

How to Get CRISM Data

Visit us at the PDS Geosciences booth for a hands-on demonstration!

CRISM data are available through NASA's Planetary Data System's Geosciences node. The data may be accessed via the Geosciences CRISM web site or through the Geosciences Orbital Data Explorer tool.

The web site includes the data in archive form as well as:

- Access to the CAT toolkit
- Access to the CRISM Data User's workshop materials
- And a link to the CRISM Team Web Site

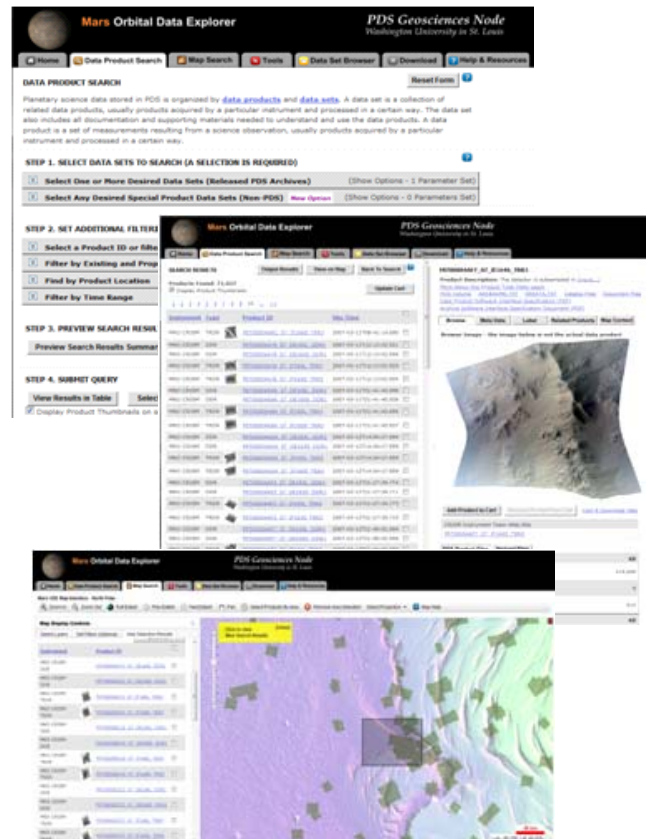
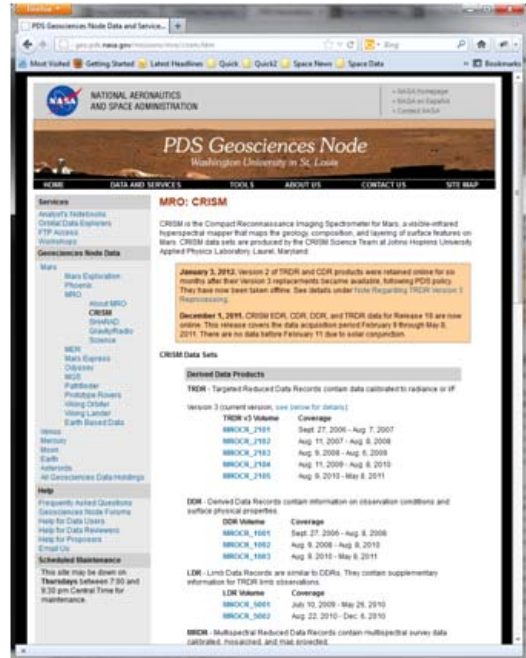
<http://geo.pds.nasa.gov/missions/mro/crism.htm>

The Orbital Data Explorer is a web-based tool that provides PDS archive search and retrieval services.

Features include:

- Dynamic forms-based product query including:
 - Instrument/Product Type
 - Space and Time
 - MRO Coordinated Observations
 - Ad-hoc Cross-instrument searches
 - Product-specific searches
- Map-based query
- Browse versions of products
- Product location footprints
- Direct access to product-specific web interfaces
 - Such as the CRISM Team Site
- Download selected products in "on-the-fly mini-archives"
- Granular-level Searches for selected datasets

<http://ode.rsl.wustl.edu/>



CRISM Workshop – NASA Planetary Data System Geosciences Node Orbital Data Explorer
Workshop Handout

ODE Product Level Holding:

| ODE Mars | ODE Moon | ODE Mercury |
|------------------------------|------------------------------------|-----------------------------|
| MRO CRISM CDR/EDR/DDR/TRDR | LRO Diviner EDR/RDR/GDR/PRP | MESSENGER GRS EDR/CDR |
| MRO CRISM MRDR | LRO LAMP EDR/RDR/GDR | MESSENGER MASCS UVV EDR/CDR |
| MRO CRISM MTRDR (Future) | LRO LEND EDR/RDR/DLD | MESSENGER MASCS VIR EDR/CDR |
| MRO HiRISE EDR/RDR/DTM | LRO LOLA EDR/RDR/GDR | MESSENGER MDIS-NAC EDR/CDR |
| MRO HiRISE Anaglyphs | LRO LOLA RDR Granular-Level | MESSENGER MDIS-WAC EDR/CDR |
| MRO CTX EDR | LRO LROC EDR/CDR/GDR | MESSENGER MLA EDR/CDR |
| MRO SHARAD EDR/RDR | LRO Mini-RF PDR/CDR/Map CDR | MESSENGER NS EDR/CDR |
| MRO MCS EDR/RDR | CLEM A-Star, B-Star EDR | MESSENGER RSS |
| MRO RSS EDR/RDR | CLEM HIRES EDR/MDIM | MESSENGER XRS EDR/CDR |
| MEX HRSC RDR | CLEM LIDAR RDR/Topo | |
| MEX HRSC Map Projected RDR | CLEM LWIR EDR/RDR | |
| MEX HRSC Map Projected DTM | CLEM NIR EDR | |
| MEX MARSIS EDR/RDR | CLEM RSS FND/Gravity | |
| MEX PFS EDR | CLEM RSS Bistatic Radar | |
| MEX OMEGA EDR | CLEM UVVIS EDR/MDIM | |
| Odyssey THEMIS – Coming Soon | CLEM UVVIS Global Mosaic | |
| Odyssey GRS | LP MDR | |
| MGS MOC-NA/WA DSDP/SDP | LP ER Lv2 EDR | |
| MGS MOLA MEGDR | LP ER RDR | |
| MGS MOLA PEDR/LRDR.SHADR | LP GRS RDR | |
| MGS MOLA PEDR Granular-Level | LP MAG Lv1b, Lv2, Lv3, Lv4 | |
| Viking Orbiter EDR/MDIM/DTM | LP NS RDR | |
| | LP RSS Gravity | |
| | LP Line of Sight RDR | |
| | CH-1 M3 Raw | |
| | CH-1 M3 Calibrated (V1,2,3) | |
| | CH-1 Reflectance Images | |
| | CH-1 Mini-RF (Forerunner) - Future | |
| | Lunar Orbiter CDR | |

ODE Granular-Level Holdings:

| ODE Mars | ODE Moon | ODE Mercury |
|---------------|---------------------------------|------------------------|
| MGS MOLA PEDR | LRO Diviner RDR LRO LOLA RDR | MESSENGER MLA - Future |

MRO - Mars Reconnaissance Orbiter
MEX - ESA's Mars Express
MGS – Mars Global Surveyor
LRO – Lunar Reconnaissance Orbiter

LP – Lunar Prospector
CLEM – Clementine
CH-1 – ISRO's Chandrayaan-1

How to Get CRISM Data

Visit us at the PDS Geosciences booth for a hands-on demonstration!

Example Scenario: Meridiani : MER-B Opportunity

1. Open Mars ODE - <http://ode.rsl.wustl.edu/mars/>
2. Step 1 - Select Data Product Search Tab
3. Step 2- Open “Select One or More Desired Data Sets”
 - a. Select CRISM Targeted TRDRs & DDRs (FRT, HRL, HRS), Center Swath Only I/F & DDRs
 - b. Select CTX EDR
 - c. Select HiRISE RDR and HiRISE RDR V11¹
4. Step 3 - Scroll down to “Find by Product Location”
 - a. Select the “Rovers and Landers” Feature Type
 - b. Select the “MER Opportunity Rover” Feature Name
5. Step 4 – Select the “Preview Search Results Summary” button
 - a. A mix of TRDRs, DDRs, CTX EDRs, and HiRISE RDRs are found:
 - i. ~6 CRISM TRDRs/DDRs
 - ii. ~29 CTX EDRs
 - iii. ~7 HiRISE RDR/RDRV11s
6. There are two ways to explore the data: Via a Table and Via a Map
7. Step 5a – Via a Table – Select “View Results in Table”
 - a. This presents the results in table form
 - b. You may select any Product and view details on the right
 - i. This will show a product detail page including:
 1. Browse Tab
 - a. Access to SISs and other information about the product
 - b. Browse images (for CTX, HiRISE, and CRISM TRDRs)
 - c. Links to team web sites (for HiRISE and CRISM)
 - d. List of product files
 - i. Some products include additional derived files under a derived file tab above the product file list. Derived files include product footprint data in KML and Shape file formats.
 - e. Product summary data
 2. MetaData Tab – Product metadata
 3. Label Tab – Product PDS Label
 4. Related Products (Optional) – Links to related products
 5. Map Context Tab – Product footprint projected onto a base map
8. Step 5b – Via a Map – Select “View on Map”
 - a. This presents the product footprints over a base map. The map page provides a wide range of options to zoom, pan, set filters, view products, and change projections. Select the “Map Help” icon in the top right corner for additional information.

¹ HiRISE Version 1.1 RDRs include map projection information embedded in the JPEG 2000 files.

CRISM Workshop – NASA Planetary Data System Geosciences Node Orbital Data Explorer
Workshop Handout

- b. When you initially view the map, the map shows the footprints of all the products – to view just those you selected, select the “Display Only Products Selected By Area” radio button in the upper left corner.
 - c. You may look at a list of the selected products under the “View Selection Results: tab under the Map Display Controls banner in the upper left corner.
9. Retrieving products can be done in two ways:
- a. Right click on any individual product file listed on the product results browse page
 - b. Add a product to your download cart
 - i. Click the check boxes of the desired products in the search results list. Then click the “update cart” to add the selected products to your cart.
 - c. Remember, HiRISE products are very large and can take time to download.
10. Once you have selected the products you want and added them to your download cart:
- a. Select the “Download” tab.
 - b. You may download just the products or create a mini-archive, which includes the products along with associated archive files such as documentation, catalog, and index files.
 - c. After deciding on the mini-archive, select the “Continue” button
 - d. Now, select the form, either zip, tar, or tar.gz.
 - e. Enter your email address
 - f. Select the “Submit request” button
 - i. An email will be sent when the download is ready. The email will include instructions on how to download your cart products

More information including additional tutorials can be found in under the “Help & Resources” tab at the top of the page.

You can also visit the PDS Geosciences booth for additional help and demonstration.

Get the CRISM Workshop Data

Visit us at the PDS Geosciences booth for a hands-on demonstration!

There are two ways to acquire the CRISM Workshop products:

Via PDS Geosciences FTP:

`ftp://pds-geosciences.wustl.edu/geocopy/crism/mro-m-crism-5-rdr-mptargeted-v1.0/mrocr_6pro/`

Via Mars ODE:

1. Open Mars ODE - <http://ode.rsl.wustl.edu/mars/>
2. Step 1 - Select Data Product Search Tab
3. Step 2- Open “Select One or More Desired Data Sets”
 - a. Under CRISM -
 - i. Check MRDDR - Map-Projected Derived data record (PROTOTYPE)
 - ii. Check MTRDR - Map Projected Targeted Reduced Data Record (PROTOTYPE)
 - iii. Check L4TRDR - Level 4 Targeted Reduced Data Record (PROTOTYPE)
4. Step 3 – Select “View Results in Table”
 - a. To download add, check the box just under the Update Cart button
 - b. Select the Update Cart button - all products should now be in your cart
5. Step 4 - Once you have selected the products you want and added them to your download cart:
 - a. Select the “Download” tab.
 - b. You may download just the products or create a mini-archive, which includes the products along with associated archive files such as documentation, catalog, and index files.
 - c. After deciding on the mini-archive, select the “Continue” button
 - d. Now, select the form, either zip, tar, or tar.gz.
 - e. Enter your email address
 - f. Select the “Submit request” button
 - ii. An email will be sent when the download is ready. The email will include instructions on how to download your cart products

More information including additional tutorials can be found in under the “Help & Resources” tab at the top of the page.

You can also visit the PDS Geosciences booth for additional help and demonstration.