



Astrophysics

“The most incomprehensible thing about the universe is that it is comprehensible.”

– Albert Einstein

Since our beginnings as a species, humans have looked into the night sky, pondered its beauty, and wondered just what it was they were seeing. What is the Sun? The Moon? What are the stars and planets? Where did it all come from? How does it work? Today’s astronomy is populated as well by exciting and fascinating phenomena ranging from black holes and active galaxies, star formation and evolution, supernovae, and a study of history of the entire universe itself.

Physics provides a unique set of tools for understanding these phenomena. Randolph-Macon College offers students the opportunity to combine interest in astronomy and physics in a unique academic minor in Astrophysics. You will apply basic physics to understand orbital mechanics, star formation, stellar evolution, cosmology, and more. Stimulating and challenging course work is combined with use of the College’s Keeble Observatory, and access to two on-campus radio telescopes. While students need not major in physics, the courses of the minor can be used as electives on that major.

“I know one thing. ‘Stephen Hawking’s Universe’ is not a place for the faint of heart or the feeble minded.” - John Carman

The astrophysics minor consists of two semesters each of physics, calculus, and astrophysics, plus a course in observational astronomy and a one semester inquiry into the history and philosophy of astronomy. It is possible to complete all the course work in three years with careful planning.

The Keeble Observatory, adjacent to the Copley Science Center, serves as a teaching laboratory for the physics department. This facility houses a 30 centimeter Cassegrain telescope which can be used for observation, CCD photography, photometry, and spectroscopy. A 3 meter radio telescope next to the Observatory scans the sky at 21 cm wavelength, while a dipole array on the roof of Copley studies the Sun and Jupiter at 15 meter wavelength. These observatory facilities are primarily available for student use, either for course work or research projects.

The public programs of the Keeble Observatory are conducted by students of the College, under the supervision of the Director of the Observatory, Dr. George Spagna, Jr.



Keeble Observatory (left) and Radio Telescope (right)