

National Aeronautics and
Space Administration

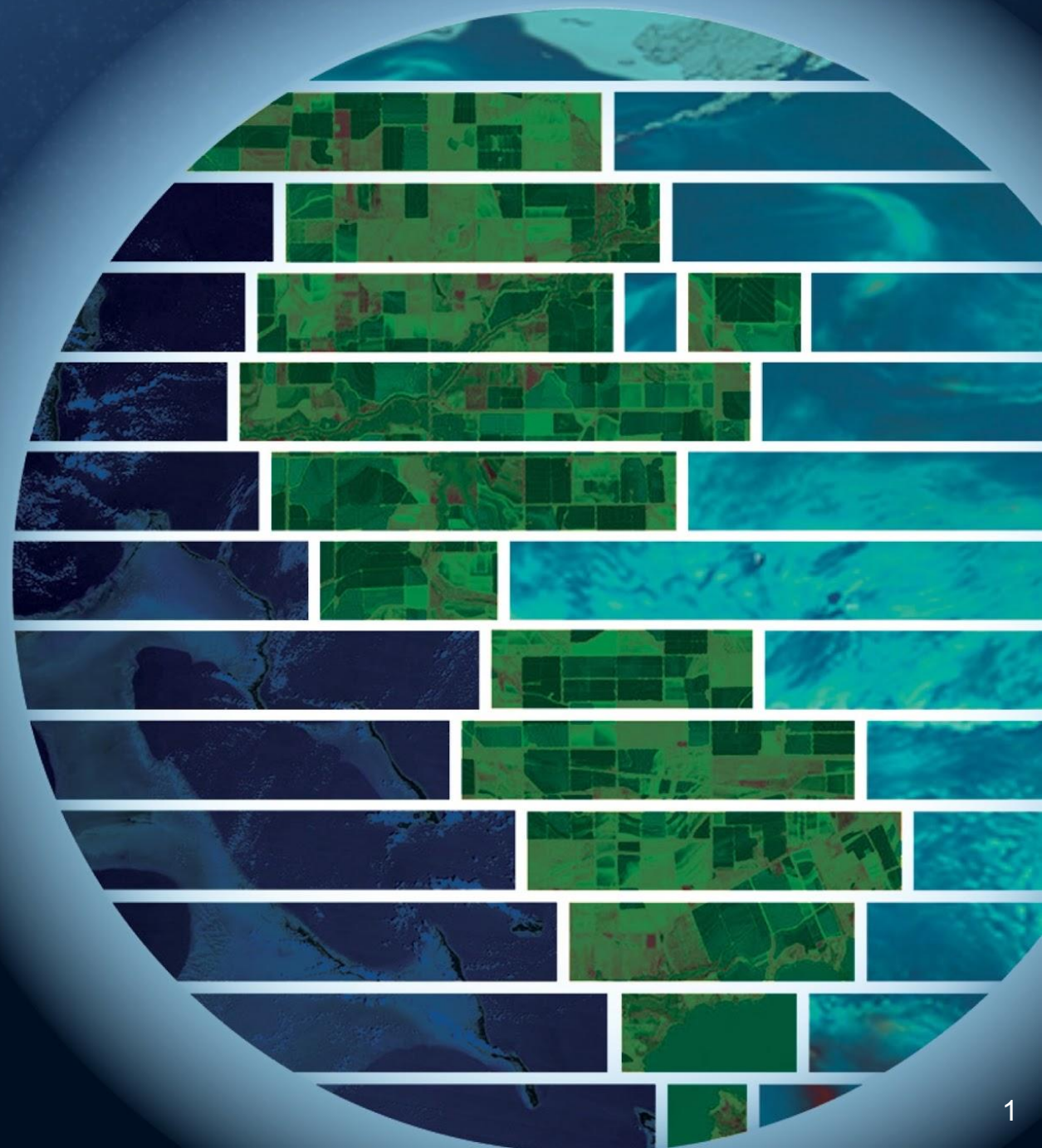
EARTHDATA

Federated Integration of INPE Datasets

WGISS-58
Sioux Falls, SD, USA

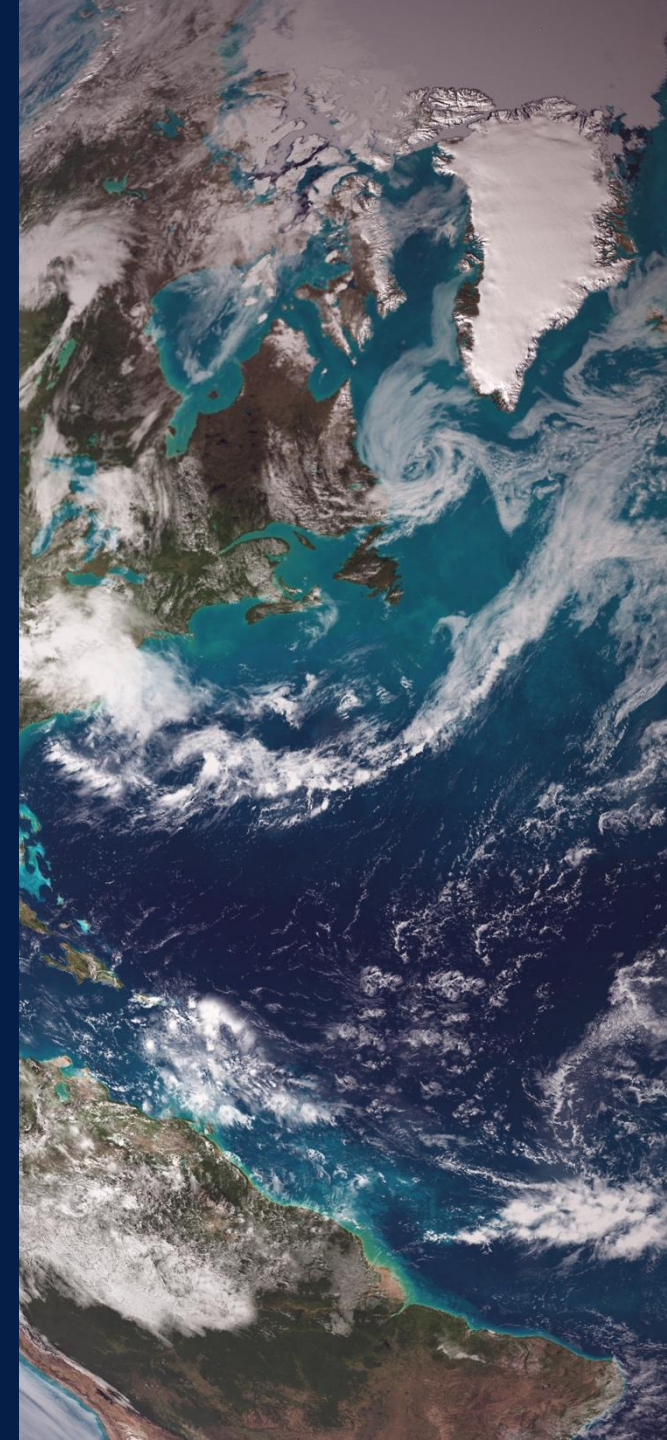
Presentation Date 10/17/2024

Michael Morahan (KBR for NASA EED-3)
IDN Coordinator



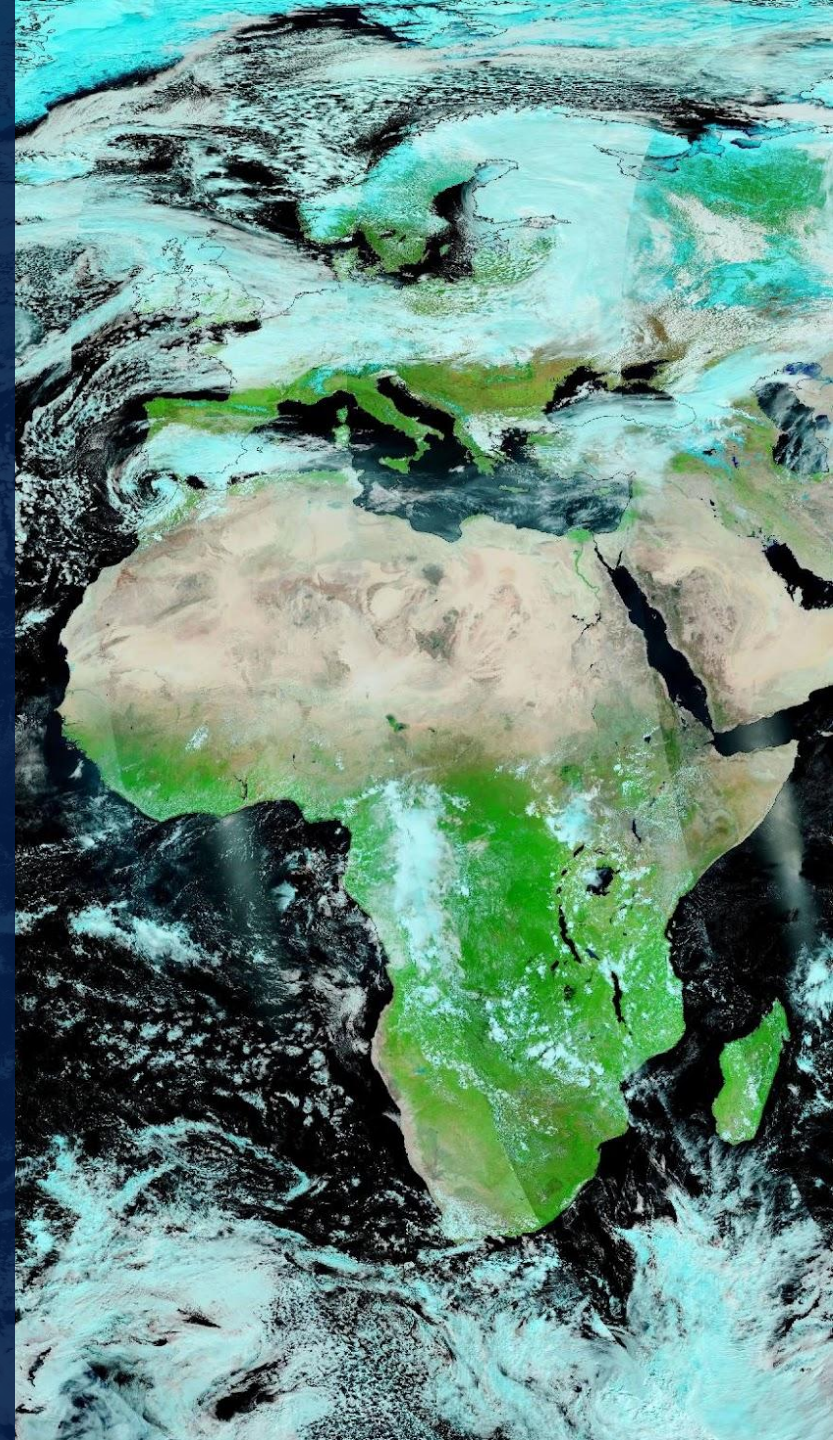
INPE DEMO Contents

1. INPE Collection Discovery
2. Collection Discovery Results
3. Refinement by Platform
4. Select Collection
5. Granule Refinement by Temporal
6. Viewing Collection and Granule Details
7. Data Access Method
8. Granule Download Status
9. Granule Download by way of INPE STAC
10. View Granule Data



EDSC IDN Search Portal Demo on INPE Data Discovery

INPE Collection Discovery. Collection Discovery Results, Refinement by Platform, Select Collection, Granule Refinement by Temporal, Viewing Collection and Granule Details, Data Access Method, Granule Download Status, Granule Download by way of INPE STAC, and View Granule Data



IDN Search Portal INPE Collection-Granule DEMO

Purpose: Demonstrate the collaboration of multi-agency resources INPE STAC, FedEO API, and IDN Search Portal for collection discovery and granule download without authentication/authorization.



IDN Search Portal INPE Collection-Granule DEMO

IDN Search Portal: <https://search.earthdata.nasa.gov/search?portal=idn>

The screenshot displays the Earthdata Search interface. At the top, the search term "BR/INPE" is entered in the search bar. The results show 53,247 matching collections. The first three results are Sentinel-1A and Sentinel-1B slant-range products, and the fourth is ECOSTRESS Land Surface Temperature and Emissivity data. The interface includes a sidebar with filters for Organization, Processing Levels, and Data Format. A map on the right shows the Indian Ocean region. The footer contains version information, search time, and NASA contact details.

Organization	Collection Name	Granules	Start Date	Status
BR/INPE	SENTINEL-1A_SLC	1,760,158	2014-04-03	ongoing
BR/INPE/DAS	SENTINEL-1B_SLC	789,393	2016-04-25	2021-12-24
BR/INPE/DSR	SENTINEL-1A_DUAL_POL_GRD_HIGH_RES	1,512,900	2014-04-03	ongoing
BR/INPE/DGI	ECOSTRESS Land Surface Temperature and Emissivity Daily L2 Global 70m V001	475,767	2018-07-09	ongoing



INPE Collection Discovery

The user can either refine searches for INPE collections by (see red boxes):

1. Typing BR/INPE into the free-text box and selecting the desired facet element.
2. Or, selecting Organization Data Center facet values starting with "BR/INPE".

The collection results will be narrowed down to only show the INPE collections.

The screenshot displays the Earthdata Search interface. At the top, the search bar contains 'BR/INPE', and the results show 53,247 matching collections. The interface is divided into a left sidebar with facets, a main results pane, and a right-side map. The facets on the left include 'Organization' with values like BR/INPE, BR/INPE/DAS, BR/INPE/DSA, BR/INPE/CPTEC, BR/INPE/DSR, BR/INPE/DGI, BR/INPE/DAE/FISAT, BR/IME, and DOI/USGS/ASC/BR. The main results pane lists several collections, including SENTINEL-1A_SLC, SENTINEL-1B_SLC, SENTINEL-1A_DUAL_POL_GRD_HIGH_RES, and ECOSTRESS Land Surface Temperature and Emissivity Daily L2 Global 70m V001. The map on the right shows a satellite view of the Indian Ocean region, with a hand cursor hovering over the water. The interface includes navigation controls like zoom in/out, home, and search, and a footer with version information and accessibility statements.

INPE Collection Discovery Results

IDN Search Portal: search.earthdata.nasa.gov/search?portal=idn&q=BR/INPE&fdc=BR%252FINPE%252FDGI!BR%252FINPE%252FDAS!BR%252FINPE!ESA%252FESRIN!BR%252FINPE...

EARTHDATA SEARCH

Find a DAAC

Earthdata Login

IDN (CEOS International Directory Ne...) 74 Matching Collections

Showing 60 of 74 matching collections

BR/INPE

Keywords
Platforms
Instruments
Organizations 8 Selected
Projects
Processing Levels

- BR/INPE 31
- BR/INPE/CPTEC 8
- BR/INPE/DAE/FISAT 1
- BR/INPE/DAS 1
- BR/INPE/DGI 27
- BR/INPE/DSA 2
- BR/INPE/DSR 4
- DOC/NOAA 1
- DOI/USGS 1
- ESA/ESRIN 10

CBERS/WFI - Level-4-SR - Data Cube - LCF 8 days
Int'l / Interagency 2020-01-01 to 2024-05-31
Earth Observation Data Cube generated from CBERS-4/WFI and CBERS-4A/WFI Level-4 SR products over Brazil extension. This dataset is provided i...
CEOS - CBERS-WFI-8D-1 vNA - BR/INPE

CBERS-4/WFI - Level-4-SR - Data Cube - LCF 16 days
Int'l / Interagency 2016-01-01 to 2024-05-23
Earth Observation Data Cube generated from CBERS-4/WFI Level-4 SR product over Brazil extension. This dataset is provided in Cloud Optimized...
CEOS - CBERS4-WFI-16D-2 vNA - BR/INPE

CHARTER - WFI
Int'l / Interagency 2024-04-20 to 2024-05-20
This collection contains images from the WFI sensor onboard the satellites CBERS-4, CBERS-4A and AMAZONIA-1 over Brazil. The data is processed b...
CEOS - charter-wfi-1 vNA - BR/INPE

CHARTER - MUX
Int'l / Interagency 2024-01-01 to 2024-05-14
This collection contains images from the CBERS-4/MUX over Brazil. The data is processe...
CEOS - charter-mux-1 vNA - BR/INPE

Looking for more collections? Leave the IDN Portal

v24.3.3-6 · Search Time: 1.2s · NASA Official: Stephen Berrick · FOIA · NASA Privacy Policy · USA.gov

Earthdata Access: A Section 508 accessible alternative



INPE Collection Refinement by Platform

Refine by Platform using client Filter Collections feature (see red boxes):

1. Click on Platforms
2. Then click on Space-based Platform
3. Finally click on AMAZONIA-1

The results will be narrowed down to only show the INPE AMAZONIA-1 platform collections.

The screenshot displays the EarthData Search interface. The search results show two collections: 'AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF' and 'CHARTER - WFI'. The 'Filter Collections' sidebar on the left is expanded to the 'Platforms' section, which is highlighted with a red box. Under 'Space-based Platforms', 'Earth Observation Satellites' is selected, and 'Amazonia-1' is checked, also highlighted with a red box. The search results are filtered to show only these two collections. The interface includes a search bar, navigation icons, and a map of the region.

Selecting INPE Collection: AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF

Selecting from resulting INPE
AMAZONIA-1/WFI
collection:

1. Scroll down to desired collection.
2. Click on collection (see red box).

The screenshot displays the Earthdata Search interface. On the left, a sidebar shows search filters for 'BR/INPE'. Under 'Filter Collections', 'Space-based Platforms' is checked, and 'Earth Observation Satellites' is selected. 'Amazonia-1' is checked with a count of 2. The main content area shows '2 Matching Collections'. The first collection, 'AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF', is highlighted with a red box. Its details include: 'Int'l / Interagency 2024-01-01 to 2024-06-09', 'AMAZONIA-1/WFI Surface Reflectance product over Brazil. L4 SR product provides orthorectified surface reflectance images. This dataset is provided a...', and 'CEOS - AMZ1-WFI-L4-SR-1 vNA - BR/INPE'. The second collection, 'CHARTER - WFI', is also visible. A map of the world is shown on the right, and a footer contains search statistics and accessibility information.

Granule Refinement by Temporal

Refine by time using client Filter Granules feature (see red box):

1. Enter temporal values
2. Temporal format:
YYYY-MM-DD HH:mm:ss

The results will be narrowed down to only show the granules within the temporal range.

The screenshot displays the EarthData Search interface. The search results are for 'AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF'. A 'Filter Granules' panel is open, showing a temporal range from '2024-09-19 00:00:00' to '2024-09-19 23:59:59'. The results are narrowed down to 9 granules, all with a 'START' time of '2024-09-19 00:00:00' and an 'END' time of '-'. A red box highlights the 'Filter Granules' panel. The interface also shows a map of the Amazon region and a timeline at the bottom.

Granule ID	START	END
AMAZONIA_1_WFI_20240919_036_015	2024-09-19 00:00:00	-
AMAZONIA_1_WFI_20240919_036_016	2024-09-19 00:00:00	-
AMAZONIA_1_WFI_20240919_036_017	2024-09-19 00:00:00	-
AMAZONIA_1_WFI_20240919_036_018	2024-09-19 00:00:00	-
AMAZONIA_1_WFI_20240919_036_019	2024-09-19 00:00:00	-
AMAZONIA_1_WFI_20240919_036_020	2024-09-19 00:00:00	-

View Collection, Granule Details or Download Data

The user can choose to:

1. View the collection and granule details by clicking on the 3 vertical dots (see red boxes).
2. Or, click Download All to proceed to download data files (see green box).

Collection and Granule Details display

The screenshots illustrate the user interface for viewing and downloading data. The top-left screenshot shows search results for 'AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF' with a red box around a vertical ellipsis icon. The top-right screenshot shows a granule list with a red box around a vertical ellipsis icon. The middle-left screenshot shows a granule detail view with a red box around a vertical ellipsis icon. The middle-right screenshot shows a granule detail view with a green box around the 'Download All' button. The bottom-right screenshot shows the 'AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF' collection details page with a green box around the 'Download Data' button. Red arrows indicate the flow of actions between these screens.



Data Access Method

The client automatically selects Direct Download for the user (see red box).

The user can change the download options or continue with Download Data (see green box).

The screenshot displays the Earthdata Search interface. At the top, it shows the NASA logo, 'EARTHDATA', and 'Find a DAAC'. Below this is the 'EARTHDATA SEARCH' header. The main content area is divided into two columns. The left column shows a project titled 'Untitled Project' with 9 granules and 1 collection. Below this, a specific dataset 'AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF' is selected, with 9 granules and an 'Edit Options' button. The right column is titled 'Edit Options' and contains two numbered steps: '1 Choose how you want to download your data' and '2 Select a service and customize options'. Under step 1, the 'Download all data' option is selected, with a sub-option 'Direct download of all selected data'. Under step 2, a message states 'No customization options are available for the selected access method.' At the bottom of the interface, there is a green 'Download Data' button, which is highlighted with a red box. To its right, it shows 'Collection 1 of 1' and a 'Done' button. The background of the interface is a satellite map of the Middle East and surrounding regions. At the bottom, there is a footer with version information 'v24.3.3-6', search time '2.7s', and various links including 'NASA Official: Stephen Berrick', 'FOIA', 'NASA Privacy Policy', and 'USA.gov'. A note at the bottom right states 'Earthdata Access: A Section 508 accessible alternative'.



Granule Download Status

The Download status page shows the user:

1. Status of the order
2. Access Method
3. Number of Granules

The user can choose the Download method (see red box):

1. Download files through direct links.
2. Or, copy a script from the Download Script tab that can run on the user's device.

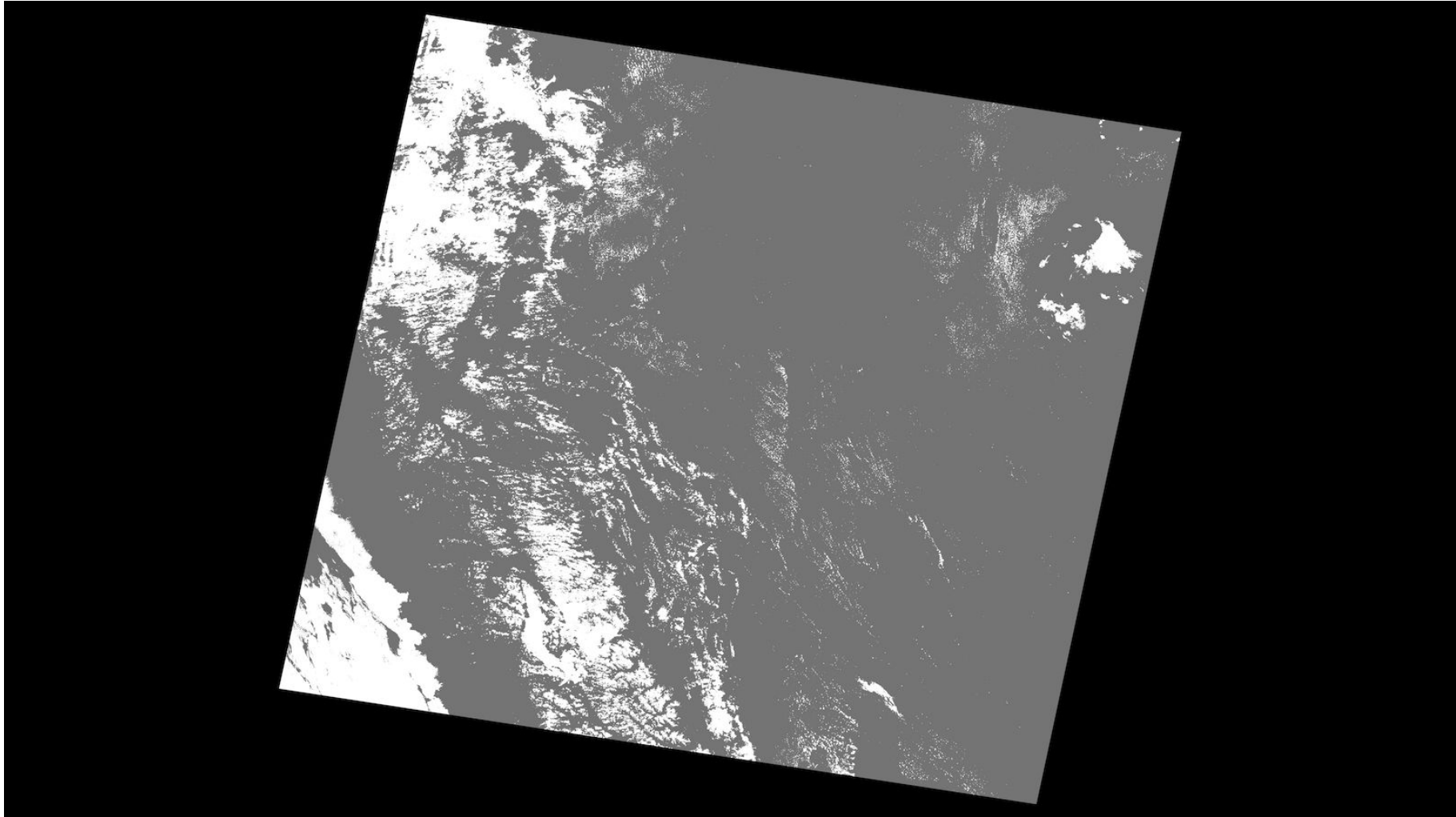
The screenshot shows the Earthdata Search interface for a specific download order. The browser address bar shows the URL: search.earthdata.nasa.gov/downloads/3496443304. The page title is "Download Status". Below the title, there is a message: "This page will automatically update as your orders are processed. The Download Status page can be accessed later by visiting <https://search.earthdata.nasa.gov/downloads/3496443304> or the Download Status and History page."

The main content area displays the order details for "AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF". A table shows the status as "Complete (100%)", the access method as "Download", and the number of granules as "9 Granules". Below this, there is a message: "Download your data directly from the links below, or use the provided download script."

Two tabs are visible: "Download Files" (which is selected and highlighted with a red box) and "Download Script". Below the tabs, a progress bar shows "Retrieved 9 files for 9 granules" at 100% completion. A "Download Files" button is visible, along with "Copy", "Save", and "Expand" options. A list of 9 granule download links is displayed, each starting with https://data.inpe.br/bdc/data/amazonia_wfi/2024_09/AMAZONIA_1_WFI_RAW_2024_09_19.13_49_30_CB10/036_015_0/4_BC_LCC_WGS.




View AMAZONIA-1/WFI - Level-4-SR - Cloud Optimized GeoTIFF



National Aeronautics and
Space Administration

National Institute for Space Research (INPE). 2024. AMAZONIA-1/WFI Surface Reflectance product over Brazil. L4 SR product provides orthorectified surface reflectance images. This dataset is provided as Cloud Optimized GeoTIFF (COG). <https://data.inpe.br/stac/browser/collections/AMZ1-WFI-L4-SR-1>



Thank You! Any Questions?

Contact CEOS WGISS DAIG
(access-system@wgiss.ceos.org)
for any further questions.

CONTACT

Michael.P.Morahan@nasa.gov

WEBSITE

[https://ceos.org/ourwork/workinggroups/wgiss/access/
international-directory-network/](https://ceos.org/ourwork/workinggroups/wgiss/access/international-directory-network/)

EARTHDATA

earthdata.nasa.gov

Thank You