

DAPPER – Launching Delaware’s First Satellite

Building upon the University of Delaware’s history of successful RockSat-C missions, the Department of Physics and Astronomy is introducing a project that will launch the state’s first orbital satellite. [RockSat-C](#) is a NASA-led program in which students design and test instruments that are flown and returned from space. This project, the **Delaware Atmospheric Plasma Probe Experiment (DAPPER)**, is a NASA-funded effort that will develop and launch [CubeSat](#), a type of standardized satellite, into orbit. DAPPER’s goals are education and scientific study of the upper ionosphere with a set of Langmuir probes and other instruments.

This project will consist of two years of CubeSat development, with a scheduled launch in 2024 through the RockSat-C program to test instrumentation, and an orbital deployment in 2025. Interested undergraduate students can **be expected to work ~10 hours per week**.

The general requirements are as follows:

- Students that are US citizens or permanent residents (A NASA requirement).
- Students with a high GPA (3.5+ preferred).
- Students that are able to register for 6 credits of PHYS 468 (research for credit), with three credits in the fall and three in the spring.

We especially encourage applications from students who are:

- From underrepresented racial, ethnic, and gender groups.
- Interested in joining the science team. Such students would be familiar with or interested in learning plasma physics.
- Interested in joining the electrical team. Such students would have a strong familiarity with electrical and/or computer engineering.
- Interested in joining the coding team. Such students would be in the field of computer science with a background in Python and C, and interested in coding flight software.
- Interested in joining the communications and design team, with an interest in communications, film, and/or graphic design.
- Interested in inventory management, as well as lab safety and protocols.

Please contact tjtom@udel.edu if interested, or with any questions.

