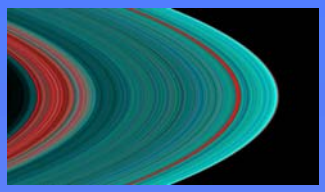
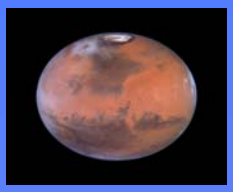
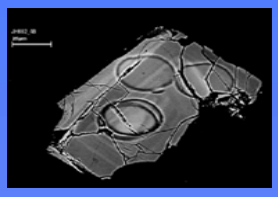
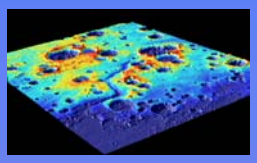
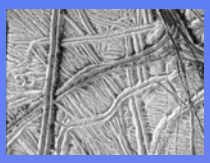
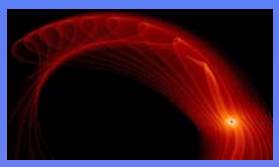
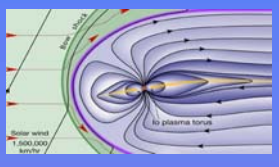
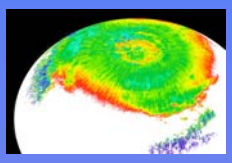
Graduate Program in Planetary Sciences at the University of Colorado



Clockwise from upper left: Cassini image of Saturn's rings, HST image of Mars, Student Dust Counter on New Horizons Pluto spacecraft, 4.3-b.y.-old zircon, theoretical Mars ground ice distribution, Jupiter magnetosphere, simulation of Io's escaping atmosphere, Europa surface ridged plains, Mars water-carved outflow channel.

PLANETARY RESEARCH. Research in planetary sciences is centered largely within the Laboratory for Atmospheric and Space Physics and includes a combination of theoretical, laboratory, spacecraft hardware, telescopic, and data analysis approaches to understanding the current state and evolution of planets and planetary systems. Specific research areas include the formation and dynamical evolution of planetary systems, terrestrial-planet atmospheres, surfaces, and interiors, outer-solar-system atmospheres and satellites, planetary rings, dusty plasmas, magnetospheres, and solar-wind interactions.

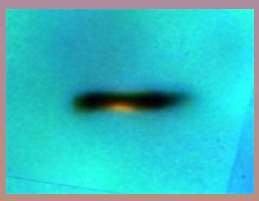
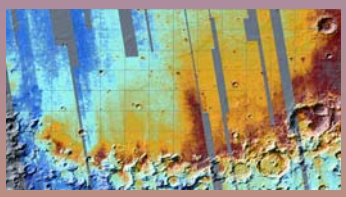
FLIGHT MISSIONS. Active planetary spacecraft are carrying two LASP-built instruments – the Ultraviolet Imaging Spectrograph on Cassini at Saturn and the MASCS ultraviolet-to-infrared spectrometer on MESSENGER en route to Mercury – and an instrument to study the interplanetary dust environment has been delivered for the upcoming New Horizons mission to Pluto. Colorado faculty also are involved in numerous other instruments and missions, including building and managing the $485 million Mars Atmosphere and Volatile EvolutioN (MAVEN) mission to Mars.

ASTROBIOLOGY. Colorado has a multi-institutional astrobiology program designed to understand the potential and actual distribution of life in the universe. Participants include faculty and students from astrophysics, planetary science, geology, atmospheric science, molecular biology, evolutionary biology, biochemistry, chemistry, and the humanities.

GRADUATE PROGRAM. Graduate students are active in all aspects of our research programs. Faculty and students reside in one of several appropriate departments, including Astrophysical and Planetary Sciences, Geological Sciences, Physics, and Atmospheric and Oceanic Sciences; prospective students can apply through any of these departments. There are over 30 graduate students in planetary science, doing cutting-edge research that spans the breadths of disciplines.

PLANETARY RESEARCHERS:

Nicole Albers	Saturn ultraviolet observations
Phil Armitage	Protoplanetary disks and planet formation
Fran Bagenal	Planetary magnetospheres
Dan Baker	Earth/planetary magnetospheres
John Bally	Observations of star and planet formation
Annamaria Cereti	Mars radar properties
Peter Delamere	Earth and planetary space physics
Gaetano Di Achille	Mars hydrology
Bob Ergun	Earth/planetary magnetospheres
Larry Esposito	Planetary rings, outer solar system
Xiaohua Fang	Sun-Planet interactions
Eberhard Gruen	Planetary physics and interplanetary dust
Greg Holsclaw	Planetary Spectroscopy
Mihaly Horanyi	Solar-system dusty plasmas
Brian Hynek	Mars geology and geophysics
Bruce Jakosky	Mars habitability, astrobiology
Makenzie Lystrup	Planetary auroras and instrumentation
Bill McClintock	Flight instrumentation, Mercury
Tom McCollom	Earth and planetary biogeochemistry
Mike Mellon	Mars surface properties and ice geophysics
Steve Mojzsis	Early Earth history
Keiji Otsuki	Dynamics and rings
Nick Schneider	Jupiter magnetosphere, Io
Miodrag Sremcevic	Saturn moons and rings
Mindi Searls	Mars geomorphology and geophysics
Zoltan Sternovsky	Dusty plasmas
Glen Stewart	Planetary formation and dynamics
Ian Stewart	Aeronomy and Cassini data analysis
Alexis Templeton	Aqueous geochemistry and astrobiology
Feng Tian	Mars atmospheric escape
Brian Toon	Planetary climate, radiation
Shijie Zhong	Earth and planetary interiors

Images, clockwise from upper left: HST image of protoplanetary disk, thermal infrared image of Isidis (Mars), HST image of Venus clouds, graduate students examine Yellowstone hot spring field site.

For more information, look on our web site at:
http://lasp.colorado.edu/planetary
or contact planetary@lasp.colorado.edu.