (some Physics REU programs often include astronomy projects):

[http://www.nsf.gov/crssprgm/reu/list\\_result.jsp?unitid=69](http://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=69)

***Pathways to Science***, a comprehensive database of science-related internships, scholarships, and post-baccalaureate opportunities:

<http://www.pathwaystoscience.org/undergrads.aspx>

Summer Opportunity Listings from the American Astronomical Society:

<http://aas.org/jobs/summer-opportunities>

### **Undergraduate Research Programs That Will Be Offered in 2018 (as of Jan. 3, 2018):**

#### ***Lunar and Planetary Institute Internship***

Deadline: January 5, 2018

Topic(s): Planetary science, including: solar systems origins, lunar exploration, remote sensing, planetary geology, planetary atmospheres, meteorites and impact studies.

<https://www.lpi.usra.edu/lpiintern>

#### ***Science Undergraduate Laboratory Internships (SULI) with the Department of Energy***

Deadline: January 12, 2018

Topic(s): Various research positions at any one of the 16 US Department of Energy National Laboratories, including a number of astrophysics projects (in addition to other projects in engineering, technology and mathematics).

<http://science.energy.gov/wdts/suli/>

***Arecibo REU Program***

Deadline: January 25, 2018

Topic(s): Radio astronomy, as applied to astronomical observations, solar system science, instrumentation/engineering, atmospheric science, and computer science.

<http://outreach.naic.edu/ao/reut>

***Solar and Space Physics REU at CU Boulder***

Deadline: January 29, 2018

Topic(s): Data analysis/observation, instrumentation, and theory projects involving the Sun, space weather, the Earth's magnetosphere, solar wind, atmosphere/climate, or engineering.

<http://eo.nso.edu/REU>

***Space Astronomy Summer Program at the Space Telescope Science Institute (STScI)***

Deadline: January 31, 2018

Topic(s): All subfields of astronomy: solar system, nearby stars with planets, star formation, the structure of the Milky Way, the composition of nearby galaxies, early Universe, dark energy, and the formation of the first galaxies. Specific focus on the use of space-based observatories, such as Hubble and the James Webb Space Telescope.

<http://www.stsci.edu/institute/smo/students>

***University of Utah Astronomy and Physics REU***

Deadline: January 31, 2018

Topic(s): Astrophysics & Observational Astronomy; Astrophysics: Relativity & Cosmology; Biophysics; Cosmic Rays; Experimental Condensed Matter Physics; Particle Physics; Theoretical Condensed Matter Physics.

<http://www.physics.utah.edu/index.php/research/reu-opportunities>

[International Location: Netherlands]

***ASTRON/JIVE Summer Student Program***

Deadline: February 1, 2018

Topic(s): Radio astronomy on galaxies, quasars, cosmology, molecular clouds/star formation, and cosmic magnetism.

\*NOTE: All international travel, housing, and summer stipend costs are covered by the ASTRON program (no cost to the student).\*

<http://www.astron.nl/astronomy-group/astronjive-summer-student-programme>

***Center for Interdisciplinary Research in Astronomy (CIERA) REU at Northwestern Univ.***

Deadline: February 1, 2018

Topic(s): A wide range of astronomy and astrophysics-related projects (all subfields, both theoretical and observational). Projects also include data visualization, climate science, astrobiology, planetary science, high-performance computing, and instrumentation.

<http://ciera.northwestern.edu/Education/REU/>

***Harvard-Smithsonian Center for Astrophysics***

Deadline: February 1, 2018

Topic(s): A wide range of astronomy and astrophysics-related projects (all subfields, both theoretical and observational).

<https://www.cfa.harvard.edu/opportunities/reu//REU.html>

***Louisiana State University Physics and Astronomy REU***

Deadline: February 1, 2018

Topic(s): Astronomy and computational physics/astrophysics (including supernovae, variable stars, and gamma ray bursts), many other physics subfields (both theoretical and experimental)

<https://www.lsu.edu/physics/undergraduate-programs/reu.php>

***Maria Mitchell Observatory REU Program***

Deadline: February 1, 2018

Topic(s): Observational astronomy in various subfields, including galaxy formation and evolution, stellar populations and star clusters, astrophysical masers/lasers, and cosmology (also projects involving the history and culture of astronomy).

<http://www.mariamitchell.org/get-involved/internships/reu>

***MIT Haystack Observatory***

Deadline: February 1, 2018

Topic(s): Radio observations, interferometry, and radar, as applied to astronomy, solar system science, instrumentation/engineering, atmospheric science, and computer science.

<http://www.haystack.mit.edu/edu/reu/index.html>

***University of Hawaii REU Program***

Deadline: February 1, 2018

Topic(s): A wide range of astrophysical disciplines, including solar physics, planetary astronomy, astrobiology, stars, the interstellar medium and star formation, the formation and evolution of galaxies, and cosmology. Also includes projects on instrumentation/technology for the development of new telescopes, instruments, and adaptive optics.

<http://www.ifa.hawaii.edu/reu/>

***Northern Arizona University REU Program***

Deadline: February 1, 2018

Topic(s): Variety of astronomy, physics, and planetary science projects (including instrumentation) with mentors at NAU, Lowell Observatory, and the US Geological Survey

<http://www.physics.nau.edu/~reu/>

***National Radio Astronomy Observatory REU Program***

Deadline: February 1, 2018

Topic(s): Radio astronomy, specifically observational astronomy, over a vast range of subfields, from planetary to galactic to extragalactic

<https://science.nrao.edu/opportunities/student-programs/summerstudents>

***SETI Institute REU Program***

Deadline: Feb. 1, 2018

Topic(s): Astrobiology (including exoplanets, search for intelligent signals and radio astronomy, meteor showers and comets, asteroid dynamics, Mars geomorphology/spectroscopy, and a range of biology-related projects)

<http://www.seti.org/seti-educators/reu>

***University of Wisconsin Astronomy REU Program***

Deadline: February 1, 2018

Topic(s): X-ray astrophysics (instrumentation and observation of the Milky Way); observational stellar astrophysics; nearby galaxies; galaxy groups and their environments; neutrino astrophysics; observational cosmology; instrumentation for characterization of exoplanets.

\*Note: Some projects involve use of WIYN 0.9m telescope data, a facility to which all Five College students have access!\*

<http://www.astro.wisc.edu/undergrads/uw-madison-reu-program/application-information/>

***American Museum of Natural History***

Deadline: February 5, 2018

Topic(s): Various subfields of astrophysics (galaxies, exoplanet atmospheres, star formation) and earth/planetary science

<http://tinyurl.com/PS-REU-Projects>

***Cornell Astronomy and Astrophysics REU***

Deadline: February 6, 2018

Topic(s): Planetary science, astronomical instrumentation, astrophysics, general relativity, cosmology

<http://astro.cornell.edu/specialprograms/reu/>

***University of Michigan REUs in Astronomy and Physics***

Deadline: February 9, 2018

Topic(s): Astrophysics/Cosmology; Atomic, Molecular and Optical Physics; Condensed Matter Experiment and Theory; High Energy Experiment and Theory; Nonlinear Dynamics/Complex Systems; and Nuclear Physics and Subatomic Physics.

<http://reu.physics.lsa.umich.edu/>

***Rutgers University REU Program***

Deadline: February 9, 2018

Topic(s): Astronomy (specifically galaxies and cosmology), and various physics subfields (including nuclear, high-energy, condensed matter, and nanophysics)

<http://reu.astro.rutgers.edu/>

***University of Texas at Austin TAURUS Summer Research Program***

Deadline: TBA, likely Feb. or Mar. 2018

Topic(s): Galaxy formation and evolution, exoplanets, star formation; largely observational projects. Program aimed toward students from under-represented backgrounds.

<http://www.as.utexas.edu/~taurus/>

***Imaging in the Physical Sciences REU at Rochester Institute of Technology***

Deadline: February 10, 2018

Topic(s): Physics of images – illumination, imaging, capture, and analysis – spanning a wide range of areas, including radiometry, remote sensing, optics, detectors, image analysis, astrophysics, human vision science and perception.

<http://www.cis.rit.edu/outreach/summer-reu-program>

***Texas A&M University REU Program***

Deadline: February 15, 2018

Topic(s): Astronomy observation and theory: supernova, cosmology, the high-redshift Universe, Dark Energy, the cosmic distance scale, the Milky Way galaxy, and extrasolar planets. Also instrumentation and experimental astrophysics projects for the Giant Magellan Telescope, Hobby-Eberly Telescope, LSST, and Dark Energy Survey.

<http://mitchell.tamu.edu/reu/>

***University of Wyoming***

Deadline: February 15, 2018

Topic(s): Astronomy (specifically galaxy interactions, strong emphasis on hands-on observational training)

<http://www.uwyo.edu/physics/reu-info/index.html>

[International Location: Netherlands]

***Leiden/ESA Astrophysics Program for Summer Students (LEAPS)***

Deadline: February 16, 2018

Topic(s): Astronomy: Observational, theoretical and experimental programs in a huge variety of subfields (solar system/planetary science, exoplanets, heliophysics, star formation, planetary nebulae, black holes, galaxies, etc).

\*NOTE: All international travel, housing, and summer stipend costs are covered by the LEAPS program (no cost to the student).\*

<http://leaps.strw.leidenuniv.nl/>

***Notre Dame Physics REU***

Deadline: February 16, 2018

Topic(s): Various subfields of physics, including some astronomy projects on the Milky Way and cataclysmic variable stars.

<http://physics.nd.edu/research/reu/>

***Caltech Summer Undergraduate Research Fellowship (SURF) Program***

Deadline: February 22, 2018

Topic(s): A vast range of astronomy/astrophysics in all subfields as well as planetary science and related projects. Also physics, computer science, engineering, and many other disciplines.

\*NOTE: You must identify AND contact a mentor at Caltech/JPL prior to applying! Talk with a faculty advisor.\*

[https://sfp.caltech.edu/programs/surf/application\\_information](https://sfp.caltech.edu/programs/surf/application_information)

***NASA: Various Internships***

Deadline: March 1, 2018

Topic(s): Students may submit a single application to a wide variety of NASA Internship sites across the country, at both Space Centers and universities, in a variety of fields related to earth and space science.

<https://intern.nasa.gov/ossi/web/public/main/>

## Previously Offered Programs That May Be Available in 2018

### *Student Summer Internships at the US Naval Observatory*

Previous Deadline: Nov 30, 2016

Topic(s): Predictions of astrophysical/solar system phenomena, astrometry, stellar dynamics, binary stars, planetary nebulae, radio and optical interferometry, dynamics of solar system bodies.

<http://ad.usno.navy.mil/seap/>

### *(??) University of Toledo Summer Research Program*

Deadline: Uncertain if will be funded in 2018 yet

Topic(s): Astronomy, both observation and theoretical (including star formation, brown dwarfs, cosmic rays, galaxies and cosmology), also various physics projects (medical, nuclear, plasma, etc)

<http://astro1.panet.utoledo.edu/~webforce/LinkI1.htm>

## Previously Offered Programs That May Be Available After 2018

### ~~UCLA Physics and Astronomy REU Program~~

[Not available in 2018; Check back in 2019]

Topic(s): Astrophysics in various subfields (including black holes, star formation, asteroids and exoplanets), as well as many physics subfields

<http://www.pa.ucla.edu/content/undergraduate-research-physics-astronomy-reu-2013>

### ~~Hoffleit Undergraduate Astronomy Summer Program at Yale~~

Deadline: February 15, 2014

Topic(s): Astronomy: Observational, theoretical, and experimental projects on exoplanets, galaxies, and cosmology.

<http://www.astro.yale.edu/vlg8/hoffleitfellowship.html>

### ~~North Carolina State University Computational Astrophysics~~

Deadline: Unclear if funded in 2018

Topic(s): Computational/theoretical astrophysics projects in various subfields (supernovae, binary stars, gamma ray bursts, etc)

<http://astro.physics.ncsu.edu/urca/>

### ~~University of Arkansas REU Program~~

Deadline: Unavailable since 2014

Topic(s): Various projects in astrobiology, astronomy/astrophysics, planetary science, engineering/instrumentation (mission design, CubeSats)

<http://spacecenter.uark.edu/97.htm>

[International Location: Germany]

***Research Internships in Science and Engineering (RISE) Program in Germany***

Deadline: Dec. 15, 2017 (deadline passed)

Topic(s): Opportunities for US students to work in Germany for three months during the summer on projects in various scientific disciplines (including physics/astronomy).

\*NOTE: Although a summer stipend and health insurance are provided by the RISE program, the student is financially responsible for his/her own transportation to Germany and accommodation there (e.g., through a different grant). Talk with an advisor.\*

<https://www.daad.de/rise/en/>