

How to Access Landsat Data from USGS EarthExplorer



Landsats 1-7:
*Multispectral over previous time
periods
(Mid 1972 – 6th April 2022)*



Landsat 8
*Multispectral (e.g. Optical)
Feb 2013 - Current*

Landsat 9 :
*Latest mission
Sept 2021 - Current*

*+ EarthExplorer has many other
USGS datasets e.g. Aerial surveys,
DTMs etc*

Go to <https://earthexplorer.usgs.gov/> and Login / Create an Account



EarthExplorer

System Notification (1) Help Feedback Login

Search Criteria

Data Sets

Additional Criteria

Results

1. Enter Search Criteria

To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area (for advanced map tools, view the [help documentation](#)), and/or choose a date range.

Geocoder

KML/Shapefile Upload

Select a Geocoding Method

Feature (GNIS)

Search Limits: The search result limit is 100 records; select a Country, Feature Class, and/or Feature Type to reduce your chances of exceeding this limit.

US Features

World Features

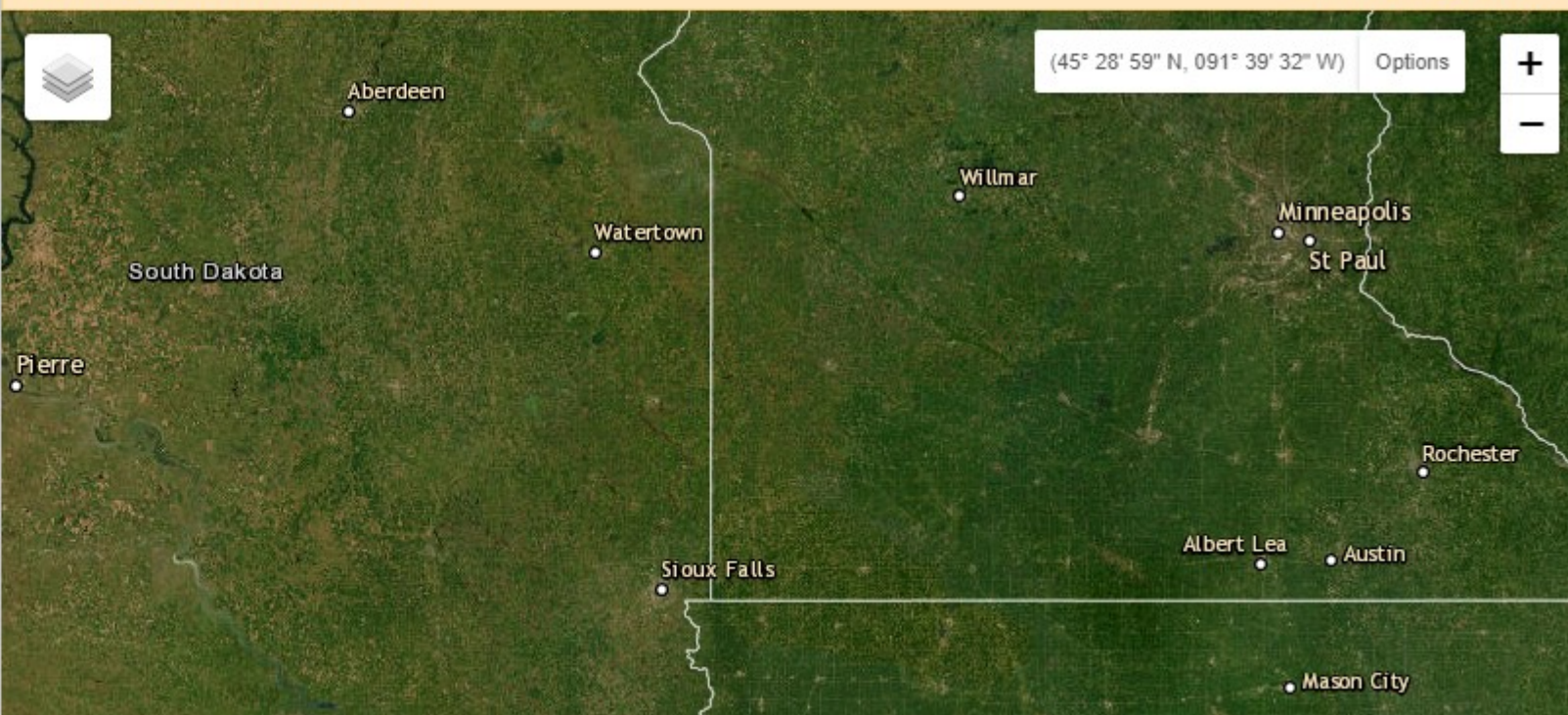
Feature Name

(use % as wildcard)

State

Search Criteria Summary (Show)

Clear Search Criteria



Select an **Area of Interest (AOI)**

Example below = drop pin to select a coordinate

EarthExplorer

Manage Criteria

System Notification (1)

Item Basket (0)

Help

Feedback

Logout [rwilks-earthobs]

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US Features

World Features

Feature Name

(use % as wildcard)

Country

All

Feature Class

All

Feature Type

All

Show

Clear

Polygon

Circle

Predefined Area

Degree/Minute/Second

Decimal

1. Lat: 62° 17' 04" N, Lon: 006° 36' 19" W

Use Map

Add Coordinate

Clear Coordinates

Search Criteria Summary (Show)

Clear Search Criteria

(62° 05' 41" N, 006° 47' 22" W)

Options

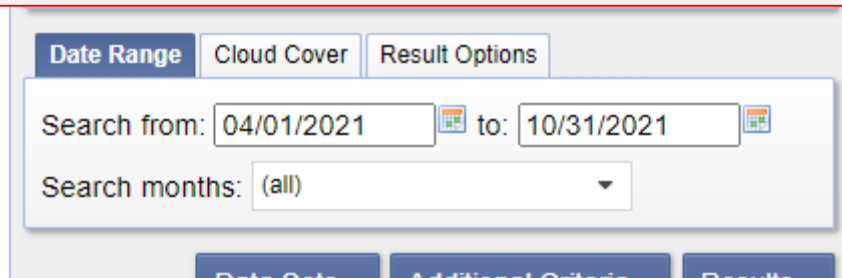
+

-

FAROE ISLANDS

Torshavn

Select a **Date Range**

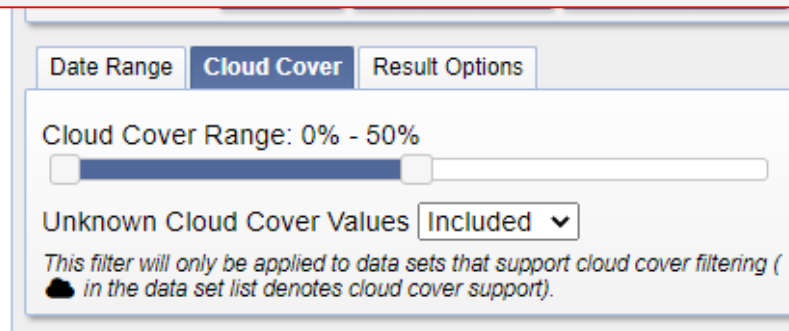


The screenshot shows the 'Date Range' tab selected. It contains a 'Search from' field with the date '04/01/2021', a 'to' field with the date '10/31/2021', and a 'Search months' dropdown menu set to '(all)'. Below these fields are three buttons: 'Data Sets', 'Additional Criteria', and 'Results'.



Select a **Cloud Cover %**

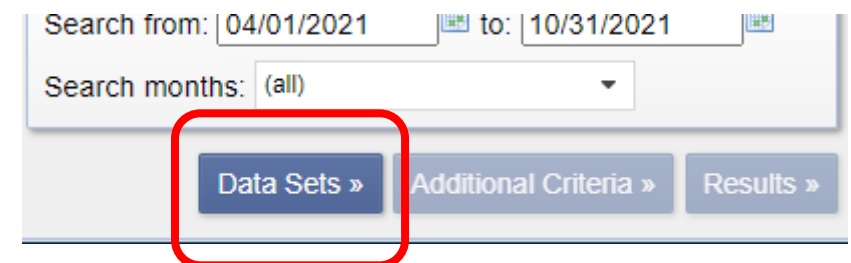
Note: For very low % covers e.g. <20% (esp. for Faroe Islands) you will likely need wider date ranges



The screenshot shows the 'Cloud Cover' tab selected. It features a 'Cloud Cover Range' slider set from 0% to 50%. Below the slider is a dropdown menu for 'Unknown Cloud Cover Values' set to 'Included'. A note at the bottom states: 'This filter will only be applied to data sets that support cloud cover filtering (☁ in the data set list denotes cloud cover support)'. The 'Data Sets', 'Additional Criteria', and 'Results' buttons are visible at the bottom.



Click 'Data Sets' to select which USGS Data Set you are searching.
e.g. Landsat 8, Aerial Surveys, Other USGS data products etc.



This screenshot shows the search interface with the 'Data Sets' button highlighted by a red rectangle. The 'Search from' field is '04/01/2021', the 'to' field is '10/31/2021', and the 'Search months' dropdown is '(all)'. The 'Data Sets', 'Additional Criteria', and 'Results' buttons are at the bottom.

Search Criteria

Data Sets

Additional Criteria

Results

2. Select Your Data Set(s)

Check the boxes for the data set(s) you want to search. When done selecting data set(s), click the *Additional Criteria* or *Results* buttons below. Click the plus sign next to the category name to show a list of data sets.

☐ Use Data Set Prefilter [\(What's This?\)](#)

Data Set Search:

Aerial Imagery

AVHRR

CEOS Legacy

Commercial Satellites

Declassified Data

Digital Elevation

Digital Line Graphs

Digital Maps

EO-1

Global Fiducials

HCMM

ISERV

Land Cover

Landsat

Landsat Collection 2 Level-3 Science Products

Landsat C2 U.S. Analysis Ready Data (ARD)

Landsat Collection 2 Level-2

Landsat Collection 2 Level-1

Landsat C2 Atmospheric Auxiliary Data

Landsat Legacy

☒ Landsat 8-9 OLI/TIRS C2 L2

☐ Landsat 7 ETM+ C2 L2

☐ Landsat 4-5 TM C2 L2

Clear All Selected

Additional Criteria »

Results »

Select the **Data Set** you want

Want **Landsat 8-9 OLI/TIRS C2 L2**

-> We are using **Level 2 (L2)** products across our analysis. Levels 0,1,2,3 are consistent across multispectral satellite providers, however there may be subsets e.g. Level 2A, Level 2B in some.

-> Some examples of typical processing at different levels, atmospheric correction is applied for a Level 2 product.



Select for **Results**

View the footprint (e.g. Extent) of an image

Search Criteria

Data Sets

Additional Criteria

Results

4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

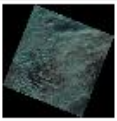
Show Result Controls

Data Set [Click here to export your results »](#)









Landsat 8-9 OLI/TIRS C2 L2

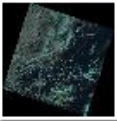
« First < Previous 1 of 1 Next > Last »

Displaying 1 - 9 of 9











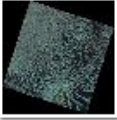
ID:
LC08_L2SP_209016_20211019_20211026_02_T2
Date Acquired: 2021/10/19
Path: 209
Row: 016














ID:
LC08_L2SP_210016_20211010_20211019_02_T1
Date Acquired: 2021/10/10
Path: 210
Row: 016






ID:
LC08_L2SP_210016_20210924_20210930_02_T2
Date Acquired: 2021/09/24
Path: 210
Row: 016



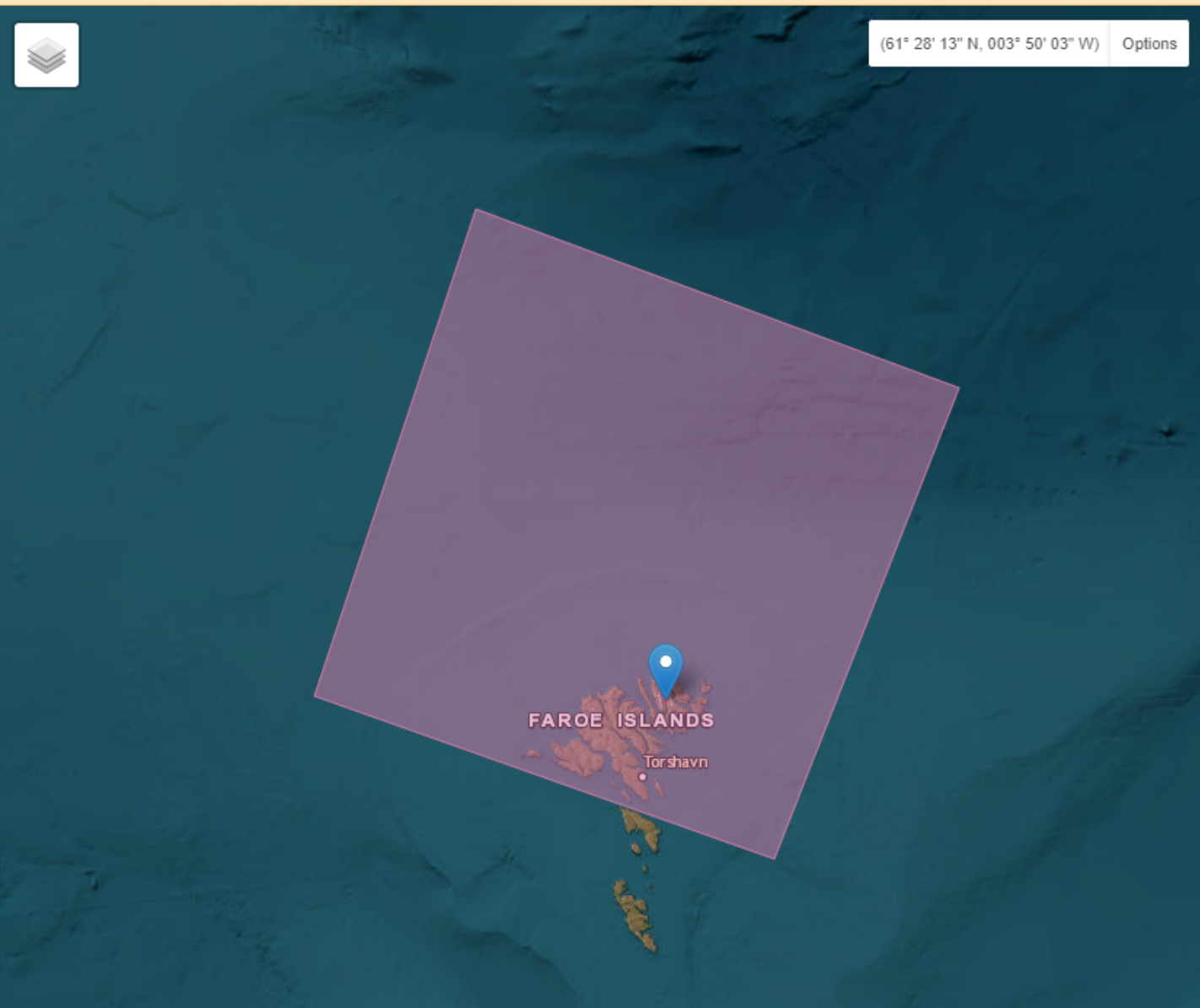


ID:
LC08_L2SP_209016_20210816_20210826_02_T2
Date Acquired: 2021/08/16

Search Criteria Summary (Show) Clear Search C



(61° 28' 13" N, 003° 50' 03" W) Options



View the image

Search Criteria Data Sets Additional Criteria **Results**

4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

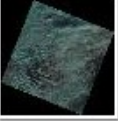
Show Result Controls ▾

Data Set [Click here to export your results »](#)






Landsat 8-9 OLI/TIRS C2 L2 ▾

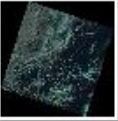
« First < Previous 1 of 1 Next > Last »

Displaying 1 - 9 of 9









ID:
LC08_L2SP_209016_20211019_20211026_02_T2
Date Acquired: 2021/10/19
Path: 209
Row: 016











ID:
LC08_L2SP_210016_20211010_20211019_02_T1
Date Acquired: 2021/10/10
Path: 210
Row: 016





ID:
LC08_L2SP_210016_20210924_20210930_02_T2
Date Acquired: 2021/09/24
Path: 210
Row: 016





ID:
LC08_L2SP_209016_20210816_20210826_02_T2
Date Acquired: 2021/08/16

Download image product

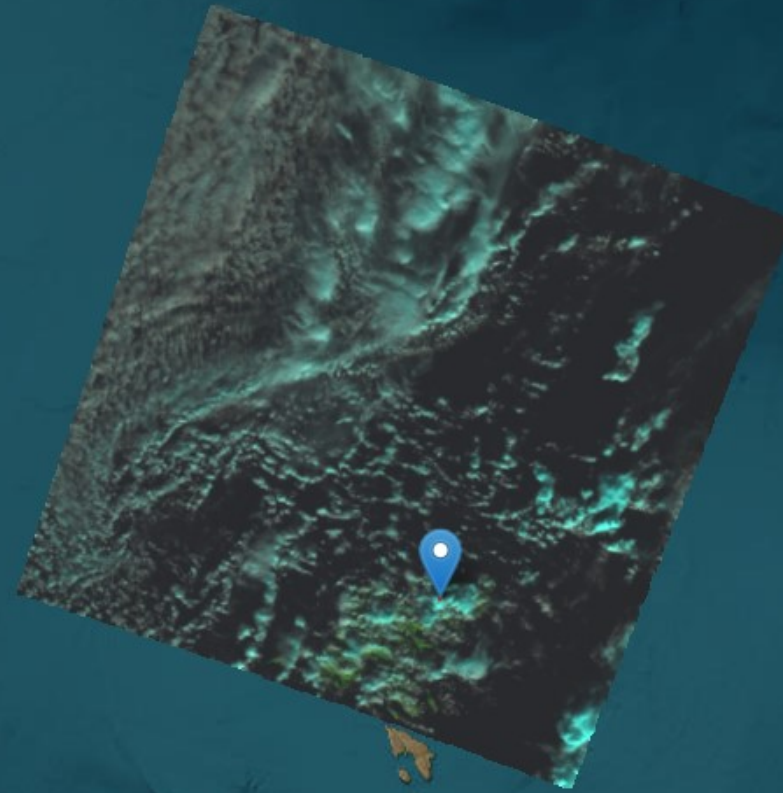
Search Criteria Summary (Show)

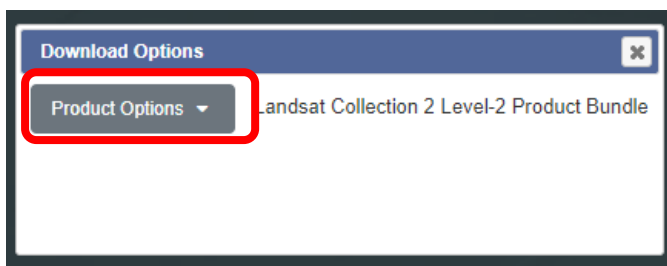
Clear Search C



(61° 21' 54" N, 009° 38' 06" W)

Options





Product Download Options for LC08_L2SP_210016_20211010_20211019_02_T1

Landsat Collection 2 Level-2 Product Bundle

814.31 MiB Landsat Collection 2 Level-2 Product Bundle

The following items are available for individual download

(Item Name Filter)

	89.64 MiB	LC08_L2SP_210016_20211010_20211019_02_T1_SR_B0.TIF Landsat Collection 2 Level-2 Band File
	89.41 MiB	LC08_L2SP_210016_20211010_20211019_02_T1_SR_B4.TIF Landsat Collection 2 Level-2 Band File
	89.13 MiB	LC08_L2SP_210016_20211010_20211019_02_T1_SR_B5.TIF Landsat Collection 2 Level-2 Band File
	86.28 MiB	LC08_L2SP_210016_20211010_20211019_02_T1_SR_B6.TIF Landsat Collection 2 Level-2 Band File
	84.49 MiB	LC08_L2SP_210016_20211010_20211019_02_T1_SR_B7.TIF Landsat Collection 2 Level-2 Band File
	5.99 MiB	LC08_L2SP_210016_20211010_20211019_02_T1_SR_QA_AEROSOL.TIF Landsat Collection 2 Level-2 Band File

Add All to Bulk Close

A 'satellite image' is actually a data product, containing multiple files. You can either download the whole thing (top button), or download a selection individually. Brief explanation of files on next page

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Band Files

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B1.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B2.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B3.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B4.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B5.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B6.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_B7.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_B10.TIF
Landsat Collection 2 Level-2 Band File

Other Data

LC08_L2SP_210016_20211010_20211019_02_T1_ANG.txt
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_MTL.txt
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_MTL.xml
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_QA_PIXEL.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_QA_RADSAT.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_SR_QA_AEROSOL.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_ATRAN.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_CDIST.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_DRAD.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_EMIT.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_EMSD.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_QA.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_TRAD.TIF
Landsat Collection 2 Level-2 Band File

LC08_L2SP_210016_20211010_20211019_02_T1_ST_URAD.TIF