



several cameras, a radiation detector, and a meteorological station.

The MESSENGER mission was launched in 2004 to Mercury, on a journey that includes one flyby of Earth, two of Venus, and three of Mercury before settling into Mercury's orbit in March 2011. The Geosciences Node is archiving data from the X-Ray Spectrometer (XRS), Mercury Laser Altimeter (MLA), Gamma Ray (GRS) and Neutron (NS) Spectrometers, Mercury Atmospheric and Surface Composition Spectrometer (MASCS, shared with the PDS Atmospheres Node), and the Radio Science experiment. MESSENGER data releases are scheduled based on mission events. Data from the Earth and Venus flybys are currently available. Data from the first Mercury flyby will be released in July 2008.

The Lunar Reconnaissance Orbiter (LRO) will be launched in October 2008. Its archives at the Geosciences Node will include data from a laser altimeter (LOLA), neutron detector (LEND), radiometer (Diviner), and synthetic aperture radar (Mini-RF). The first LRO data will be released in April 2009. Piggybacking on the LRO launch vehicle is the LCROSS experiment (Lunar Crater Observation and Sensing Satellite), which will drop an empty fuel tank onto the lunar surface and observe the impact with a suite of cameras and spectrometers, before impacting itself.

The Gravity Recovery and Interior Laboratory (GRAIL) mission will consist of a pair of spacecraft launched in 2011 to measure the Moon's gravity field. Although archive planning has not yet begun, the Geosciences Node expects to archive some or all of the GRAIL data.

In addition to NASA lunar missions, the Geosciences Node will also archive data from the Mini-RF radar instrument on the Indian lunar orbiter Chandrayaan-1, to be launched in 2008.

In all, the Geosciences Node hosts a total of approximately nine terabytes of data in 150 data sets from 19 missions, along with data from Earth-based and laboratory experiments.

**Where to Get the Data:** All data archived in PDS are available to the public. The Geosciences Node maintains its holdings online at its web site, <http://pds-geosciences.wustl.edu/>. The site allows the user to browse through data sets sorted by planet and mission, and to download selected data products. Announcements of new data releases are shown in the "What's New" section of the home page. Interested users may sign up for email notification of new releases of data sets by using the "Subscription Manager" service on the PDS web site, <http://pds.nasa.gov/>.

**Tools for Data Search and Access:** The PDS offers a data search capability for all PDS holdings, including those at the Geosciences Node. See the "Data Search" service at <http://pds.nasa.gov/>. The Geosciences Node provides the following specialized search services for particular data sets.

The MER Analyst's Notebook integrates raw and derived science data with daily mission activity plans, site and traverse maps, quick-look data, and other resources. [1] Additional Analyst's Notebooks will be developed to support the Phoenix and MSL archives.

The Orbital Data Explorer (ODE) allows cross-instrument and cross-mission searches of Mars orbital data sets. [2] An upgrade to include lunar orbital data is planned in support of the first LRO release in 2009.

The CRISM Spectral Library is a collection of laboratory spectra of Mars-analog materials to support the analysis of CRISM data. Spectra may be selected, plotted online, and downloaded.

The GRS Data Node, a satellite of the Geosciences Node, allows user-customized queries of Odyssey Gamma Ray Spectrometer (GRS) data sets.

**Contact Information:** The Geosciences Node welcomes questions and comments from the user community. Please send email to [geosci@wunder.wustl.edu](mailto:geosci@wunder.wustl.edu).

**References:** [1] Stein T. et al. (2008), The MER Analyst's Notebook, *LPS XXXIX*. [2] Bennett K. et al. (2008) Accessing Mars Data Using PDS Geosciences Node's Orbital Data Explorer, *LPS XXXIX*.

**Table 1. Links mentioned in this abstract**

PDS Geosciences Node web site	<a href="http://pds-geosciences.wustl.edu">pds-geosciences.wustl.edu</a>
PDS Home Page	<a href="http://pds.nasa.gov">pds.nasa.gov</a>
Odyssey GRS Data Node	<a href="http://grspds.lpl.arizona.edu">grspds.lpl.arizona.edu</a>
MER Analyst's Notebook	<a href="http://pds-geosciences.wustl.edu/meran">pds-geosciences.wustl.edu/meran</a>
MRO CRISM Spectral Library	<a href="http://pds-geosciences.wustl.edu/missions/mro/spectral_library.htm">pds-geosciences.wustl.edu/missions/mro/spectral_library.htm</a>
Orbital Data Explorer	<a href="http://ode.rsl.wustl.edu/mars/">ode.rsl.wustl.edu/mars/</a>
Geosciences Node email contact	<a href="mailto:geosci@wunder.wustl.edu">geosci@wunder.wustl.edu</a>