DEPARTMENT OF ASTRONOMY

Astronomy is the quest to make the Universe comprehensible—an adventure into the beginning of time and through the vast distances of space. We ask how stars and planetary systems form and evolve, how galaxies form, how the elements arose, and probe the origin, fate, and structure of the Universe. Along the way we challenge and enrich physics with our discoveries.

Education

The Astronomy Department provides the most engaging and challenging of research opportunities covering the spectrum of modern astrophysics. Courses provide the background; the close, diverse community of learning provides the excitement; and the array of observational and computational tools provides the opportunities for everyone to participate and learn together.

Our undergraduate program is one of the largest in the nation, graduating approximately 20 students annually, nearly all of whom also major in physics. Many non-majors also enroll in astronomy courses, with annual course enrollments totaling nearly 2,000. Our graduate program was ranked in the top half-dozen in the nation in the most recent (2010) review by the NRC of the National Academy of Sciences. All graduate students receive full financial support.

Research

The Department of Astronomy currently has more than 100 active research grants, representing several millions of dollars in research funding.

Astronomy faculty have leading roles in two major telescope projects: the 3.5-m research telescope and the 2.5-m Sloan Digital Sky Survey, both in the high mountains of New Mexico. Faculty, postdocs, and students are major users of national telescopes in space (such as the Hubble Space Telescope) and on the ground (such as the Gemini Telescopes).

The Department is a founding partner of an 8.4-m telescope that will survey the sky frequently and to unprecedented depth, known as the Large Synoptic Survey Telescope (LSST), with various partner institutions around the U.S. and world (see lsst.org). The goal of the LSST is to probe the structure and evolution of the solar system, our Milky Way Galaxy, and the cosmos.

Astronomy faculty and students collaborate with colleagues in other UW departments and programs including Physics, Astrobiology, Earth & Space Sciences, Computer Sciences & Engineering, and eScience.

STUDENTS (Autumn 2015)

65	Undergraduate majors
30	PhD students

DEGREES AWARDED (2014-2015)

18	Bachelor of Science degrees
1	Master of Science degree
5	PhD degrees

AREAS OF RESEARCH INCLUDE:

- Astronomical surveys and time-domain studies; astronomical instrumentation
- Growth and structure of the solar system; stability of planetary orbits; extrasolar planets
- Astrobiology and conditions for finding life elsewhere
- Stellar structure and evolution
- Astrophysics: dark matter, energy, gravitation, radiation physics, relativistic accretion disks, computational astrophysics
- Formation, evolution, and structure of the Milky Way, other galaxies, intergalactic media, and quasars
- Mapping the large-scale structure of the Cosmos; cosmology, and the early Universe
- Multiple star systems: mass-exchange binaries, high-energy emissions, clusters, and stellar dynamics
- Stellar exotica: flare stars, very low- and very high-mass stars, stellar winds and outflows

DEPARTMENT OF ASTRONOMY • BOX 351580 • UNIVERSITY OF WASHINGTON • SEATTLE, WA 98195-1580
PHONE: (206) 543-2888 • FAX: (206) 685-0403 • DEPTS.WASHINGTON.EDU/ASTRON/

Faculty

Department of Astronomy faculty serve in leadership positions in many national and international projects such as the Hubble Space Telescope, new satellites in NASA's pipeline, huge new telescopes on the ground, and the UW Astrobiology program.

Faculty honors include:

2 National Academy of Sciences members

4 American Association for the Advancement of Science fellows

1 Henry Norris Russell Prize for distinguished career accomplishment from the American Astronomical Society

1 Karl Schwarzschild Medal for distinguished career accomplishment from the Astronomische Gesellschaft of Germany

1 National Science Foundation Career Grant

1 Leroy Doggett Prize for Historical Astronomy

FACULTY AND RESEARCHERS (Autumn 2015)

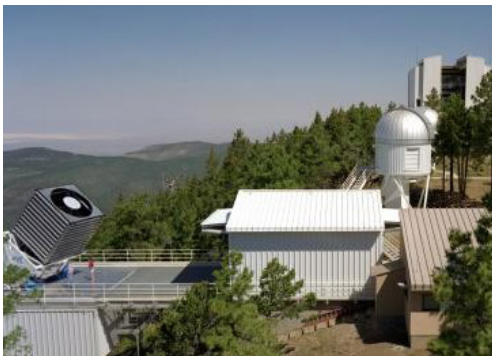
10	Professors
1	Associate Professor
2	Assistant Professors
2	Research Professors (all ranks)
5	Lecturers
3	Adjunct Professors from other departments on campus
4	Affiliate Professors from local industry and other universities
20	Research Postdocs and Scientists
31	Graduate Students

Diversity and Outreach

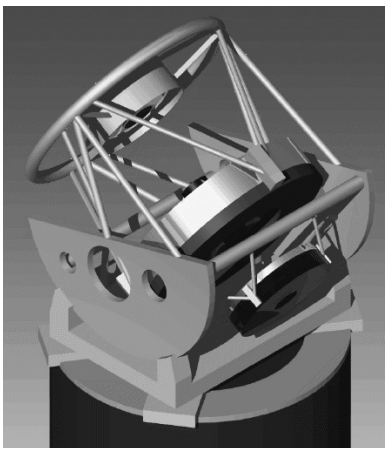
Undergraduates, with guidance from a faculty advisor, offer bi-monthly viewing nights for the public at the UW's Theodore Jacobsen Observatory, including talks about the night sky and modern astronomical research. More than 1,000 visitors attend our open house nights annually..

The Astronomy Department recognizes the need for a more diverse scientific community. To this end, the Pre-Major in Astronomy Program (Pre-MAP) preferentially targets traditionally underrepresented freshmen, sophomores, and college transfer students. Pre-MAP engages students in astronomy research and provides them with mentoring as soon as they begin their careers at the UW. Visit www.astro.washington.edu/premap for more information, including student profiles, past research projects, and photos from field trips.

The students in our department invite K-12 students to campus for planetarium shows, reaching nearly 100 school groups each year via our recently upgraded digital facilities.



Apache Point Observatory, with 2.5-m telescope of the Sloan Digital Sky Survey at lower left and 3.5-m research telescope at upper right.



Concept sketch of the 8.4-m Large Synoptic Survey Telescope (LSST). LSST was ranked by the Astro2010 Decadal review as the highest priority program in U.S. ground-based astronomy for the forthcoming decade. The University of Washington is a founding partner in this international project.

last update: Autumn 2015