

Archive Status MRO and Phoenix

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PDS Management Council
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MRO PSP Archive Schedule

| Release | Coverage | Delivery | Public Release |
|---------|--|---------------|----------------|
| 1 | Nov. 8 – Dec. 7, 2006 (PSP month 1) | May 25, 2007 | June 8, 2007 |
| 2 | Dec. 8 – Feb. 7, 2007 (PSP months 2-3) | Aug. 24, 2007 | Sept. 7, 2007 |
| 3 | Feb. 8 – May 7, 2007 (PSP months 4-6) | Nov. 23, 2007 | Dec. 7, 2007 |
| 4 | May 8 – Aug. 7, 2007 (PSP months 7-9) | Feb. 22, 2008 | Mar. 7, 2008 |
| 5 | Aug. 8 – Nov. 7, 2007 (PSP months 10-12) | May 23, 2008 | June 6, 2008 |
| 6 | Nov. 8 – Feb. 7, 2008 (PSP months 13-15) | Aug. 25, 2008 | Sept. 8, 2008 |
| 7 | Feb. 8 – May 7, 2008 (PSP months 16-18) | Nov. 24, 2008 | Dec. 8, 2008 |
| 8 | May 8 – Aug. 7, 2008 (PSP months 19-21) | Feb. 20, 2009 | Mar. 6, 2009 |
| 9 | Aug. 8 – Nov. 8, 2008 (PSP months 22-24) | Apr. 24, 2009 | May 8, 2009 |

MRO releases data every 3 months, starting 6 months after the beginning of the Primary Science Phase. The PSP lasts 731 days. An extended mission is possible.

MRO Archive Status

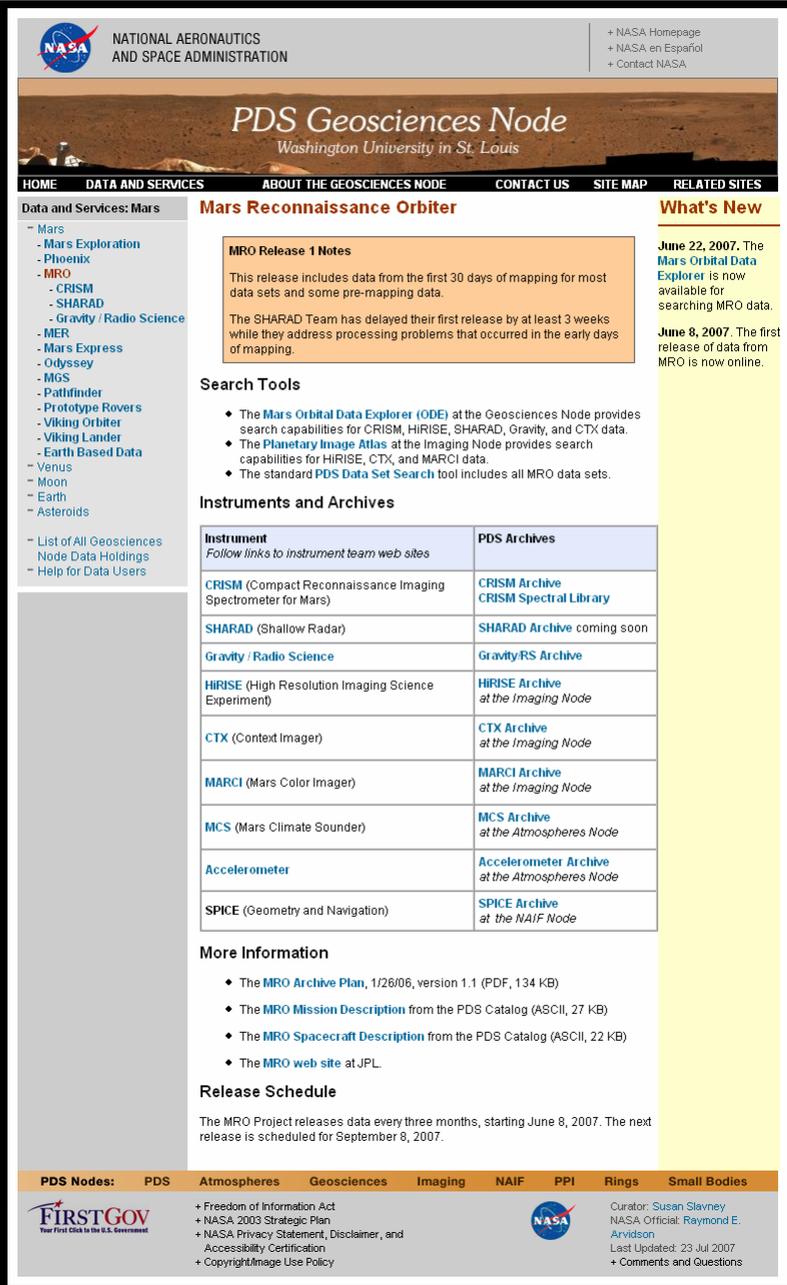
- **CRISM (Geosciences Node)**
 - EDR, CDR (calibration files), DDR (ancillary files), TRDR (targeted RDR) online
 - TRDR products to be revised and redelivered later.
 - MRDR (map projected) and MTRDR (map projected, targeted) to be produced and delivered later.
 - Data volume is about 0.5 to 1.0 TB per month, thus far.
- **SHARAD (Geosciences Node)**
 - EDR and RDR data for Release 1 delivered late and are now validated. Release is pending resolution of peer review liens.
 - Data volume is about 100 GB per month.
- **Radio Science and Gravity (Geosciences Node)**
 - Raw radio science data (EDR) online
 - Gravity: SHADR (spherical harmonics ASCII), SHBDR (spherical harmonics binary), and RSDMAP (radio science digital map) to be delivered with Release 3 or later
 - Data volume for EDRs is about 2.2 GB per month

- **HiRISE (Imaging Node)**
 - EDR and RDR (calibrated, map-projected) data sets
 - Searchable through the Planetary Atlas
 - Distributed by the HiRISE Data Node, U. of Arizona
- **MARCI and CTX (Imaging Node)**
 - EDR data set
 - Searchable through the Planetary Atlas
 - Distributed by the Imaging Node
- **MCS (Atmospheres)**
 - EDR and RDR data sets, both still in peer review
 - Data are online at Atmospheres with a note about peer review
- **Accelerometer (Atmospheres)**
 - EDR and RDR data sets, both still in peer review
 - Data are online at Atmospheres with a note about peer review

- **Large volume of data, rapid growth**
 - CRISM: 0.5 to 1.0 TB per month, higher rate once delivery of MRDR and MTRDR begins
 - SHARAD: 0.1 TB per month
- **Geo Node plans for handling the data volume**
 - New hardware includes expansion of Storage Area Network (SAN) for primary data repository (16 TB for FY08) and addition of 24 TB Network Attached Storage (NAS) for a hard disk secondary data repository
 - Data integrity and availability safeguards in place
 - RAID-5 drive arrays with hot spare and hot-swappable disk replacement
 - Dual fabric switches with multiple data paths
 - Active/passive clustered services with automatic failover

- **Announcements of data releases**
 - For Releases 1 and 2, announcement from EN goes to entire PDS user list. Users are encouraged to sign up for future MRO announcements via the **Subscription Service**.
 - Starting with Release 3, announcements from EN go to subscribers only.
 - Geo Node has link on its MRO page to direct users to PDS Subscription Service.
 - Release 1 announcement went to Planetary Exploration Newsletter (Mark Sykes).
 - We recommend that EN Operations Manager work out details with PEN to automatically include future announcements in PEN for MRO and other missions.

- The Geosciences Node hosts a one-stop-shopping page for MRO archives, including...
- Links to Geo Node, Image Node, and PDS catalog search pages
- Links to each instrument teams' web site
- Links to PDS archives for each instrument



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

+ NASA Homepage
+ NASA en Español
+ Contact NASA

PDS Geosciences Node

Washington University in St. Louis

HOME DATA AND SERVICES ABOUT THE GEOSCIENCES NODE CONTACT US SITE MAP RELATED SITES

Data and Services: Mars

- Mars
- Mars Exploration
- Phoenix
- MRO
 - CRISM
 - SHARAD
 - Gravity / Radio Science
- MER
- Mars Express
- Odyssey
- MGS
- Pathfinder
- Prototype Rovers
- Viking Orbiter
- Viking Lander
- Earth Based Data
- Venus
- Moon
- Earth
- Asteroids

- List of All Geosciences Node Data Holdings
- Help for Data Users

Mars Reconnaissance Orbiter

MRO Release 1 Notes

This release includes data from the first 30 days of mapping for most data sets and some pre-mapping data.

The SHARAD Team has delayed their first release by at least 3 weeks while they address processing problems that occurred in the early days of mapping.

Search Tools

- The [Mars Orbital Data Explorer \(ODE\)](#) at the Geosciences Node provides search capabilities for CRISM, HIRISE, SHARAD, Gravity, and CTX data.
- The [Planetary Image Atlas](#) at the Imaging Node provides search capabilities for HIRISE, CTX, and MARCI data.
- The standard [PDS Data Set Search](#) tool includes all MRO data sets.

Instruments and Archives

| Instrument | PDS Archives |
|--|---|
| <i>Follow links to instrument team web sites</i> | |
| CRISM (Compact Reconnaissance Imaging Spectrometer for Mars) | CRISM Archive CRISM Spectral Library |
| SHARAD (Shallow Radar) | SHARAD Archive coming soon |
| Gravity / Radio Science | GravityRS Archive |
| HIRISE (High Resolution Imaging Science Experiment) | HIRISE Archive <i>at the Imaging Node</i> |
| CTX (Context Imager) | CTX Archive <i>at the Imaging Node</i> |
| MARCI (Mars Color Imager) | MARCI Archive <i>at the Imaging Node</i> |
| MCS (Mars Climate Sounder) | MCS Archive <i>at the Atmospheres Node</i> |
| Accelerometer | Accelerometer Archive <i>at the Atmospheres Node</i> |
| SPICE (Geometry and Navigation) | SPICE Archive <i>at the NAIF Node</i> |

More Information

- The [MRO Archive Plan](#), 1/26/06, version 1.1 (PDF, 134 KB)
- The [MRO Mission Description](#) from the PDS Catalog (ASCII, 27 kB)
- The [MRO Spacecraft Description](#) from the PDS Catalog (ASCII, 22 KB)
- The [MRO web site](#) at JPL.

Release Schedule

The MRO Project releases data every three months, starting June 8, 2007. The next release is scheduled for September 8, 2007.

What's New

June 22, 2007. The [Mars Orbital Data Explorer](#) is now available for searching MRO data.

June 8, 2007. The first release of data from MRO is now online.

PDS Nodes: PDS Atmospheres Geosciences Imaging NAIF PPI Rings Small Bodies

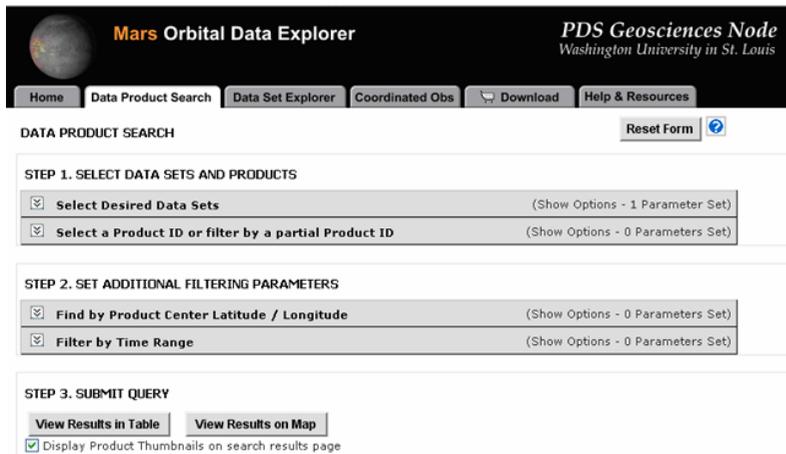
FIRST GOV
Your First Click to the U.S. Government

+ Freedom of Information Act
+ NASA 2003 Strategic Plan
+ NASA Privacy Statement, Disclaimer, and Accessibility Certification
+ Copyright/Image Use Policy

NASA

Curator: Susan Slavney
NASA Official: Raymond E. Arvidson
Last Updated: 23 Jul 2007
+ Comments and Questions

Orbital Data Explorer (ODE)



Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Data Set Explorer Coordinated Obs Download Help & Resources

DATA PRODUCT SEARCH [Reset Form](#)

STEP 1. SELECT DATA SETS AND PRODUCTS

- Select Desired Data Sets (Show Options - 1 Parameter Set)
- Select a Product ID or filter by a partial Product ID (Show Options - 0 Parameters Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS

- Find by Product Center Latitude / Longitude (Show Options - 0 Parameters Set)
- Filter by Time Range (Show Options - 0 Parameters Set)

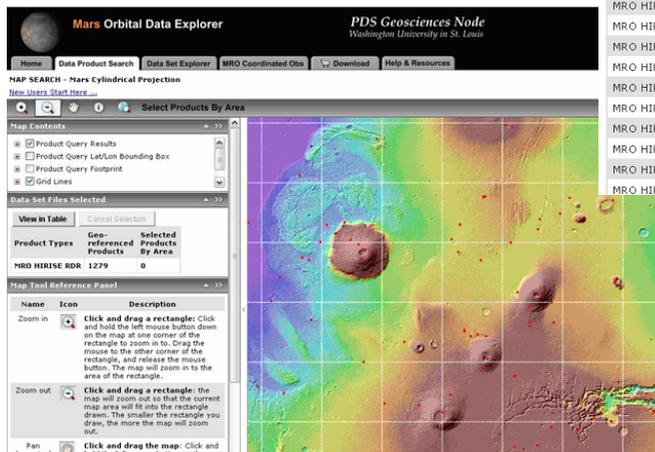
STEP 3. SUBMIT QUERY

[View Results in Table](#) [View Results on Map](#)

Display Product Thumbnails on search results page

SEARCH for Products

MAP Products



Mars Orbital Data Explorer PDS Geosciences Node
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Home Data Product Search Data Set Explorer MRO Coordinated Obs Download Help & Resources

HAP SEARCH - Mars Cylindrical Projection

Map contents

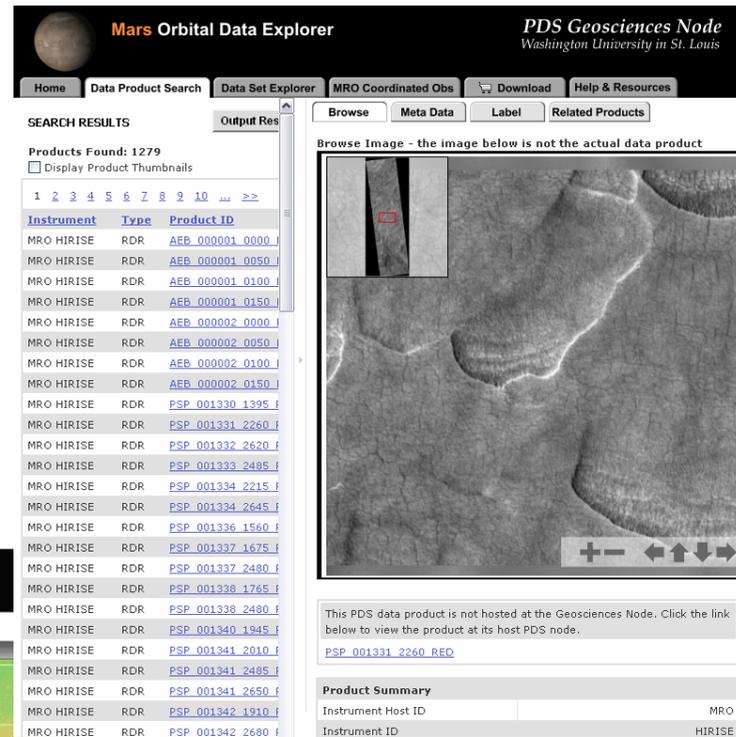
- Product Query Results
- Product Query Lat/Lon Bounding Box
- Product Query Footprint
- Grid Lines

Data Set Files Selected

| View in Table | Cancel Selection | Geo-referenced Products By Area | Selected Products |
|----------------|------------------|---------------------------------|-------------------|
| MRO HIRISE RDR | 1279 | 0 | 0 |

Map Tool Reference Panel

| Name | Icon | Description |
|----------|------|--|
| Zoom in | | Click and drag a rectangle: Click and hold the left mouse button down on the map at one corner of the rectangle to zoom in to. Drag the mouse to the other corner of the rectangle, and release the mouse button. The map will zoom in to the area of the rectangle. |
| Zoom out | | Click and drag a rectangle: the map will zoom out so that the current map area will fit into the rectangle drawn. The smaller the rectangle you draw, the more the map will zoom out. |
| Pan | | Click and drag the map: Click and drag the map to move it. |



Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

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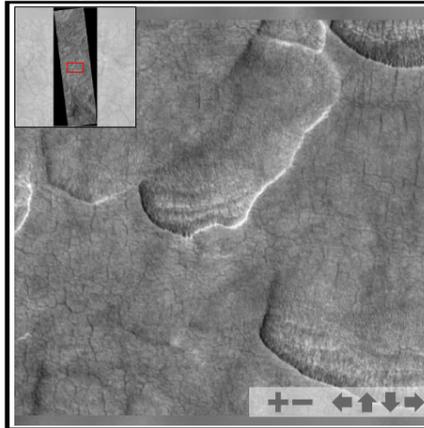
SEARCH RESULTS [Output Res](#)

Products Found: 1279

Display Product Thumbnails

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | ... | >> |
|------------|------|---------------------------------|---|---|---|---|---|---|----|-----|----|
| Instrument | Type | Product ID | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000001_0000 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000001_0050 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000001_0100 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000001_0150 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000002_0000 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000002_0050 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000002_0100 | | | | | | | | | |
| MRO HIRISE | RDR | AEB_000002_0150 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001330_1395 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001331_2260 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001332_2620 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001333_2485 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001334_2215 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001334_2645 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001336_1560 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001337_1675 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001337_2480 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001340_1945 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001341_2010 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001341_2485 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001341_2650 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001342_1910 | | | | | | | | | |
| MRO HIRISE | RDR | PSP_001342_2680 | | | | | | | | | |

Browse Image - the image below is not the actual data product



This PDS data product is not hosted at the Geosciences Node. Click the link below to view the product at its host PDS node.

[PSP_001331_2260_RED](#)

Product Summary

| | |
|--------------------|--------|
| Instrument Host ID | MRO |
| Instrument ID | HIRISE |

RETRIEVE and View Products

Orbital Data Explorer (ODE)

- Released 6/22/07 (V2.0)
- Usage since release (As of 8/7/07) :
 - ~80,000 hits from around the world
 - 2653 direct product downloads
 - Additional downloads from Geosciences' FTP server, some of which were found using ODE searches
 - ODE users download HiRISE and CTX products via the HiRISE and Imaging sites
- Periodic updates planned: V2.1 to be released late August
 - New specialized CRISM queries
 - SHARAD data sets and derived gravity data
- http://pds-geosciences.wustl.edu/ode_mars/

ODE Products

| Instruments | Searchable via ODE | Download |
|------------------------|-------------------------|----------------------|
| MRO CRISM EDR/CDR | X | Via ODE, Geo FTP |
| MRO CRISM DDR | X | Via ODE, Geo FTP |
| MRO CRISM TRDR | X | Via ODE, Geo FTP |
| MRO SHARAD EDR | Available when Released | Via ODE, Geo FTP |
| MRO SHARAD RDR | Available when Released | Via ODE, Geo FTP |
| MRO Gravity EDR | X | Via ODE, Geo FTP |
| MRO HiRISE EDR/RDR | X | Via HiRISE Data Node |
| MRO CTX EDR | X | Via Imaging Node |
| MEX HRSC RDR | X | Via ODE, Geo FTP |
| MEX HRSC Map Projected | Available with V2.1 | Via ODE, Geo FTP |
| MEX OMEGA | X | Via ODE, Geo FTP |

Phoenix Operations and Archiving Schedule

| Event | Date |
|-----------------------------------|--------------------------|
| Launch | Aug. 4, 2007 |
| Landing | ~ May 25, 2008 |
| Sols 1-90 (Primary Mission) | ~ May 25 – Sept. 1, 2008 |
| Sols 91-180 (Extended Mission) | ~ Sept. 2 – Dec. 2, 2008 |
| Sols 1-30 data released | ~ Jan. 1, 2009 |
| Sols 31-90 data released | ~ Mar. 1, 2009 |
| Subsequent releases every 90 sols | TBD |

- **Archive Plan complete and signed**
- **All ICDs complete and signed**
- **TEGA (Geosciences)**
 - EDR SIS, Archive Volume SIS peer review is complete
 - RDR SIS on schedule for peer review due by October 31
- **MECA TECP, AFM, and WCL (Geosciences)**
 - EDR SIS in lien resolution; data provider is late responding
 - Archive Volume SIS in draft form for team to revise
 - RDR SIS not begun
- **MET LIDAR and P&T (Atmospheres)**
 - EDR/RDR SIS peer reviews are complete
 - Archive Volume SISs in draft form for team to revise

- **ASE (Atmospheres)**
 - EDR / RDR SIS and Archive Volume SIS in development but behind schedule
- **RAC / SSI / MECA-OM (Imaging)**
 - EDR SIS in development but behind schedule
 - Archive Volume SIS in draft form for team to revise
 - RDR SIS not begun
- **MARDI (Imaging)**
 - EDR / RDR SIS in lien resolution, behind schedule
 - Archive Volume SIS in draft form for team to revise
- **SPICE (NAIF)**
 - Standard Data Product SIS in progress, on schedule

Phoenix Test Plans

- **Development of end-to-end test plan continues in coordination with Phoenix SOC (Science Operations Center)**
 - Tests will cover delivery of science data from teams to SOC, assembly of volumes at SOC, and delivery of volumes to PDS
 - Tests will verify delivery path and handshaking, archive completeness, and ability to transfer and handle typical data volumes
 - At least two tests will take place, to be held in conjunction with Phoenix Operations Readiness Tests if possible
 - One test will occur during ORT 6 (October 2007)
 - CAT integration expected during ORT 8 (January 2008)
- **Total volume of science data products, raw and derived: estimated 500 GB for the primary mission.**

Phoenix Analyst's Notebook

