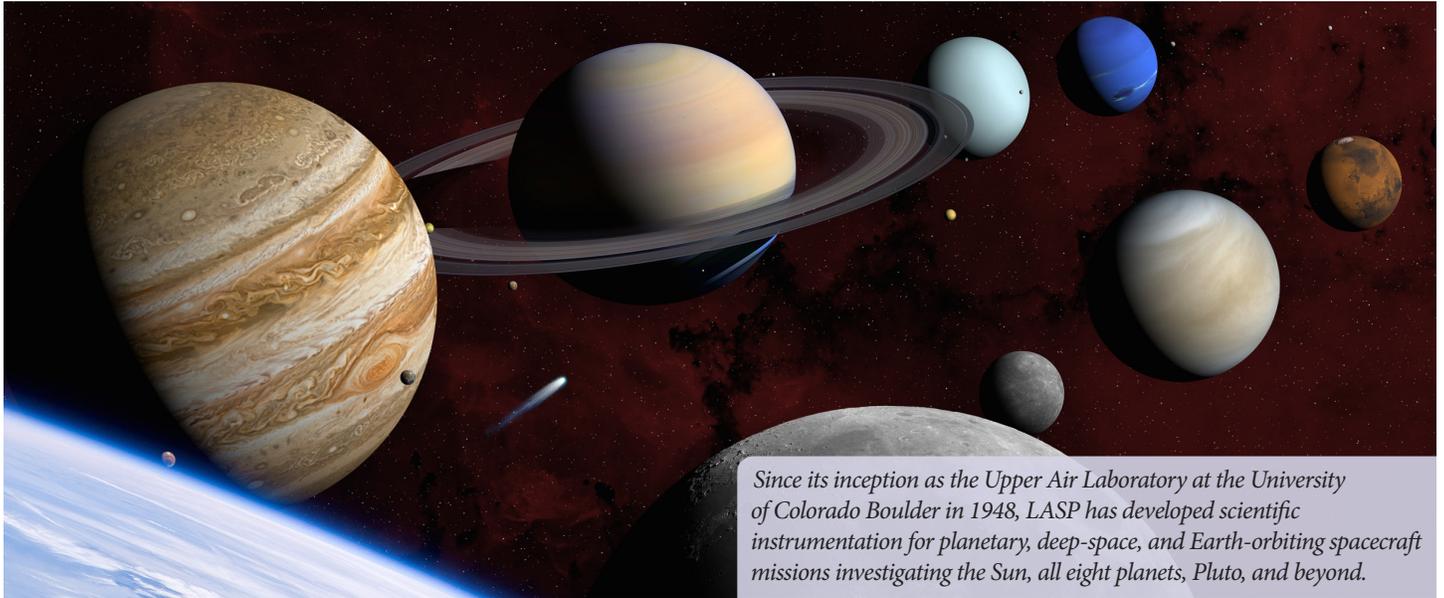


# CAPABILITIES

## The Laboratory for Atmospheric and Space Physics

*Delivering the future of space science*



*Since its inception as the Upper Air Laboratory at the University of Colorado Boulder in 1948, LASP has developed scientific instrumentation for planetary, deep-space, and Earth-orbiting spacecraft missions investigating the Sun, all eight planets, Pluto, and beyond.*

The Laboratory for Atmospheric and Space Physics (LASP) at CU Boulder is a full-cycle space research institute, combining all aspects of space exploration through expertise in science, engineering, mission operations, data management, and education.

### Science drives exploration

Science drives what we do at LASP. With a focus on the solar system—including solar influences, astrophysics, atmospheric and planetary sciences, and space physics—LASP engages in both experimental and theoretical aspects of science. As part of a full-cycle institution, LASP scientists are fully involved in designing missions and instruments to answer key scientific questions.

### Engineering supports scientific endeavors

LASP's in-house engineers and facilities support the design and manufacturing of spacecraft and scientific instrumentation in support of scientific goals. The proficiency of the engineers, as well as the depth of their technical expertise and LASP's business system organization, mirror those of a small aerospace company. The proximity of scientists and engineers at LASP maximizes scientific return by enabling daily collaboration.

### Mission Ops retrieves, processes, and delivers data

To round out the full-cycle institution, the LASP Mission Operations & Data Systems (MO&DS) staff manage the day-to-day mission and scientific operations for numerous spacecraft and instruments. LASP is one of only a few university-based mission operations centers in the world. The data systems personnel ensure the delivery of scientific data to scientists and the public, continuing the cycle of space exploration.

## Current Accomplishments

### FY 2021

**Research awards:** 306 valued at \$120,909,125

**Employees:** 491 staff and 178 students

**LASP currently operates satellites or instruments for these missions:** AIM, Emirates Mars Mission, GOES, GOLD, IXPE, MAVEN, MinXSS-3, MMS, New Horizons, Parker Solar Probe, SDO, THEMIS/ARTEMIS, TIMED, TSIS-1, Voyager

**LASP is funded to develop instrumentation or mission operations for these missions:**

**Explorer Class and larger:** CLARREO Pathfinder, Daedalus, EDA, Europa Clipper, GOES-U, IMAP, Libera, LSITP, NEO Surveyor, TSIS-2

**SmallSat:** AEPEX, CANVAS, CIRBE, CTIM, CUTE, DYNAGLO, INSPIRESat program, SPRITE, SunCET, VISORS

### Students are involved in all facets

LASP is committed to educating the next generation of space professionals. The laboratory employs University of Colorado Boulder undergraduate and graduate students to work in all aspects of LASP operations, including science, MO&DS, engineering, and administration. This hands-on, real-life experience provides the groundwork to produce successful industry professionals that will carry on the future of space exploration.

*For nearly 75 years, LASP has posed pivotal questions in space science and innovated new technologies and approaches to discover the answers. LASP discoveries have transformed our understanding of the cosmos and raised new questions that continue to push the boundaries of scientific exploration. Learn more at <http://lasp.colorado.edu>. Questions? [epomail@lasp.colorado.edu](mailto:epomail@lasp.colorado.edu).*