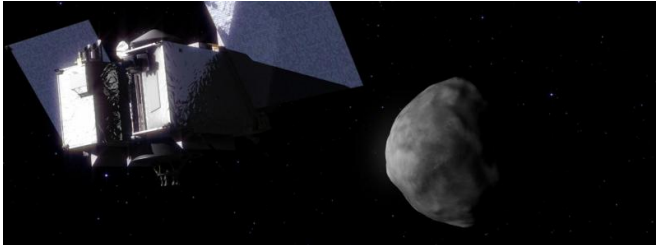


OSIRIS-REx team prepares for next step in NASA's asteroid sample return mission

22 June 2015, by Nancy Neal Jones



Artist's concept of OSIRIS-Rex nearing Asteroid Bennu.
Credit: NASA

With launch only 15 months away, NASA's Origins Spectral Interpretation Resource Identification Security-Regolith Explorer (OSIRIS-REx) team is preparing to deliver instruments for integration with the spacecraft that will travel to, and collect a sample from, an asteroid.

"This is an exciting time for the project," said Mike Donnelly, OSIRIS-REx project manager from NASA's Goddard Space Flight Center in Greenbelt, Maryland. "Years of effort are coming to culmination with the upcoming deliveries of the instruments to the spacecraft."

OSIRIS-REx will travel to a near-Earth [asteroid](#) called Bennu and bring a small sample back to Earth for study. The mission is scheduled for launch in September 2016. The spacecraft will reach its asteroid target in 2018 and return a sample to Earth in 2023.

The spacecraft will carry five instruments from national and international partners. These instruments will be key to mapping and analyzing Bennu's surface and will be critical in identifying a site from which a sample can be safely retrieved and ultimately returned to Earth.

The OSIRIS-REx Camera Suite (OCAMS) consists

of three cameras that will image the asteroid Bennu during approach and proximity operations. The University of Arizona designed and built OCAMS.

The OSIRIS-REx Laser Altimeter (OLA) will scan Bennu to map the entire asteroid surface, producing local and global topographic maps. OLA is a contributed [instrument](#) from the Canadian Space Agency.

The OSIRIS-REx Thermal Emission Spectrometer (OTES) will conduct surveys to map mineral and chemical abundances and to take Bennu's temperature. OTES is provided by Arizona State University.

The OSIRIS-REx Visible and Infrared Spectrometer (OVIRS) measures visible and infrared light from Bennu, which can be used to identify water and organic materials. The instrument is provided by NASA's Goddard Space Flight Center.

A student experiment called the Regolith X-ray Imaging Spectrometer (REXIS) will map elemental abundances on the asteroid. REXIS is a collaboration between the students and faculty of the Massachusetts Institute of Technology and Harvard University.

"These instruments are essential to accomplishing the mission's science goals and unlocking the secrets of Bennu," said Dante Lauretta, principal investigator for OSIRIS-Rex at the University of Arizona, Tucson. "I am proud of the dedication to excellence that each of our instrument teams brings to this mission, and I look forward to all that we will discover at the asteroid."

Provided by NASA's Goddard Space Flight Center

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