Preparing QGIS and Data Downloading

Japan Space Systems
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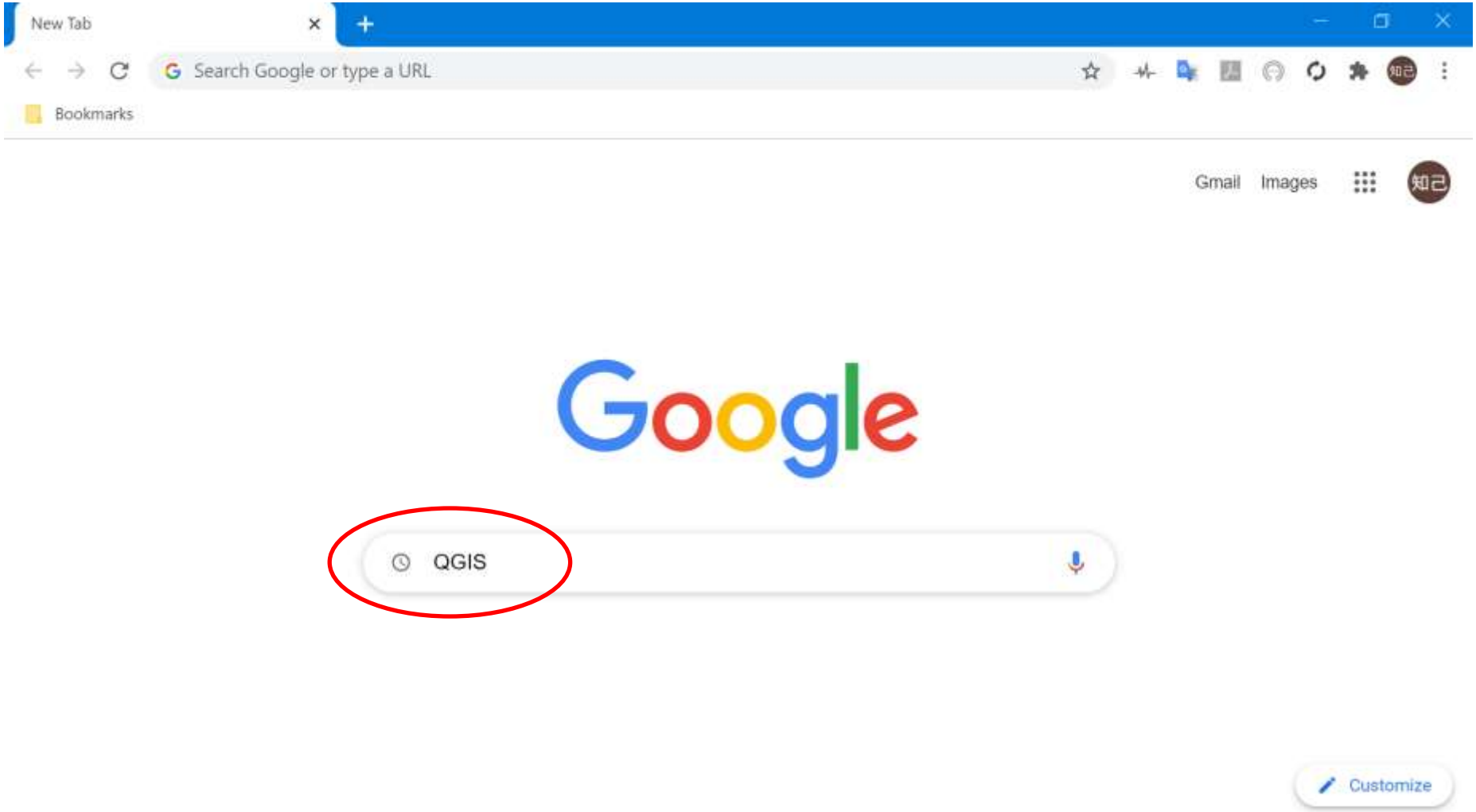
Contents

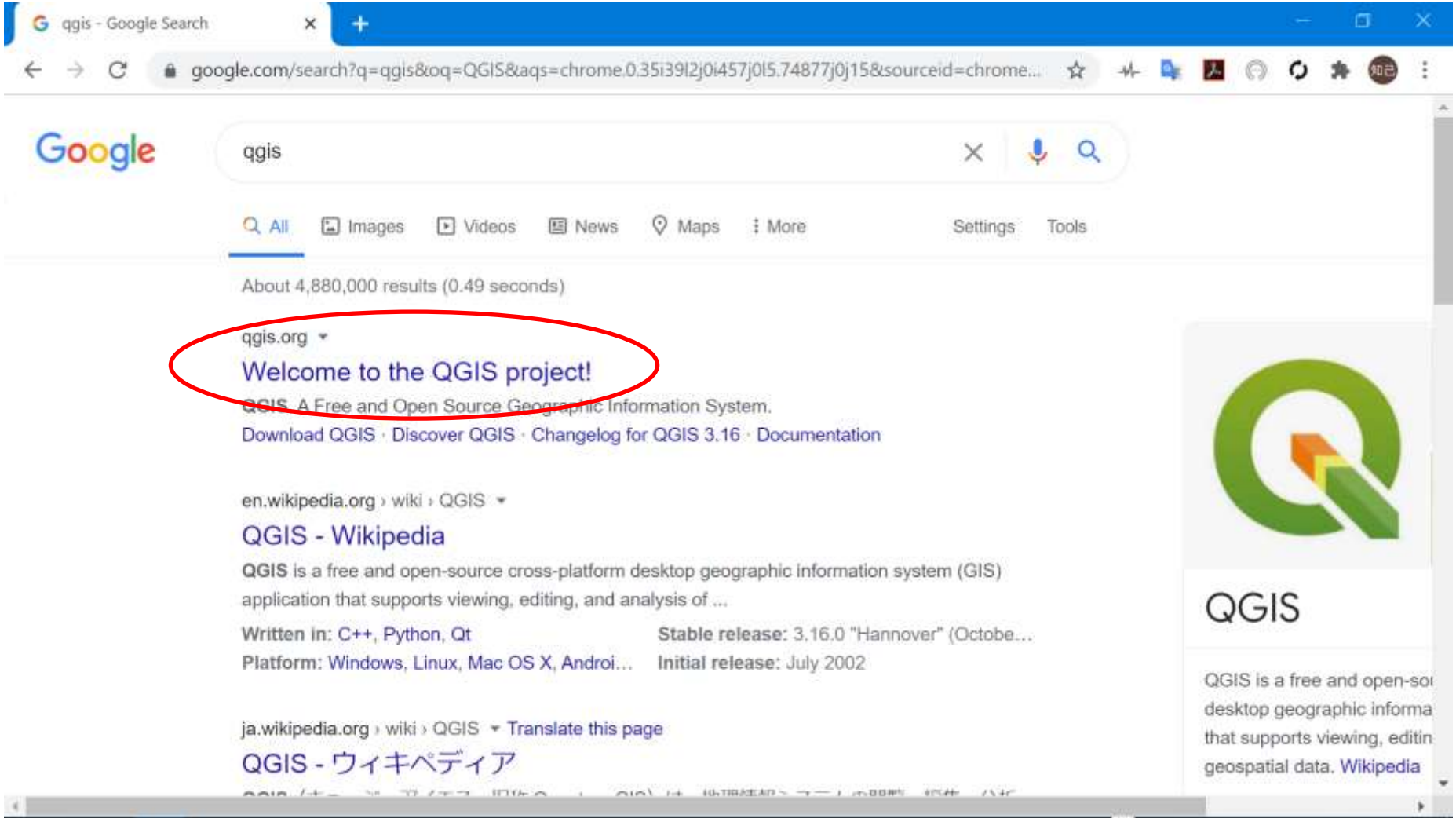
Downloading QGIS

- Search “QGIS”.



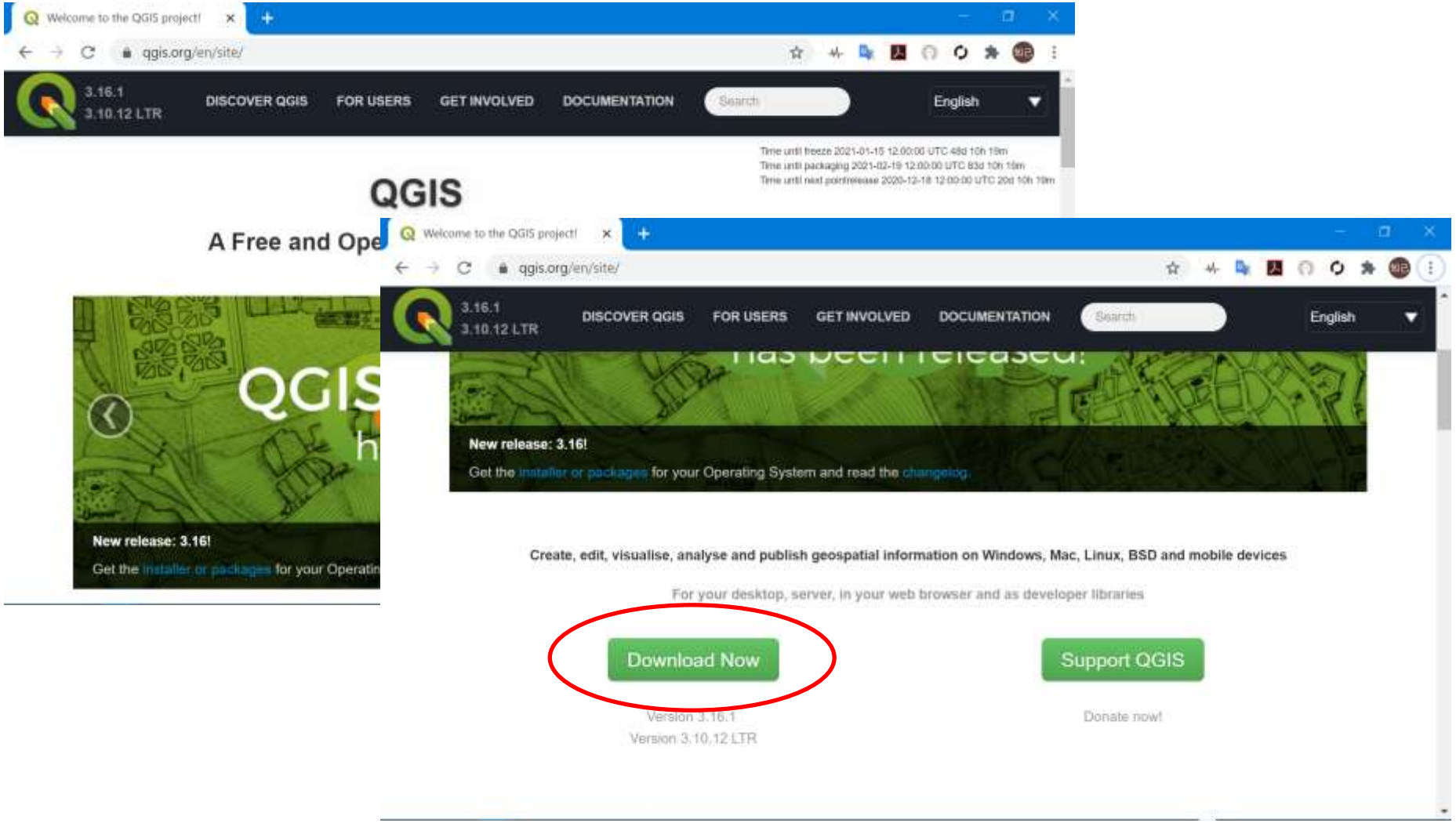
Downloading QGIS

- Open “Welcome to the QGIS project!” link.



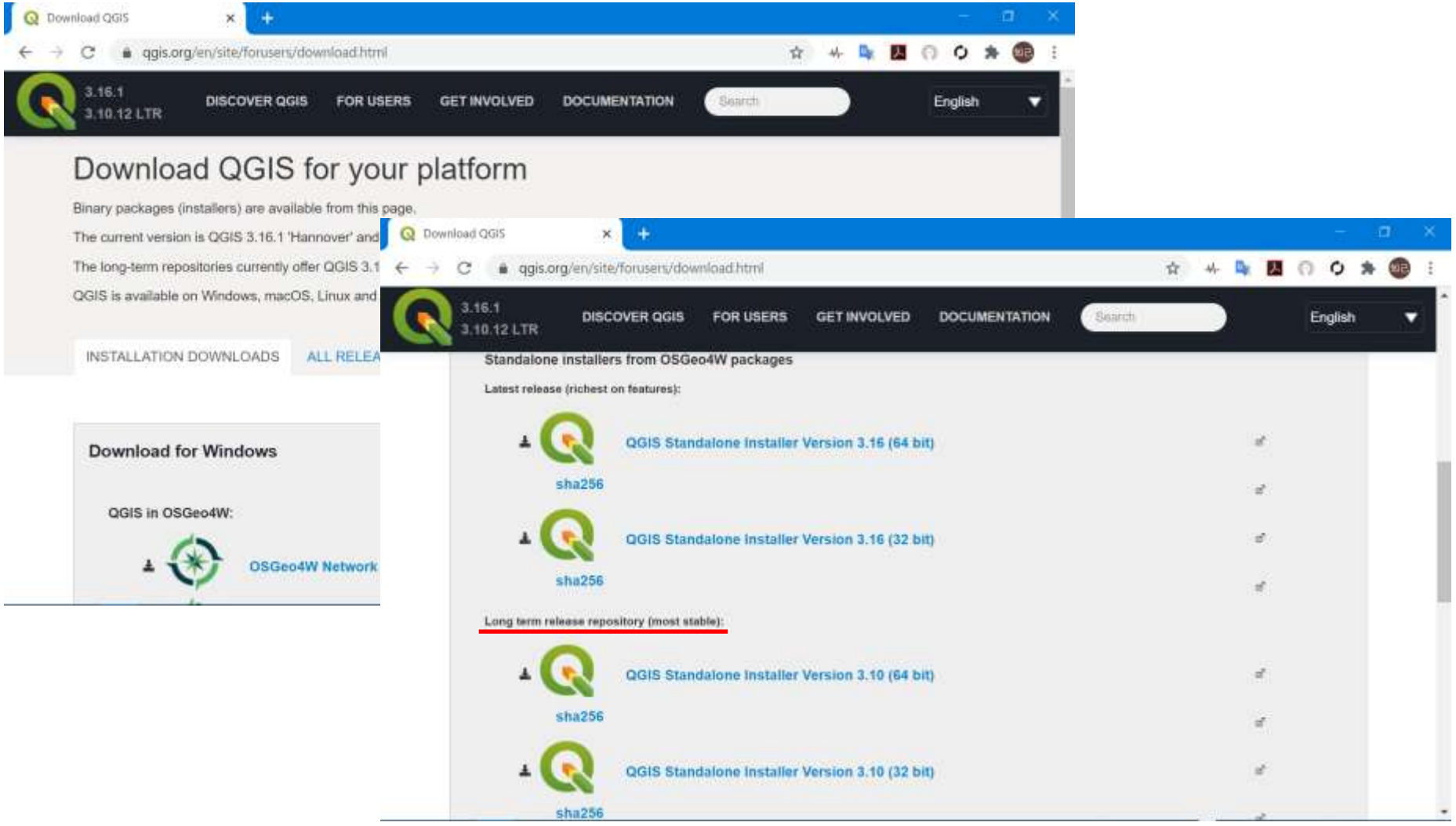
Downloading QGIS

- Scroll down and open “Download Now” link.



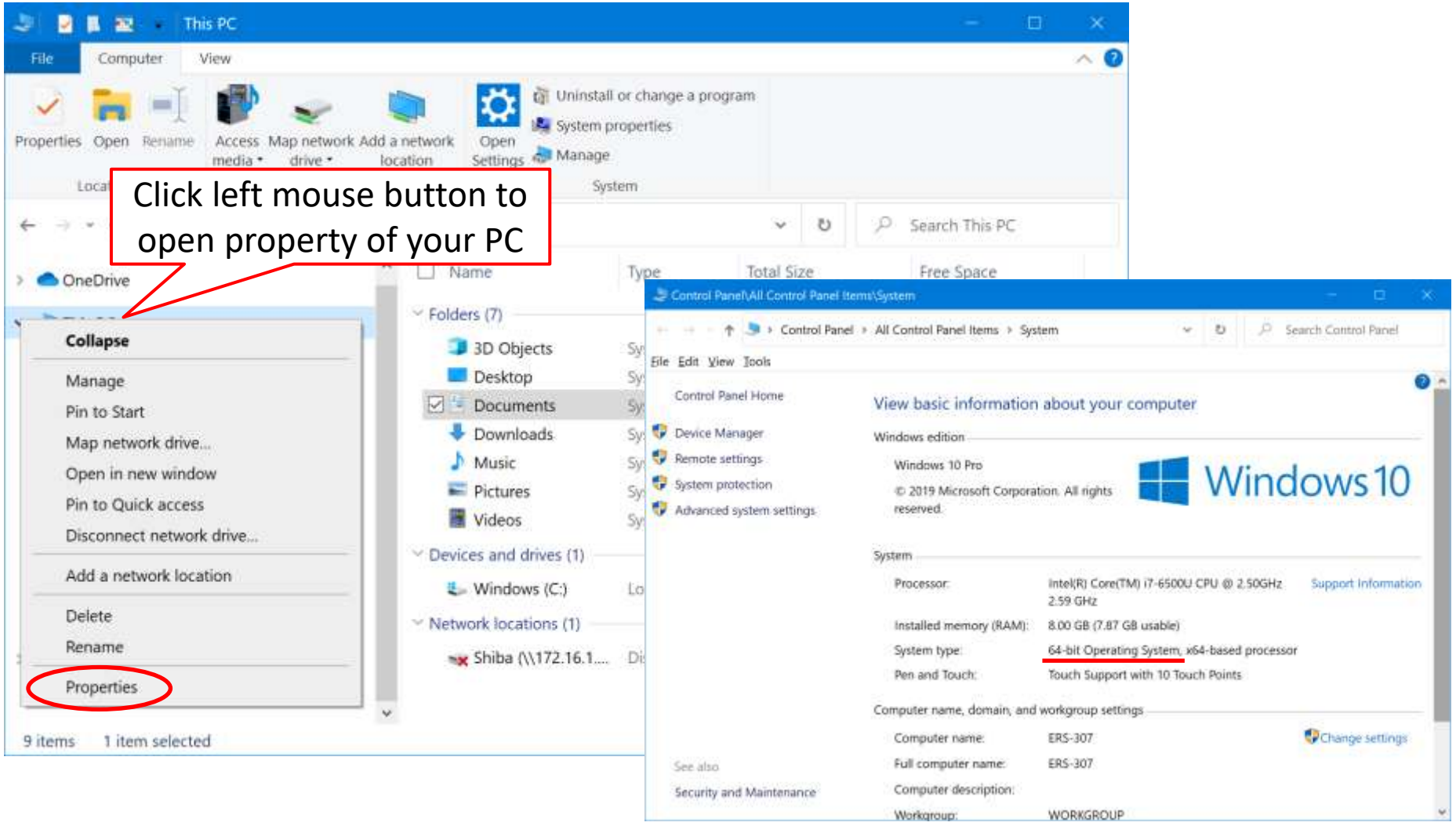
Downloading QGIS

- Scroll down and download QGIS installer.
  - Choose installer of 64bit or 32 bit depend on your windows os from the “Long term release repository”.



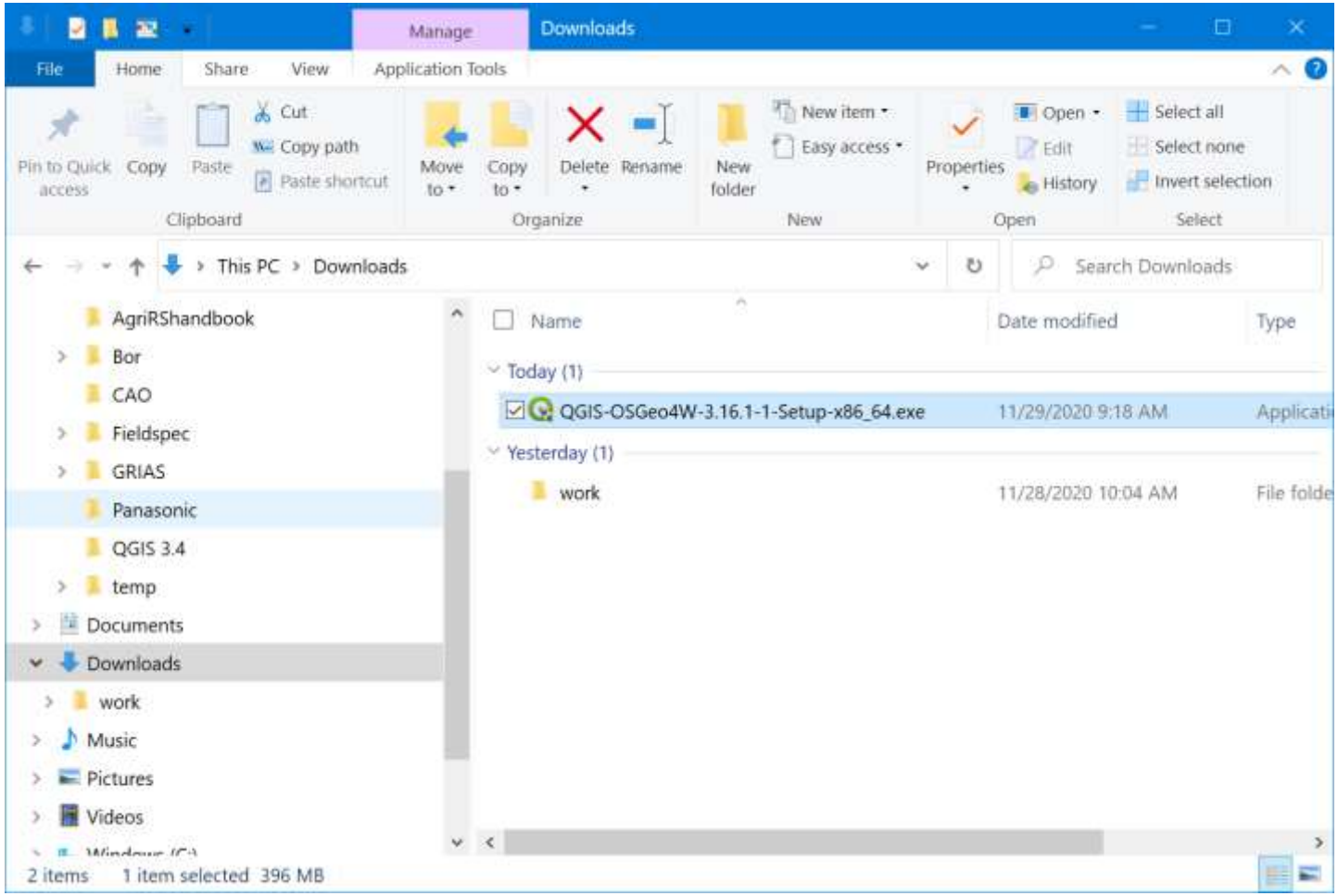
Downloading QGIS

- To confirm your windows, open properties of your PC with file explore.
  - Click right mouse button on “This PC” and select “Properties”.
  - See “system type”



Downloading QGIS

- QGIS installer is downloaded.

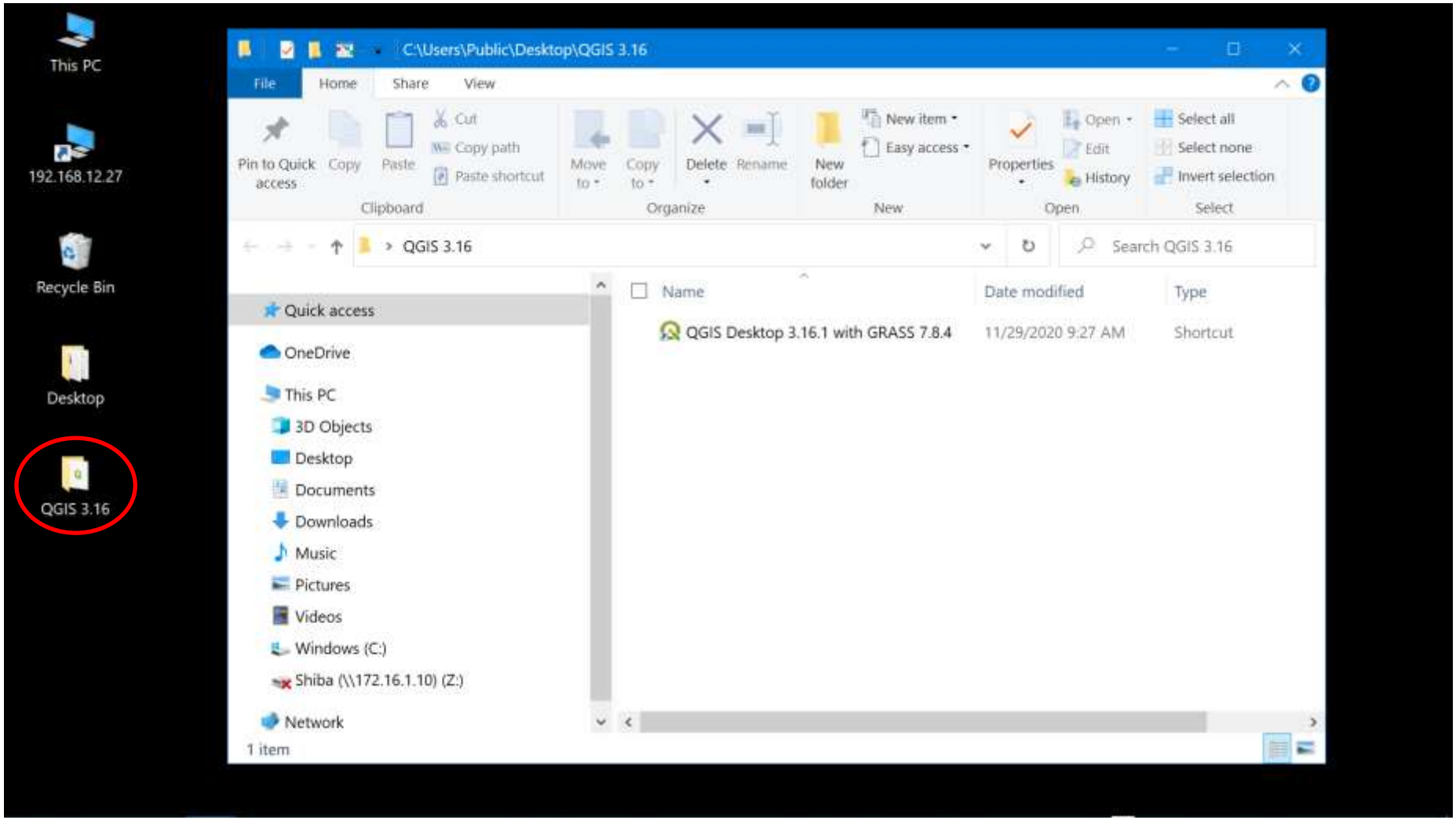


Installing QGIS

- Install QGIS step by step.

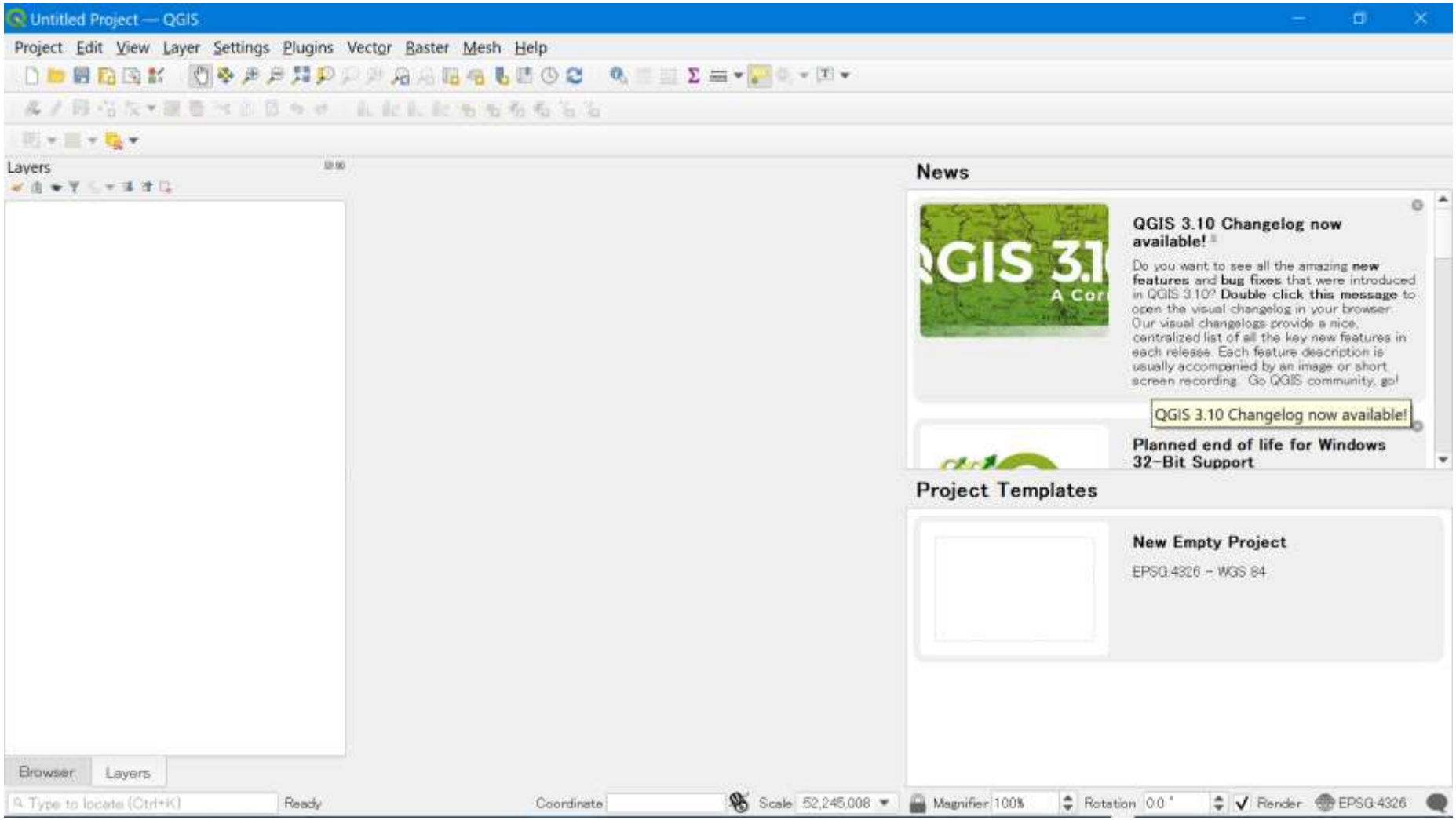
Installing QGIS

- QGIS folder is created on your PC desktop.



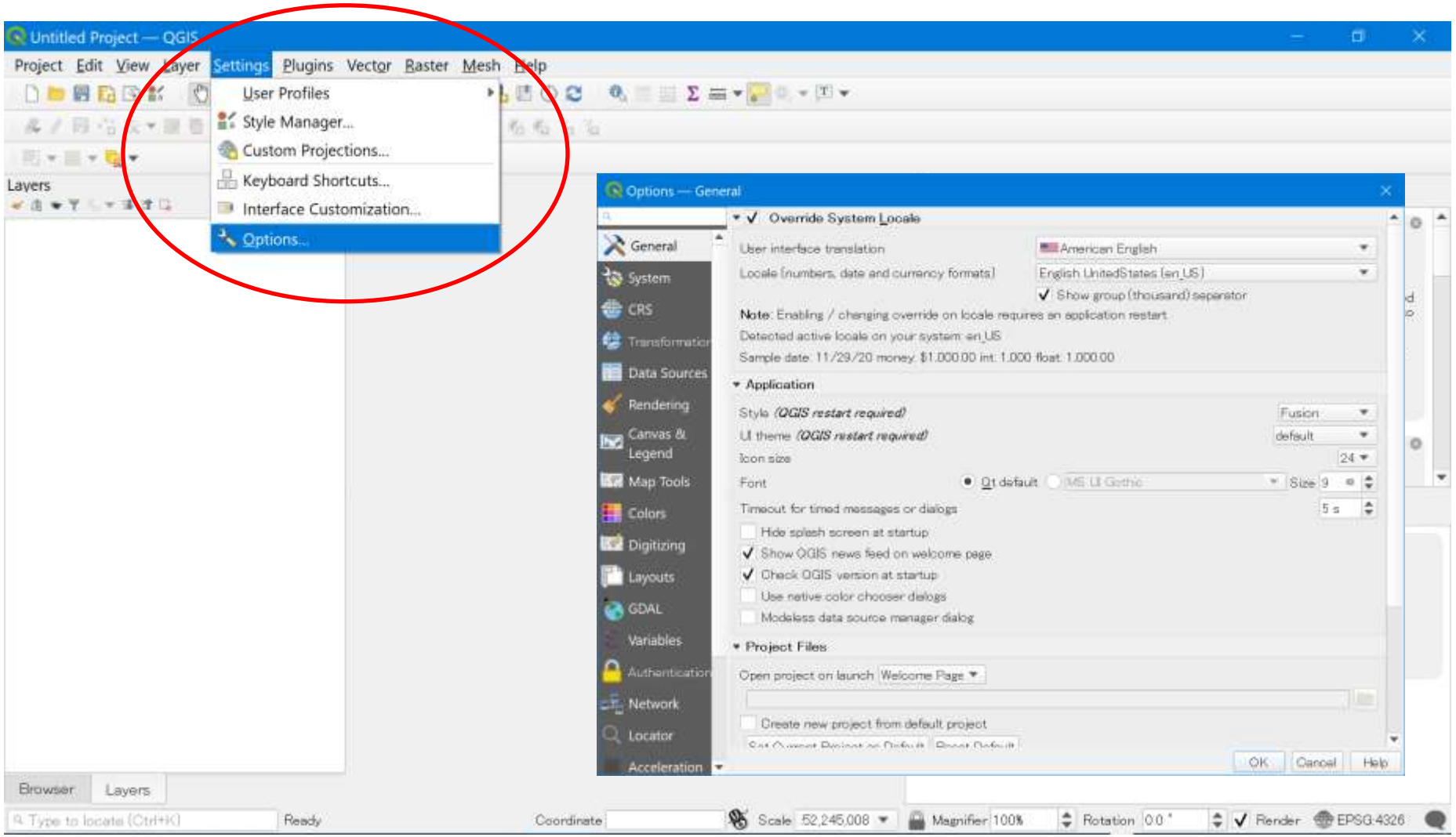
Installing QGIS

- Start QGIS.



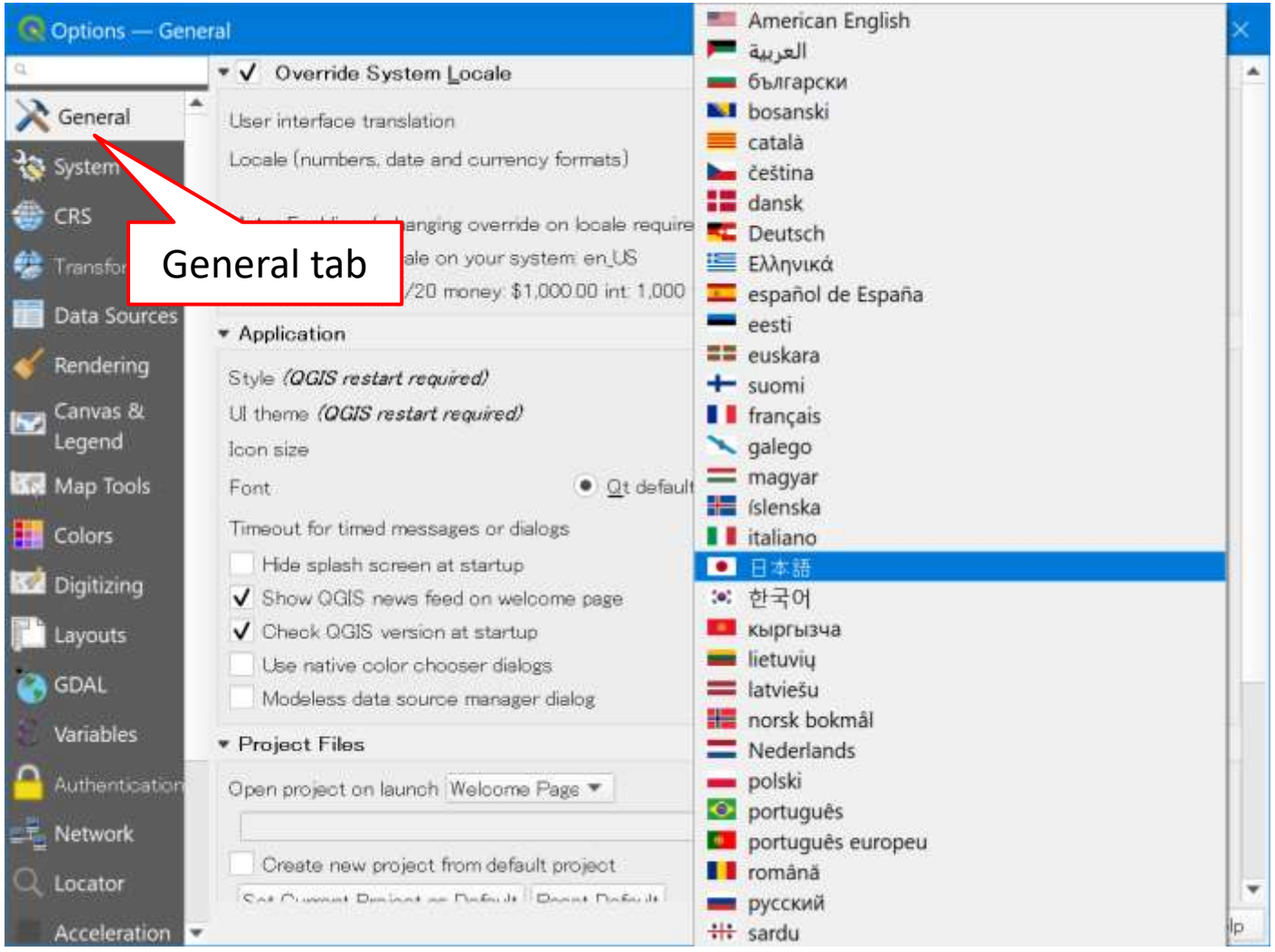
Setting up QGIS

- To change default settings, open options in Setting menu.



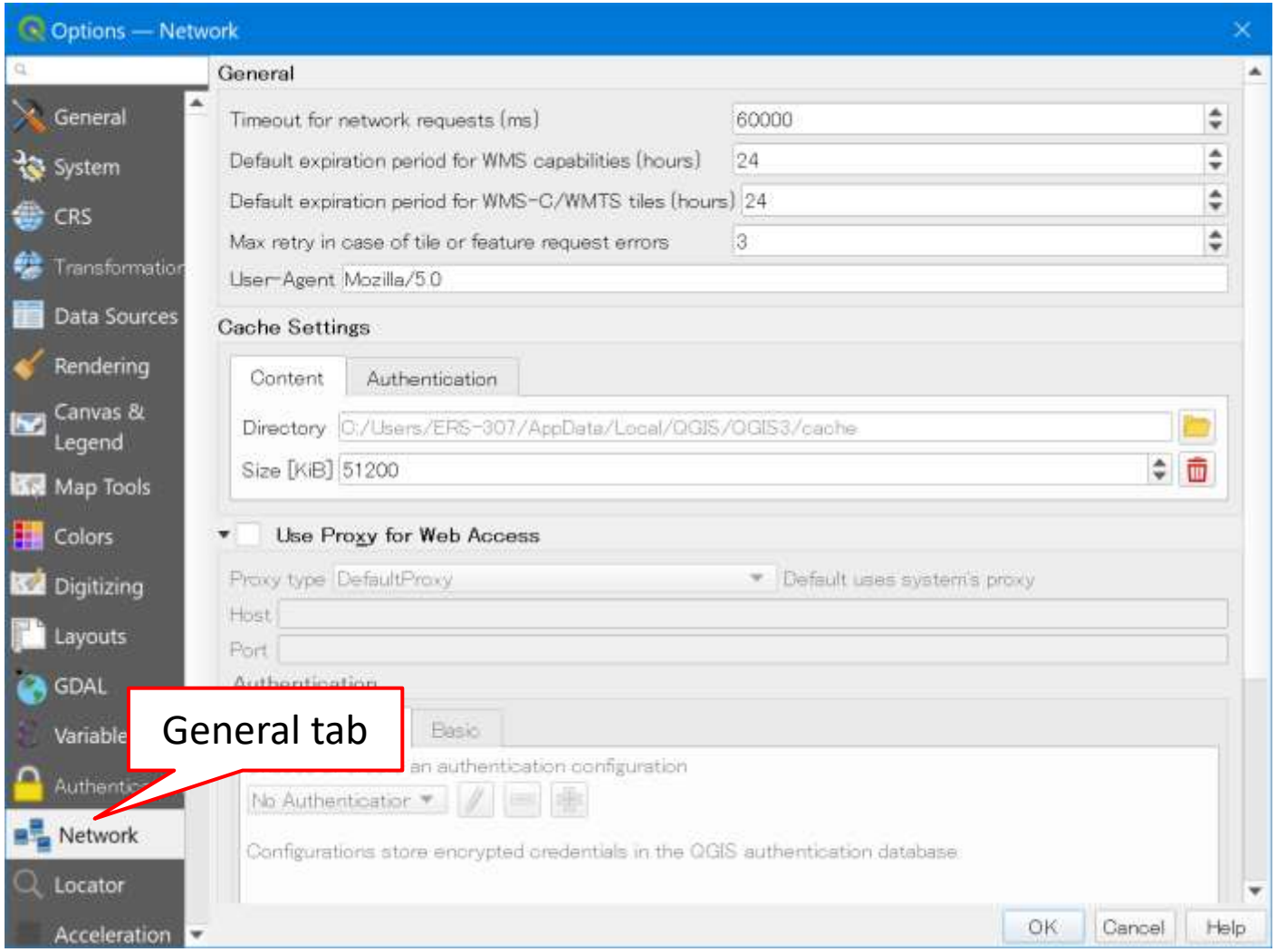
Setting up QGIS

- For example, you can change language at General tab.



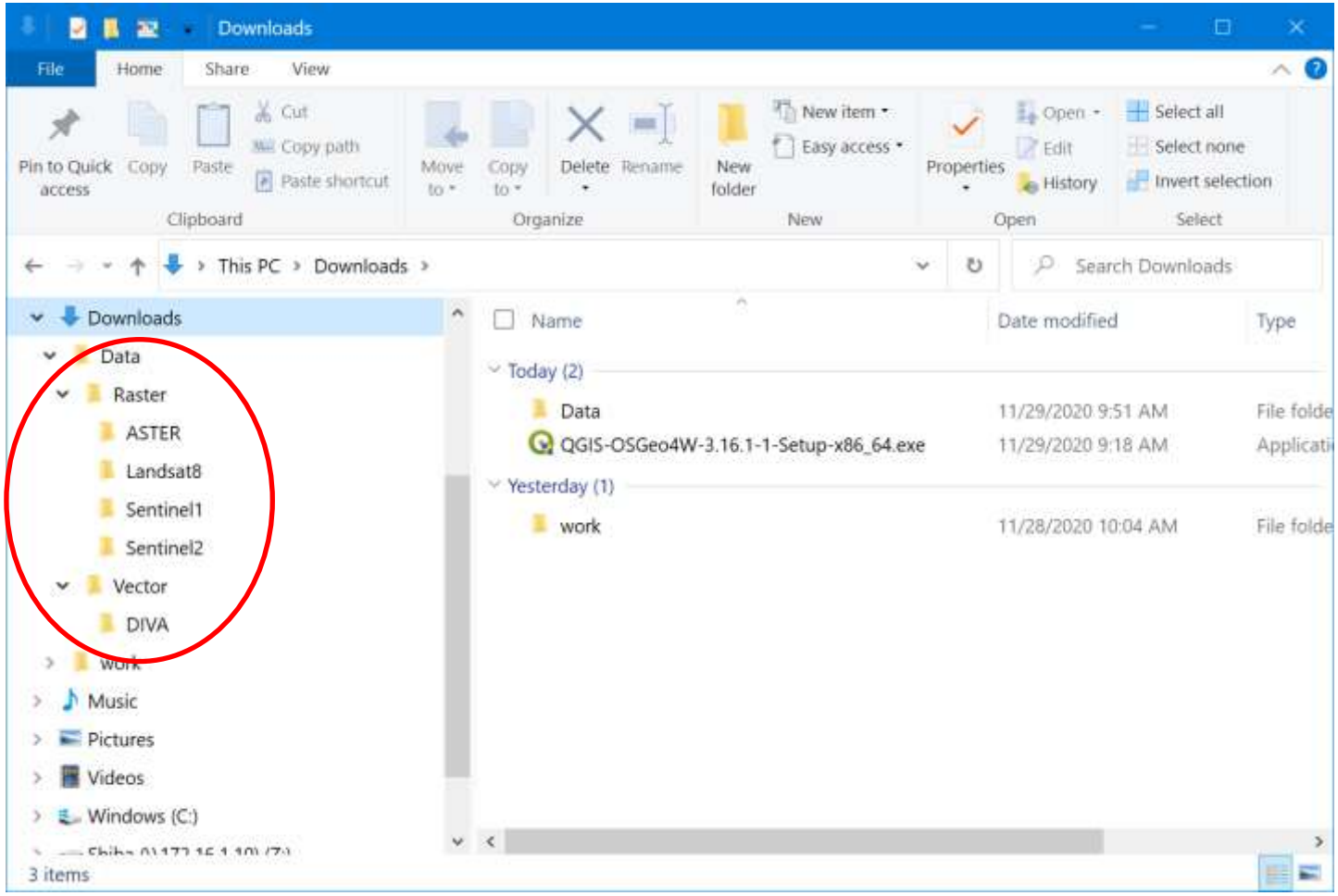
Setting up QGIS

- For example, you can use proxy at Network tab.



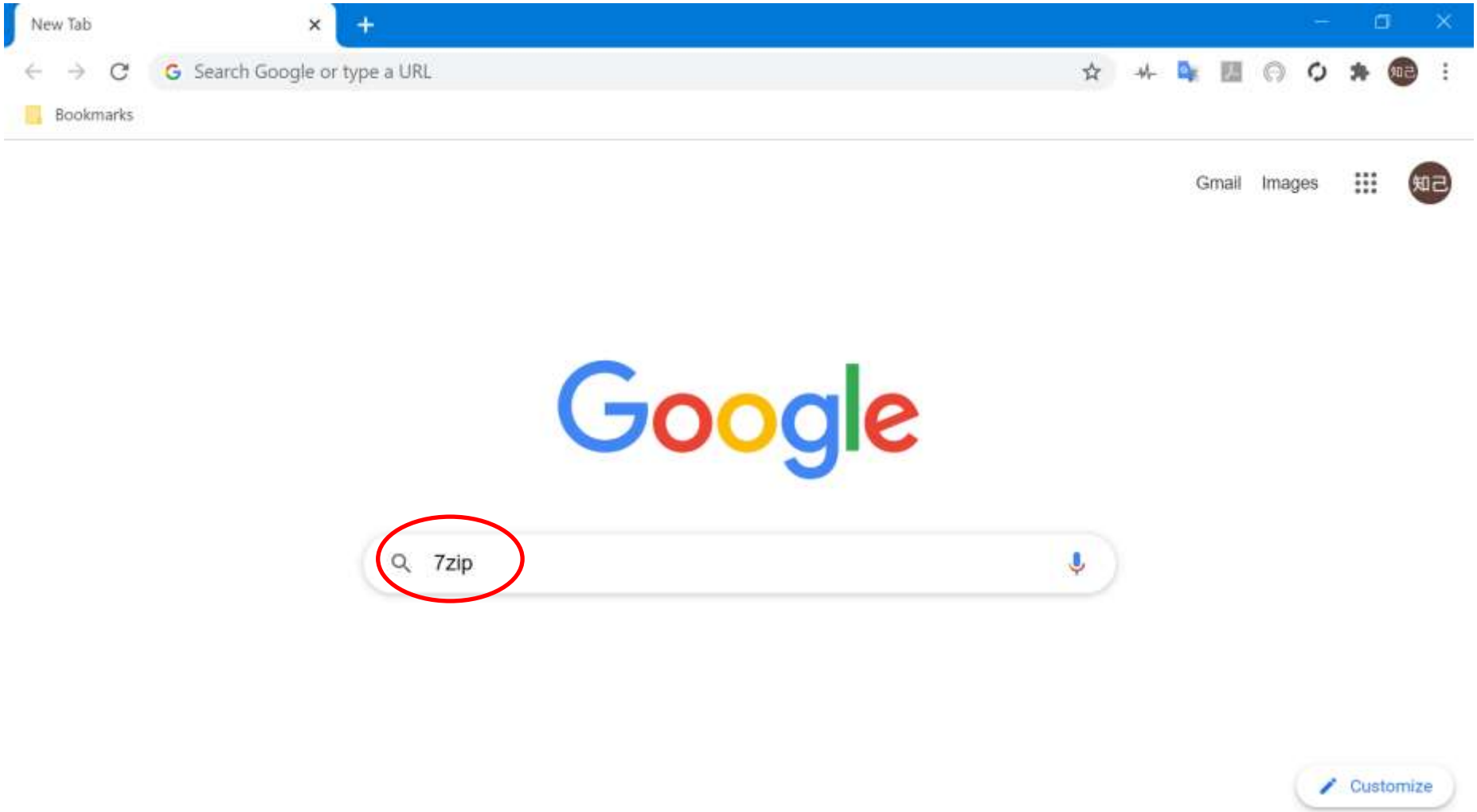
Preparing Data

- You should make folders to save data depend on its type.
  - Raster or vector?
  - ASTER, Landsat8, Sentinel-2, and so on.



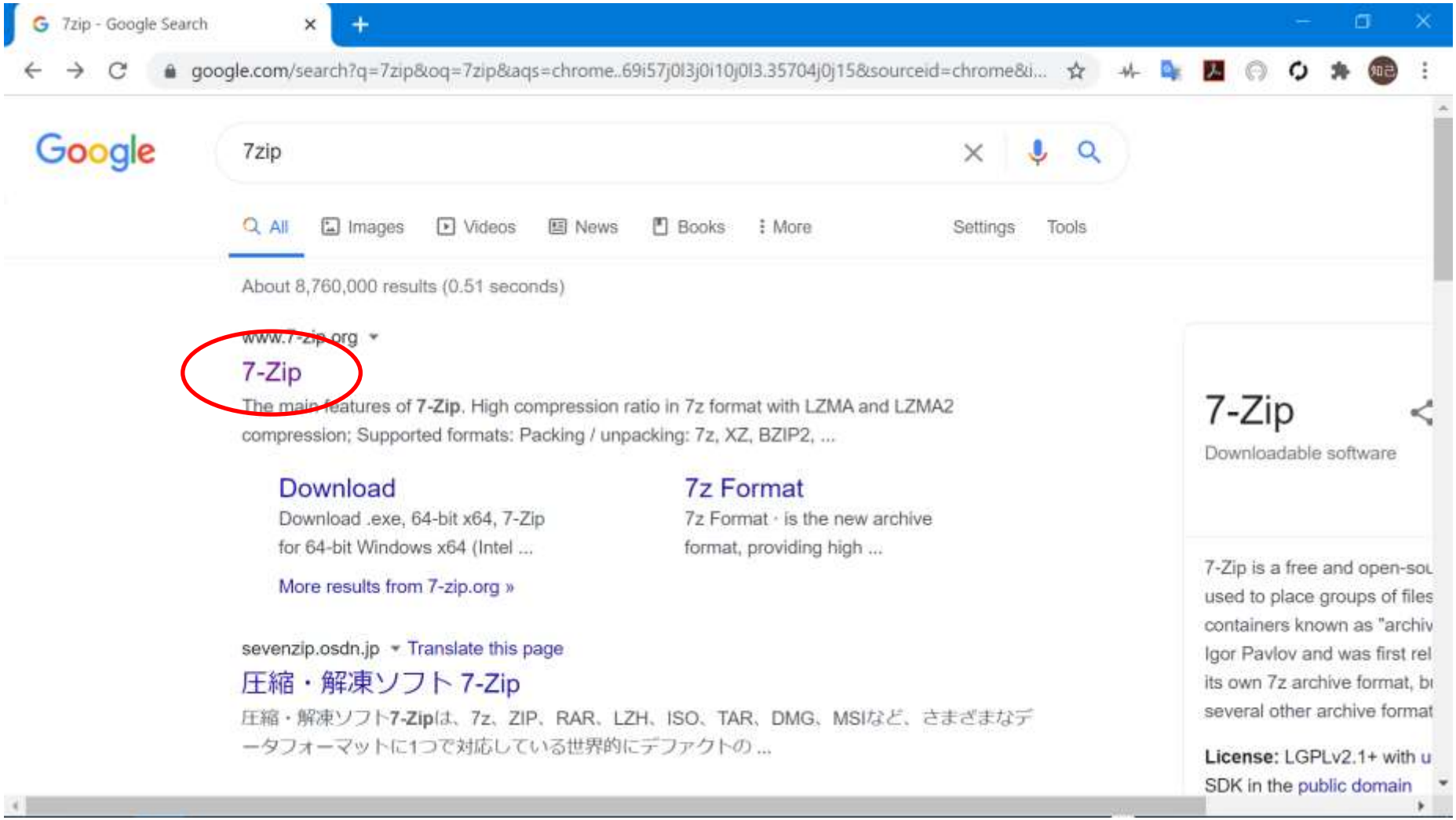
Preparing Data

- Search 7zip.
  - Some downloaded data is compressed, so that you need to decompress them before analyzing.



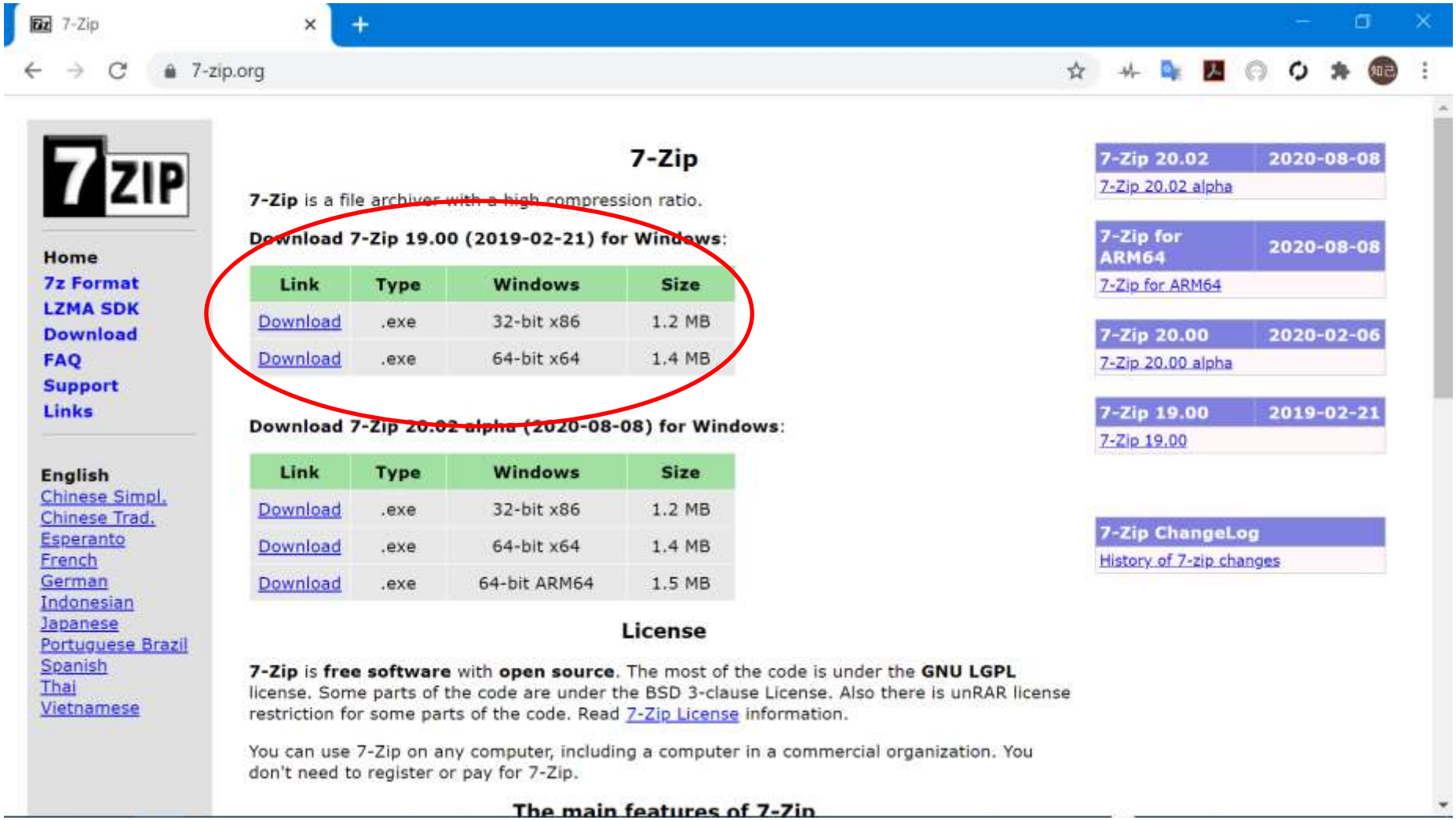
Preparing Data

- Open link of 7zip web site.



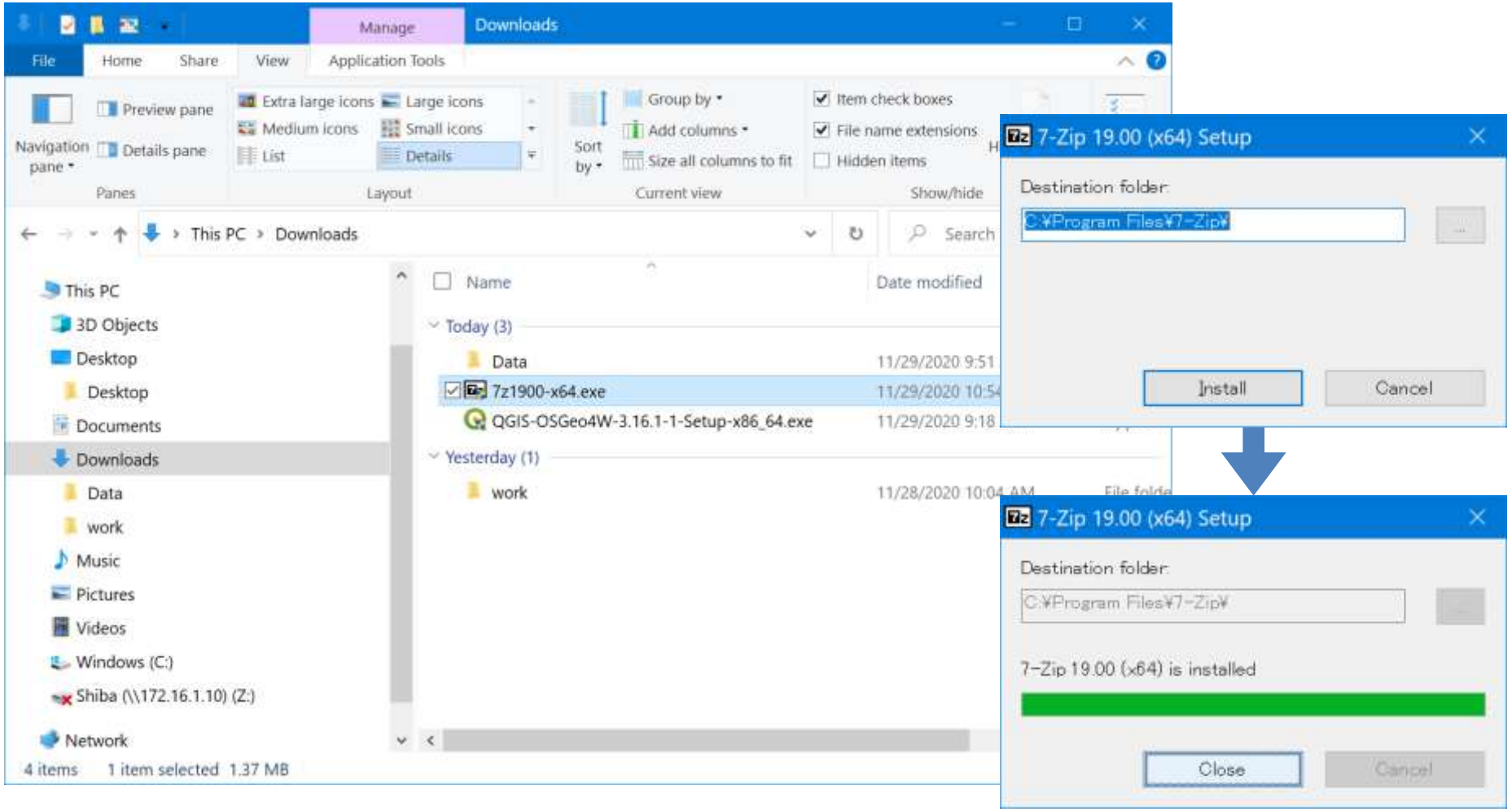
Preparing Data

- Download 7zip.
  - Select downloader depend on your windows os.

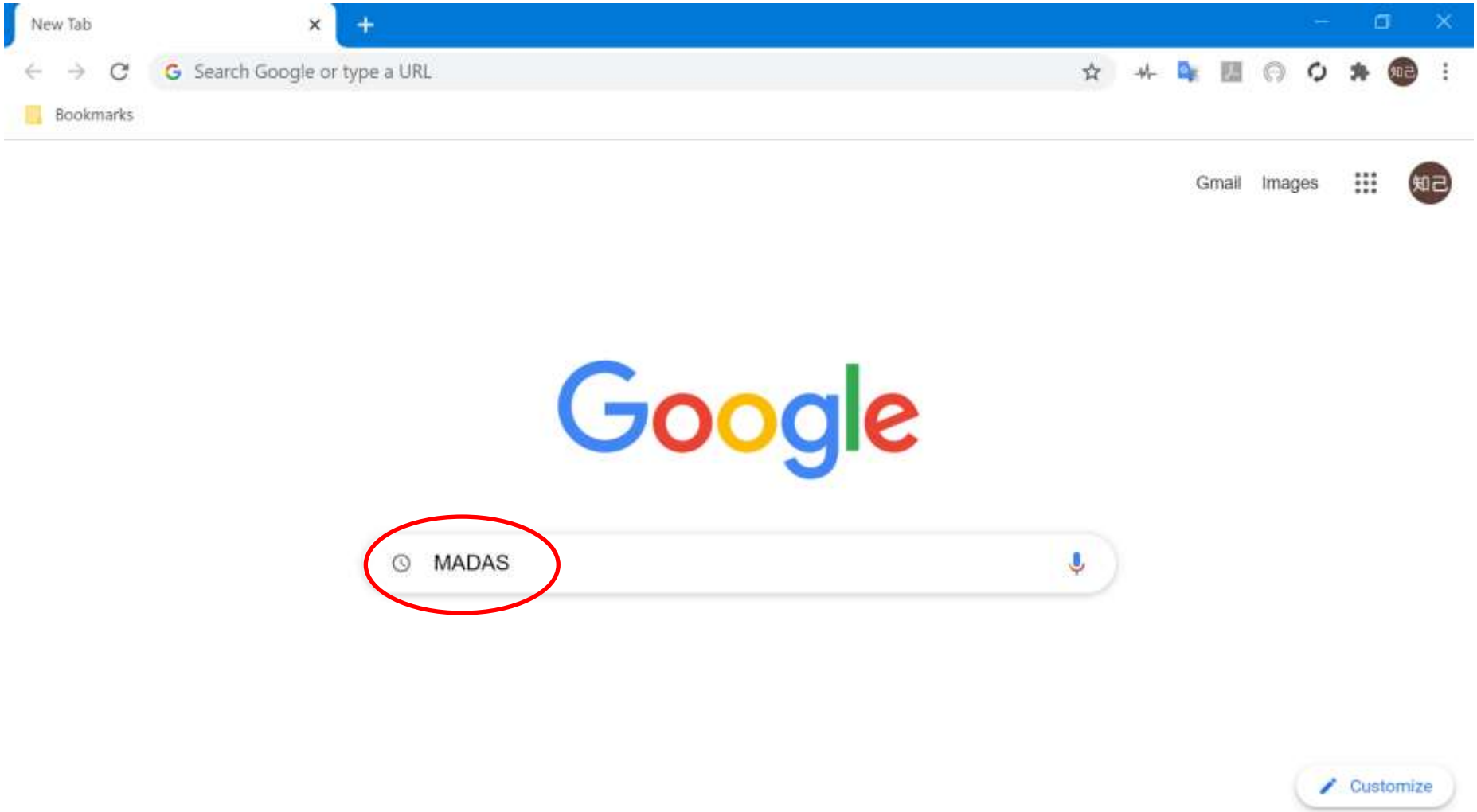


Preparing Data

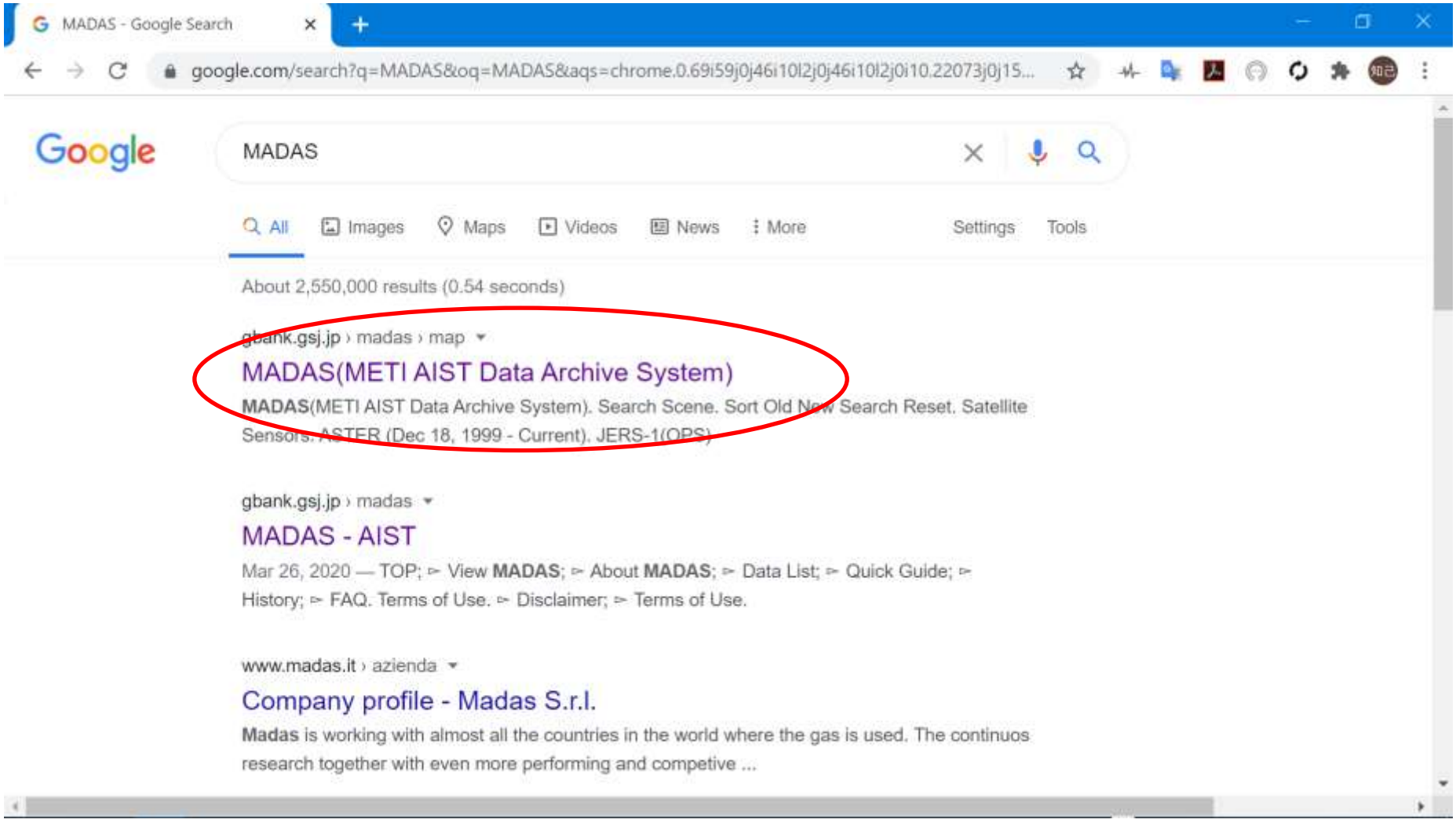
- Install 7zip.



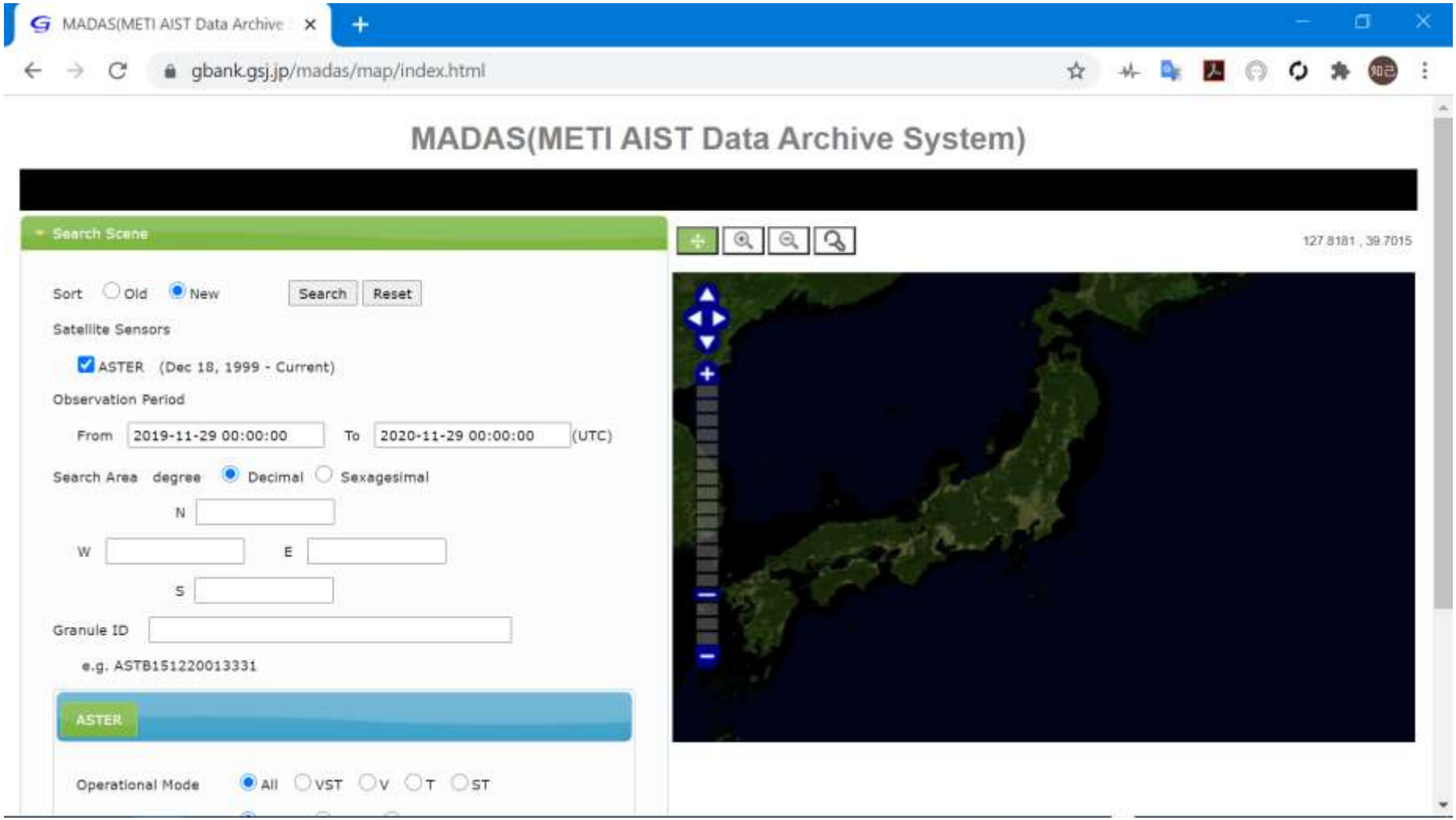
- Search MADAS.



- Open link of “MADAS (METI AIST Data Archive System) web site.

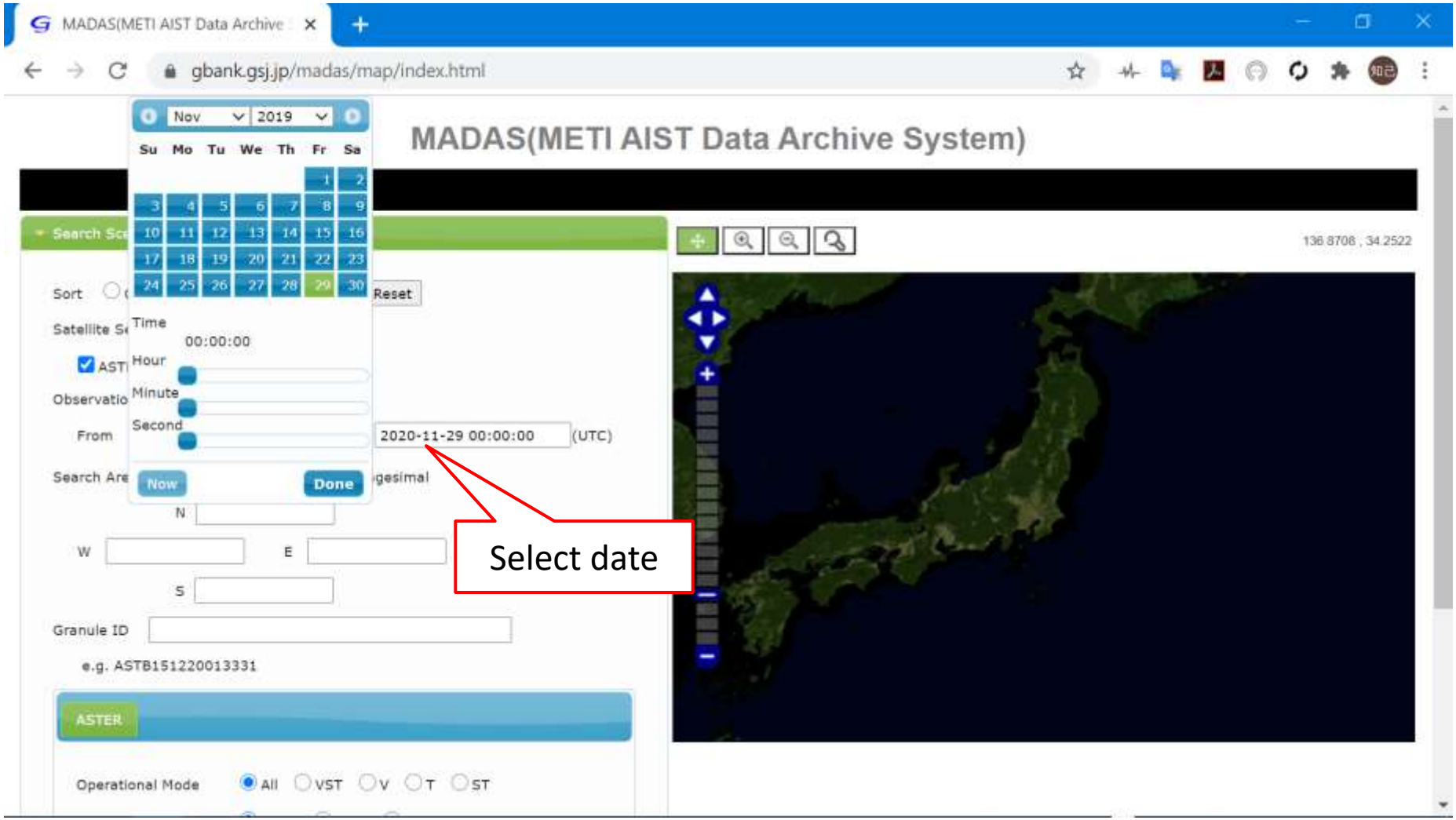


- MADAS is opened.

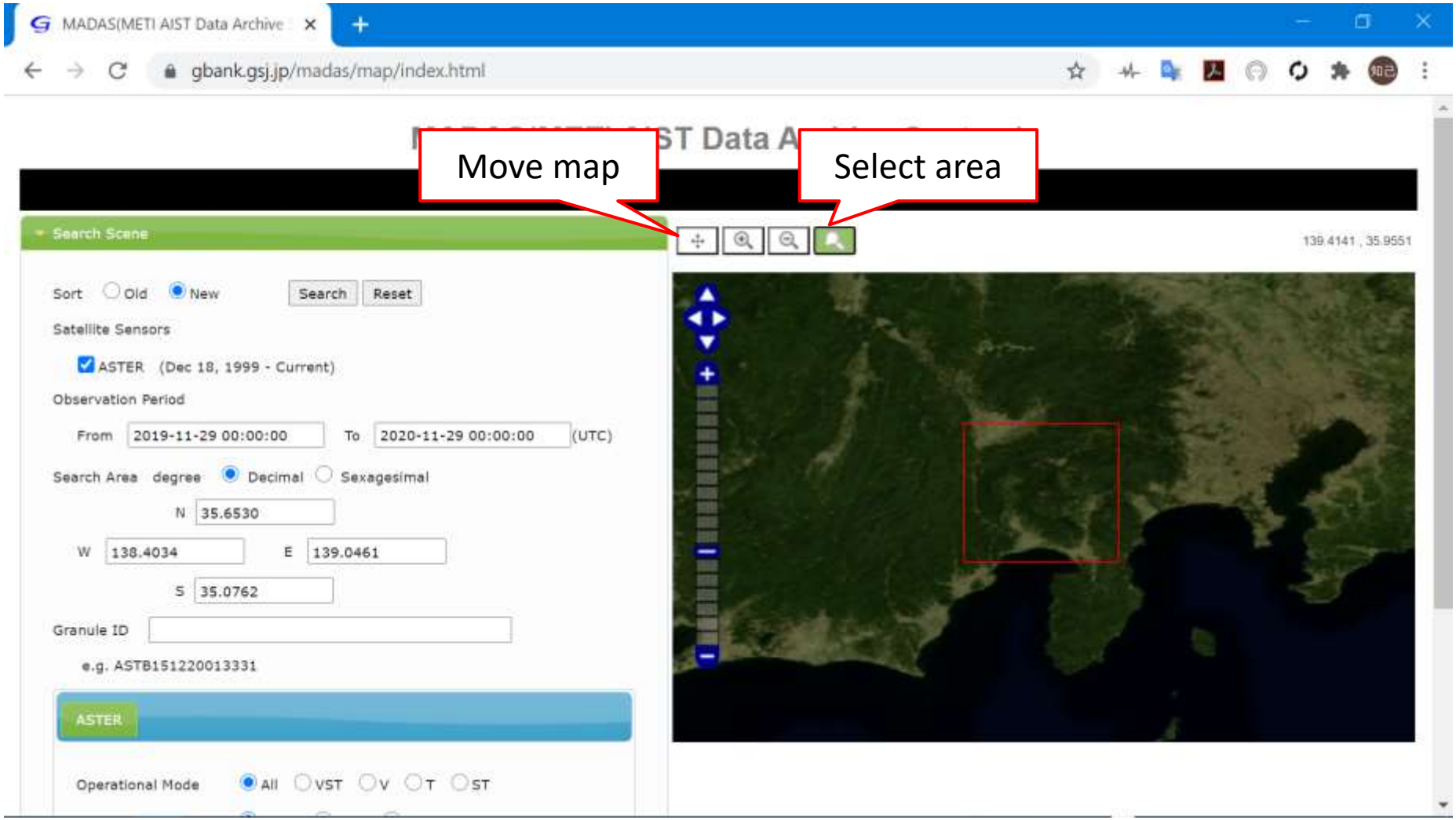


- Set period you want to download data.

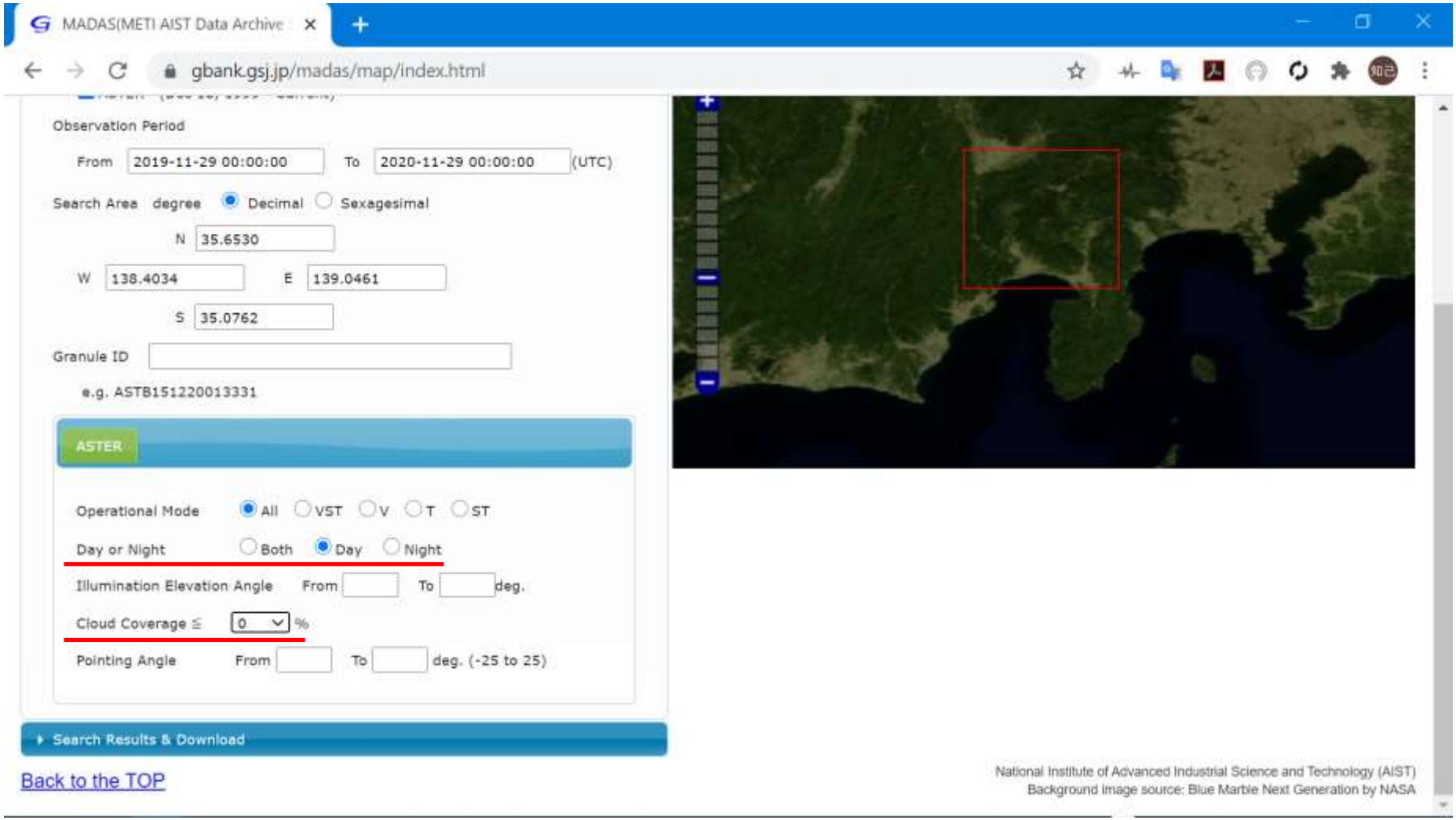
If you want to use SWIR, you have to set period before 2007.



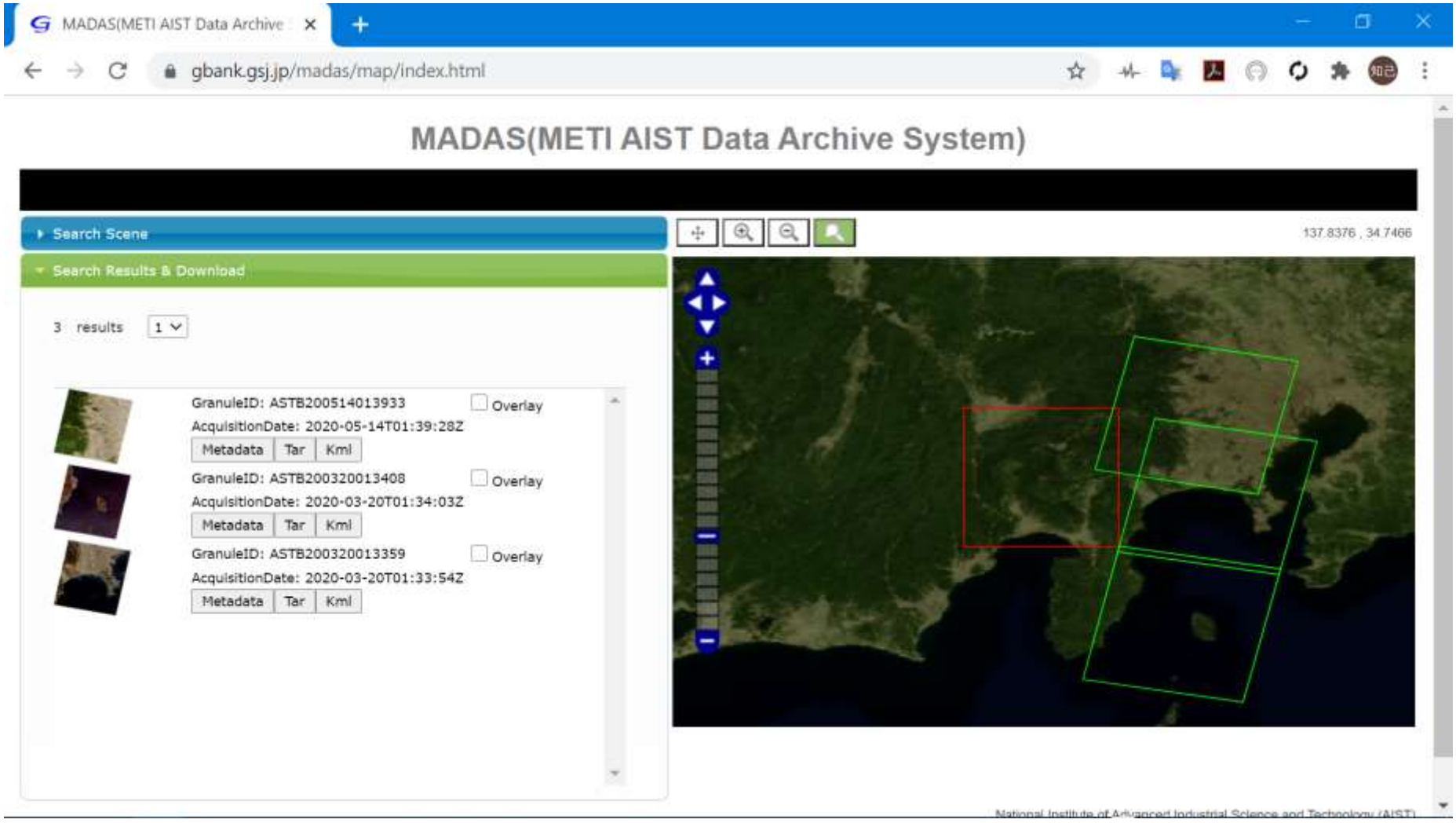
- Set area you want to download data.



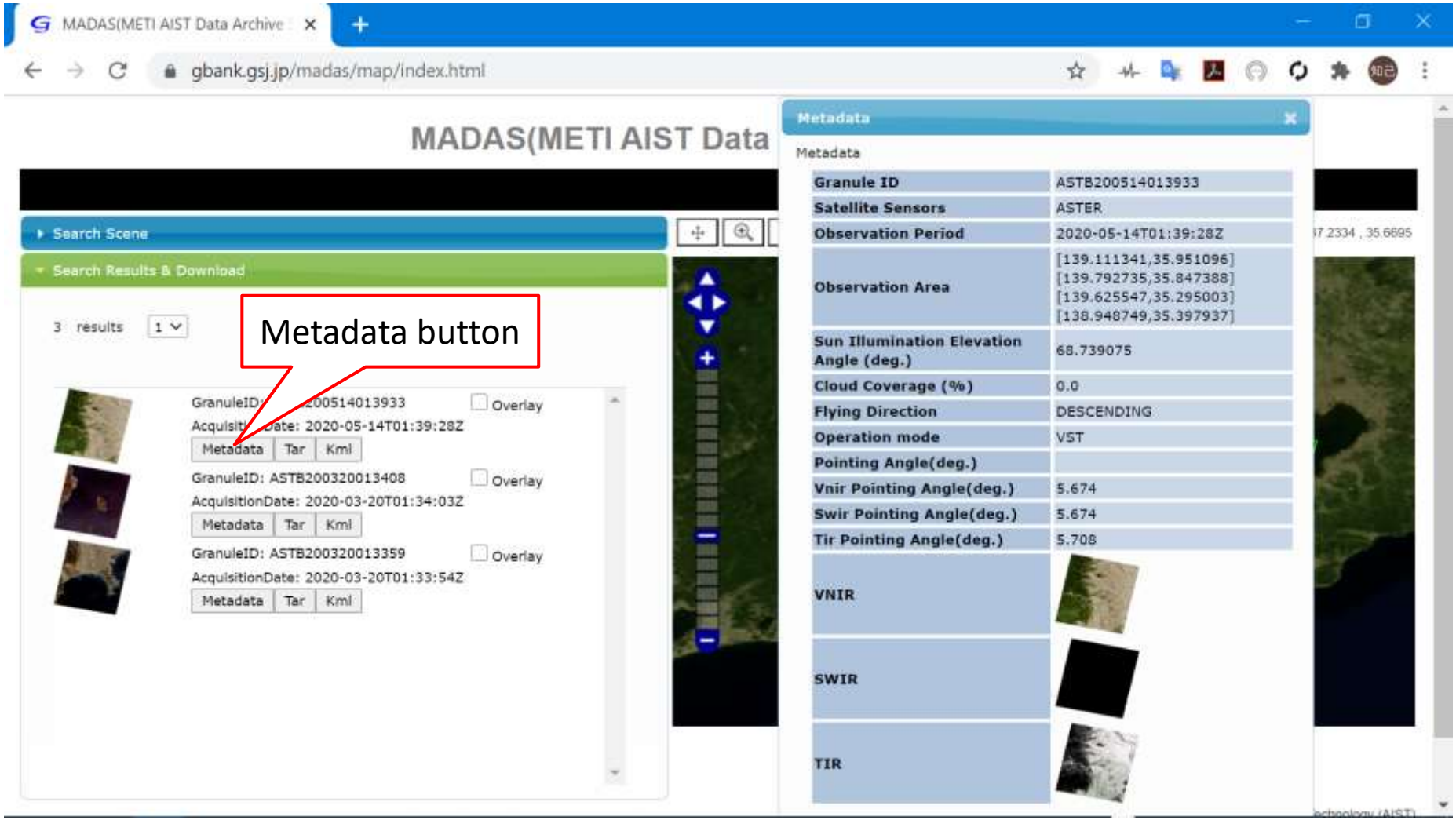
- Set additional criteria.
  - You should select Day as “Day or Night” and 0 as “Cloud Coverage %”.
- Click Search button.



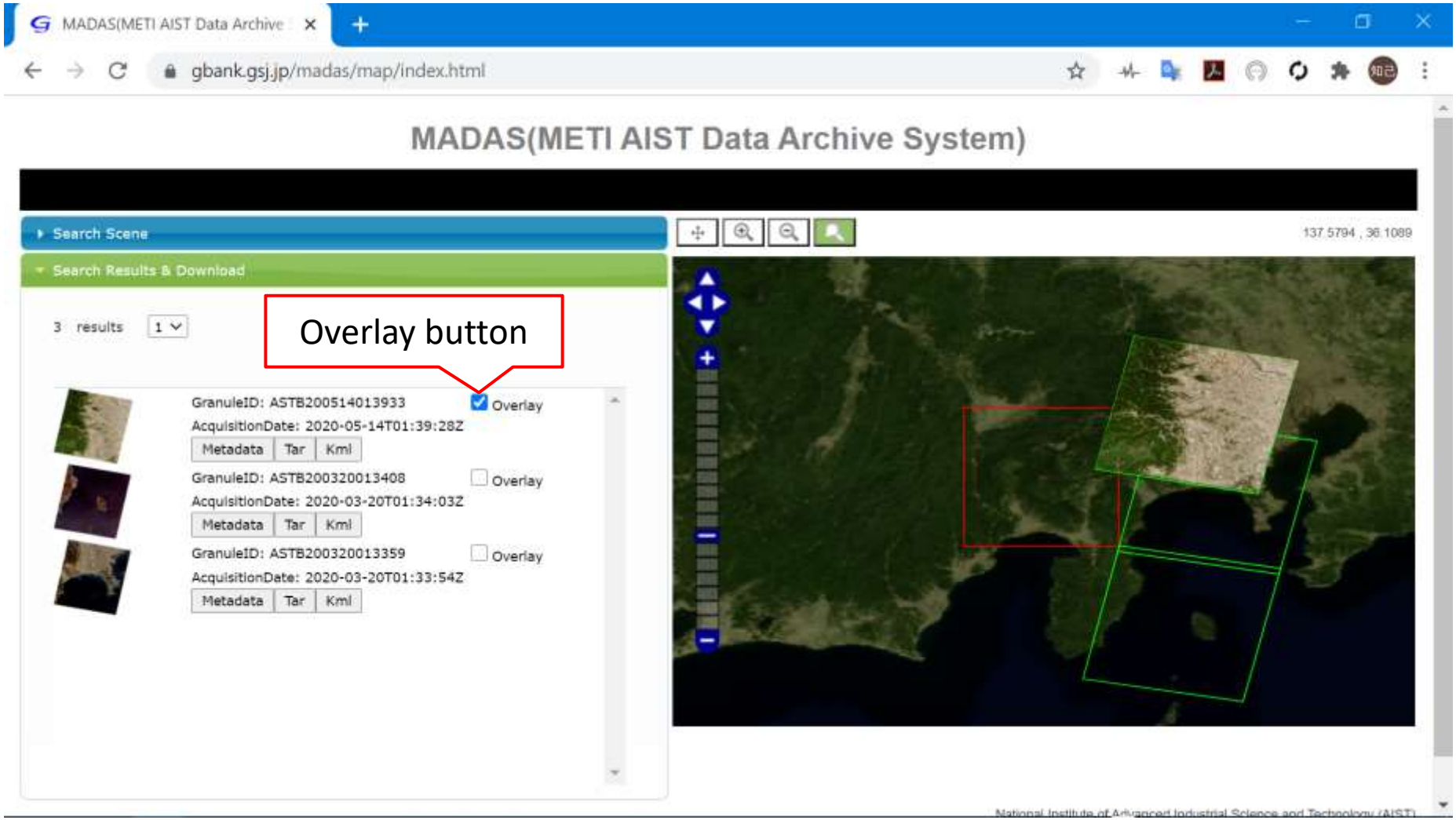
- The list of results is displayed in left side.
  - If you have no results, try to change cloud coverage or period.



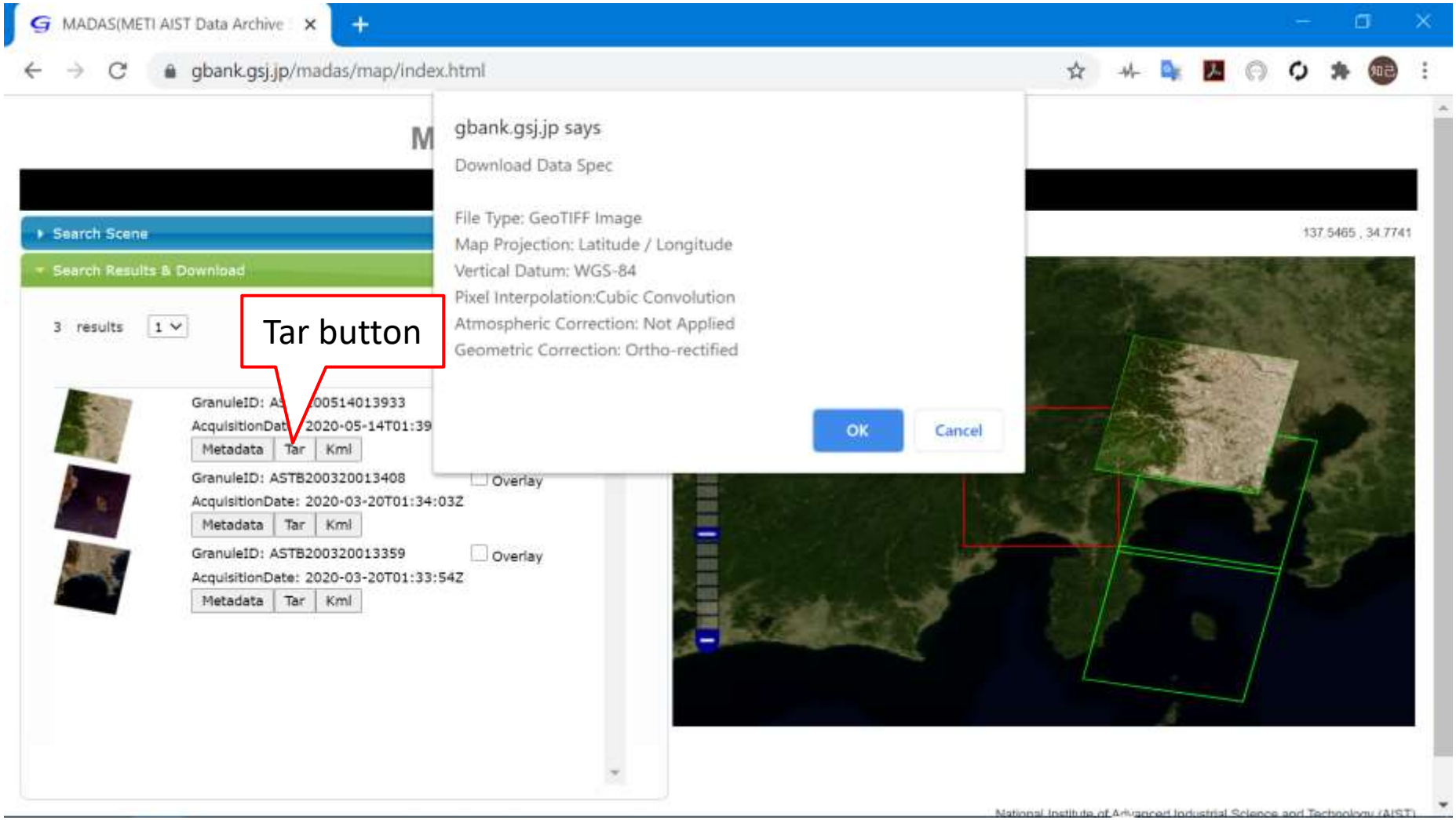
- In order to check metadata such as Granule ID, Satellite Sensors and so on, click “Metadata” button.



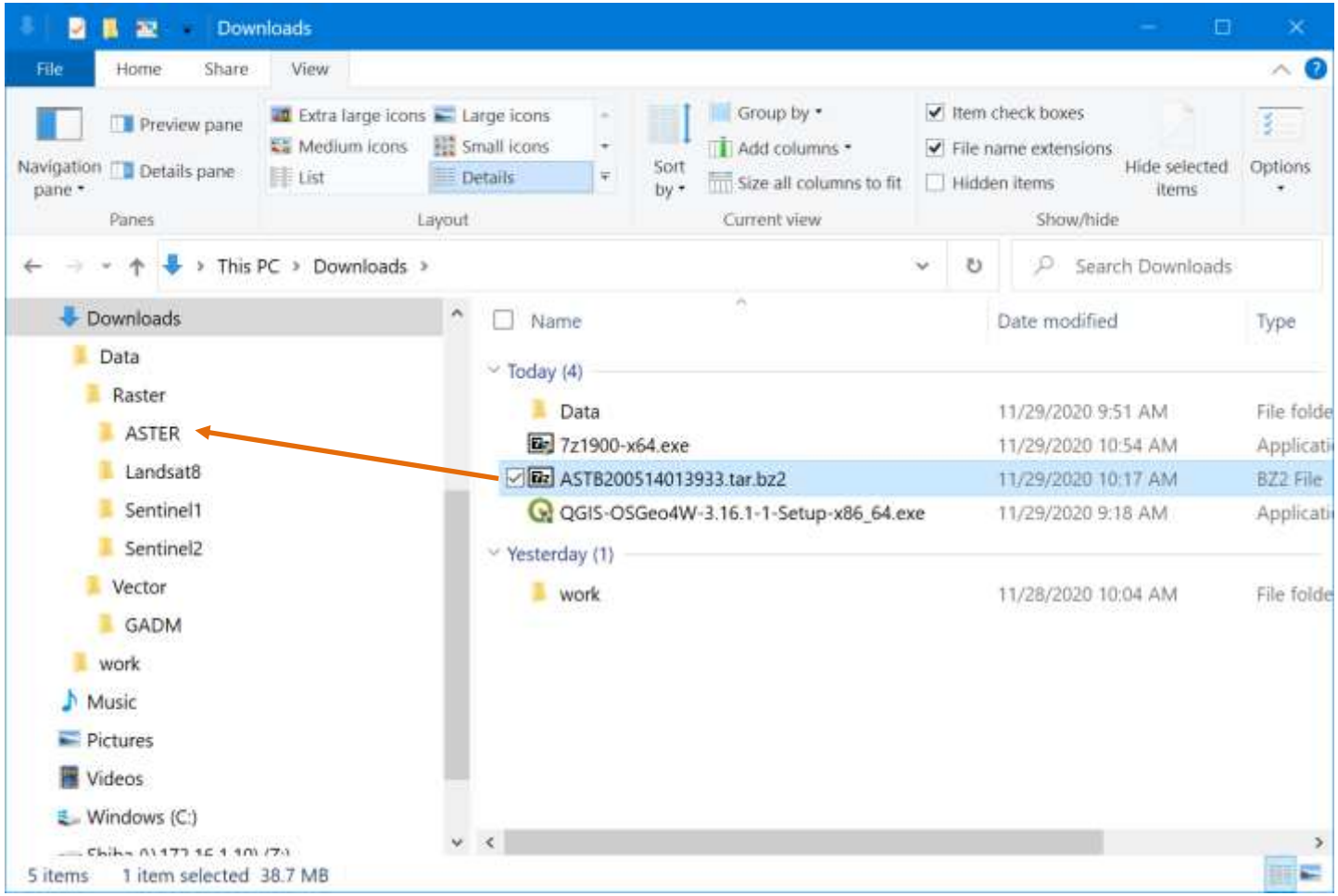
- In order to check preview image, check “Overlay” option.



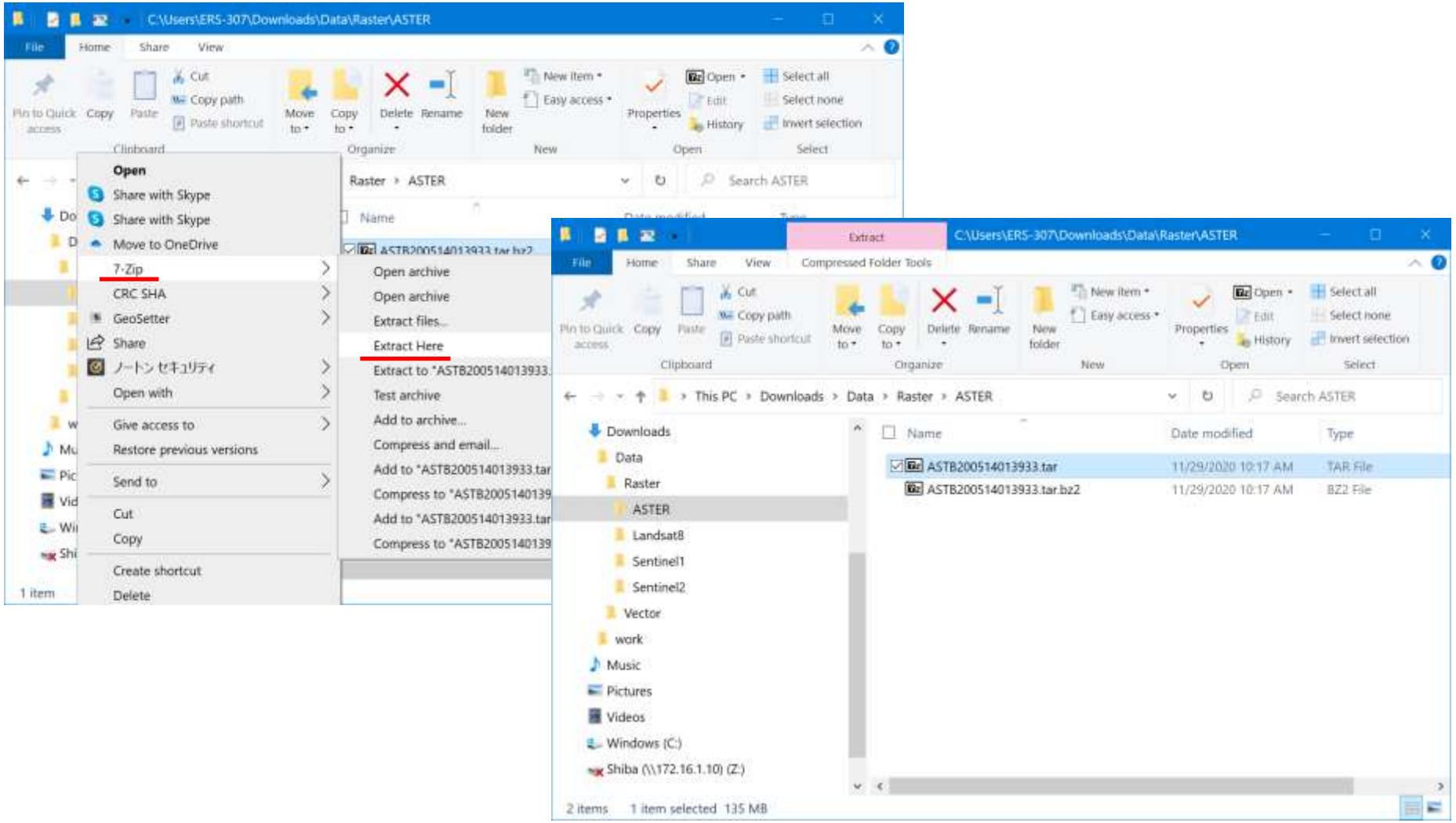
- In order to download data, click Tar button.



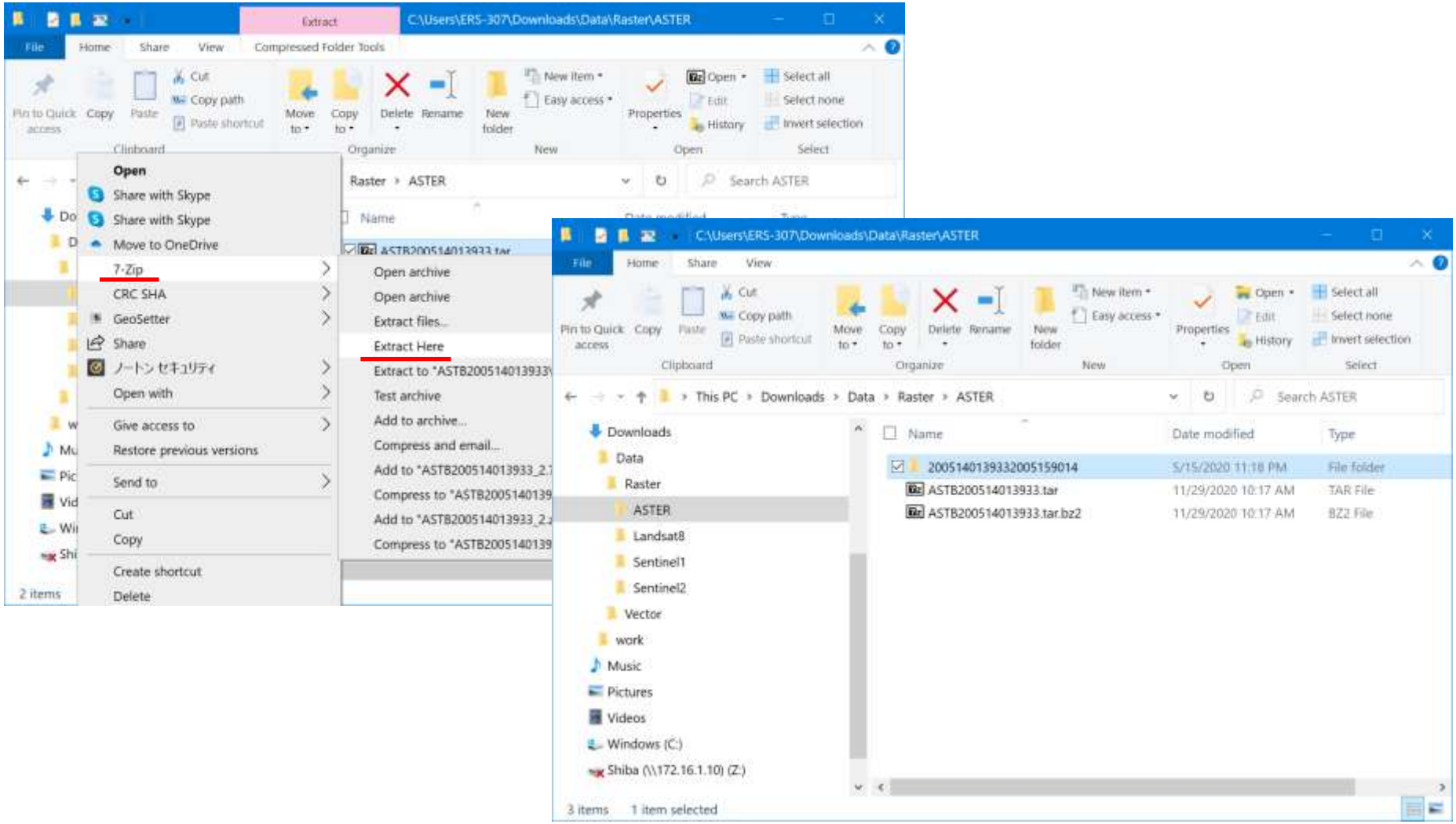
- Move downloaded file to ASTER folder.



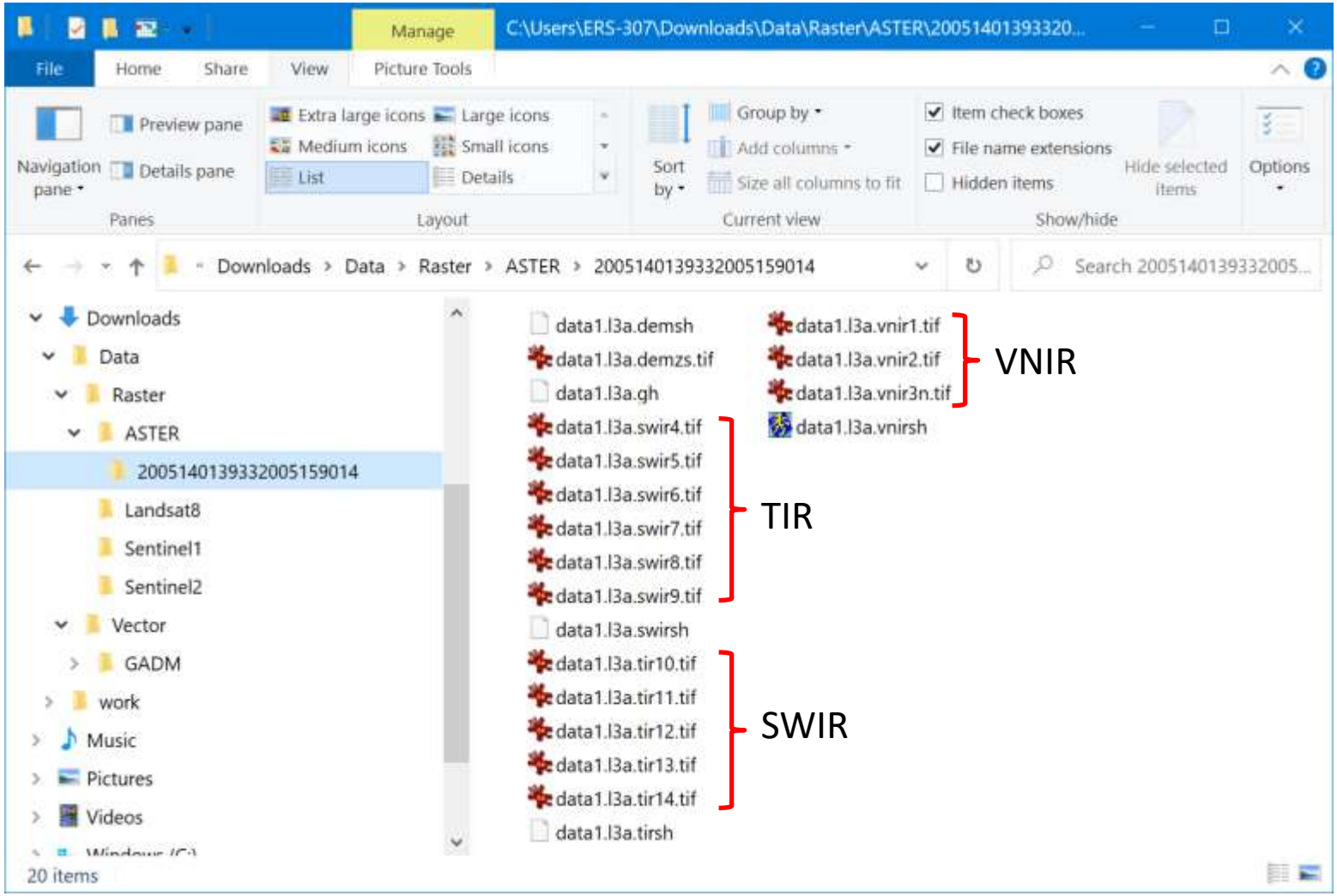
- Extract tar.bz2 file here.
  - Click right mouse button on your downloaded file.



- Extract tar file here.
  - Click left mouse button on your expressed file.

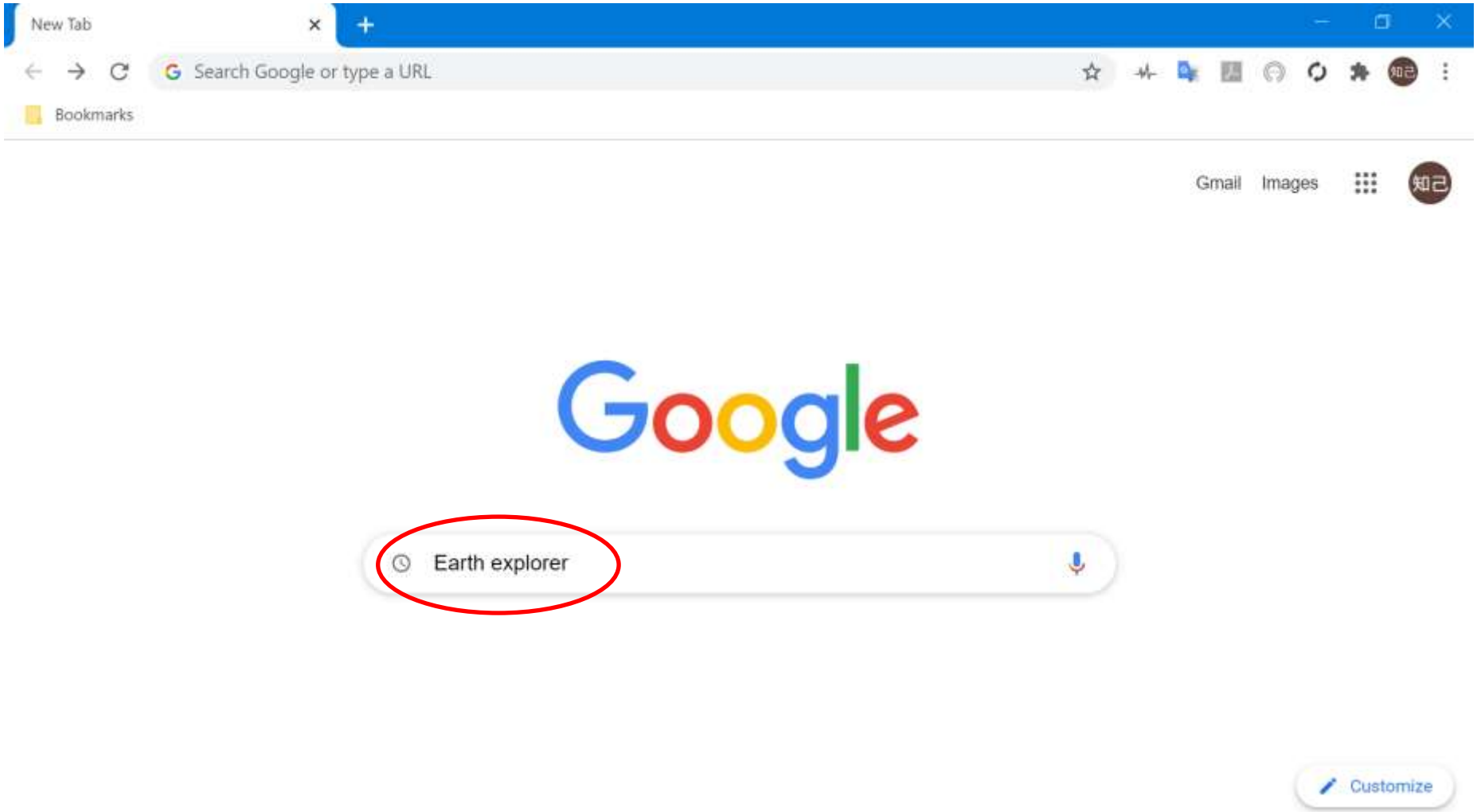


- Satellite images are extracted.



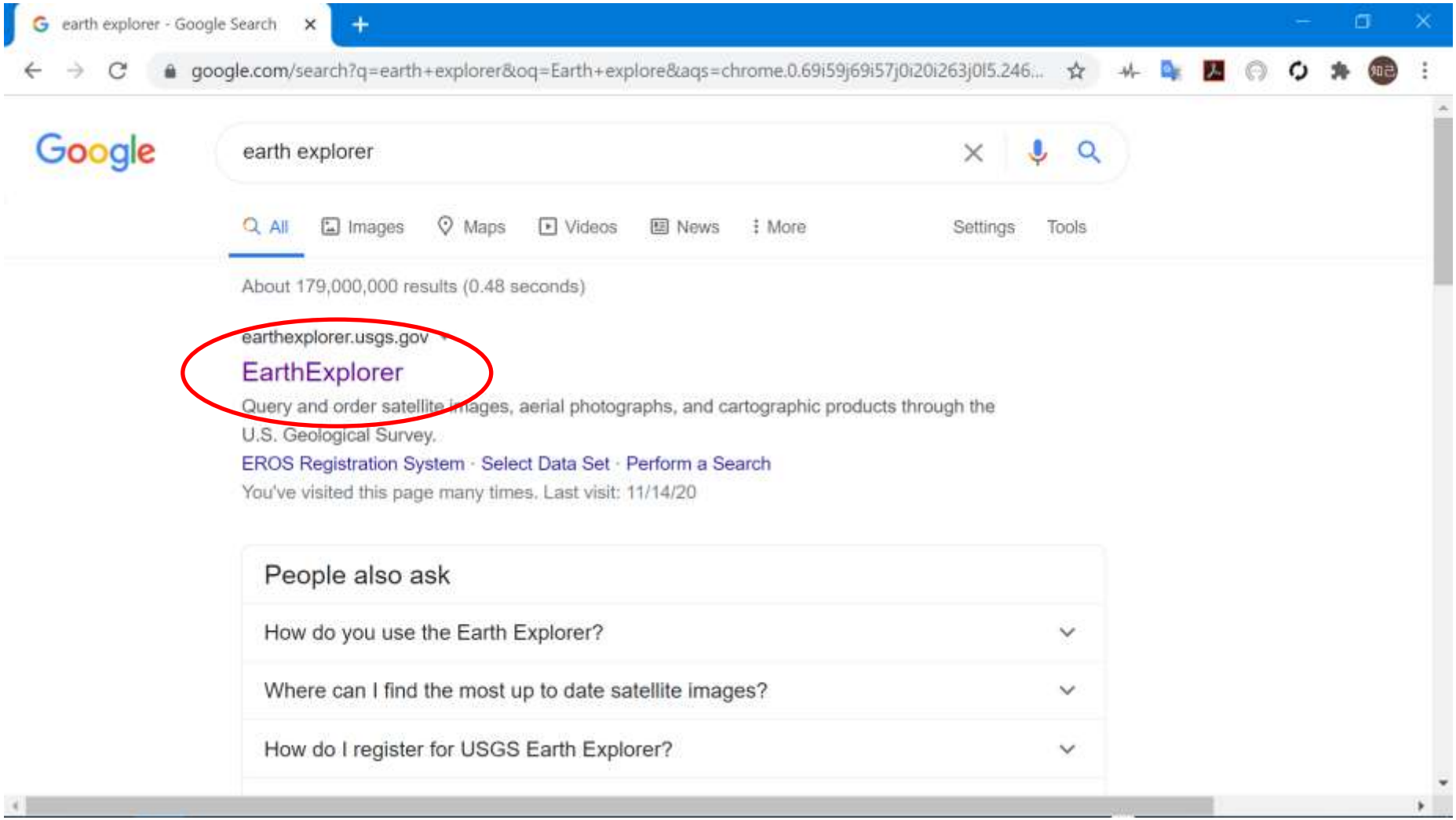
Earth explore

- Search earth explore.



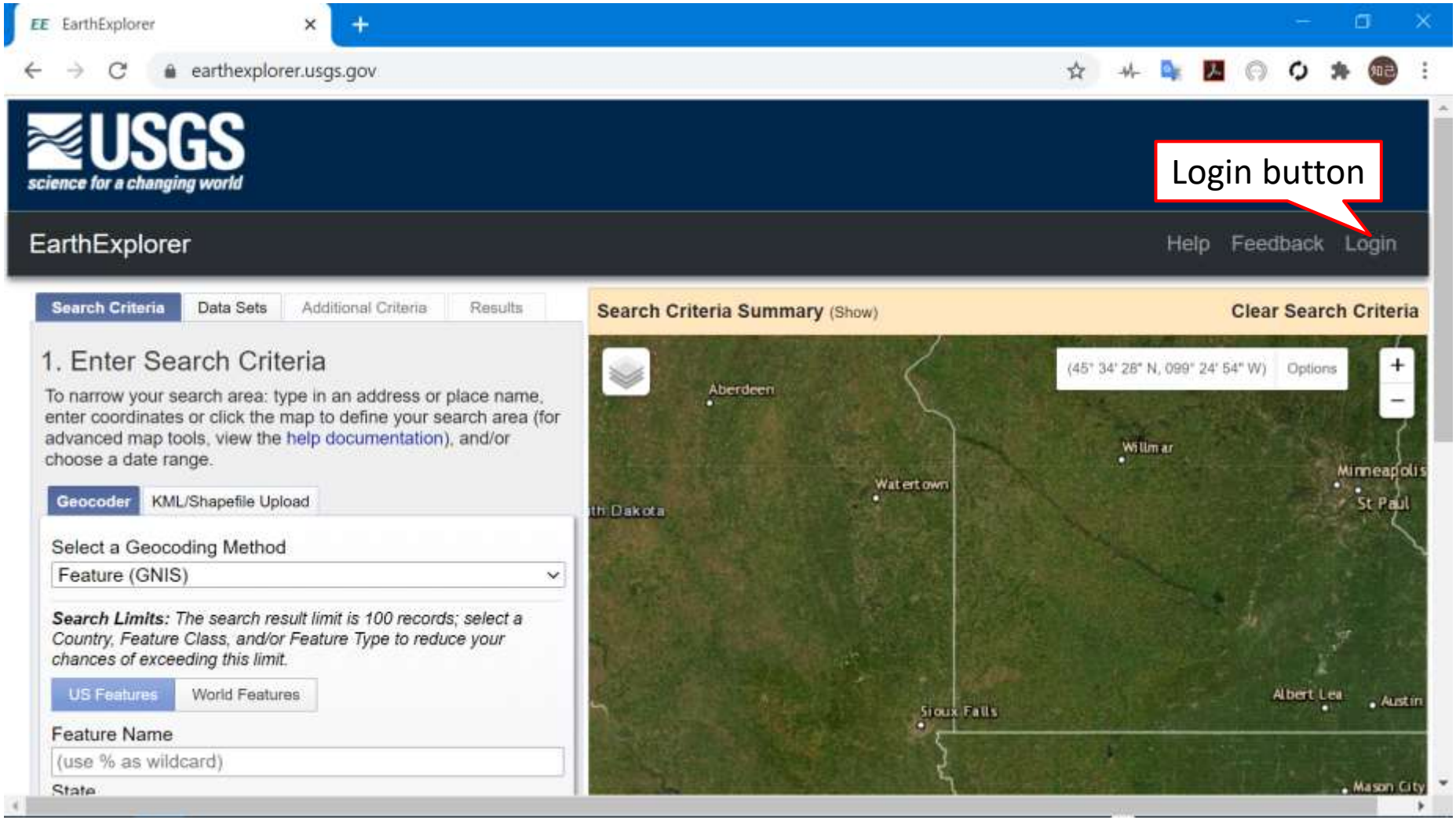
Earth explore

- Open link of EarthExplore web site.



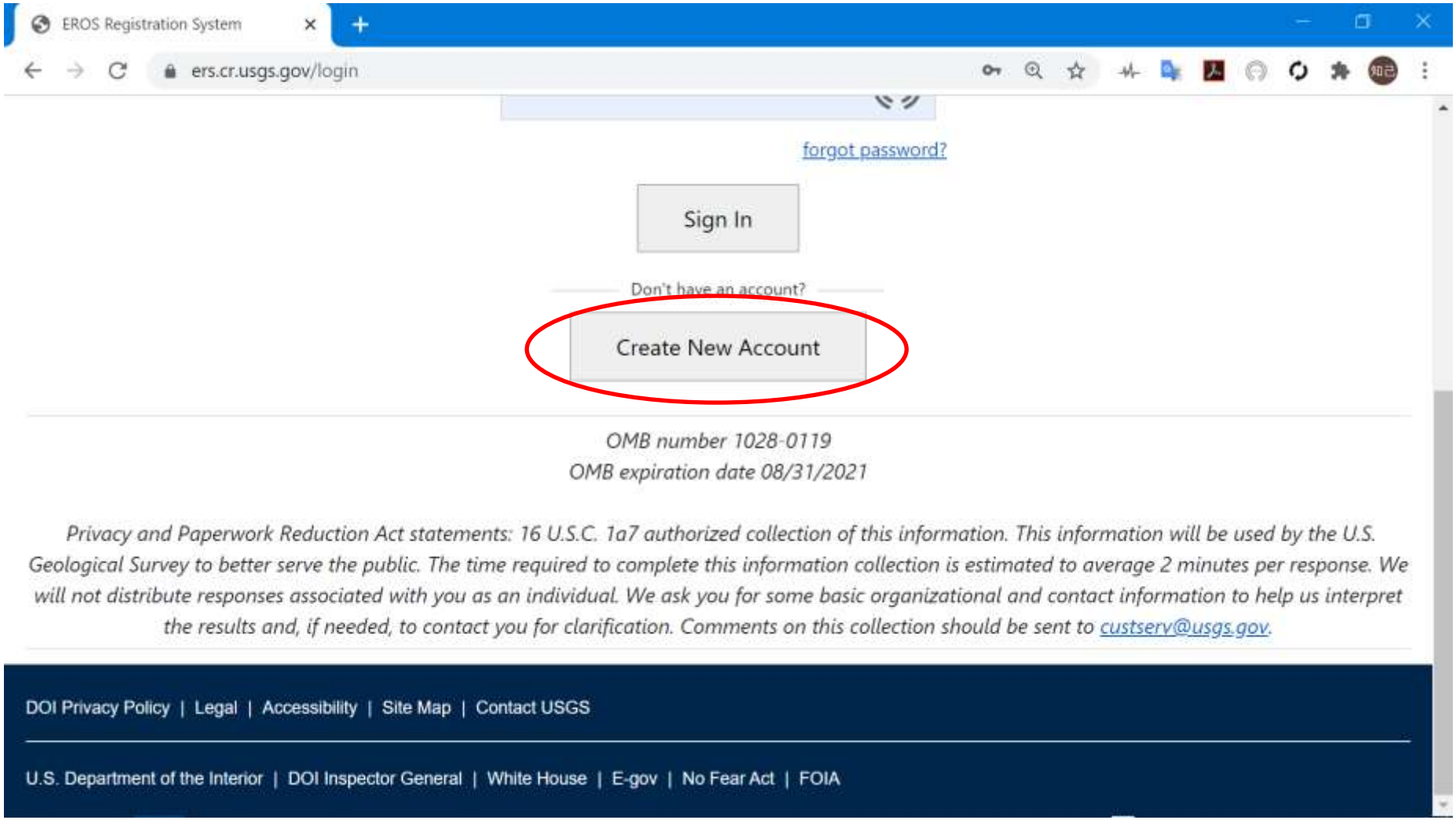
Earth explore

- EarthExplore is opened.
- Click Login button to create new account.



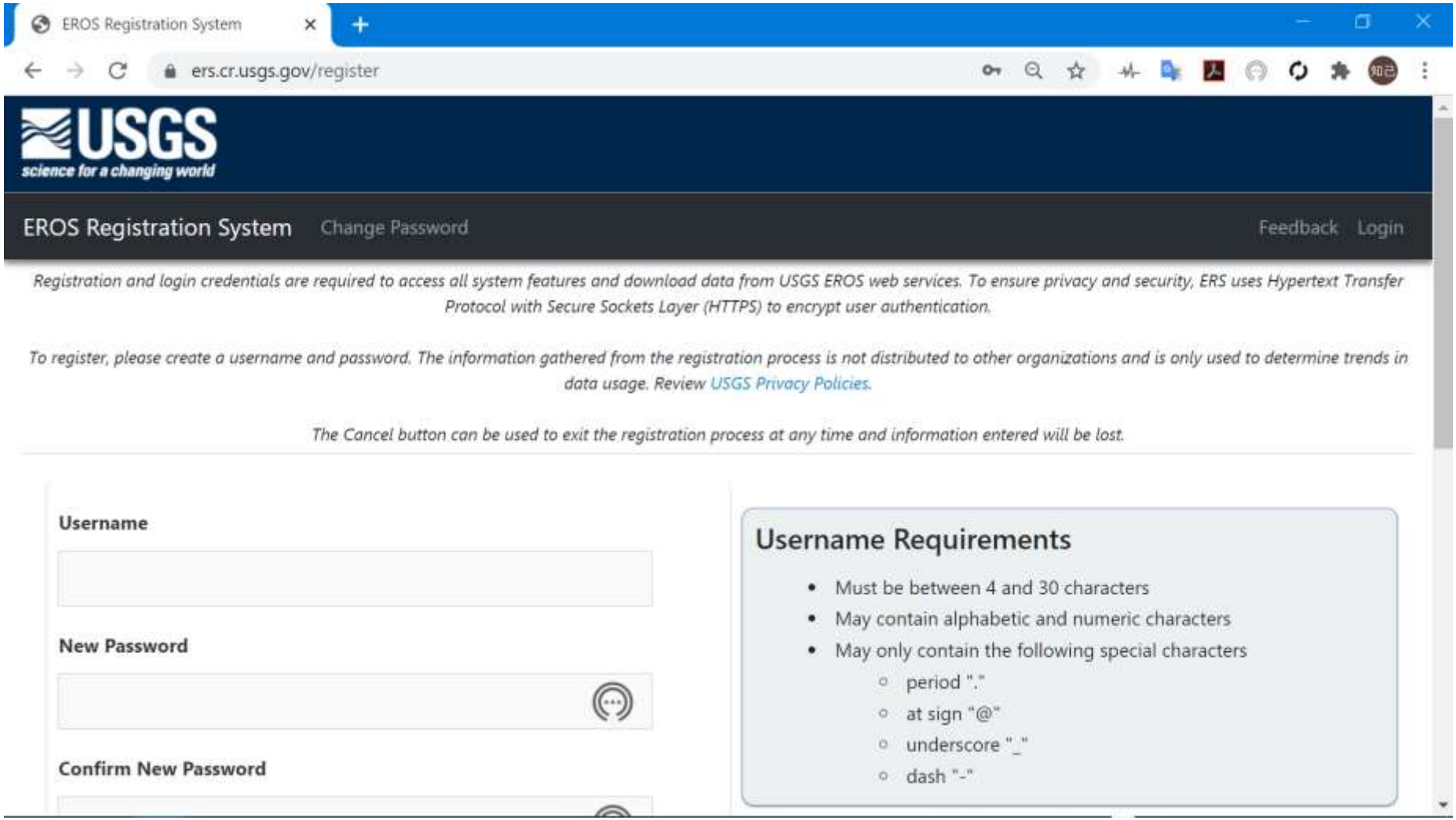
Earth explore

- Click “Create New Account” button.



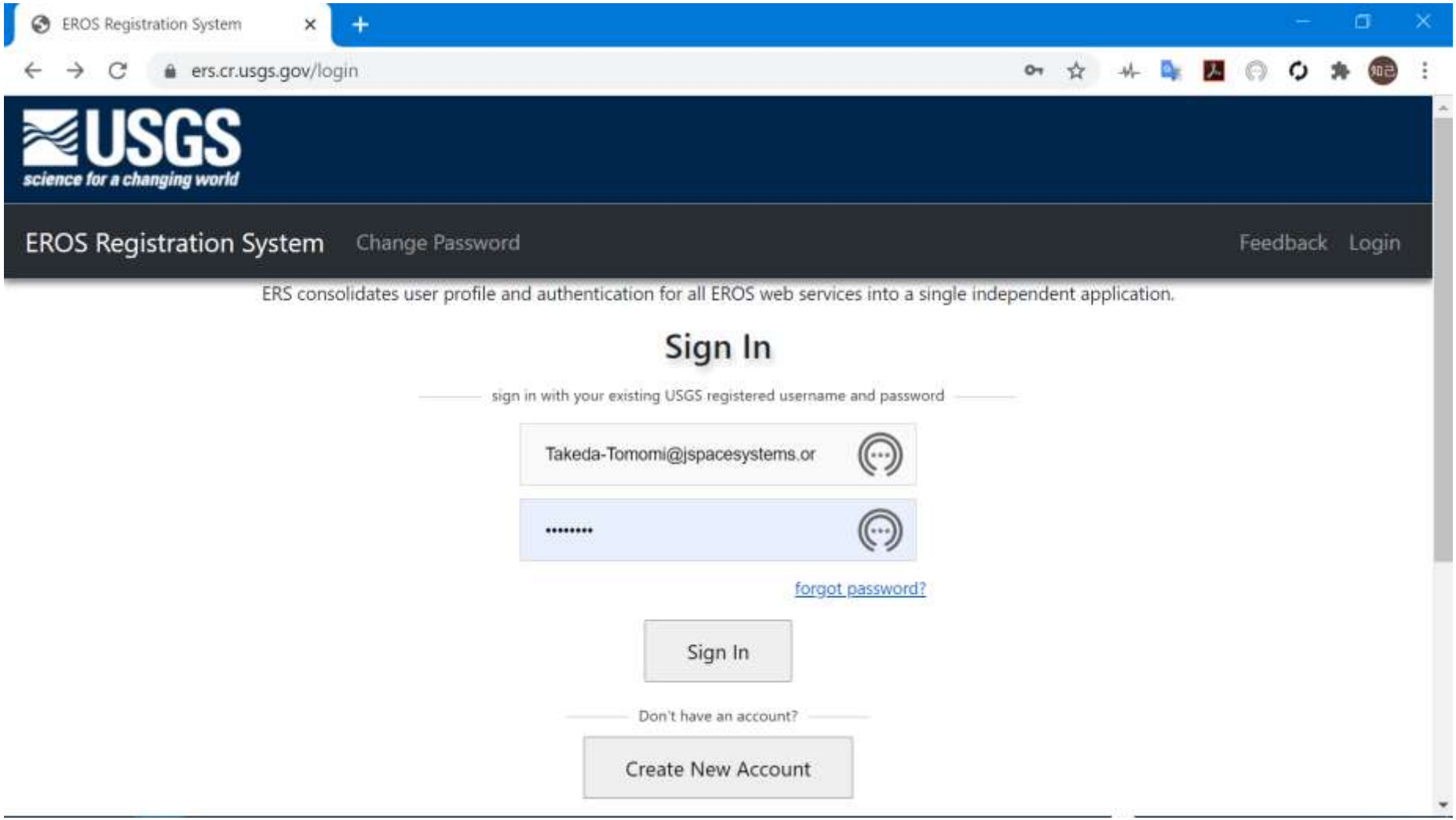
Earth explore

- Enter username, new password, and so on.
  - USGS will send you an e-mail about account.



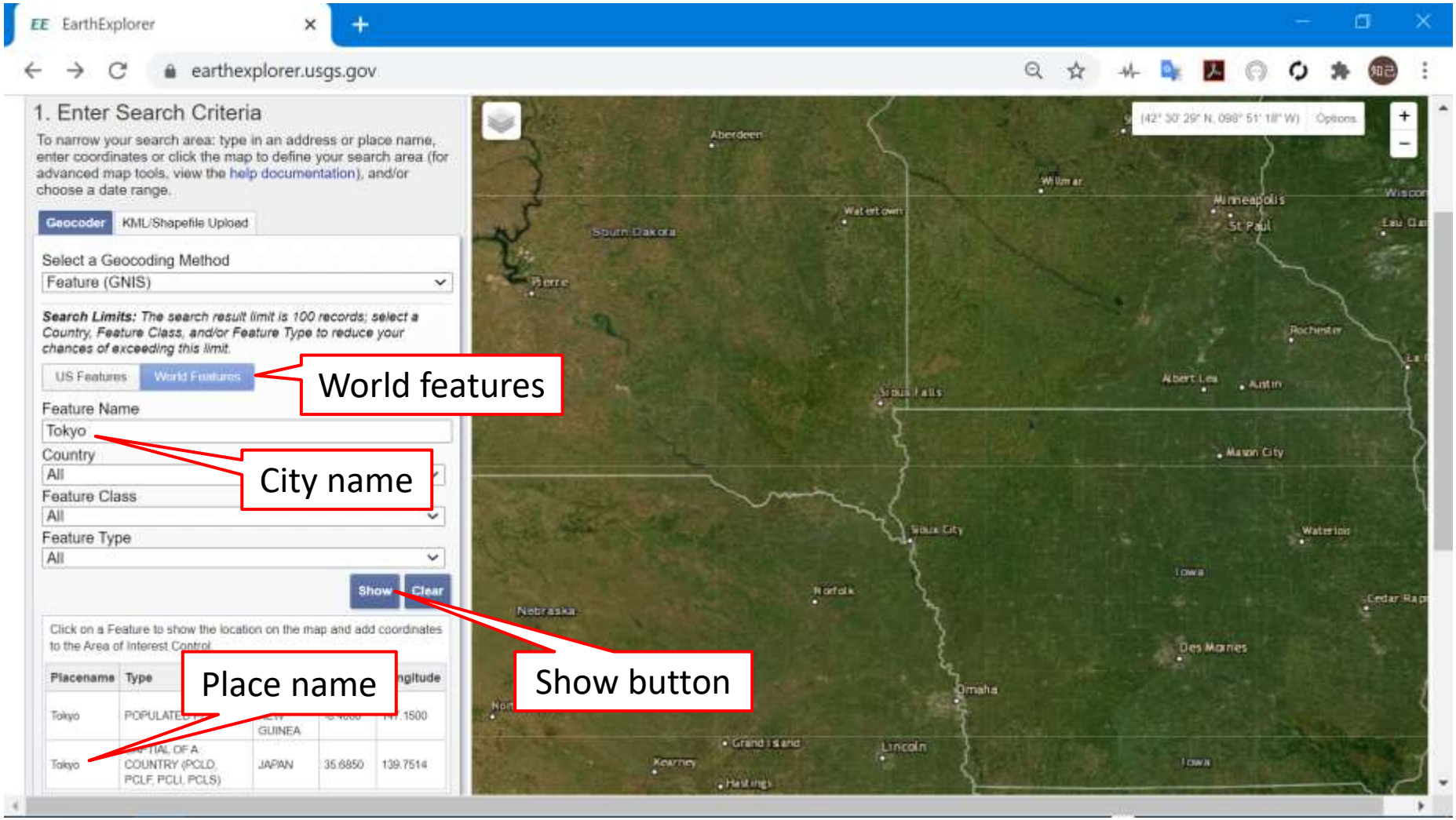
Earth explore

- After creating new account, click login button and sign in EarthExplore.



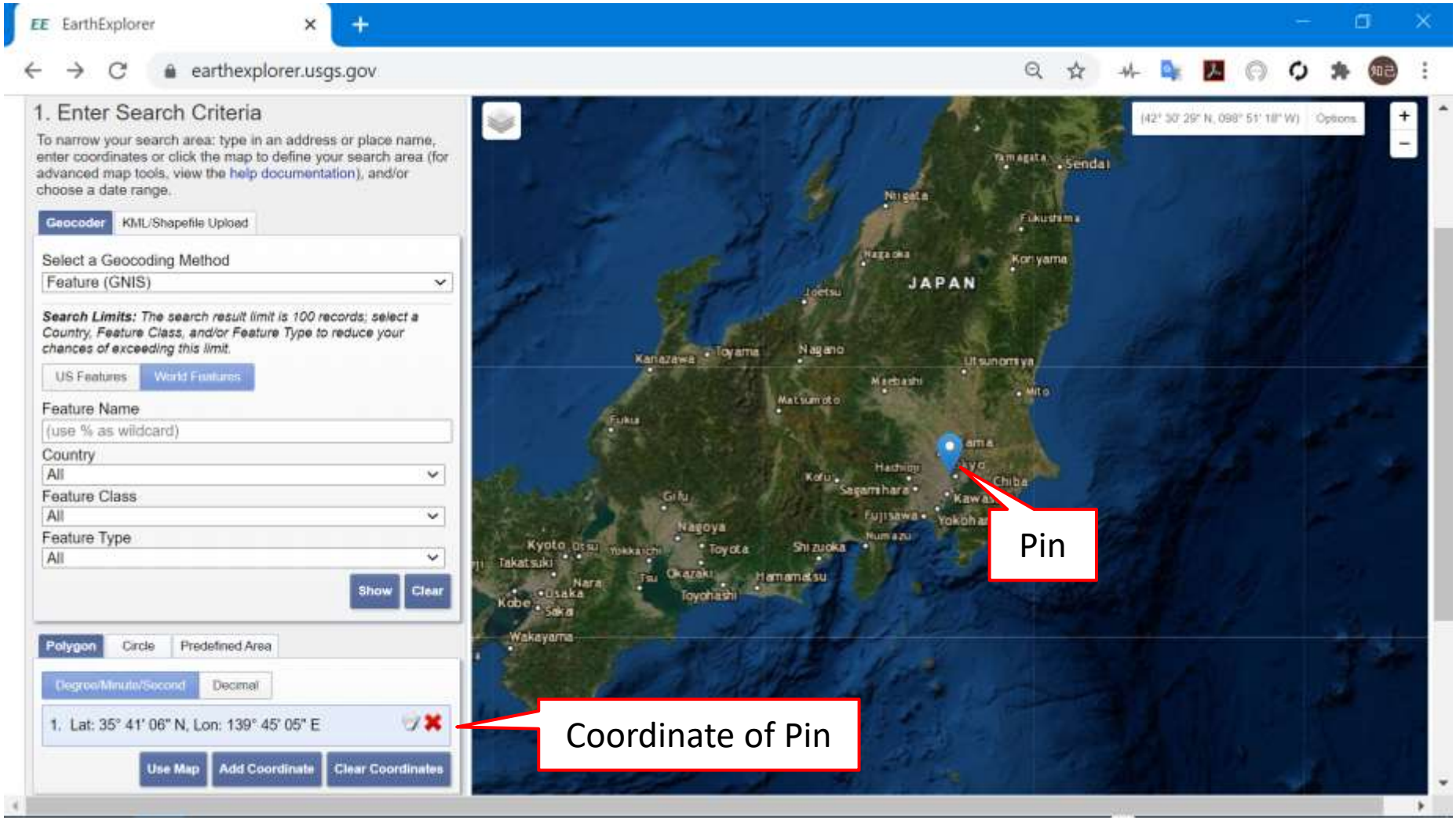
Earth explore

- Select world features.
- Enter city name and click show button.
- Select place name and show the location on the map.



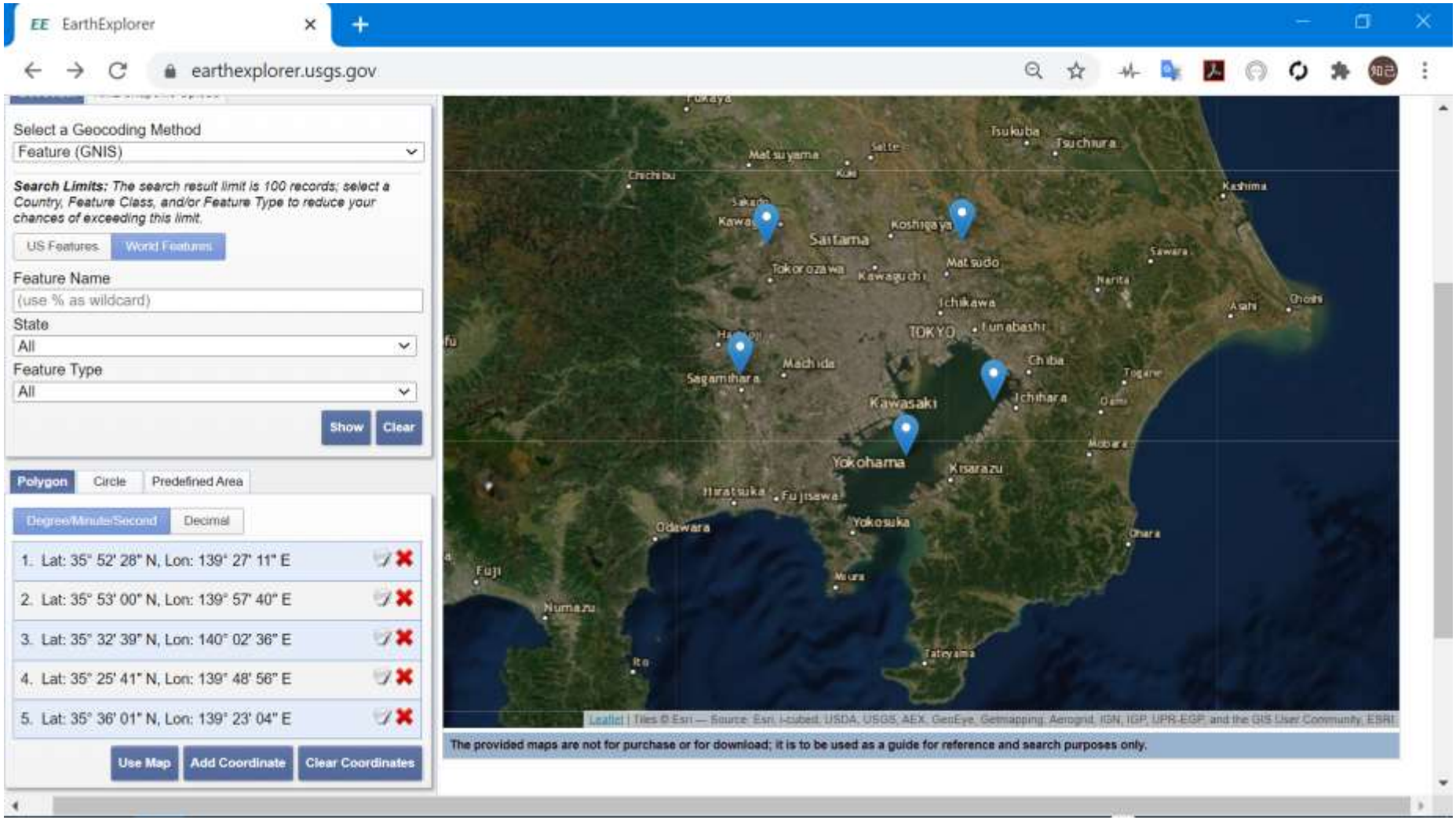
Earth explore

- Pin icon is plotted on map.
  - Coordinate is automatically entered.



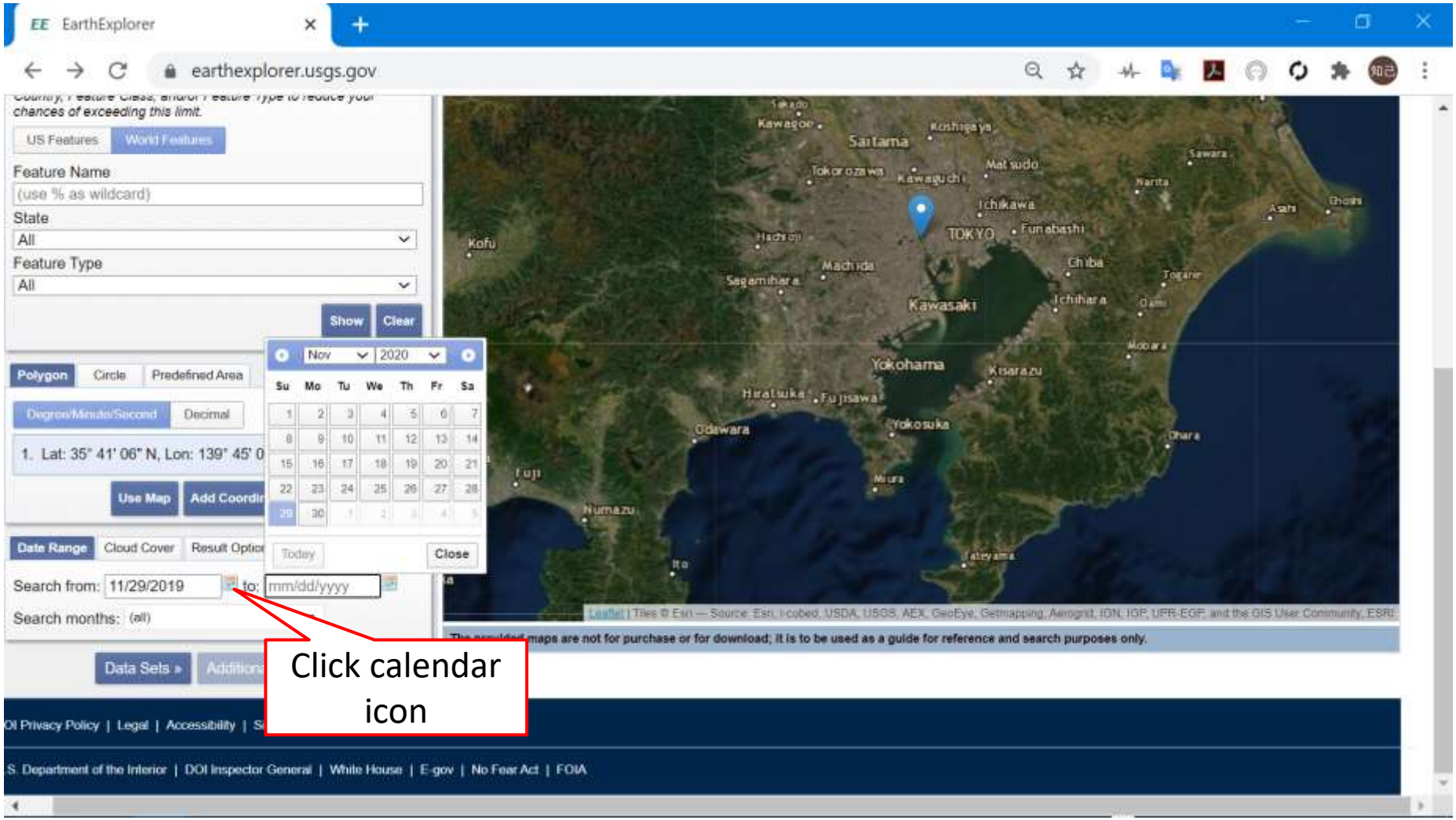
Earth explore

- You can select area directly to click left mouse button at the locations on the map.



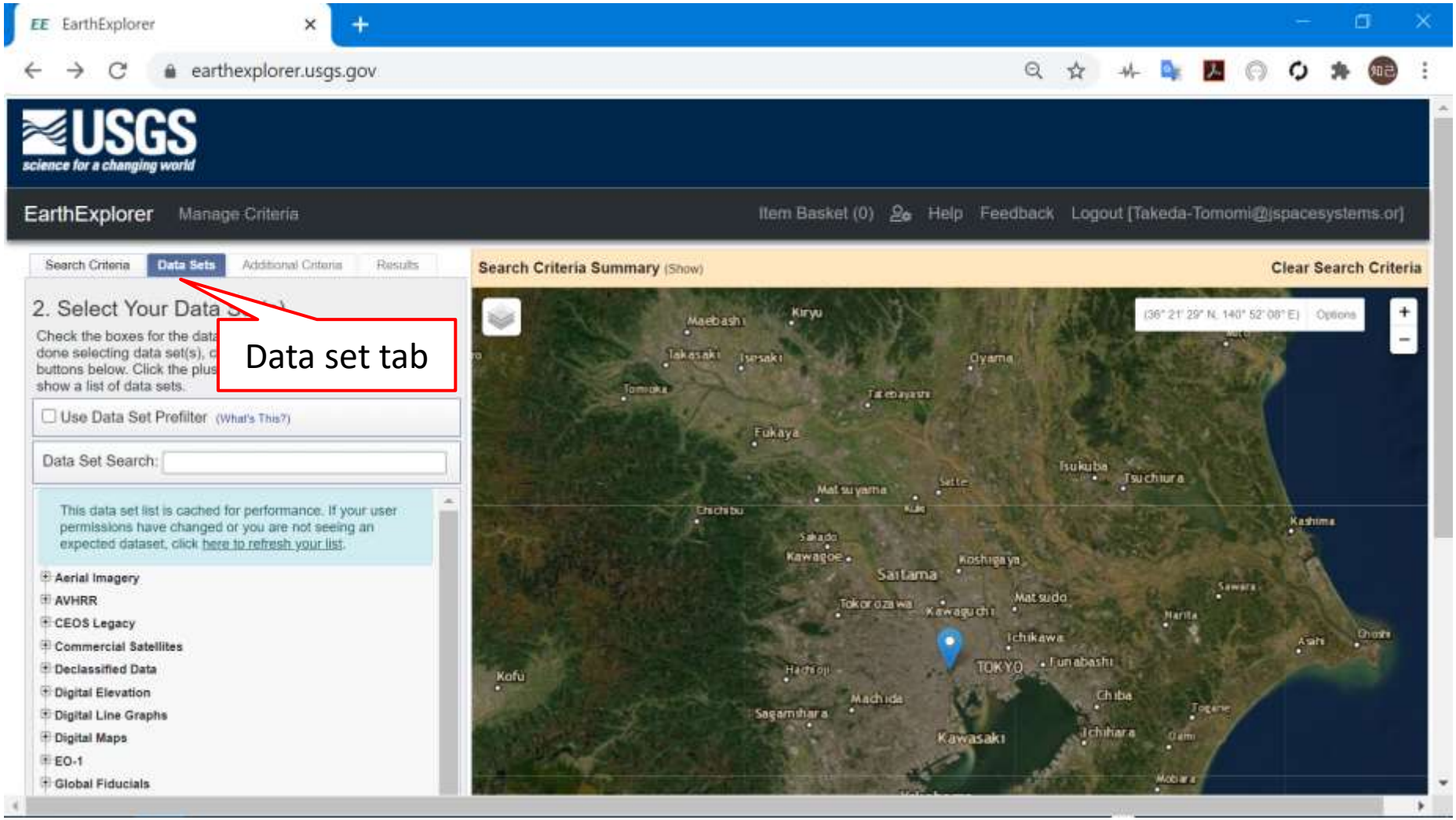
Earth explore

- Set period you want to download data.



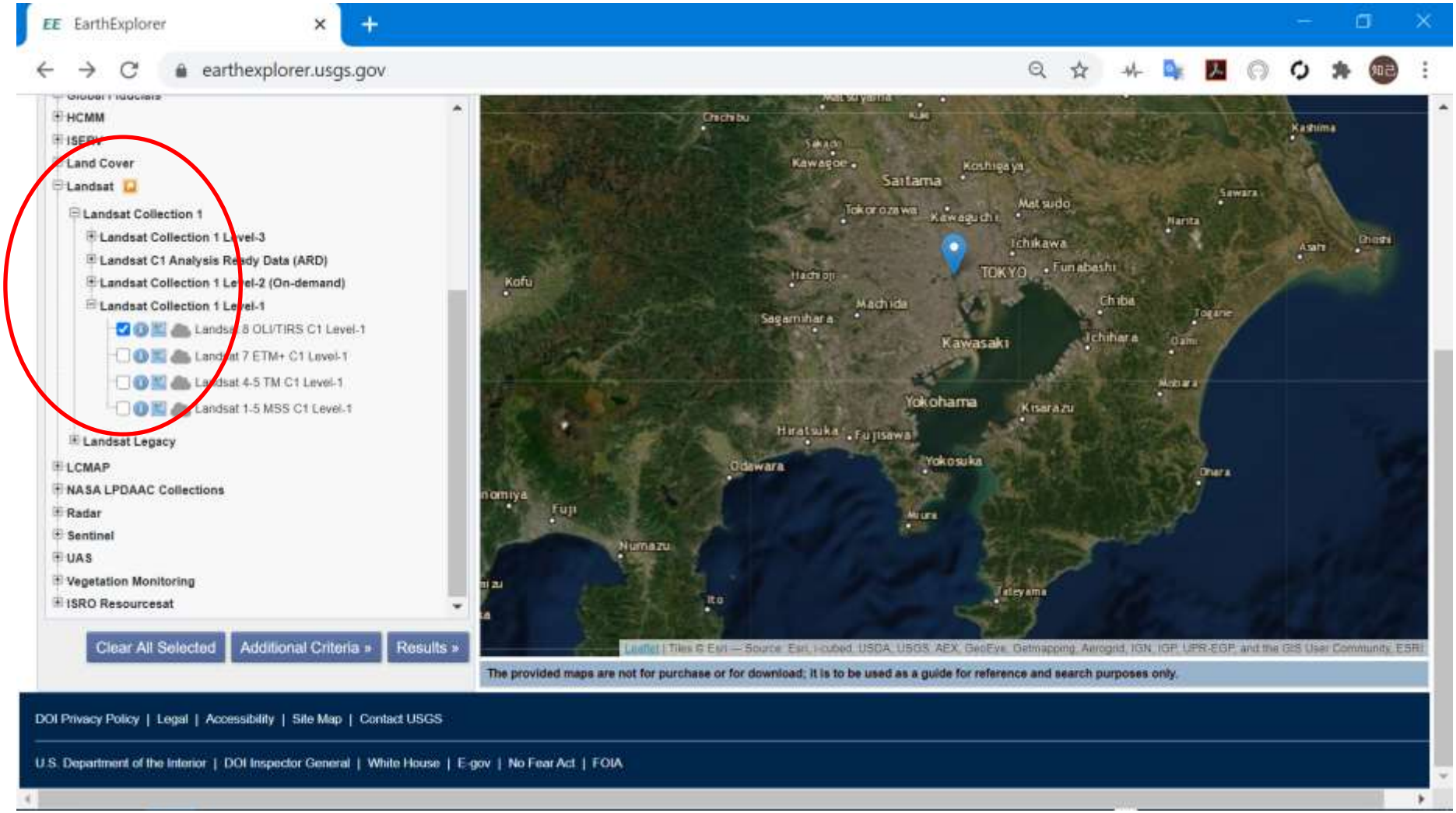
Earth explore

- Select data set.



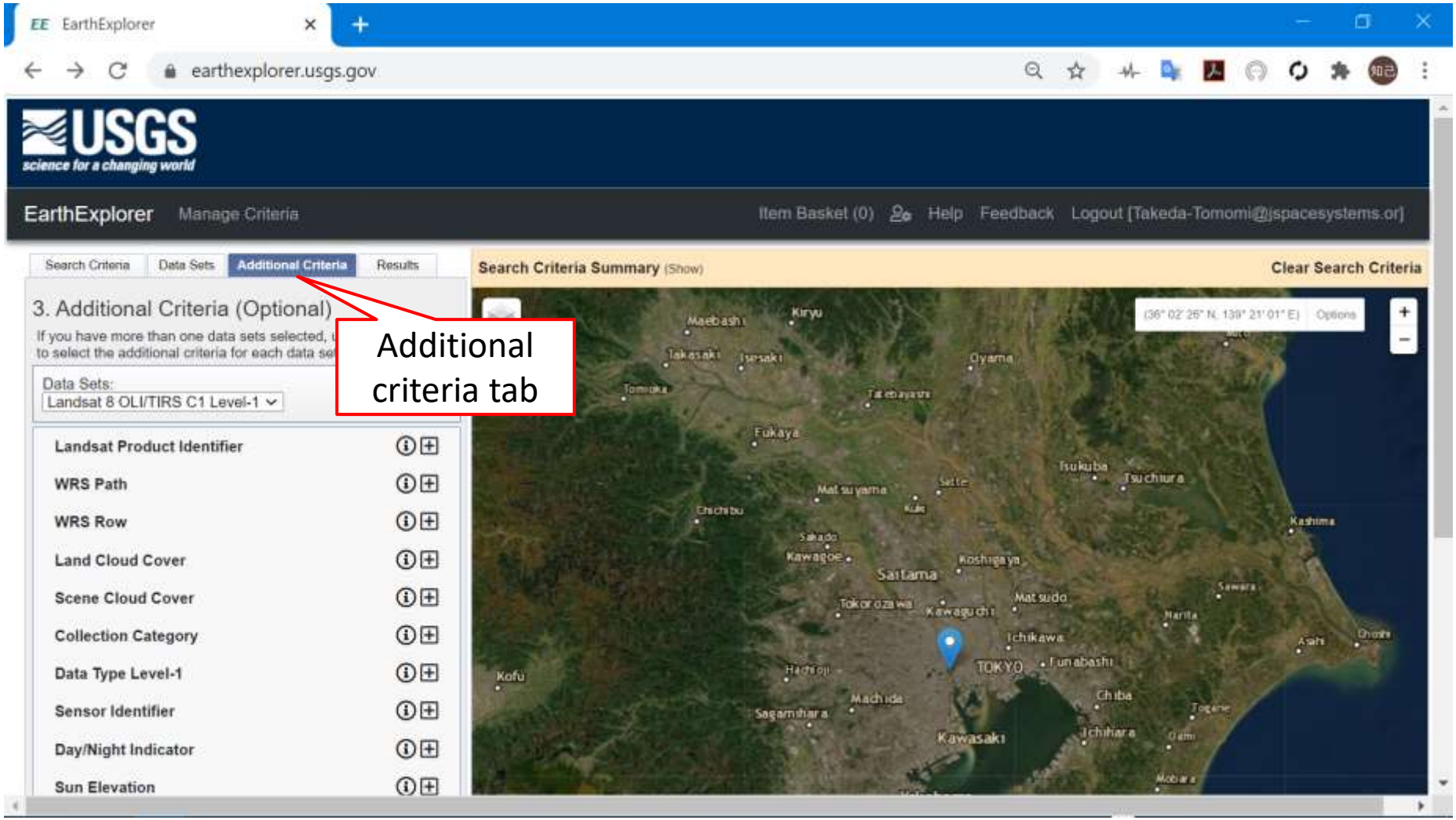
Earth explore

- For example, select Landsat 8 OLI/TIRS C1 Level-1 data.



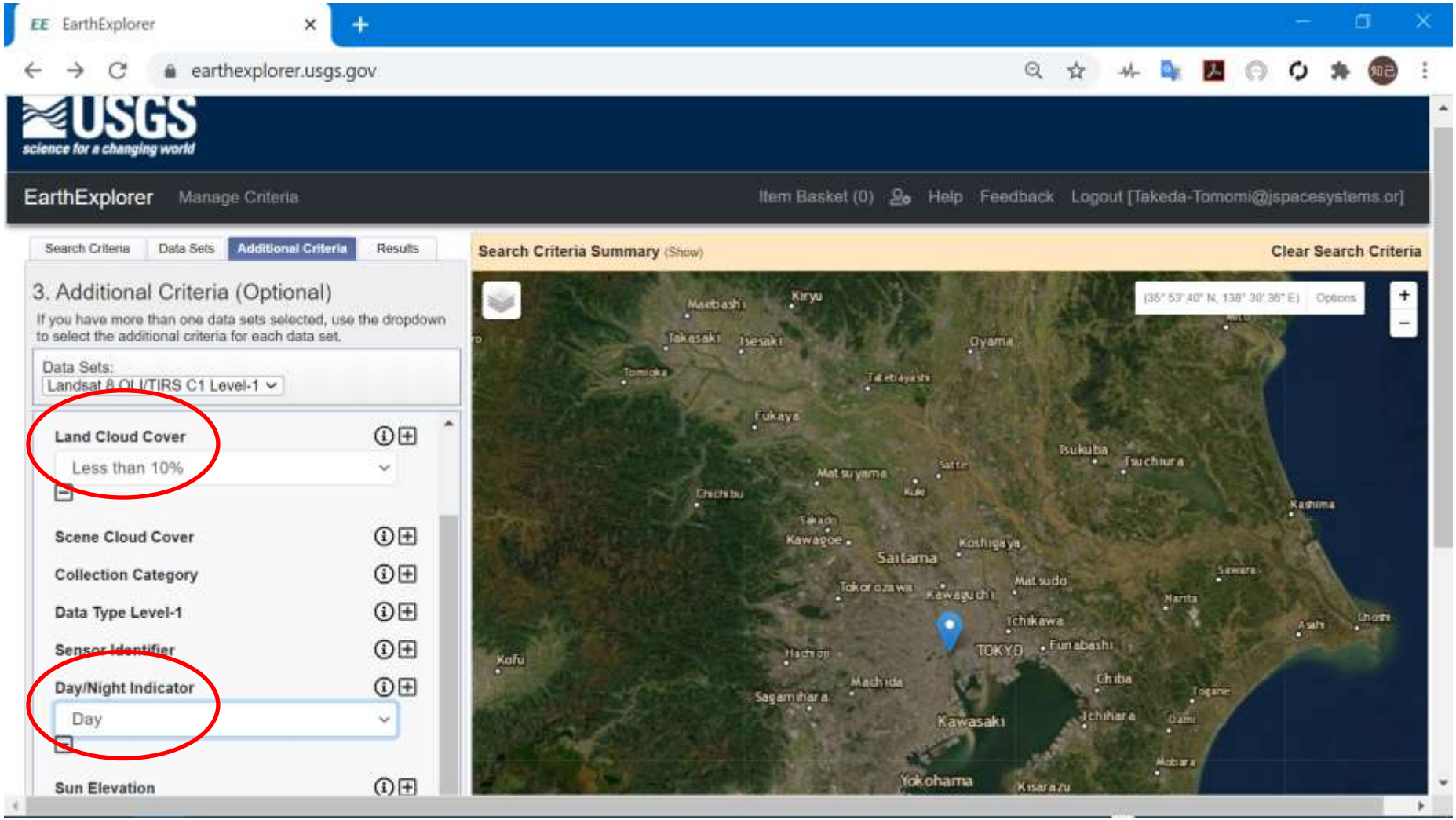
Earth explore

- Set additional criteria.



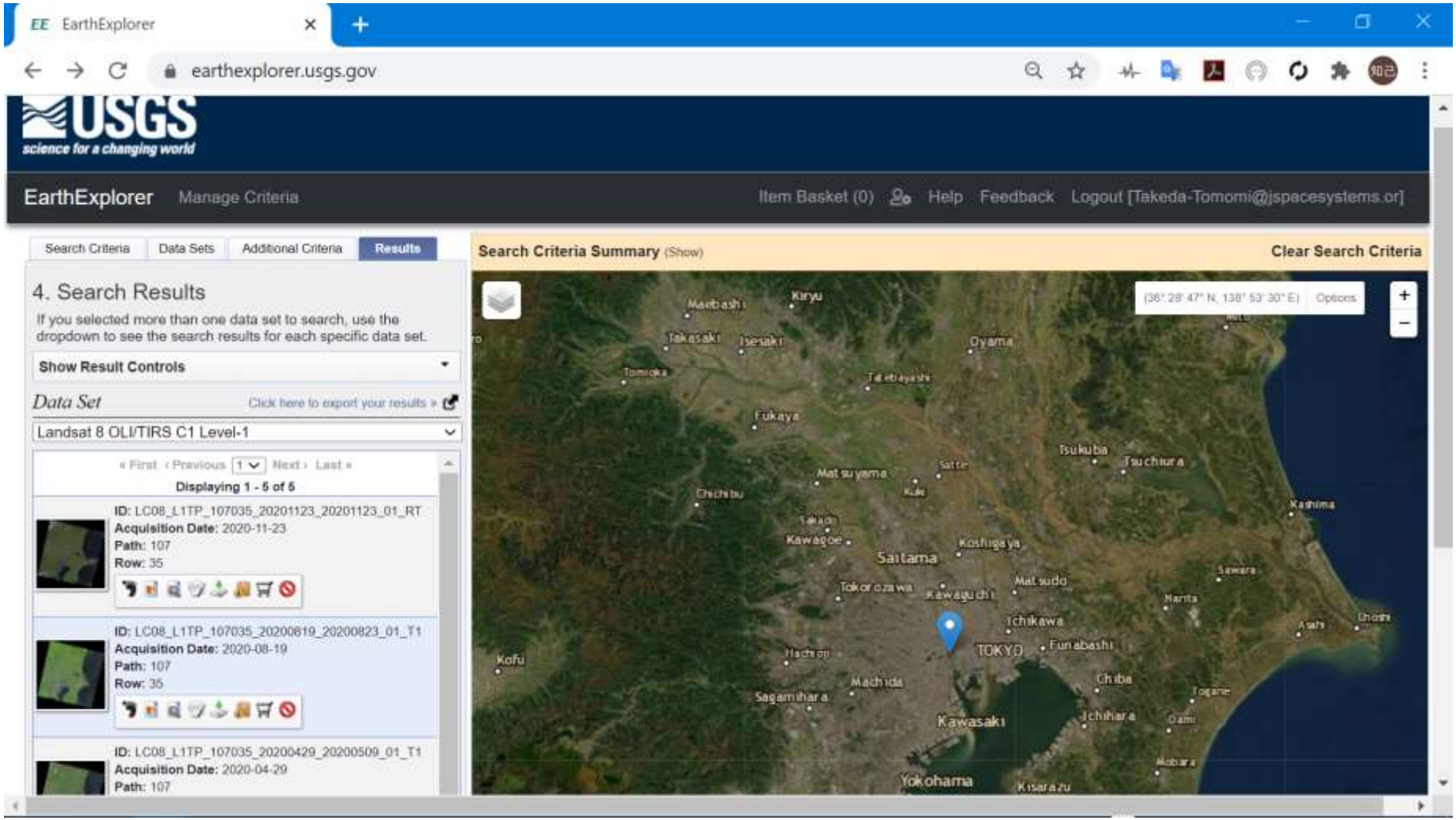
Earth explore

- Set additional criteria.
- You should select Day in Day/Night Indicator and Less than 10% in Land Cloud Cover.



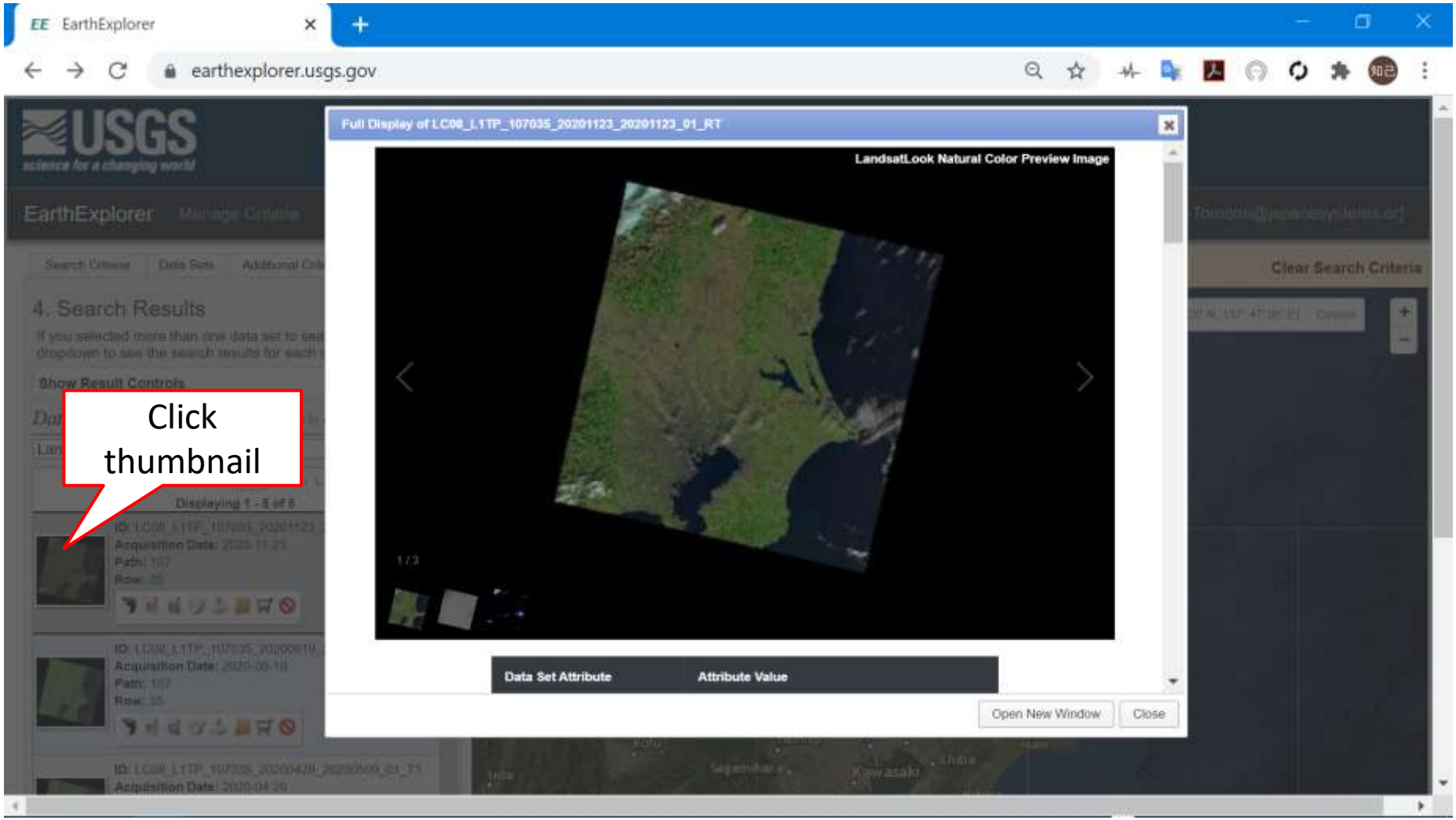
Earth explore

- The list of results is displayed in left side.
  - If you have no results, try to change period or cloud coverage.



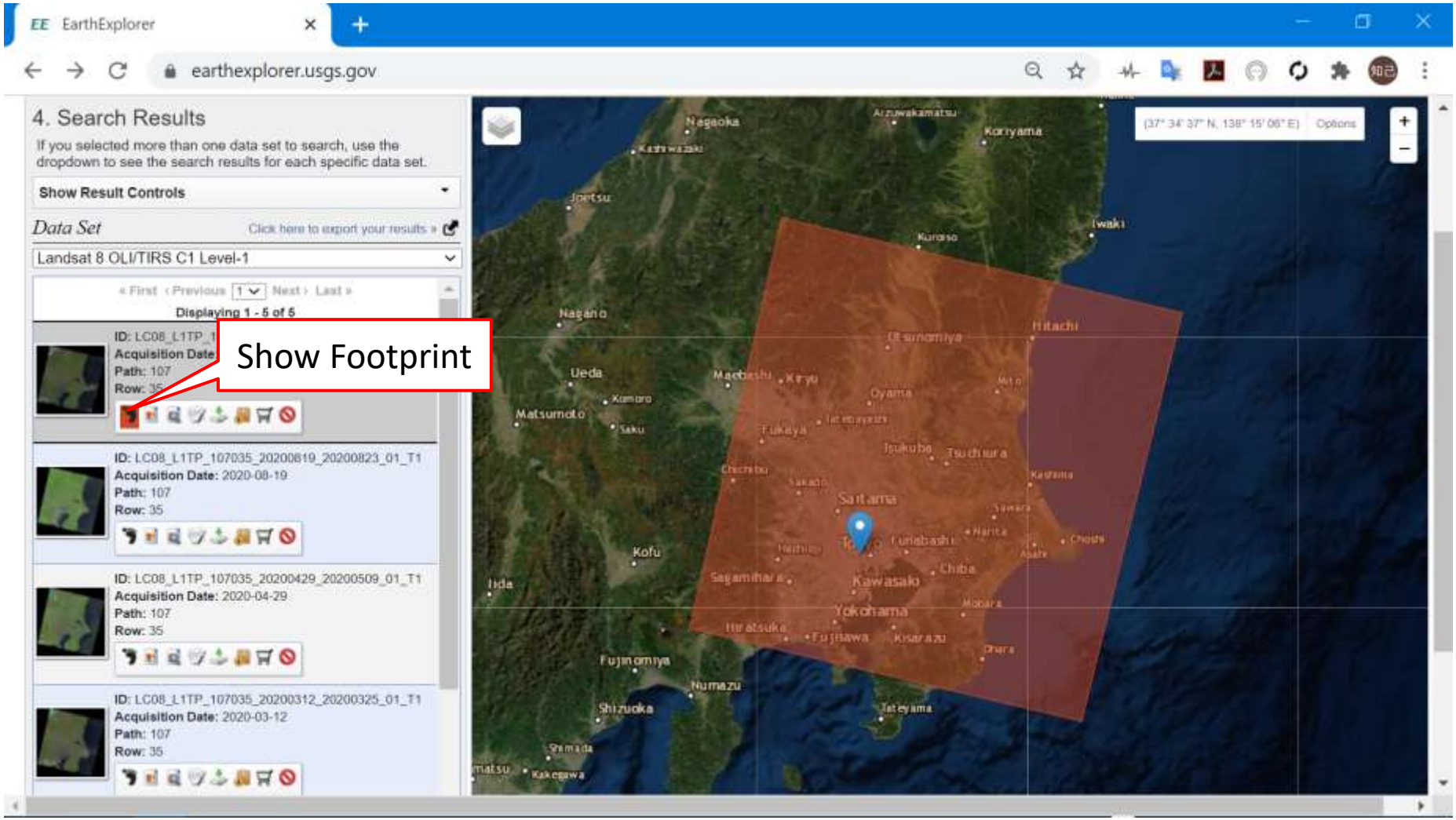
Earth explore

- In order to check metadata, click thumbnail image in the list.



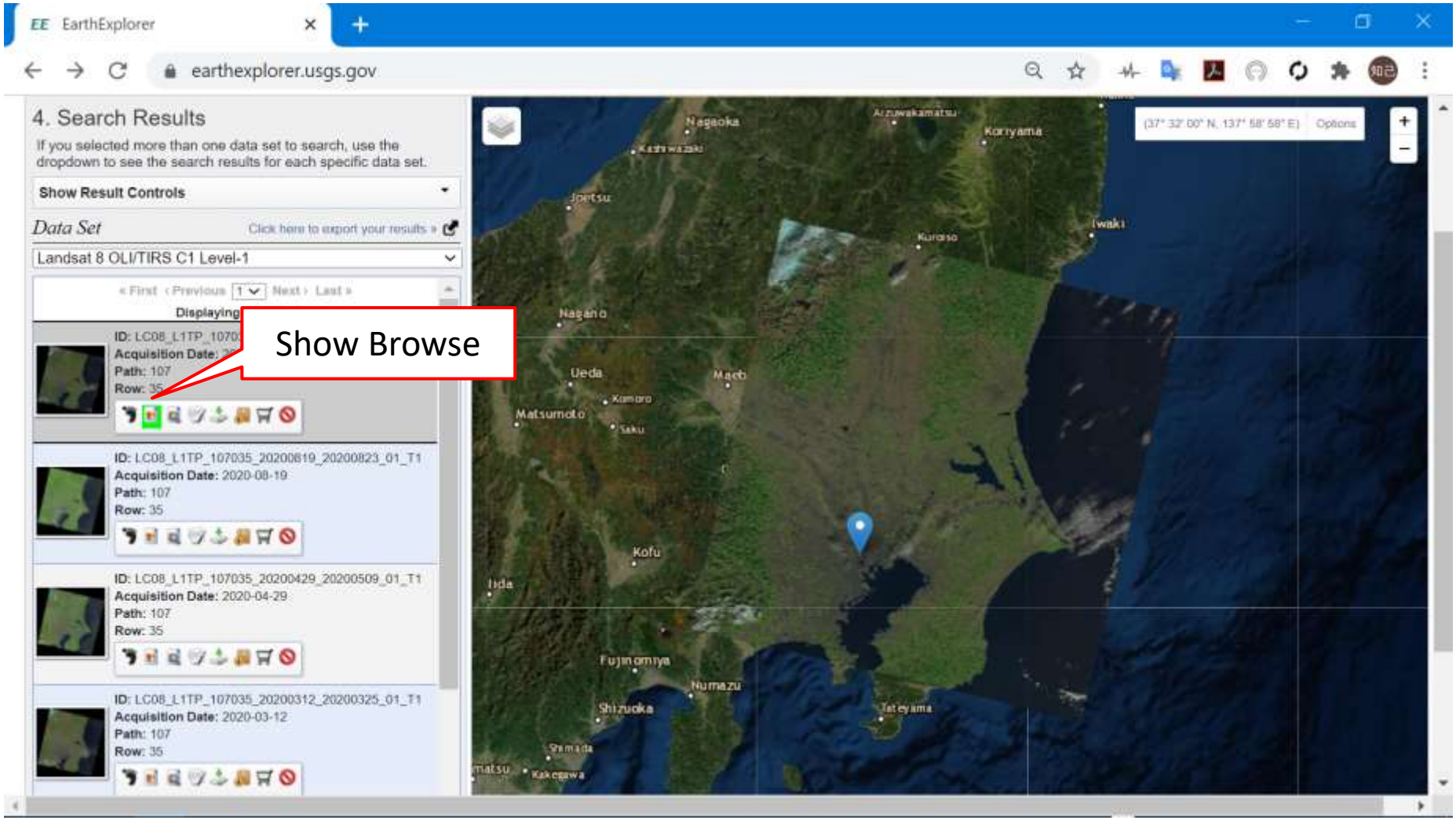
Earth explore

- In order to check image coverage, click “Show Footprint” icon.



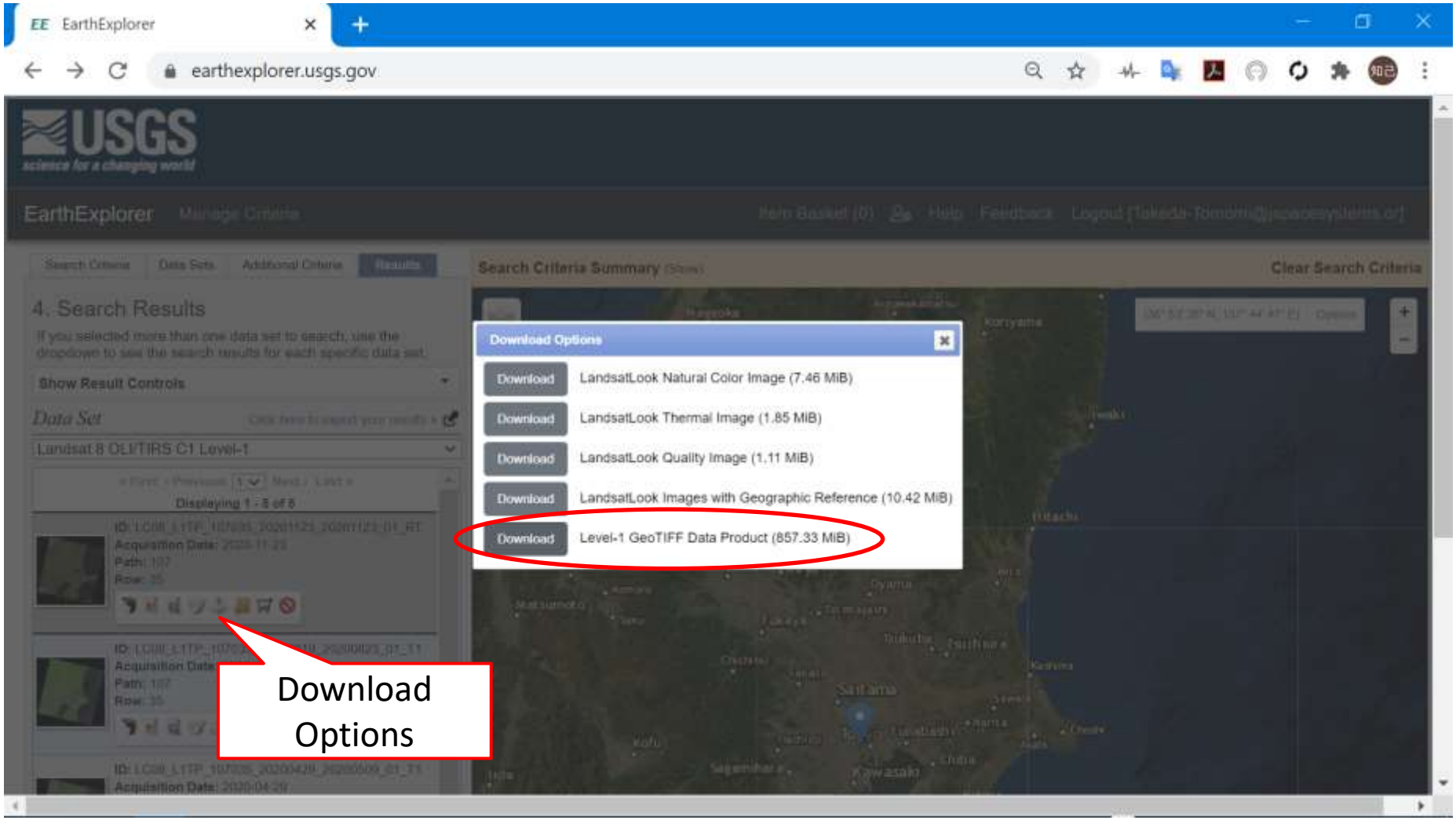
Earth explore

- In order to check preview image, check “Show Browse Overlay” icon.



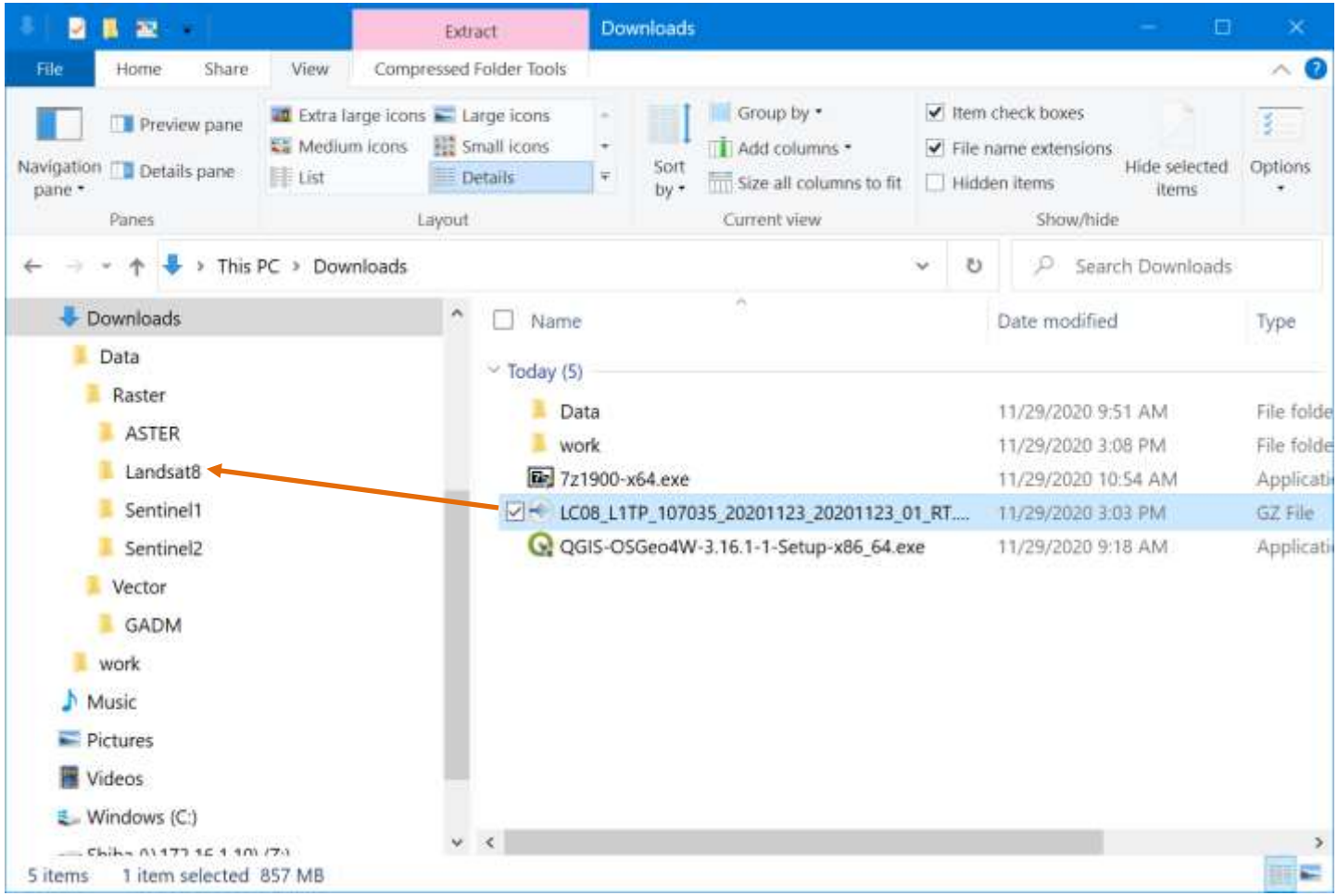
Earth explore

- In order to download data, click “Download Options” icon.
- And click download button of “Level-1 GeoTIFF Data Product (xxx.xx MiB)”.



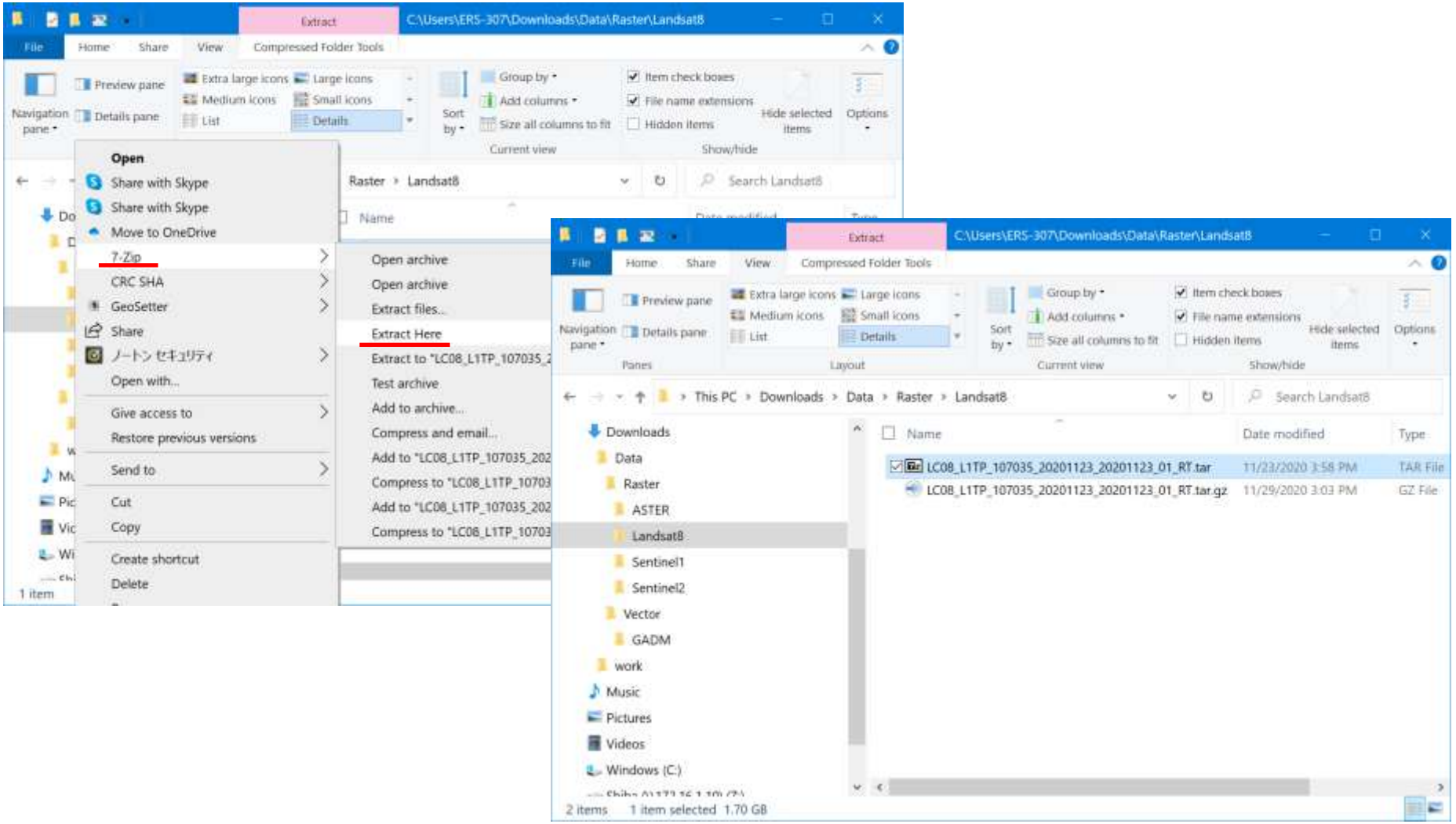
Earth explore

- Move downloaded file to Landsat8 folder.



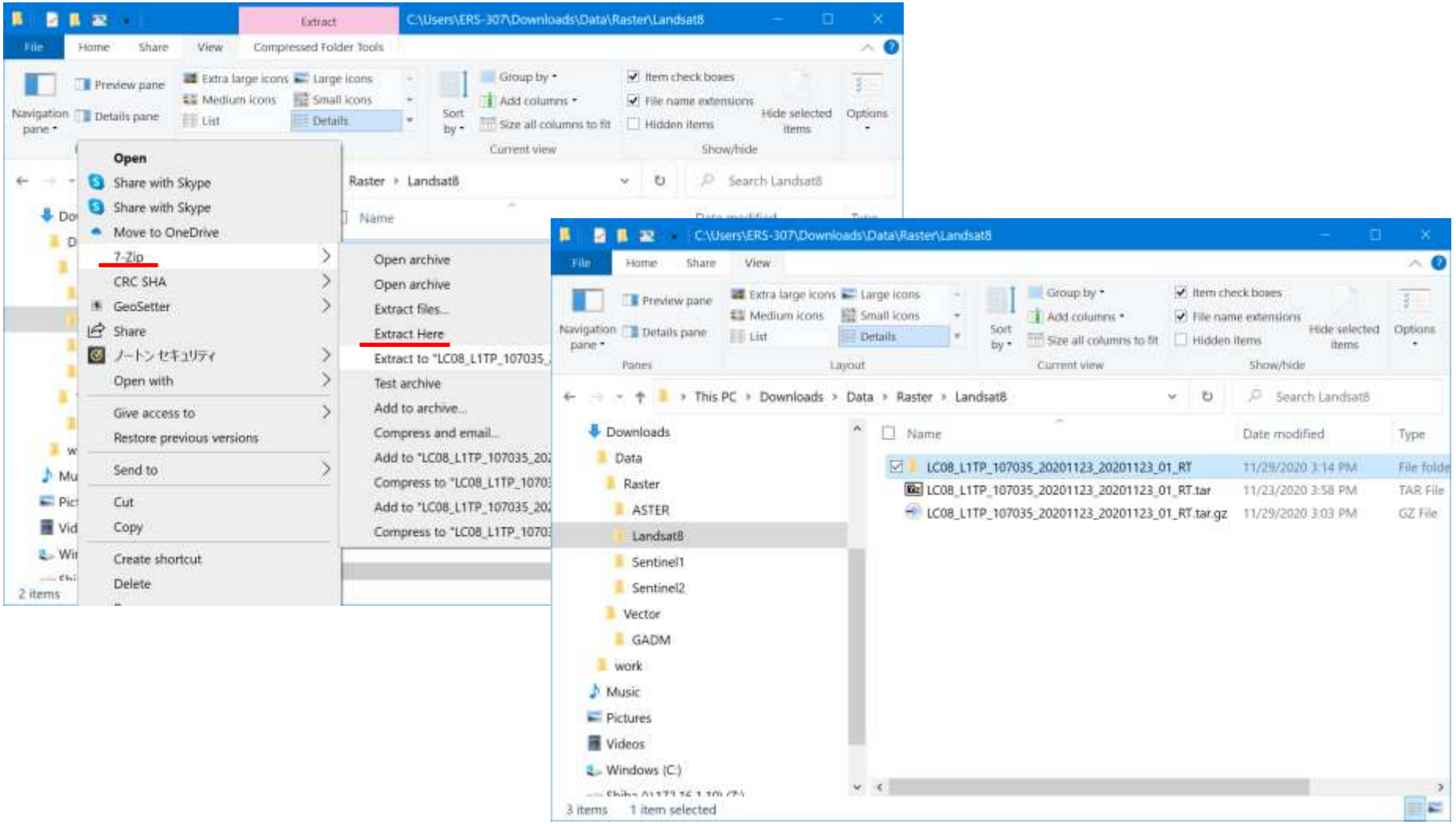
Earth explore

- Extract tar.gz file here.



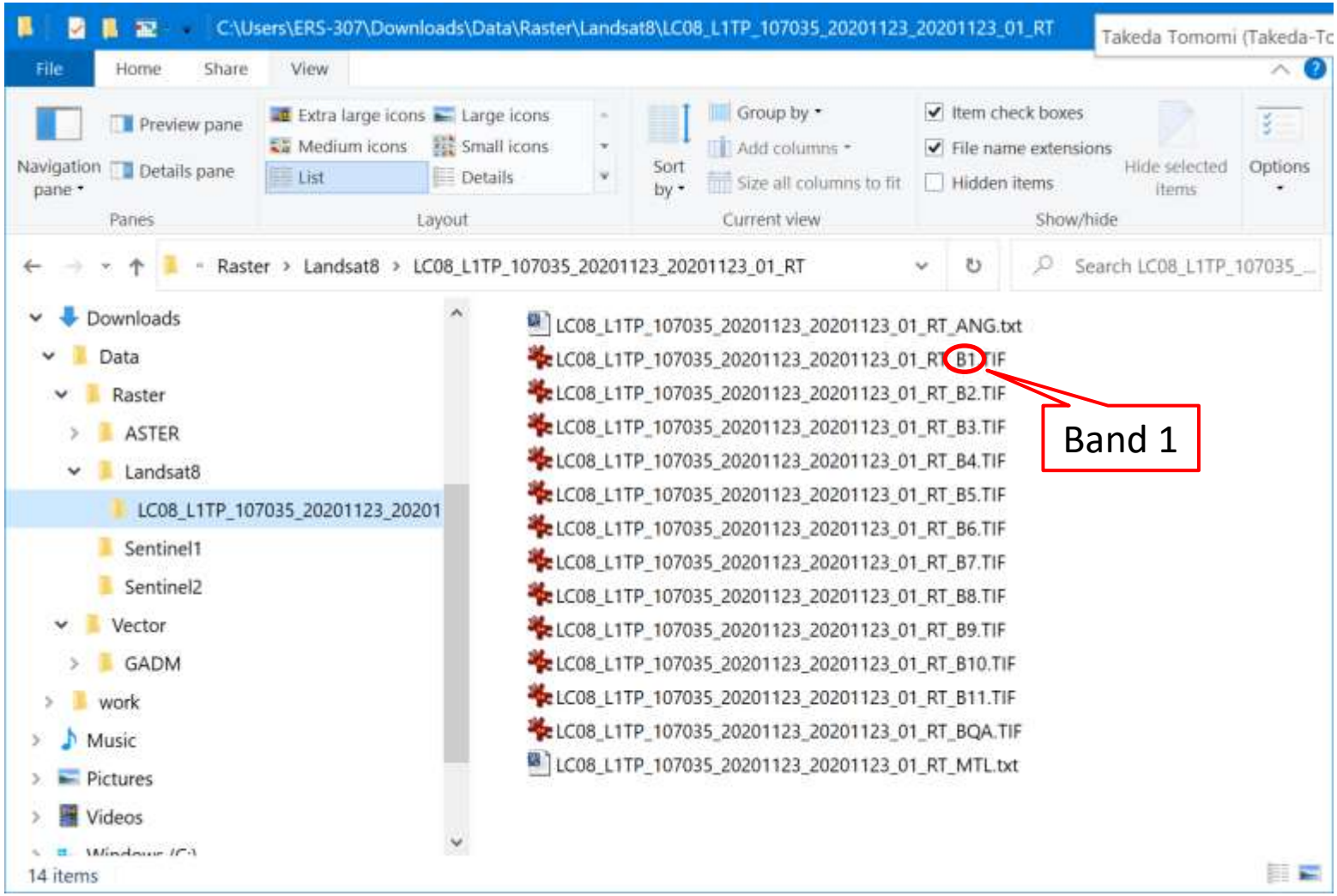
Earth explore

- Extract tar file to “LC08_L1TP_107035_20201123_20201123_01_RT”.



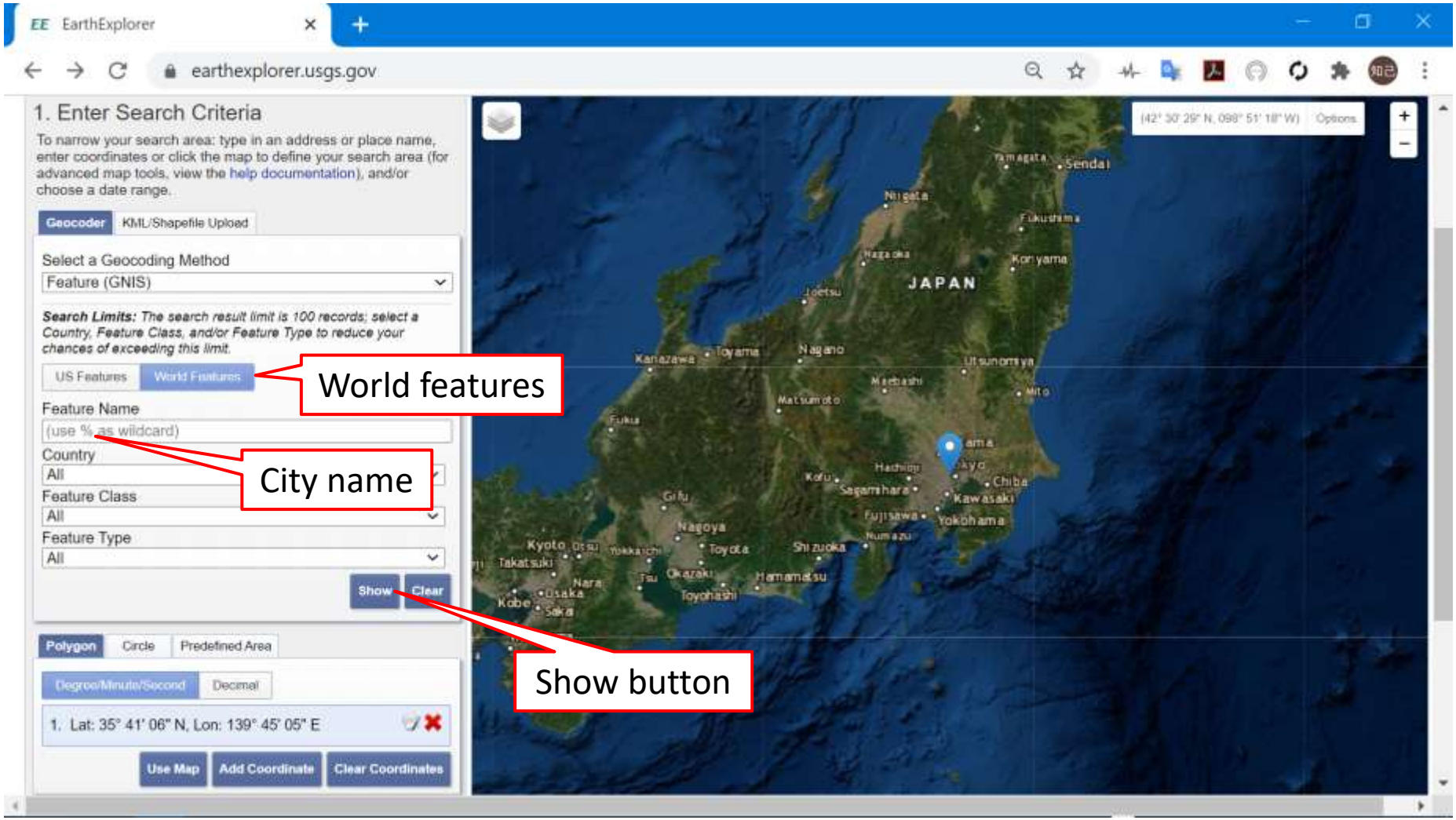
Earth explore

- Satellite images are extracted.
  - Band number is included in file name.



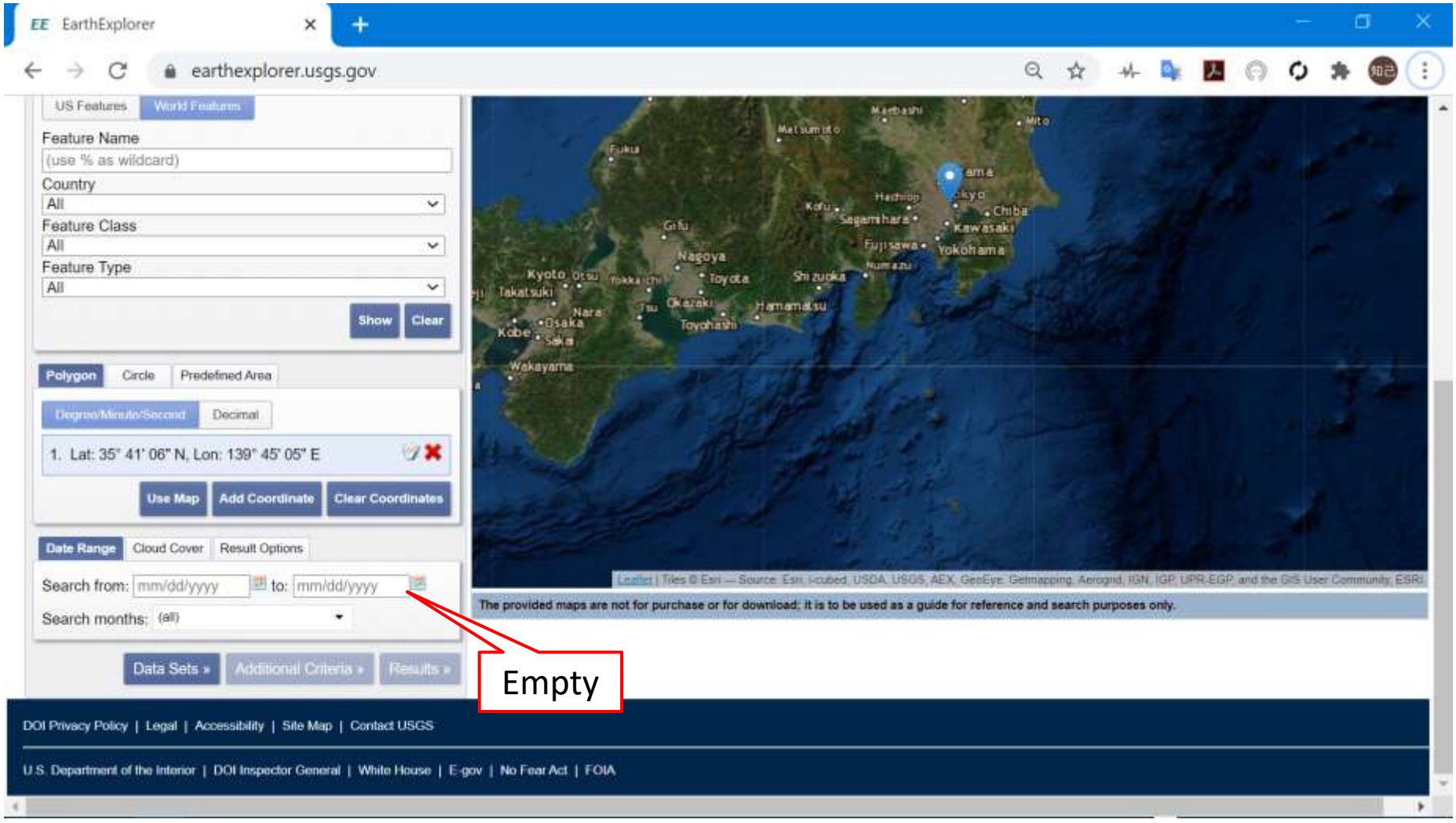
Earth explore

- Select area you want to download DEM data.



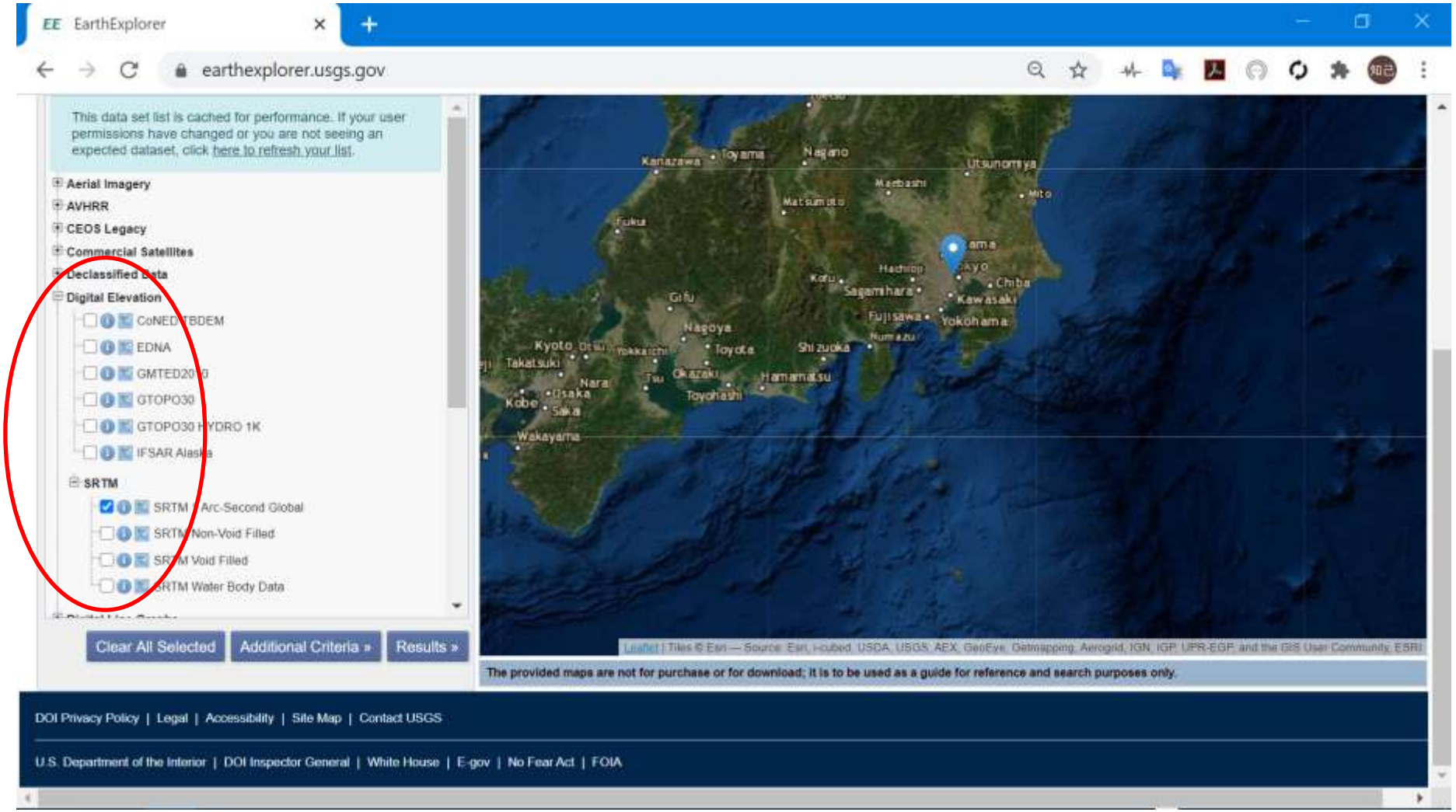
Earth explore

- Don’t set period. Keep empty.



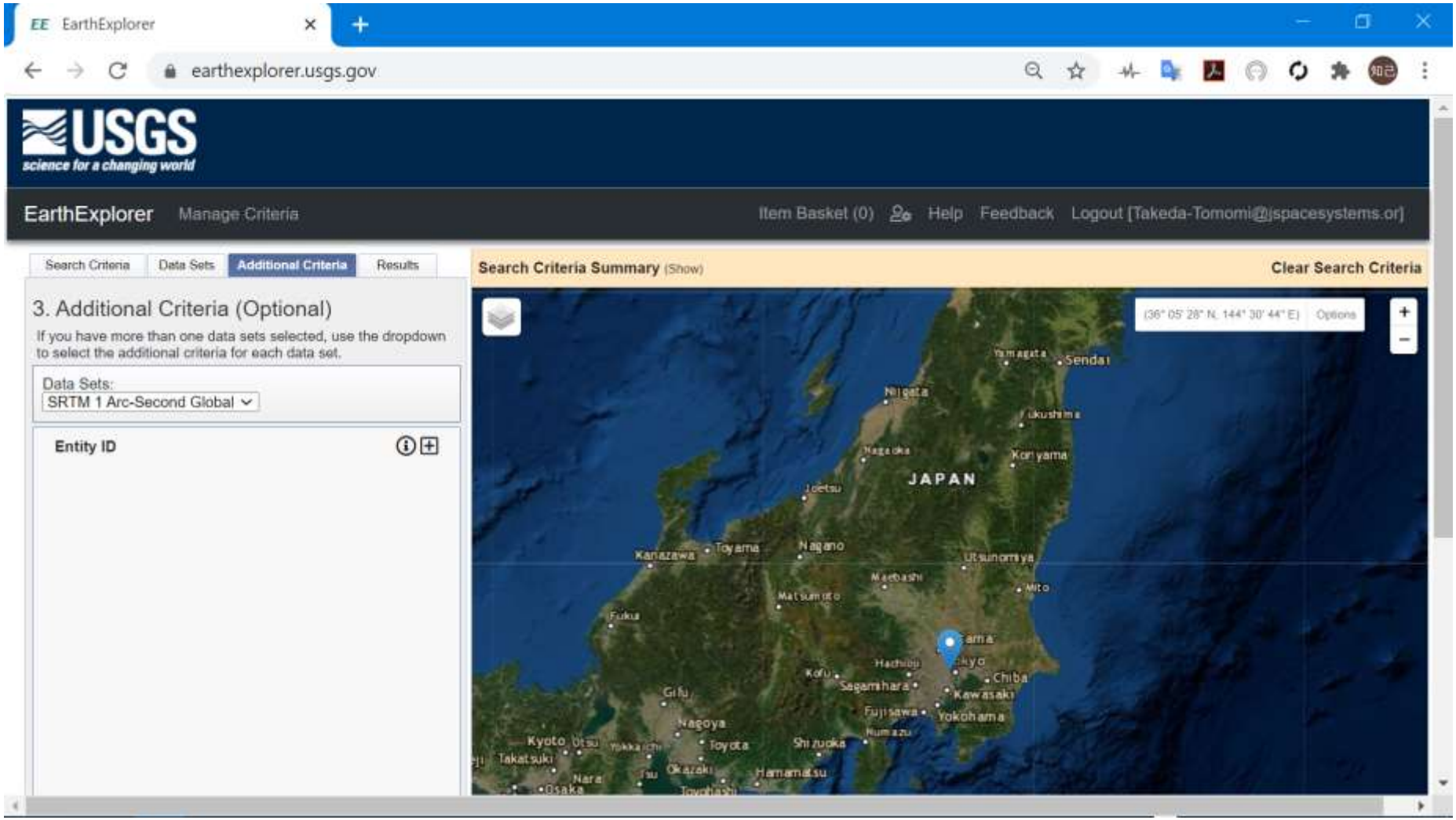
Earth explore

- Select “SRTM 1 Arc-Second Global” data in “Data Sets” tab.



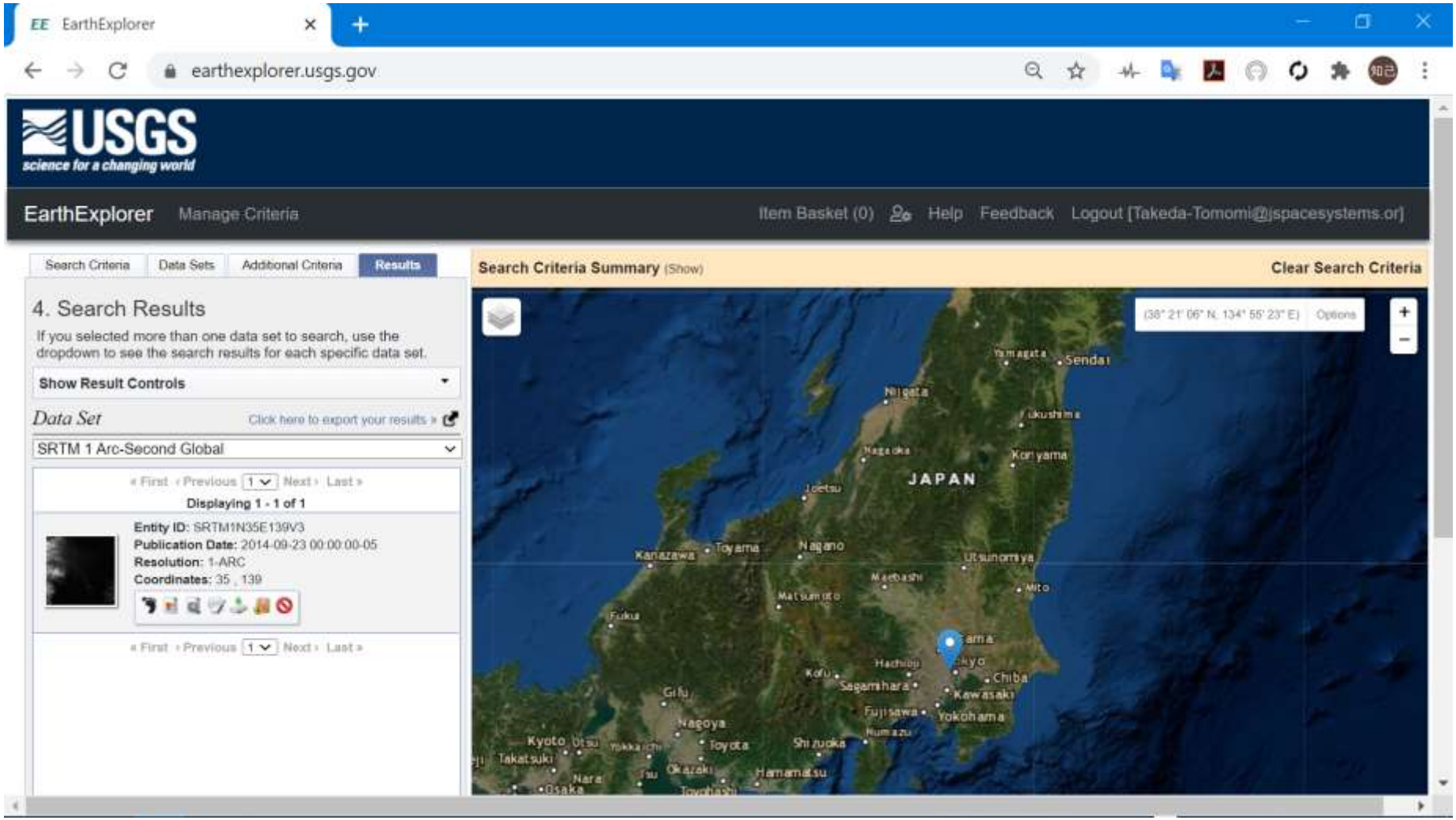
Earth explore

- You don’t need to set additional criteria.



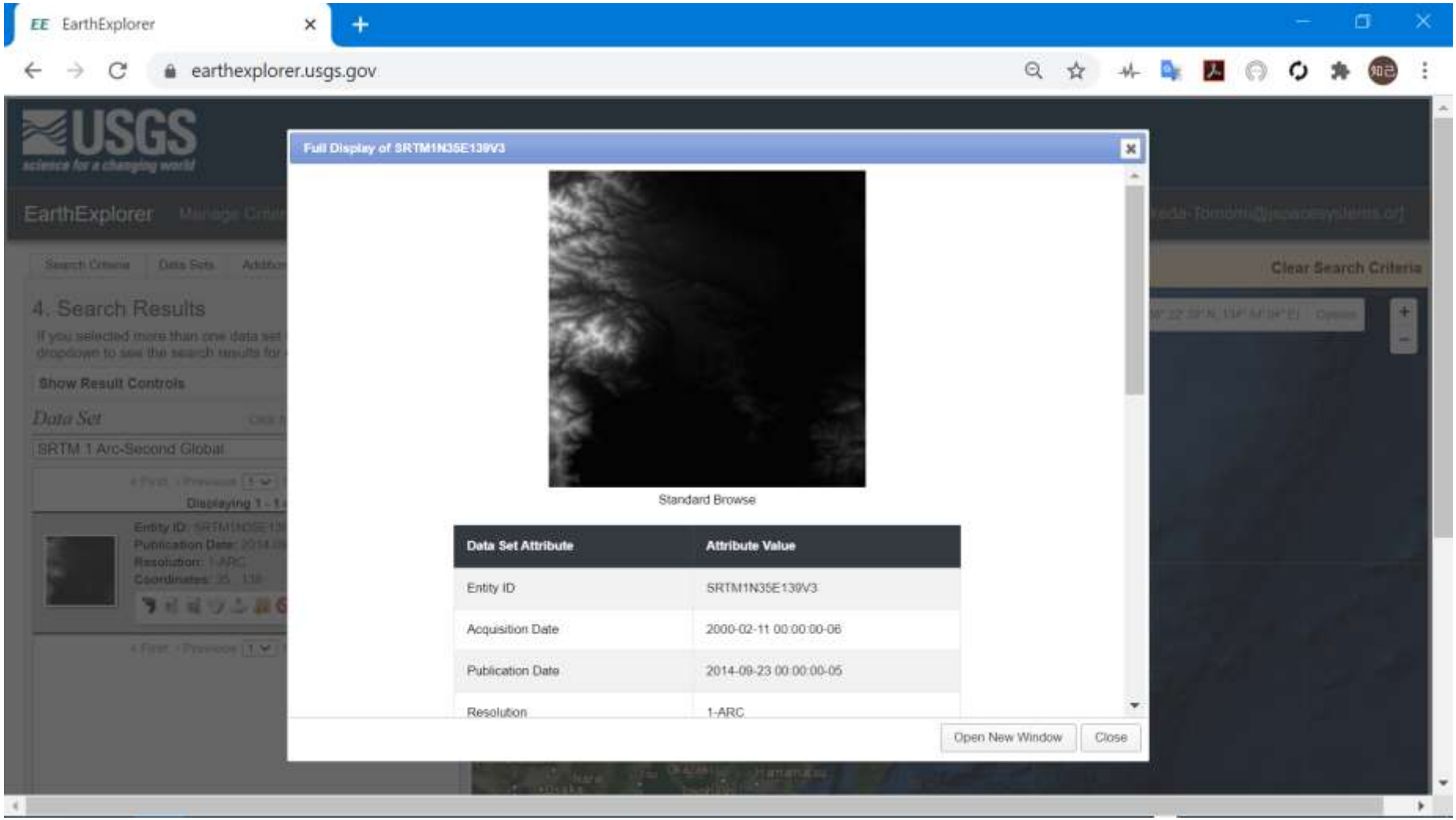
Earth explore

- The list of results is displayed in left side.



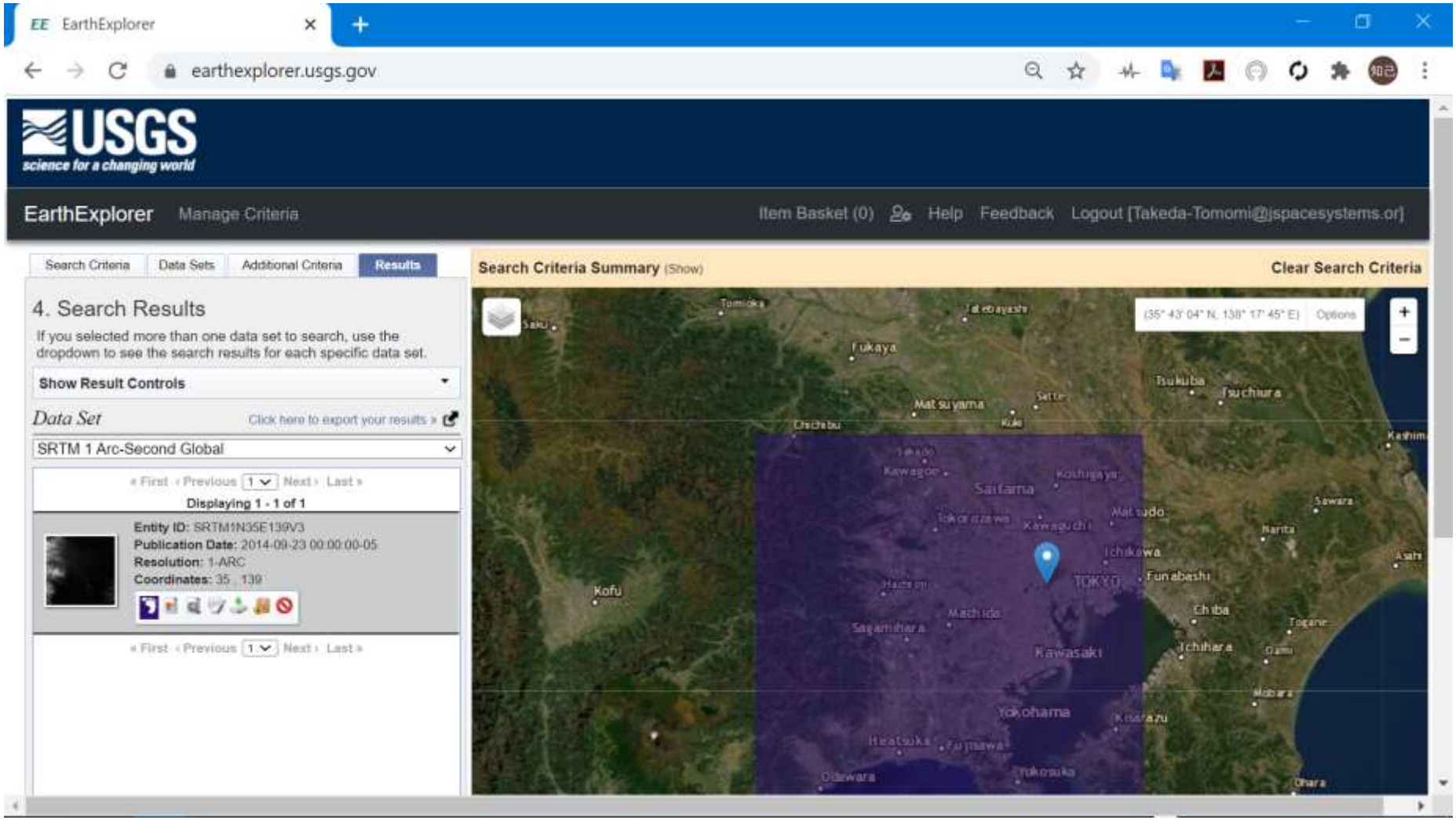
Earth explore

- In order to check metadata, click thumbnail image in the list.



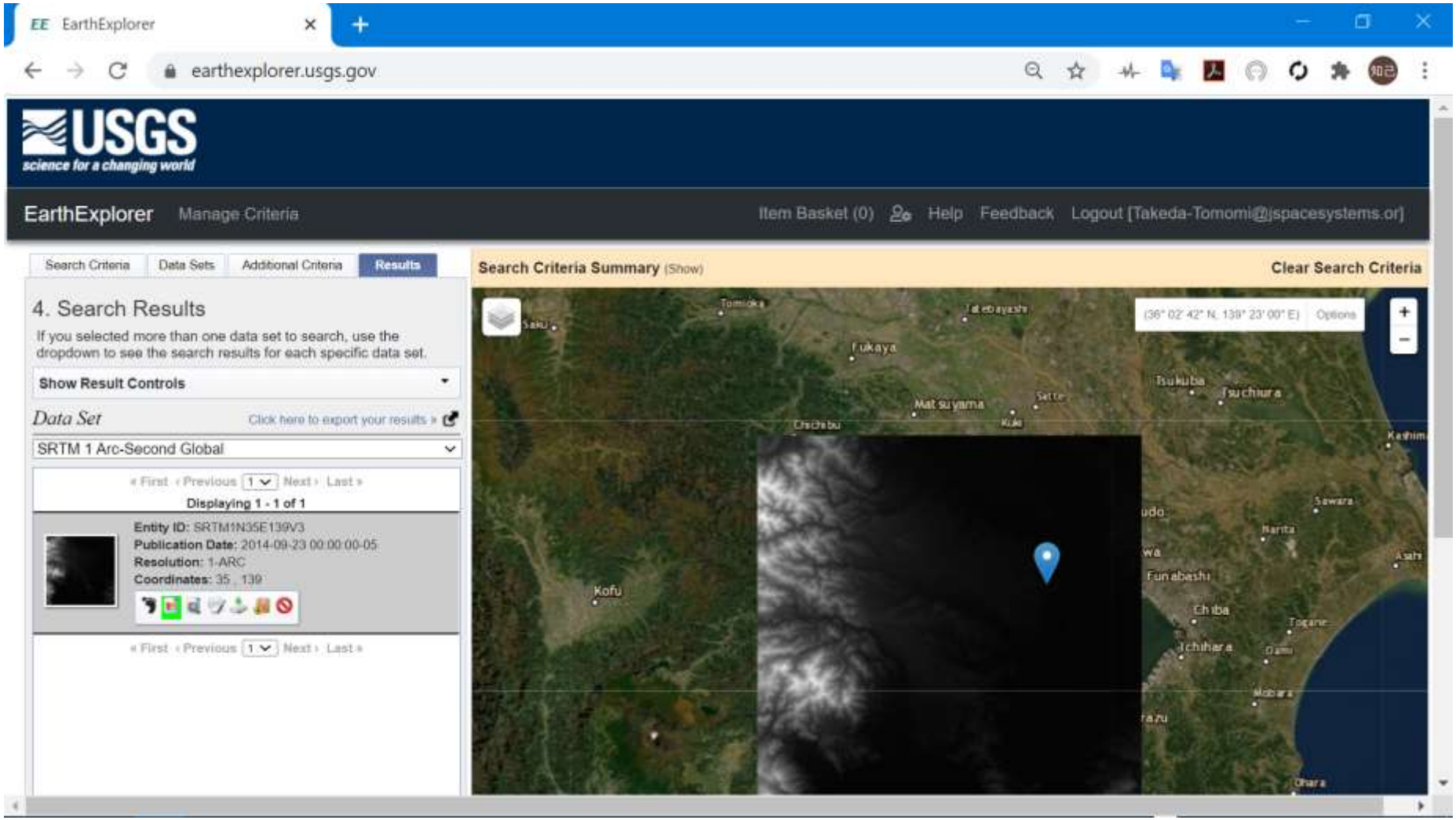
Earth explore

- In order to check image coverage, click “Show Footprint” icon.



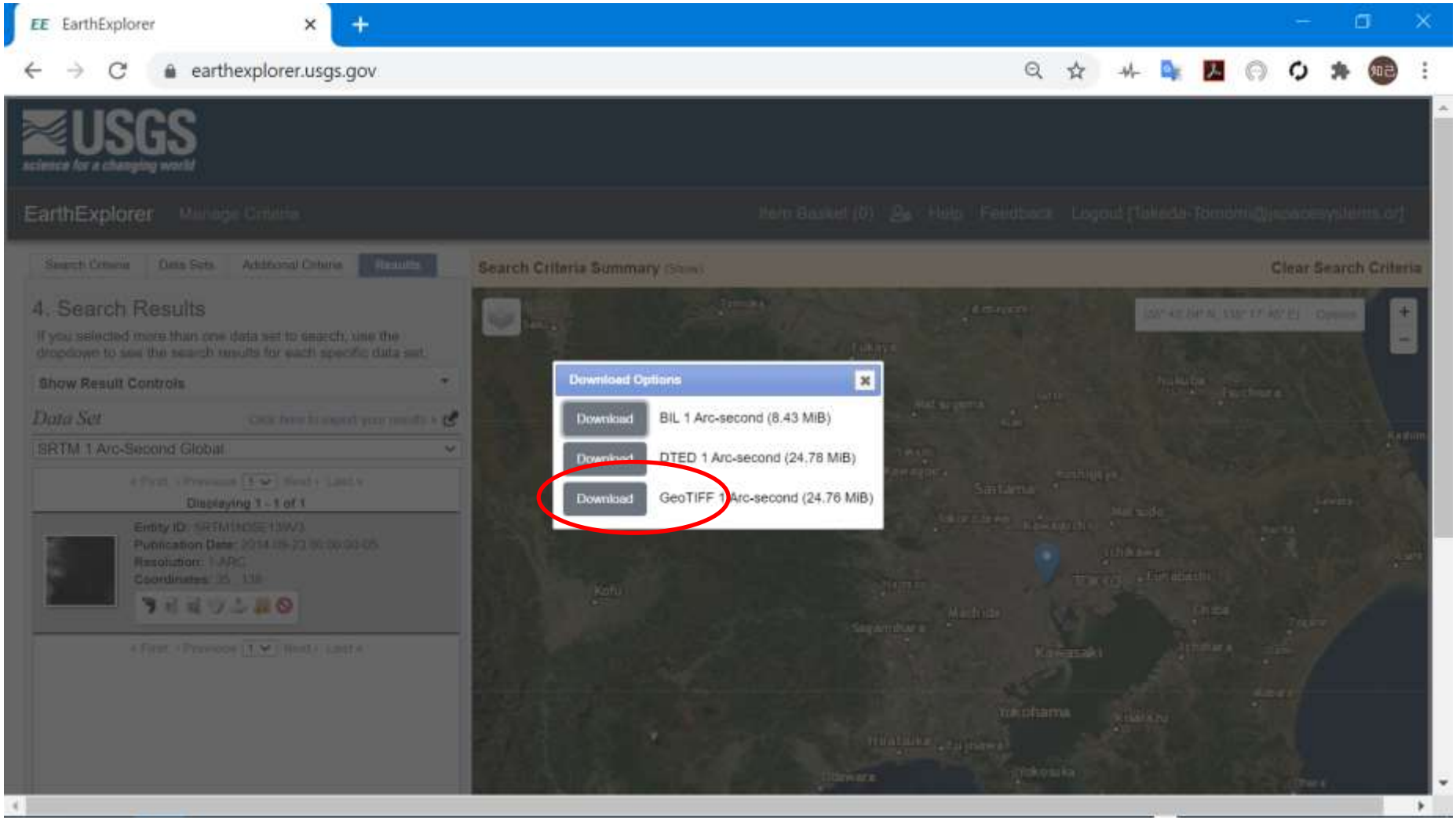
Earth explore

- In order to check preview image, check “Show Brows Overlay” icon.



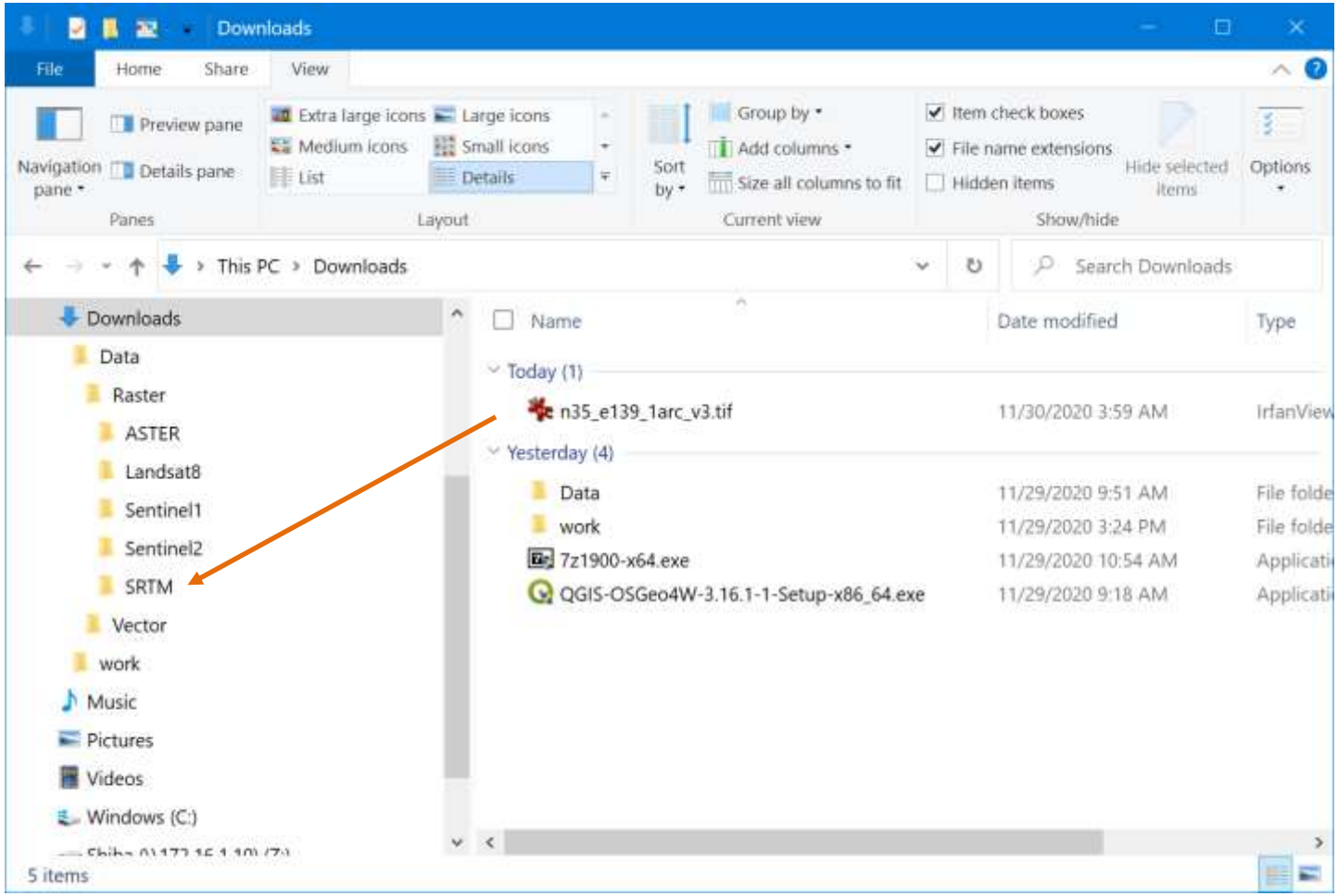
Earth explore

- In order to download data, click “Download Options” icon.
- And click download button of “GeoTiff 1 Arc-Second (xx.xx MiB)”.



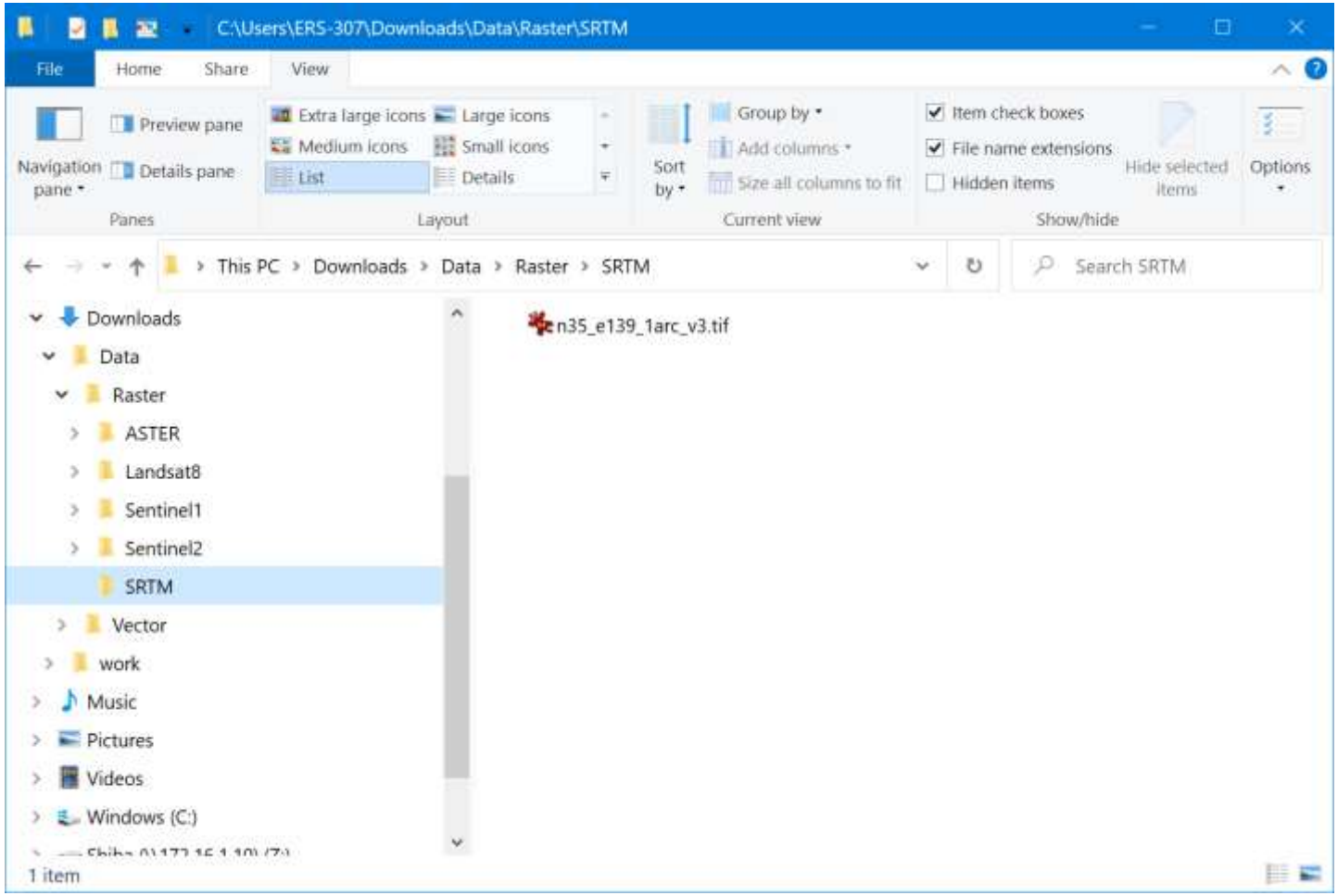
Earth explore

- Move downloaded file to SRTM folder.



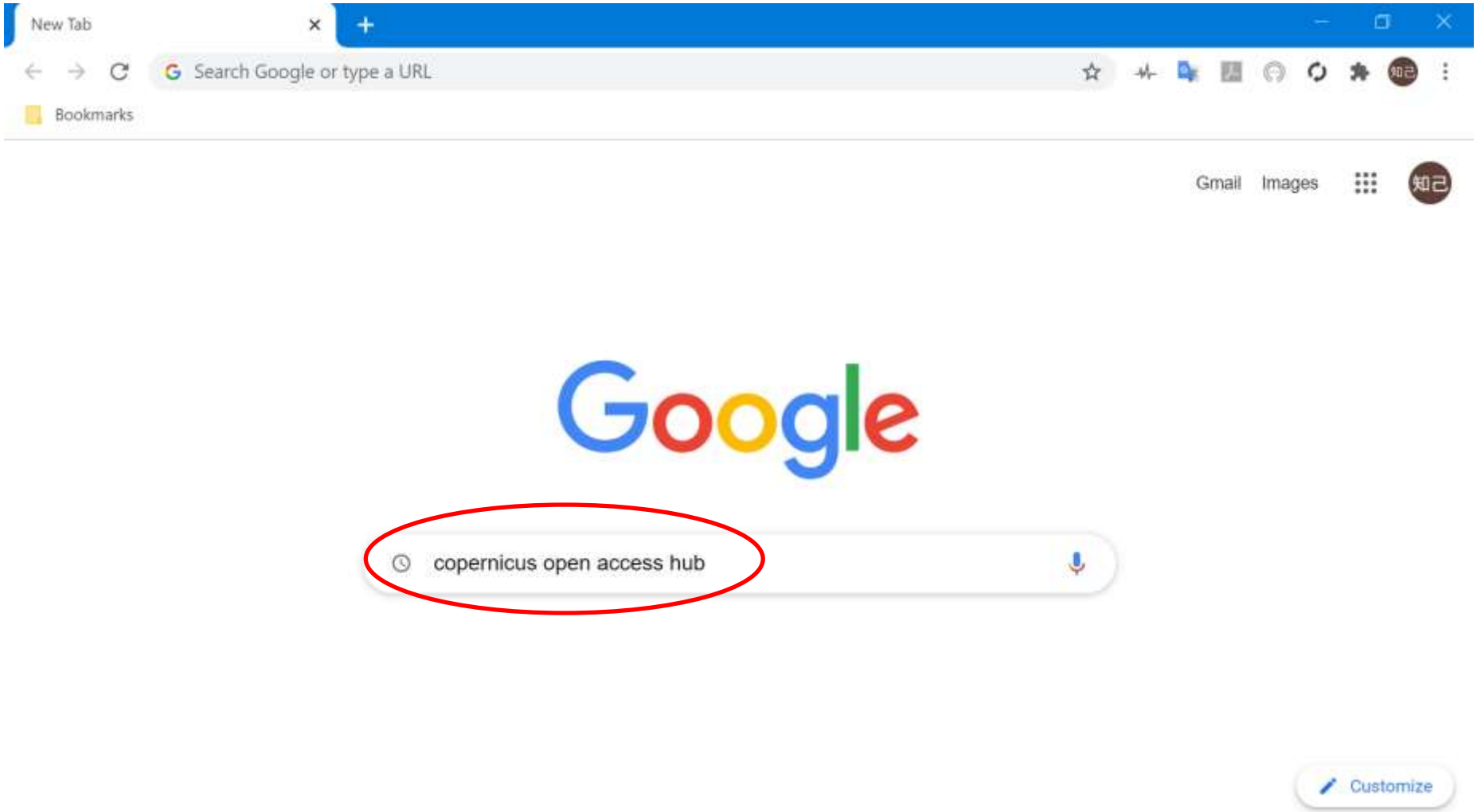
Earth explore

- DEM data is here.



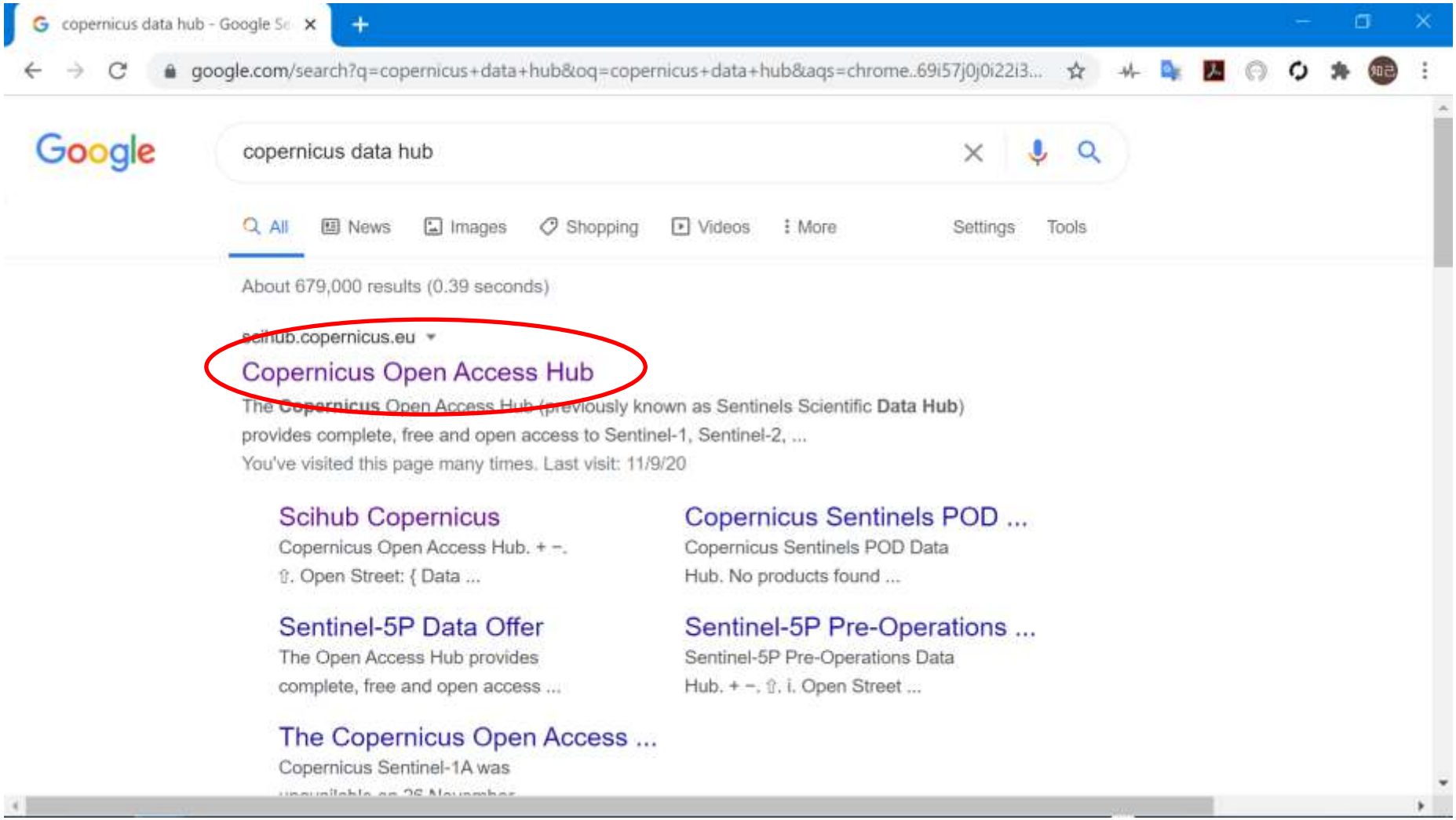
Copernicus Open Access Hub

- Search copernicus open access hub.



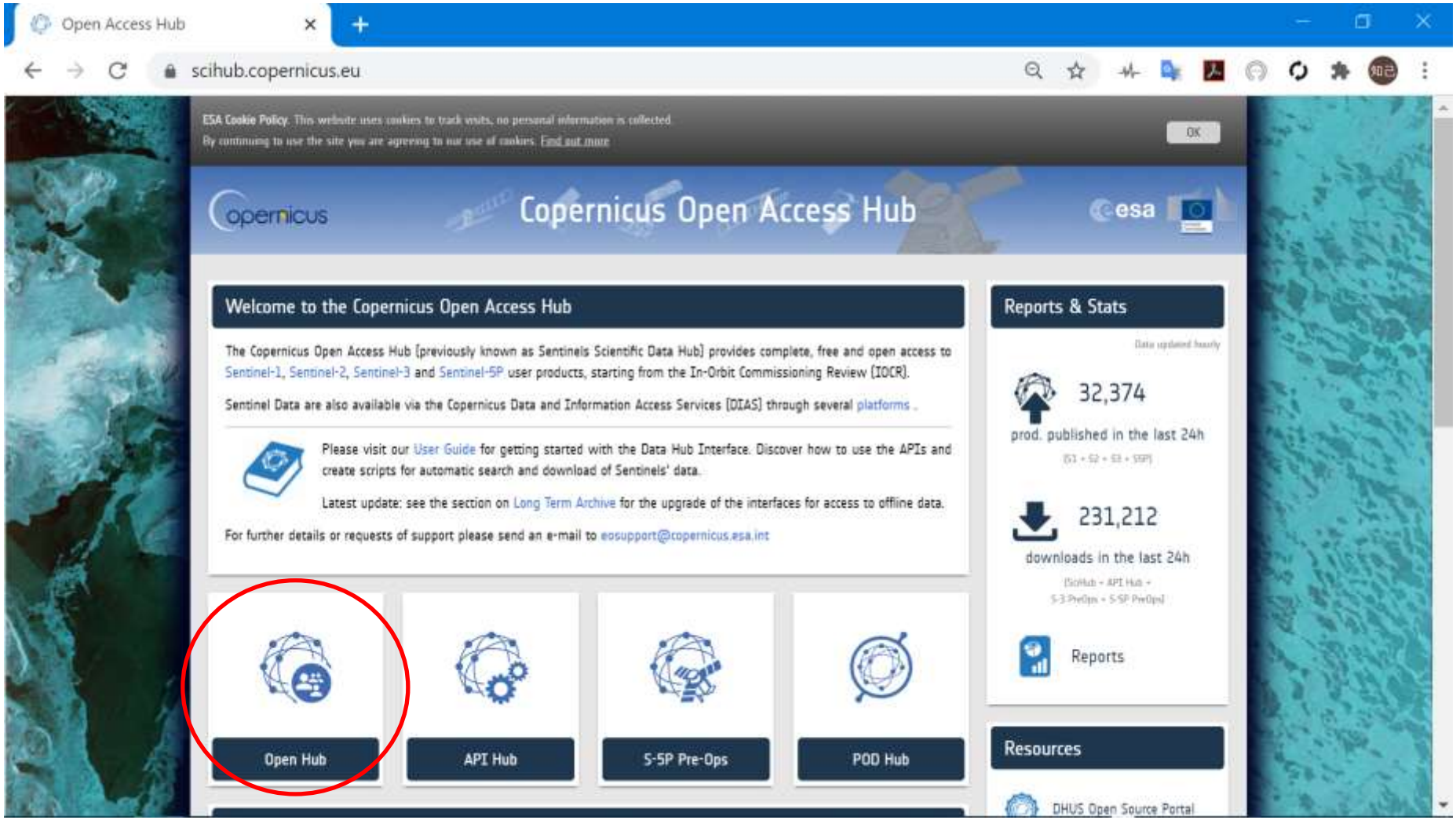
Copernicus Open Access Hub

- Open link of “Copernicus Open Access Hub”.



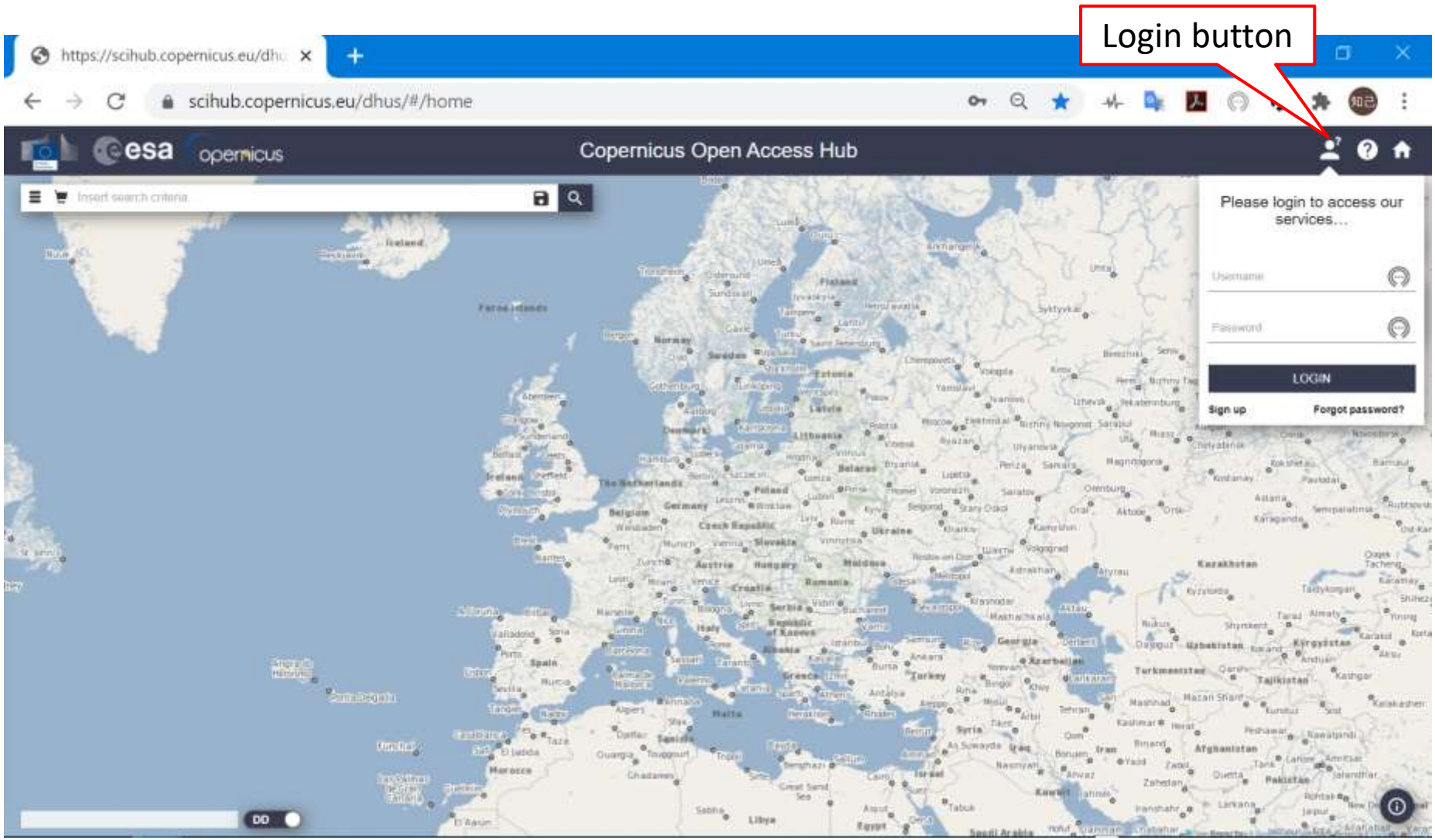
Copernicus Open Access Hub

- Open link of “Open hub”.



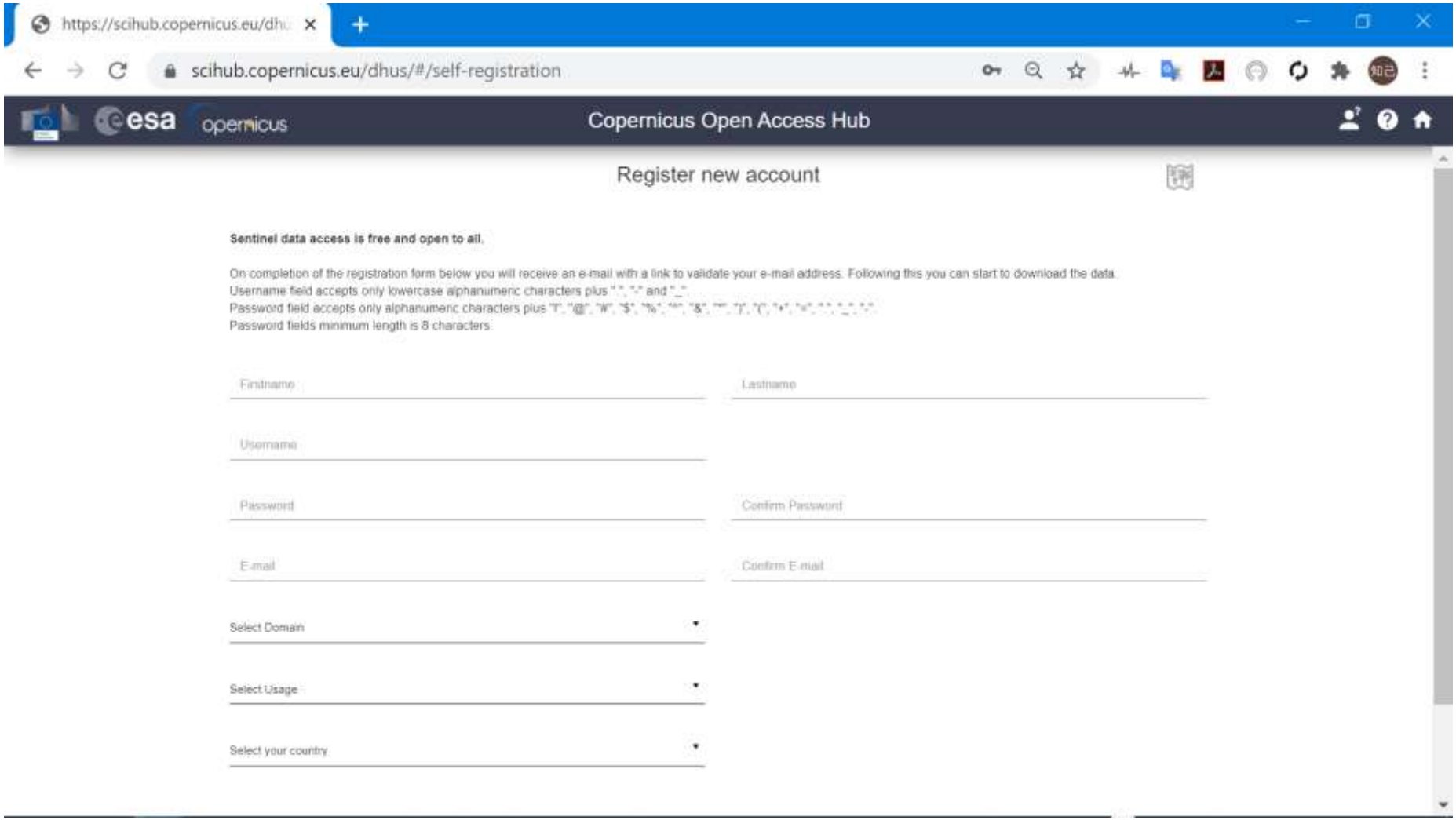
Copernicus Open Access Hub

- Click “Login” button and “Sing in” button to create new account.



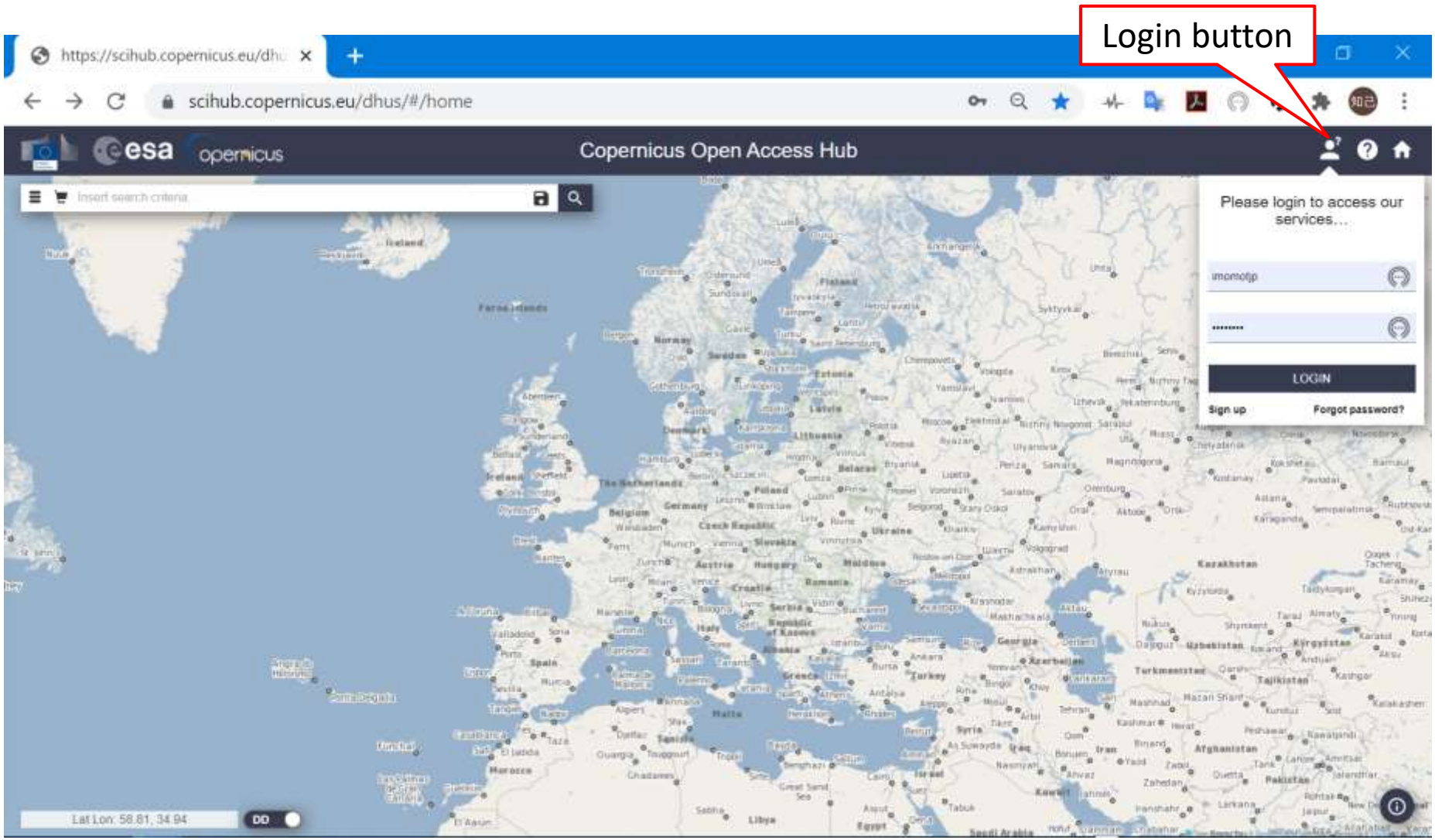
Copernicus Open Access Hub

- Enter username, new password, and so on.



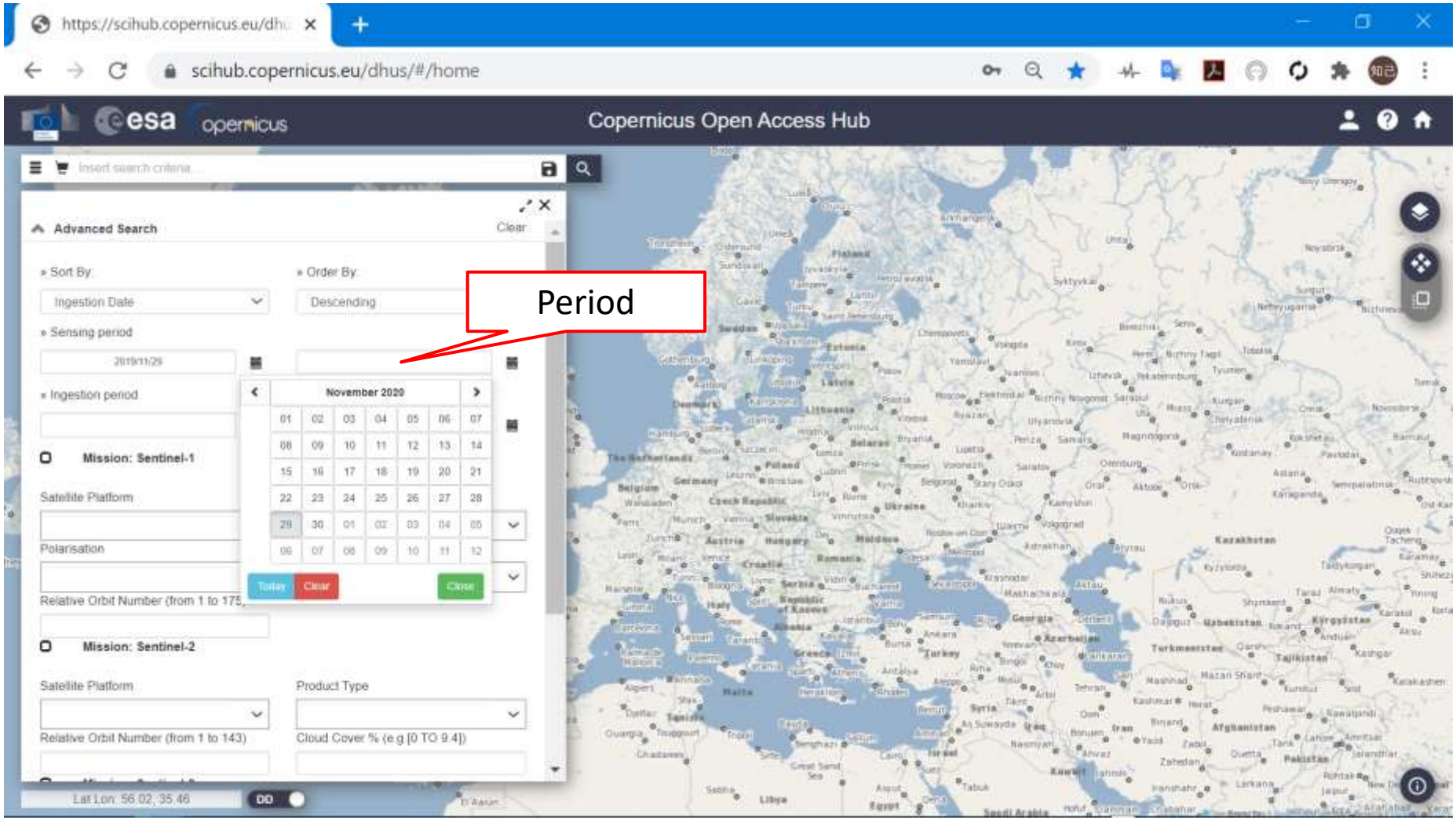
Copernicus Open Access Hub

- After creating new account, sign in copernicus open access hub.



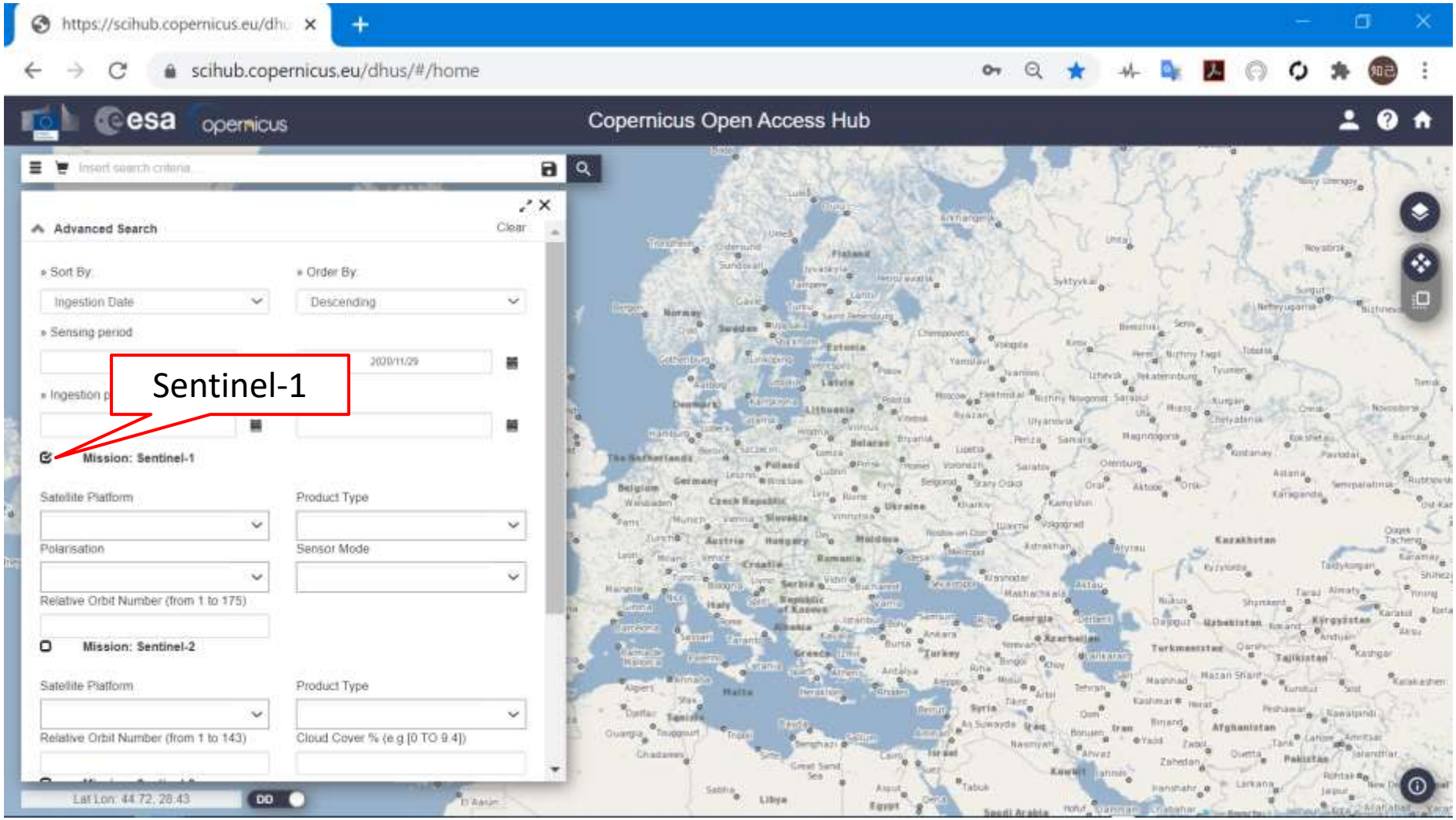
Copernicus Open Access Hub – Sentinel-1

- Set sensing period you want to download data.



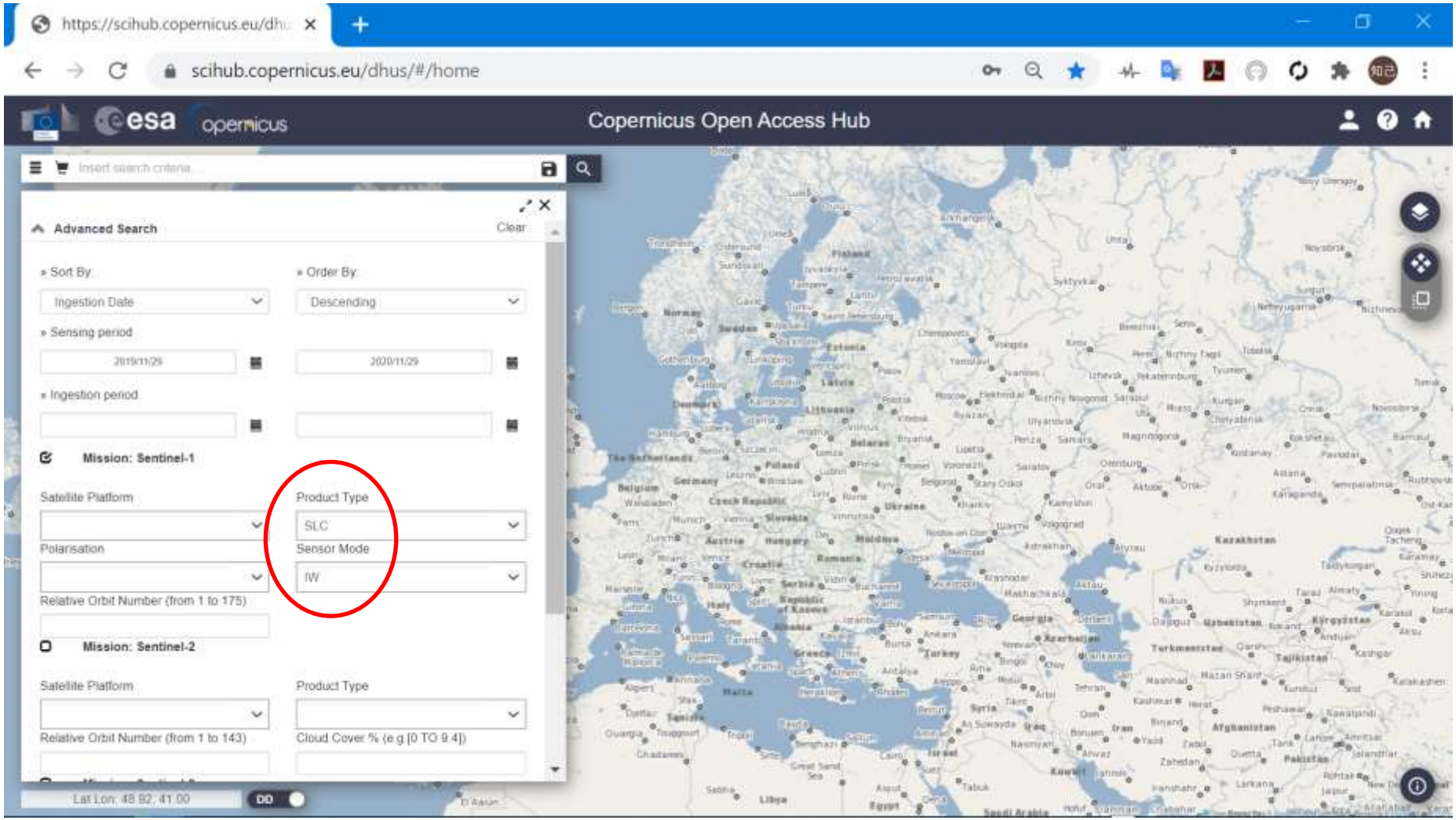
Copernicus Open Access Hub – Sentinel-1

- Select mission as Sentinel-1.



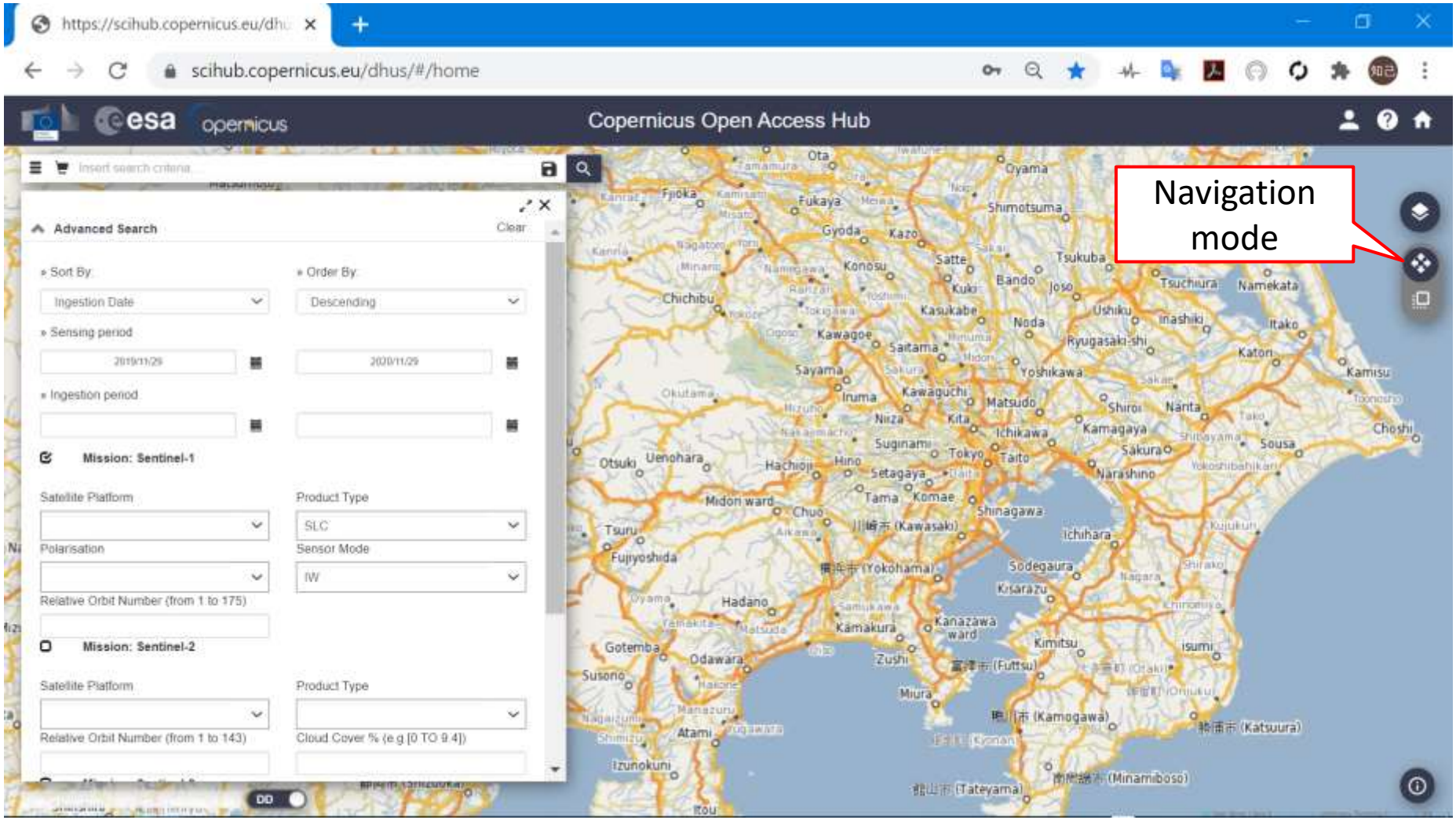
Copernicus Open Access Hub – Sentinel-1

- Select product type and sensor mode depend on your purpose.
  - Here, select SLC as product type and IW as sensor type.



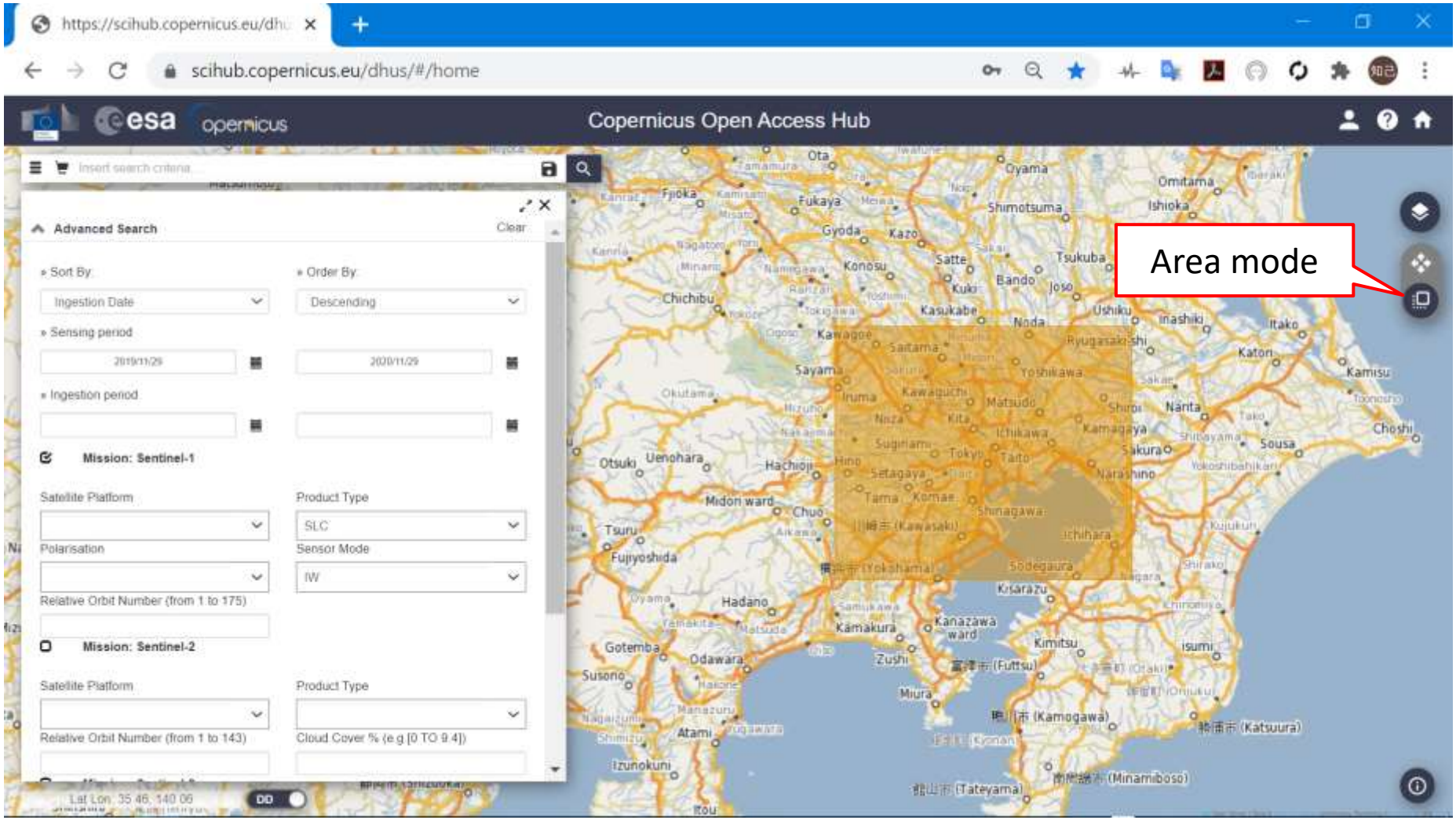
Copernicus Open Access Hub – Sentinel-1

- On navigation mode, move map to the target area.



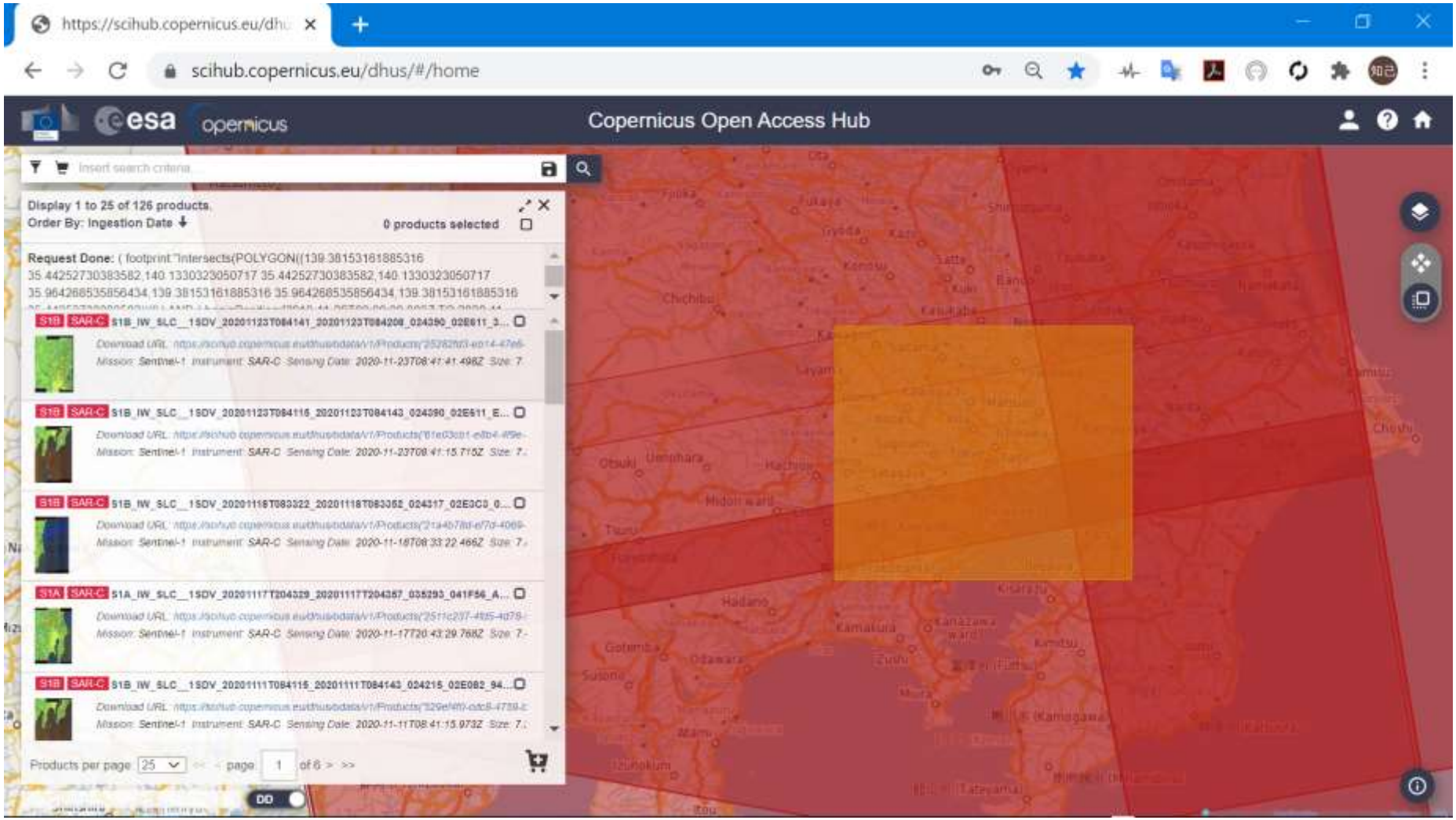
Copernicus Open Access Hub – Sentinel-1

- On area mode, select area by mouse on the map.
- Click search icon.



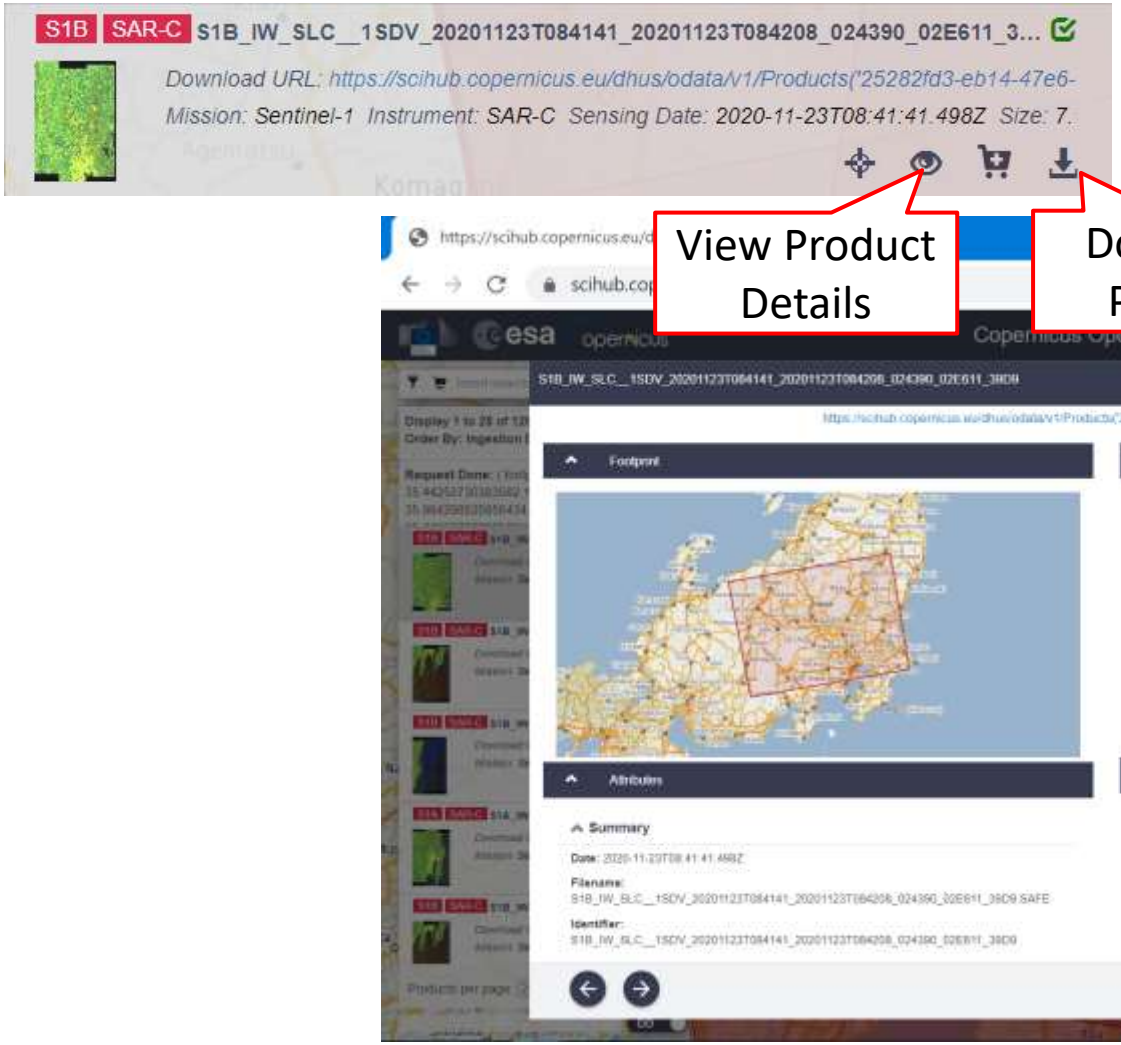
Copernicus Open Access Hub – Sentinel-1

- The list of results is displayed in left side.



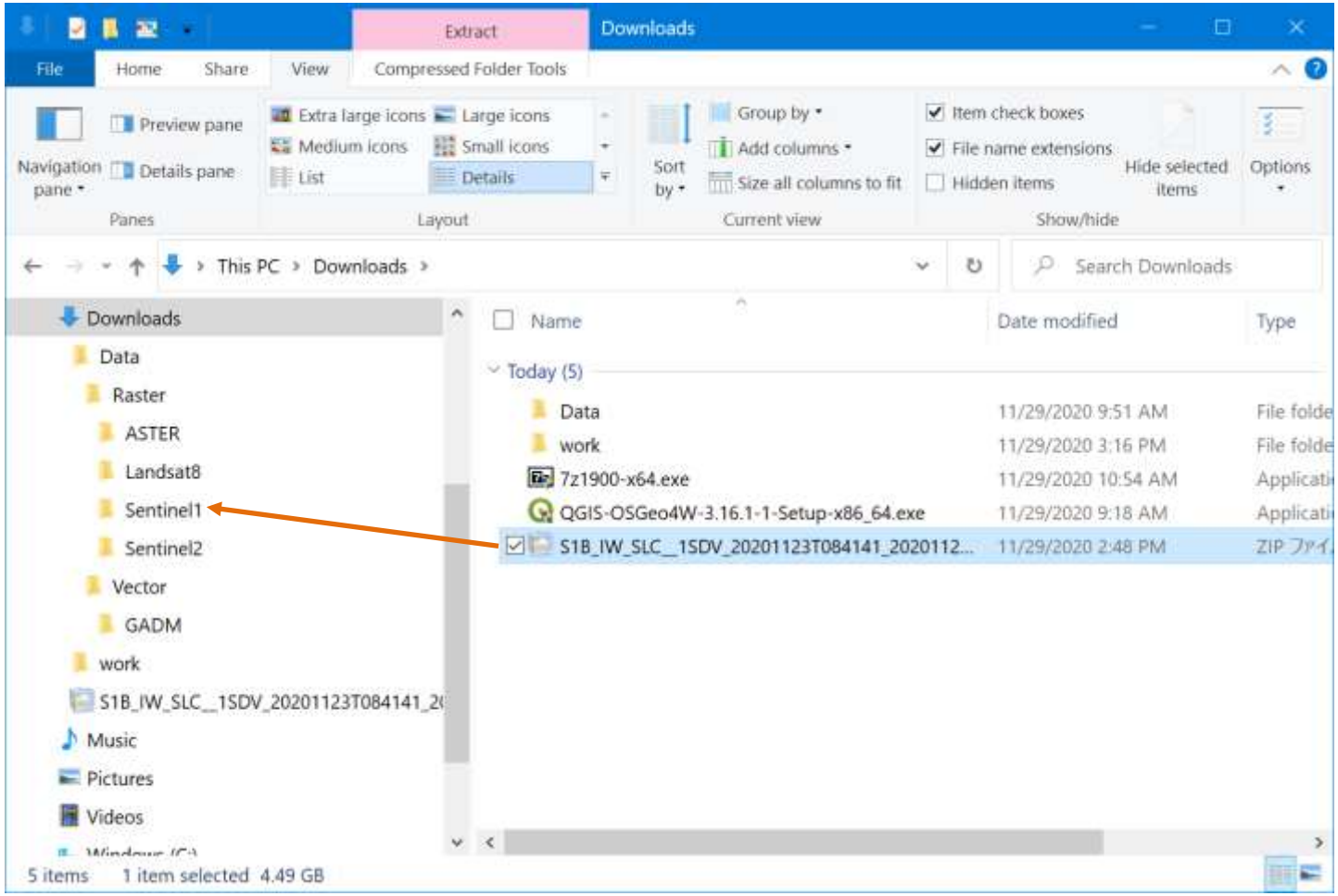
Copernicus Open Access Hub – Sentinel-1

- In order to check metadata, click “View Product Details” icon.
- In order to download data, click “Download Product” icon.



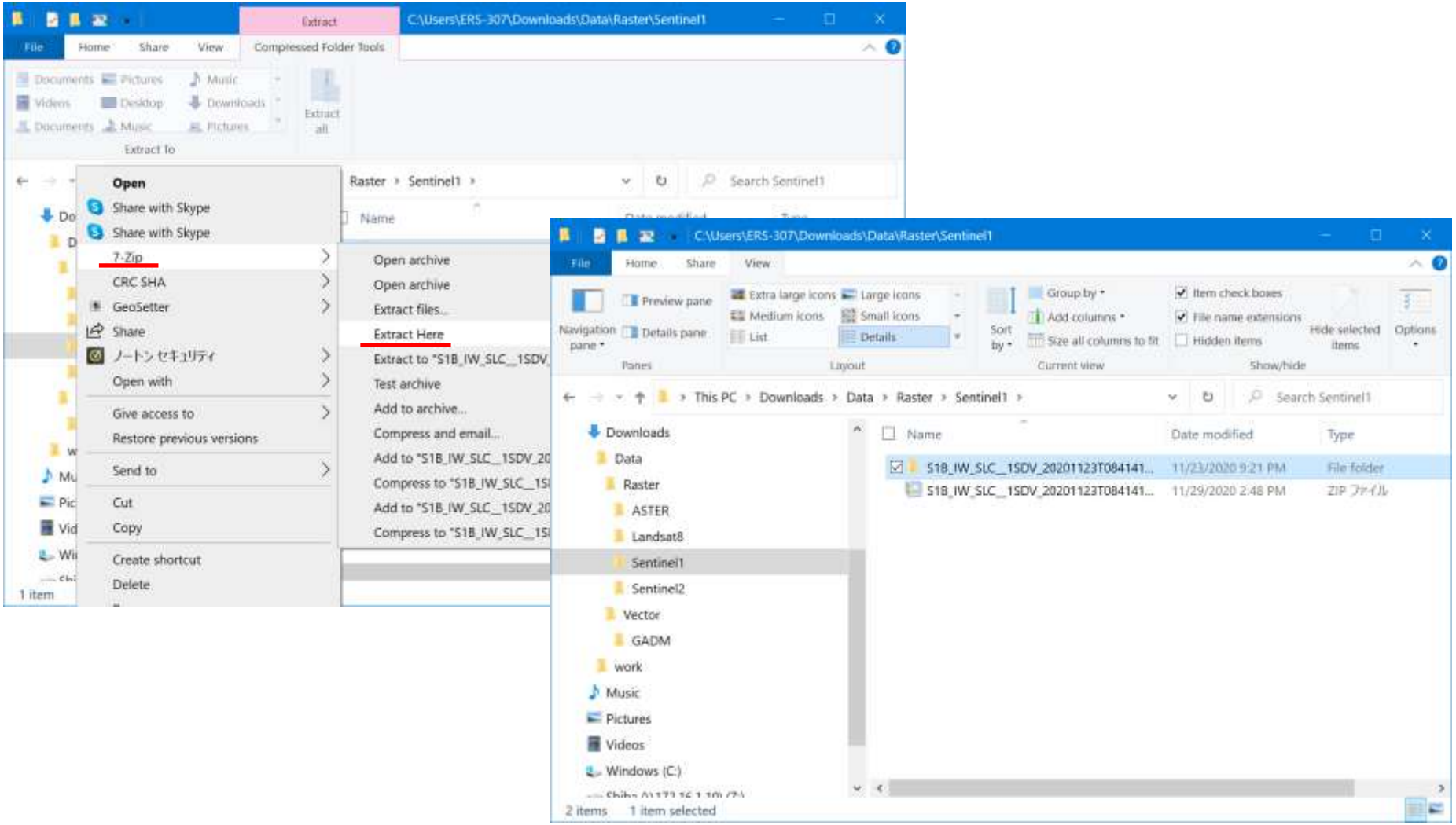
Copernicus Open Access Hub – Sentinel-1

- Move downloaded file to Sentinel1 folder.



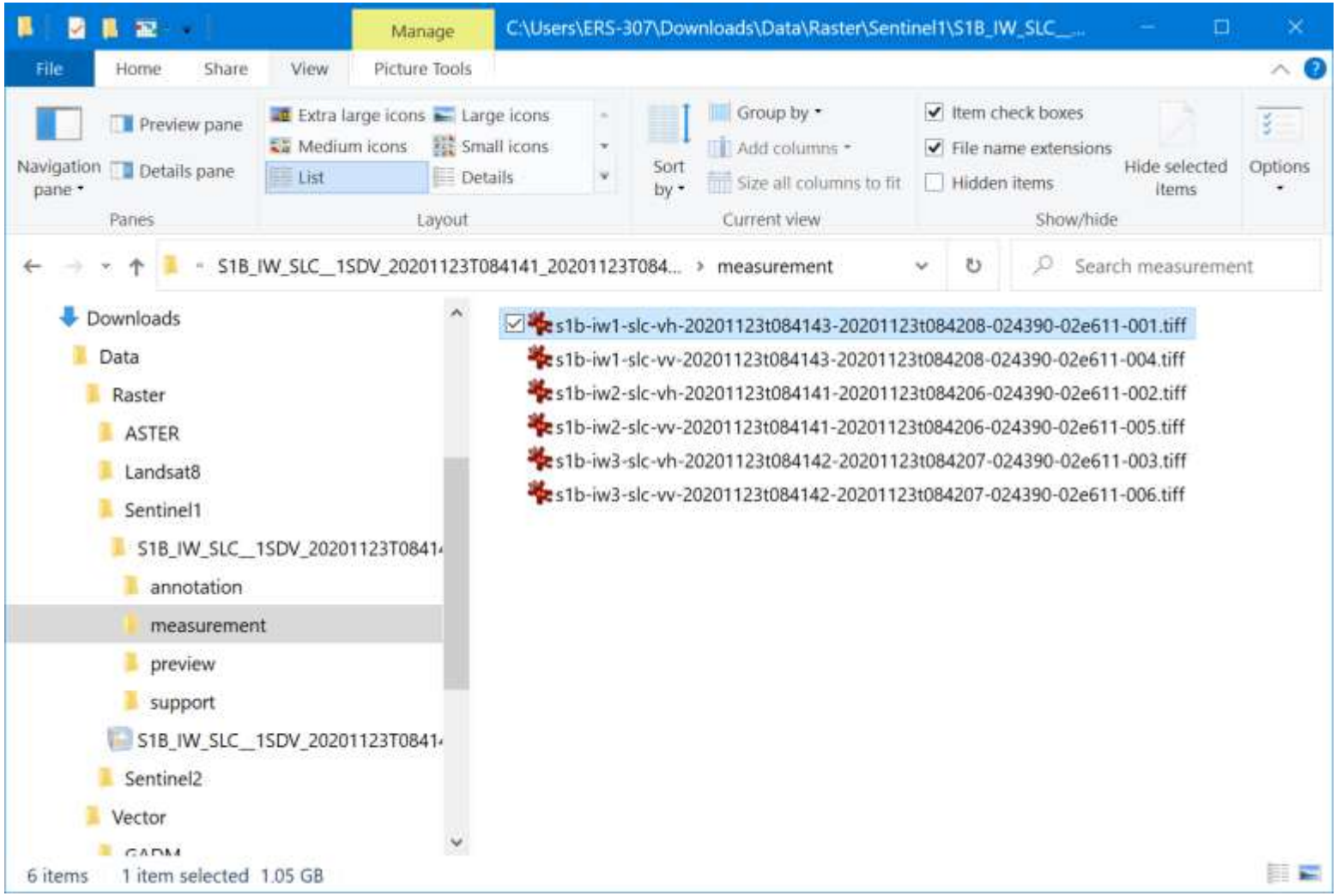
Copernicus Open Access Hub – Sentinel-1

- Extract zip file here.



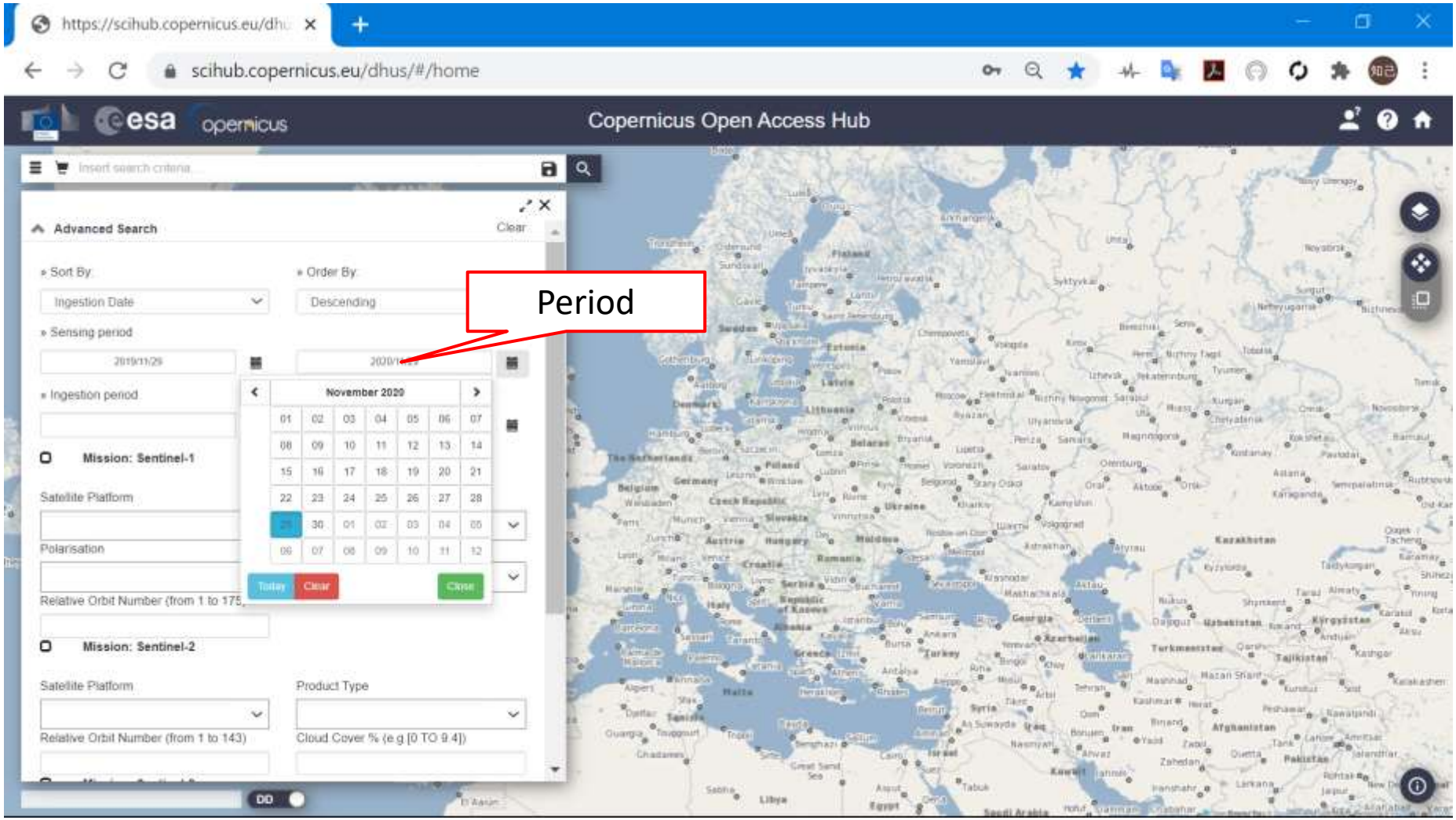
Copernicus Open Access Hub – Sentinel-1

- Satellite images are extracted under measurement folder.



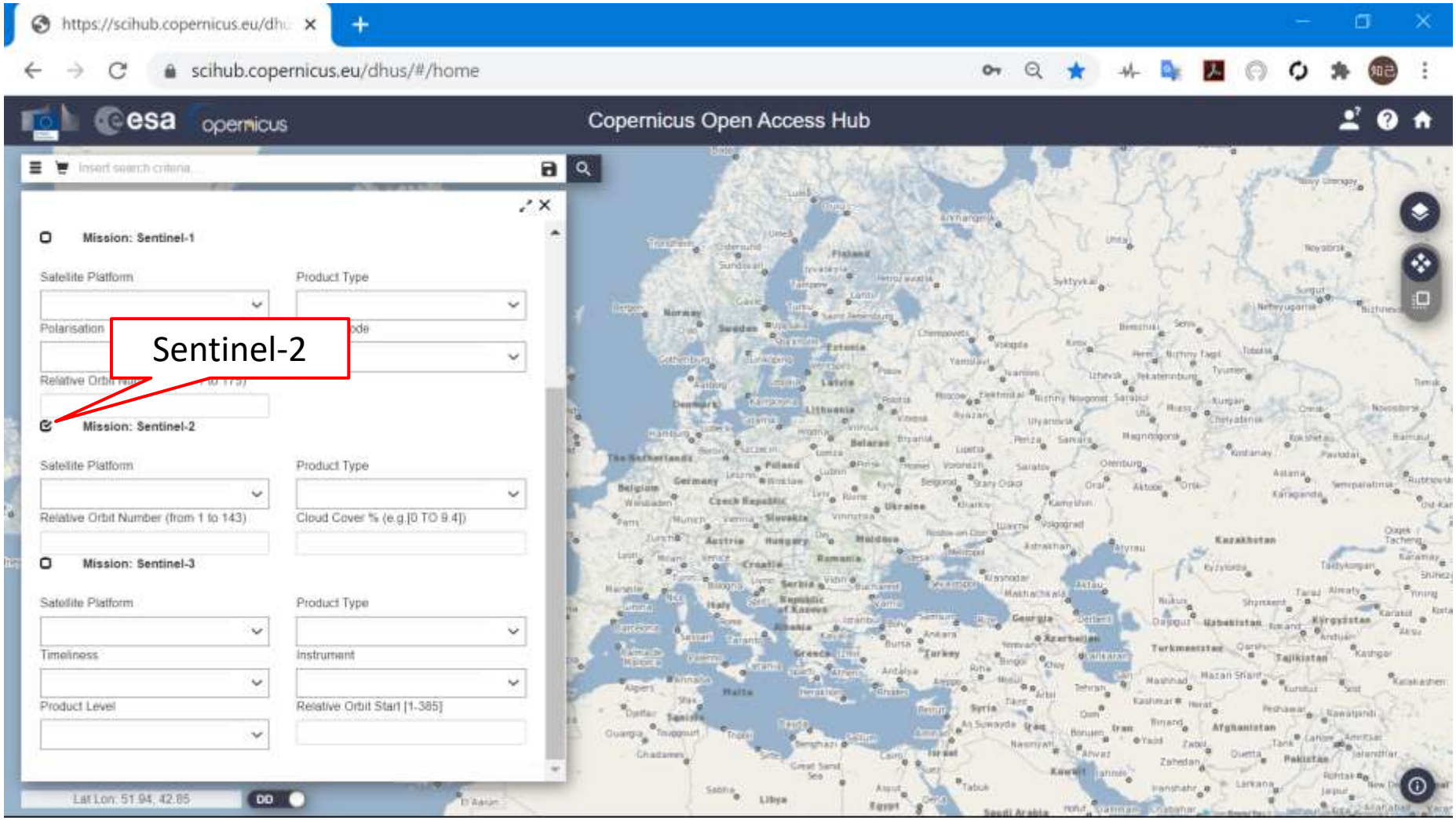
Copernicus Open Access Hub – Sentinel-2

- Set sensing period you want to download data.



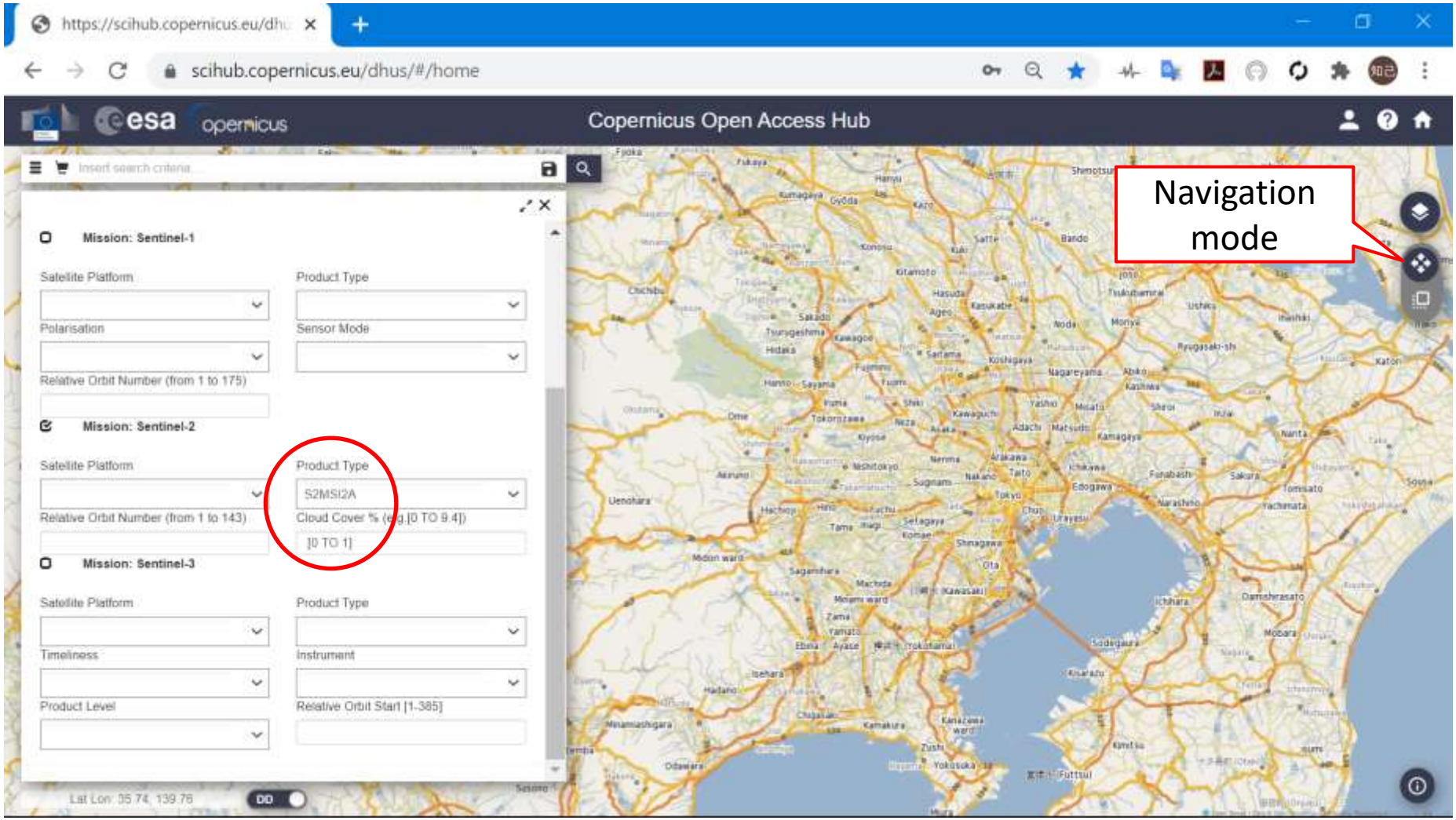
Copernicus Open Access Hub – Sentinel-2

- Select mission as Sentinel-2.



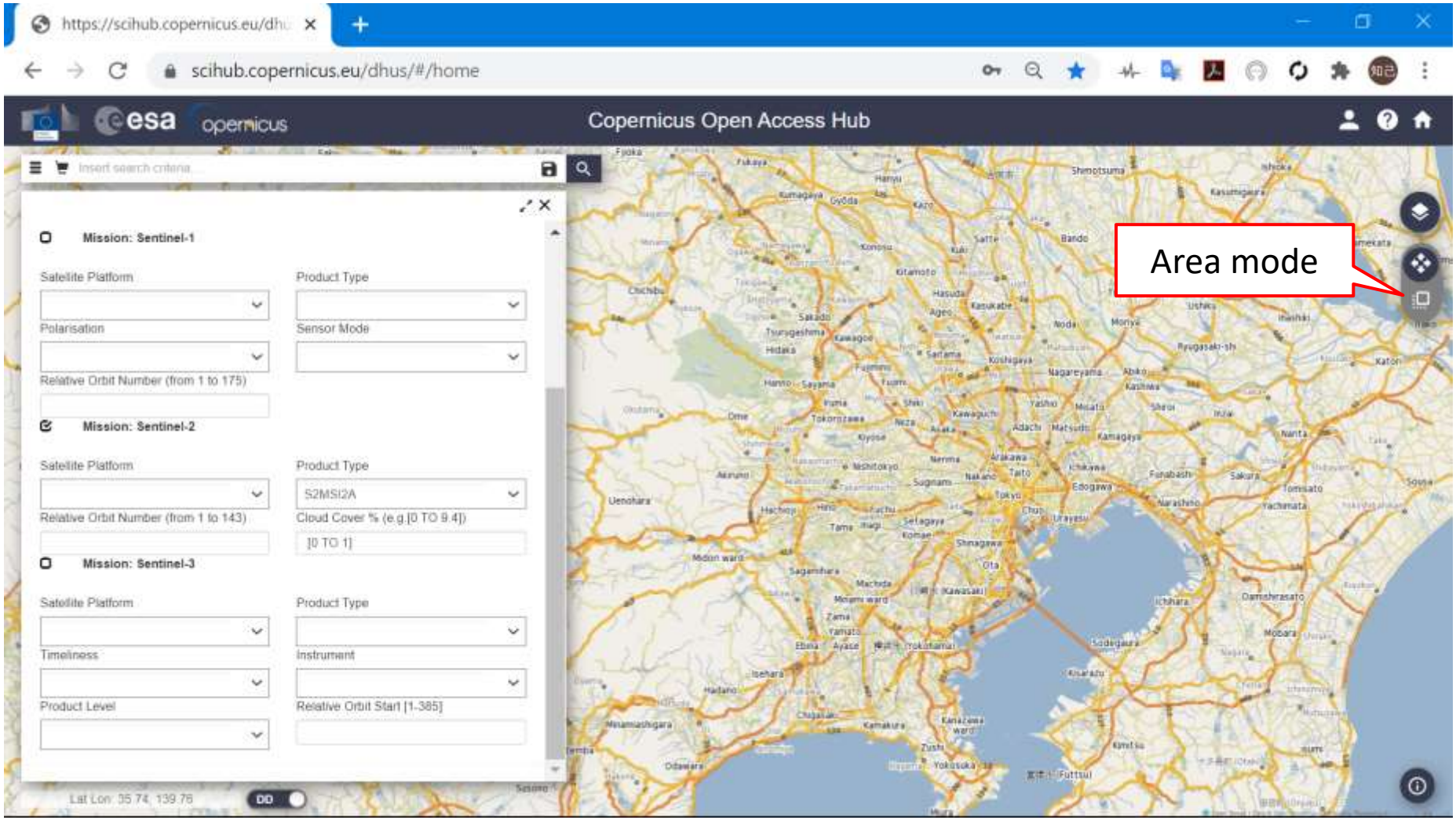
Copernicus Open Access Hub – Sentinel-2

- Select product type and cloud cover % depend on your purpose.
  - Here, select S2MSI2A as product type and [0 TO 1] as cloud cover %.



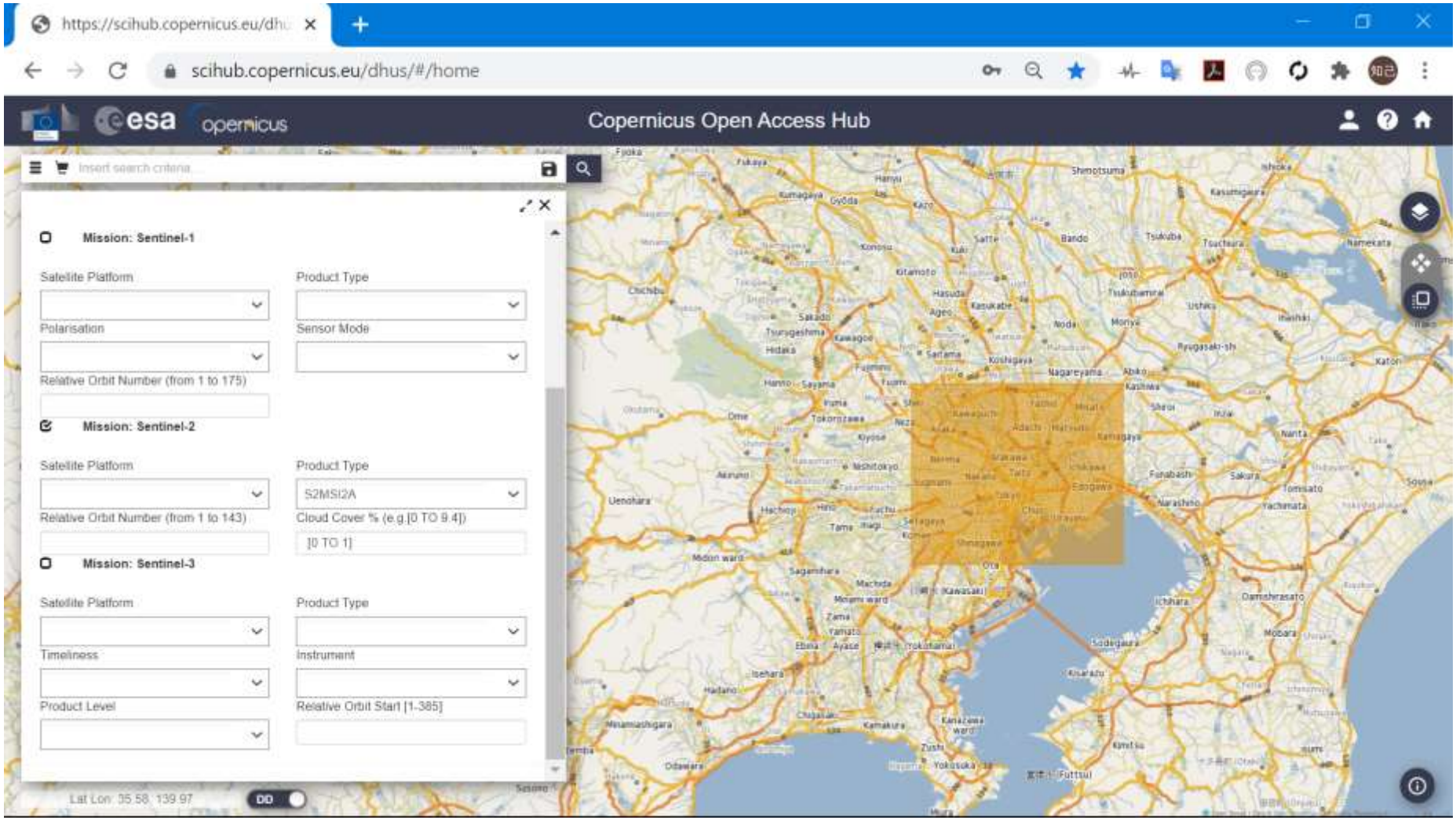
Copernicus Open Access Hub – Sentinel-2

- On navigation mode, move map to the target area.



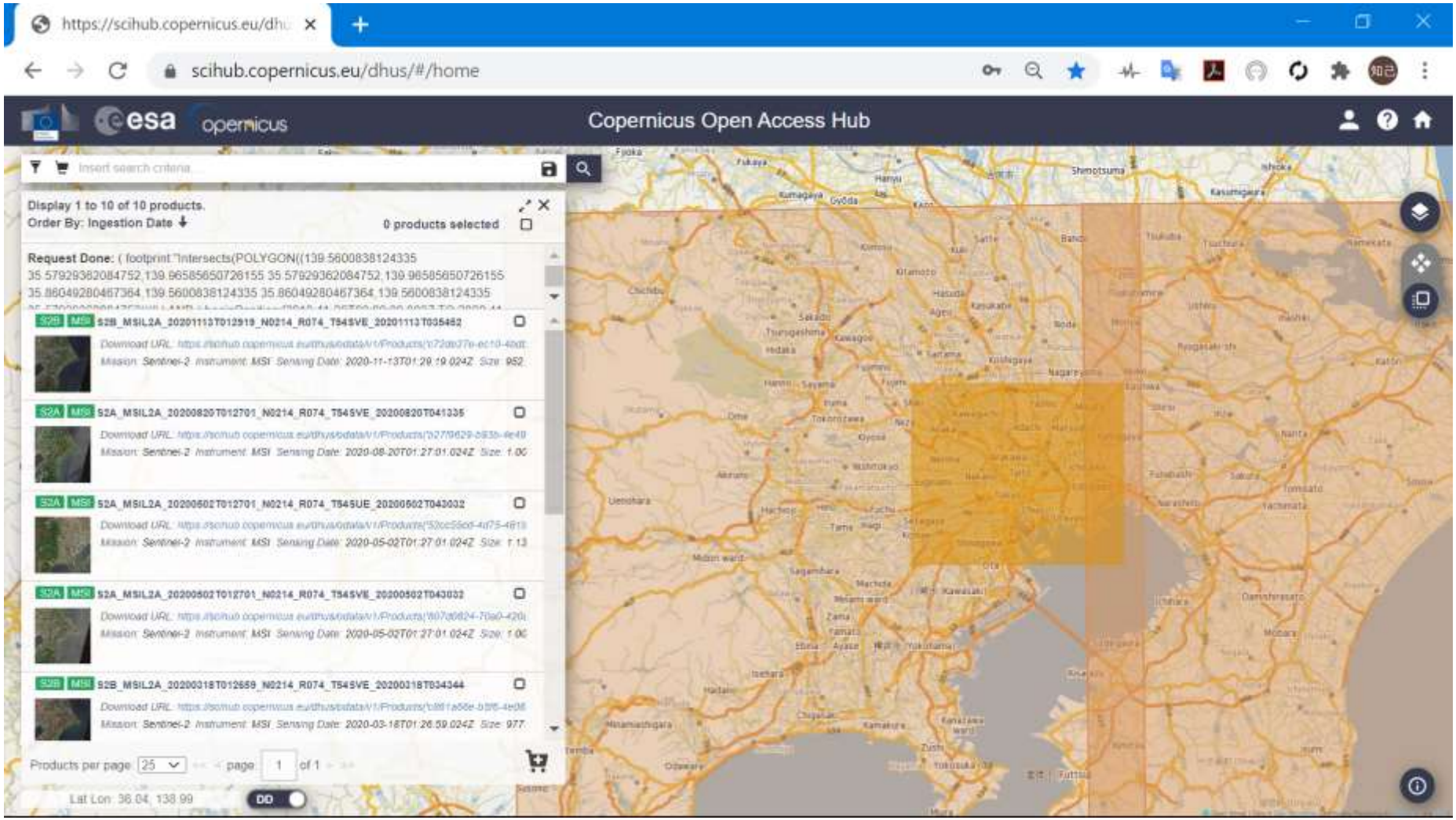
Copernicus Open Access Hub – Sentinel-2

- On area mode, select area by mouse on the map.
- Click search icon.



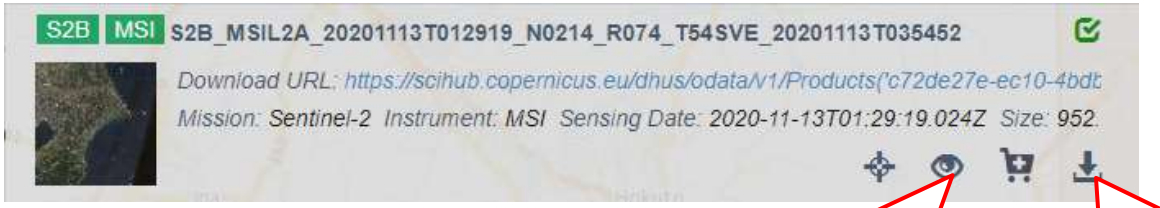
Copernicus Open Access Hub – Sentinel-2

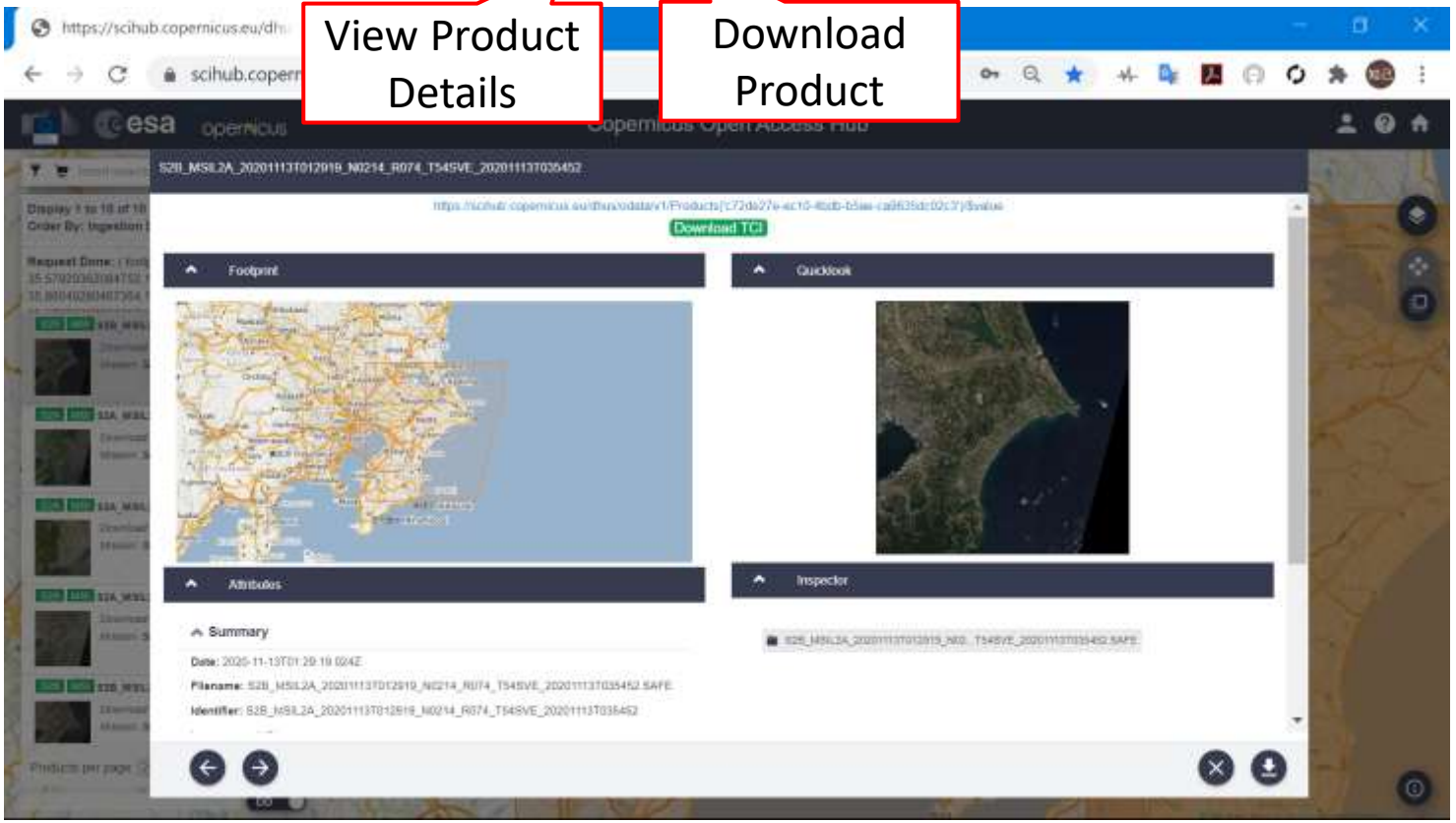
- The list of results is displayed in left side.



Copernicus Open Access Hub – Sentinel-2

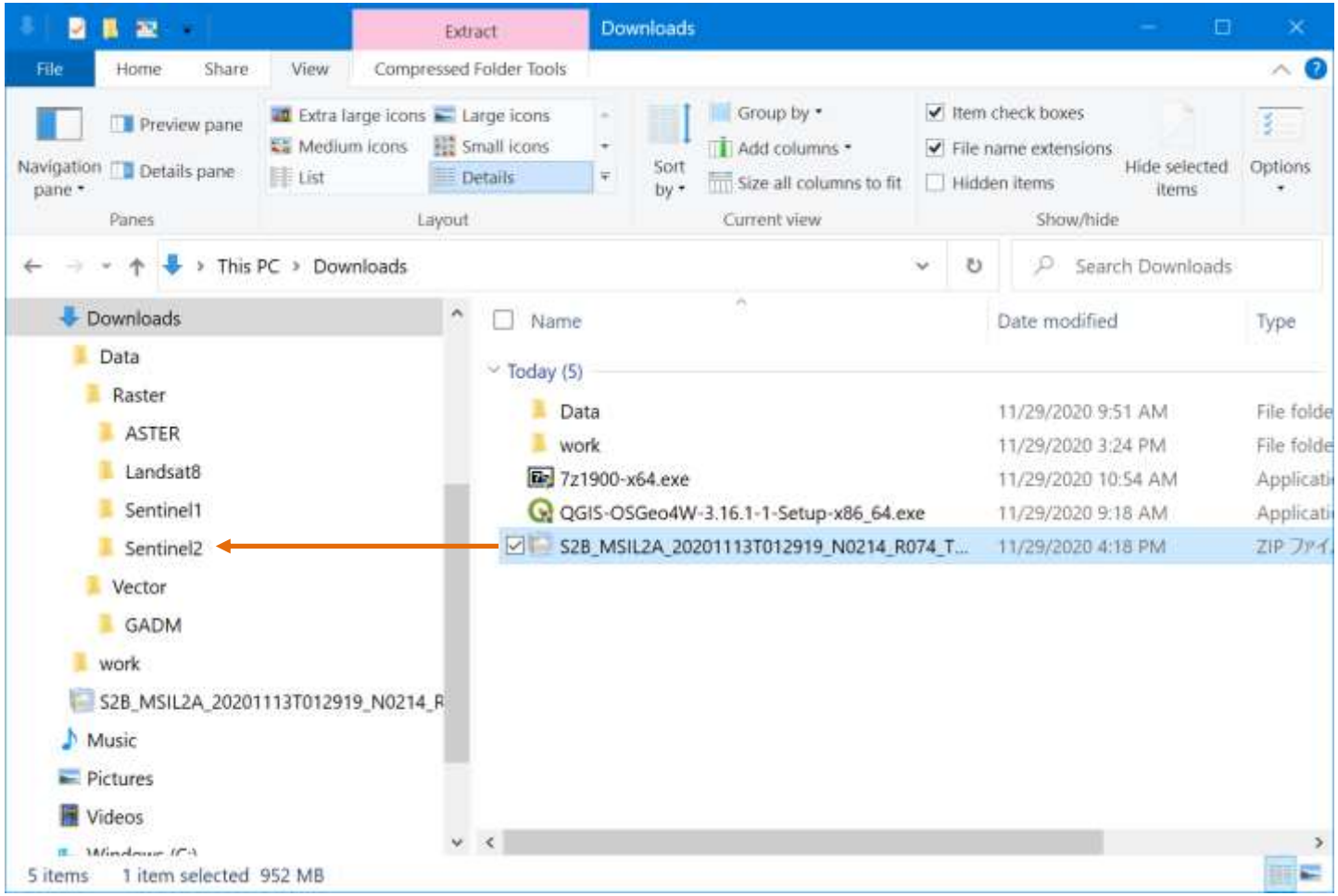
- In order to check metadata, click “View Product Details” icon.
- In order to download data, click “Download Product” icon.





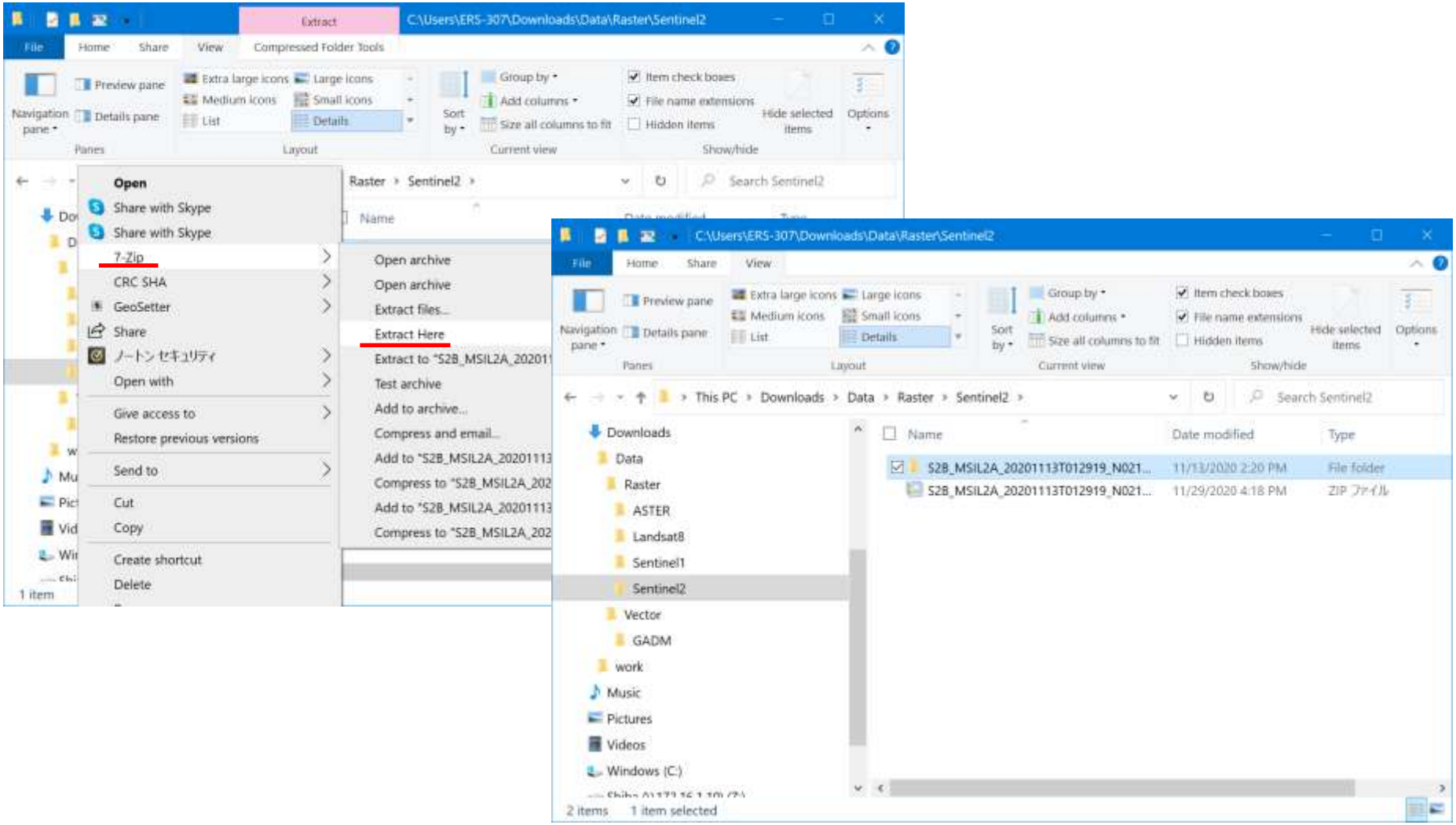
Copernicus Open Access Hub – Sentinel-2

- Move downloaded file to Sentinel2 folder.



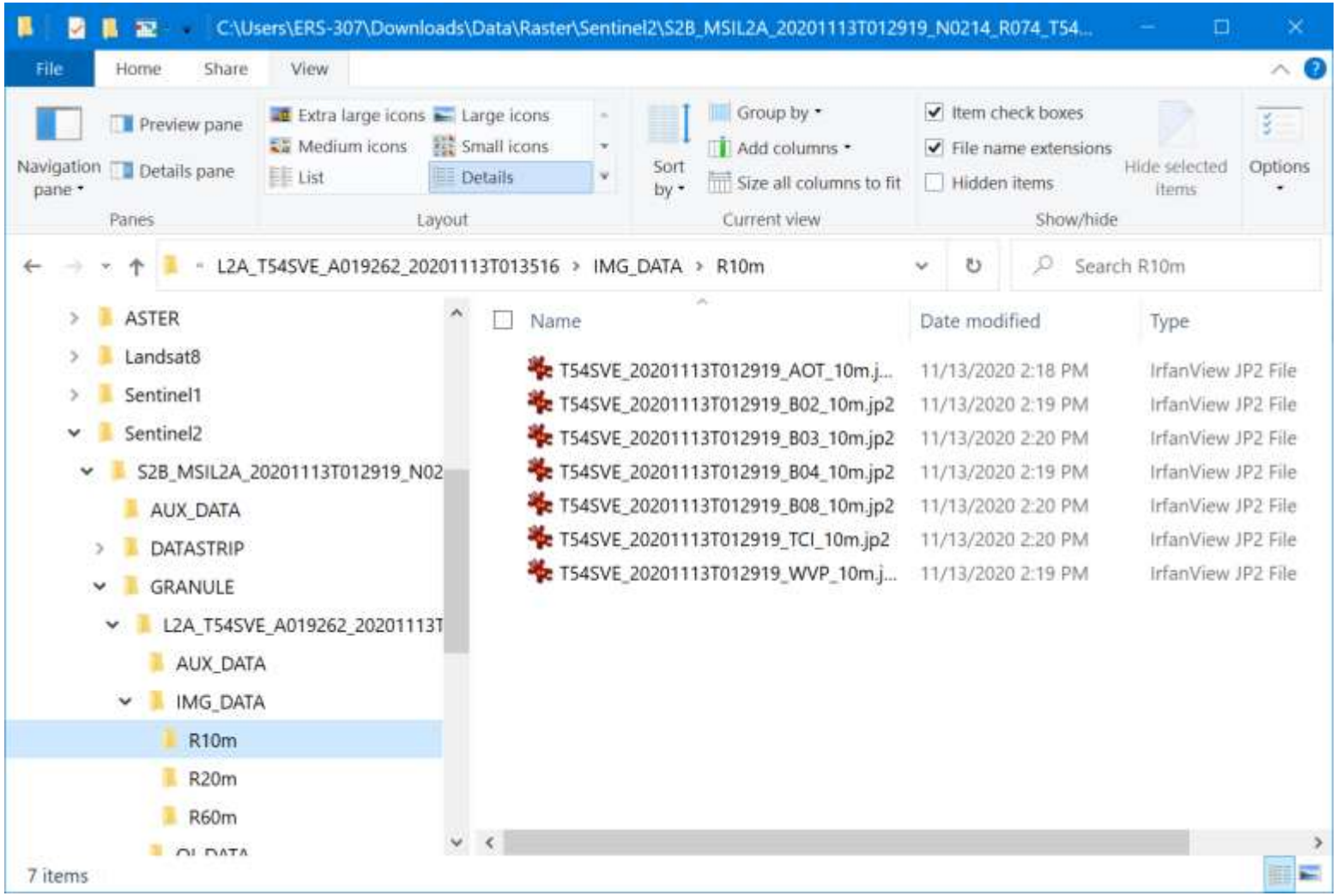
Copernicus Open Access Hub – Sentinel-2

- Extract zip file here.



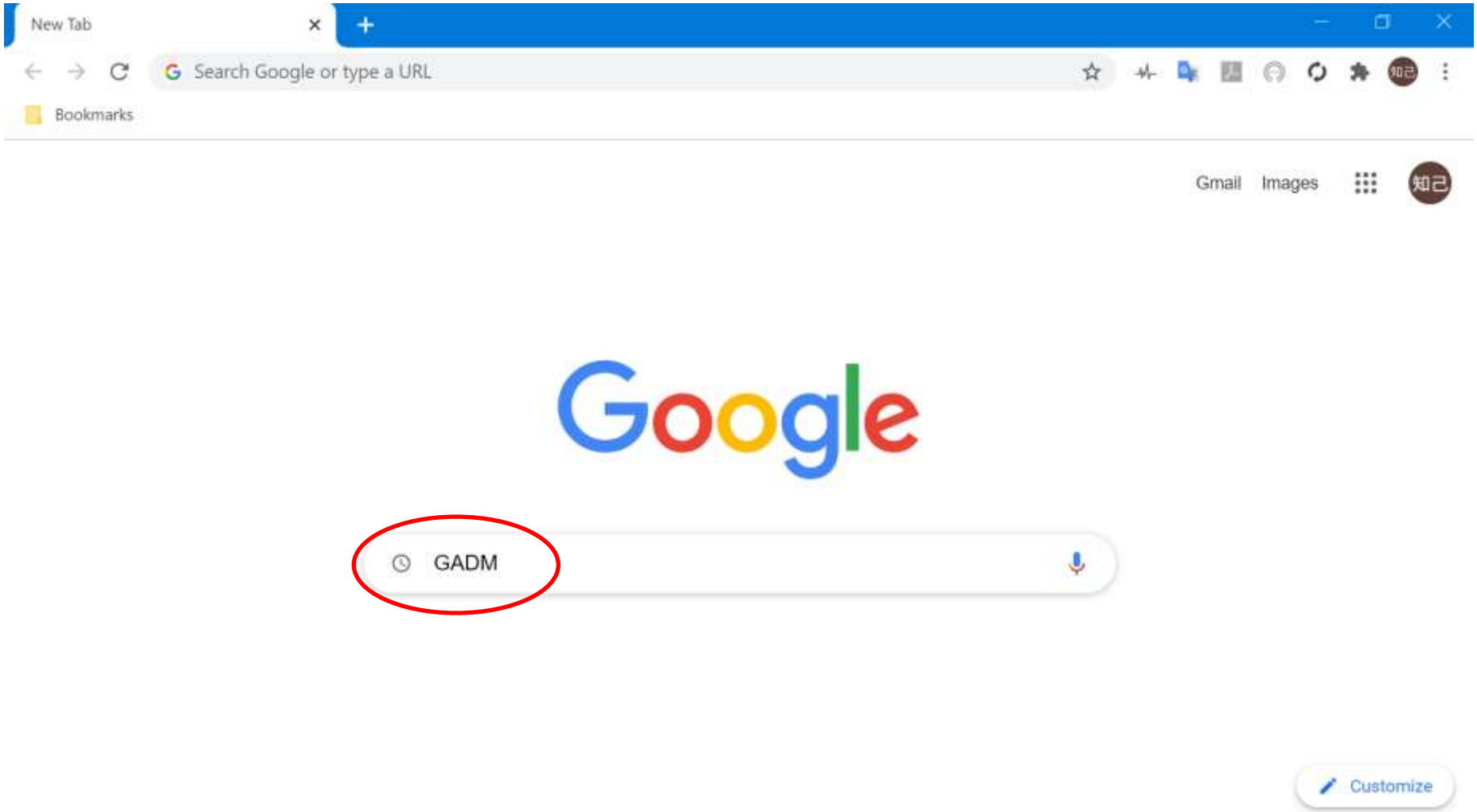
Copernicus Open Access Hub – Sentinel-2

- Satellite images are extracted under IMG_DATA folder.
  - Different spatial resolution is saved in R10m, R20m and R60m.



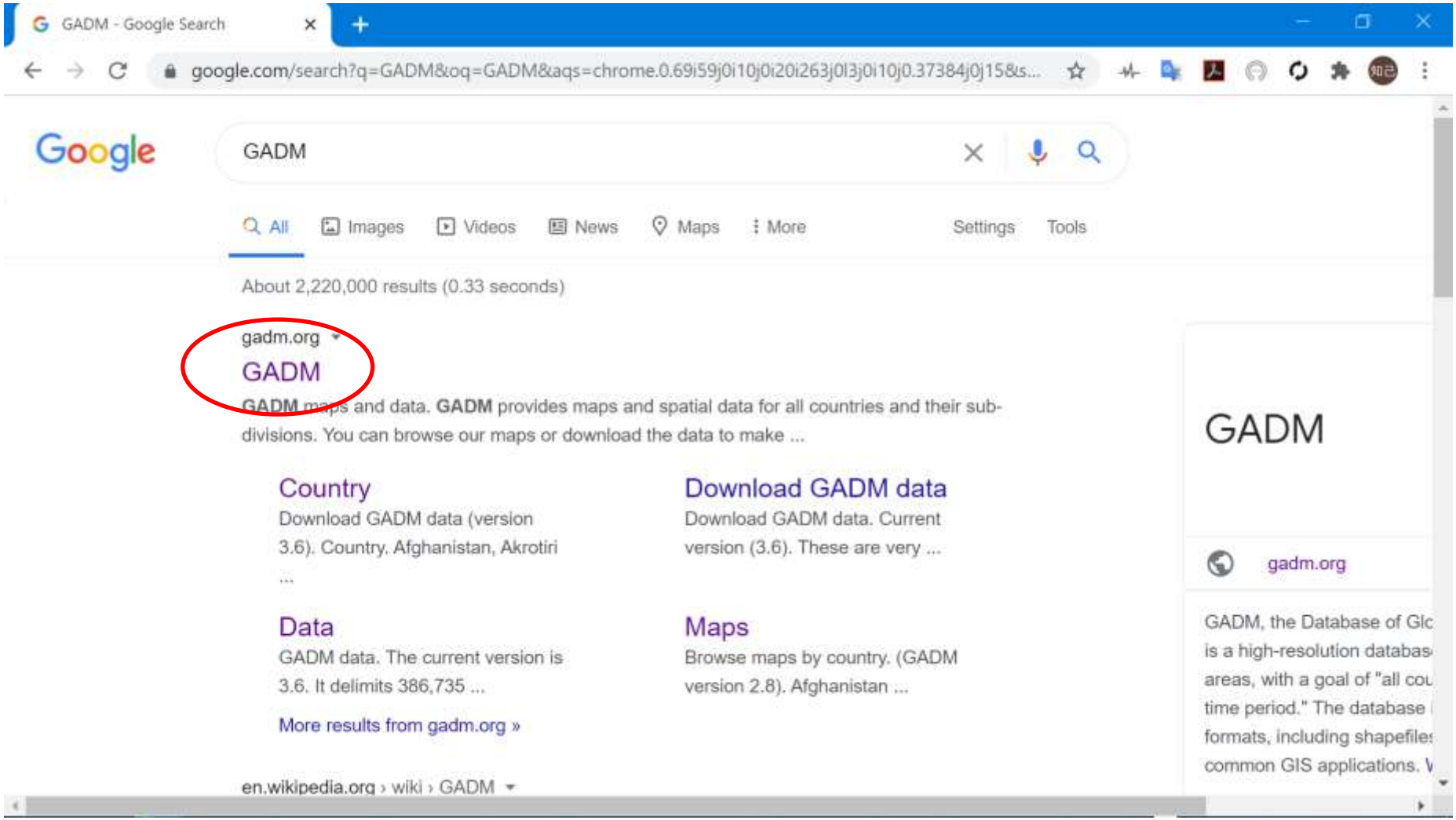
GADM

- Search GADM.



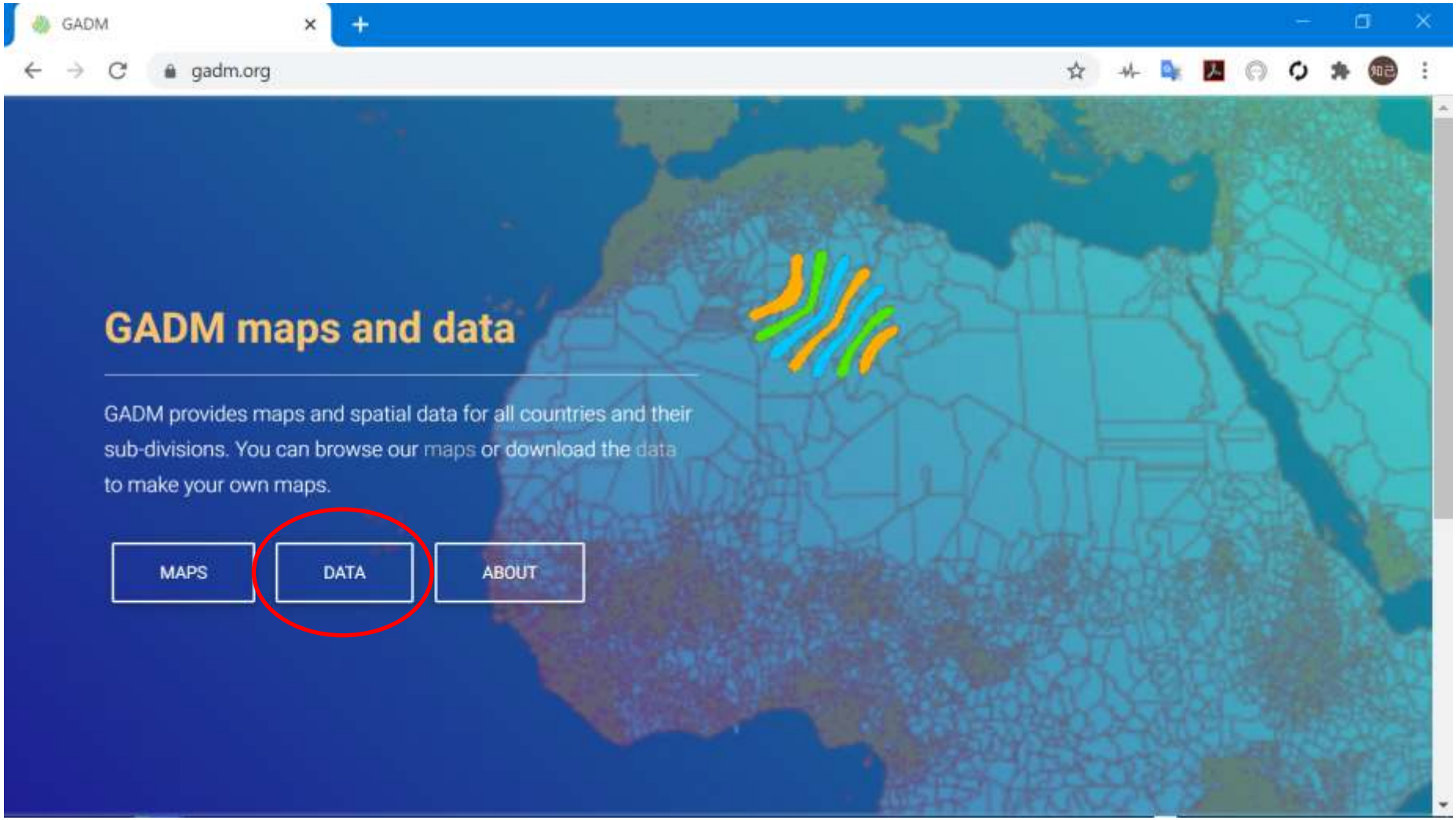
GADM

- Open link of GADM.

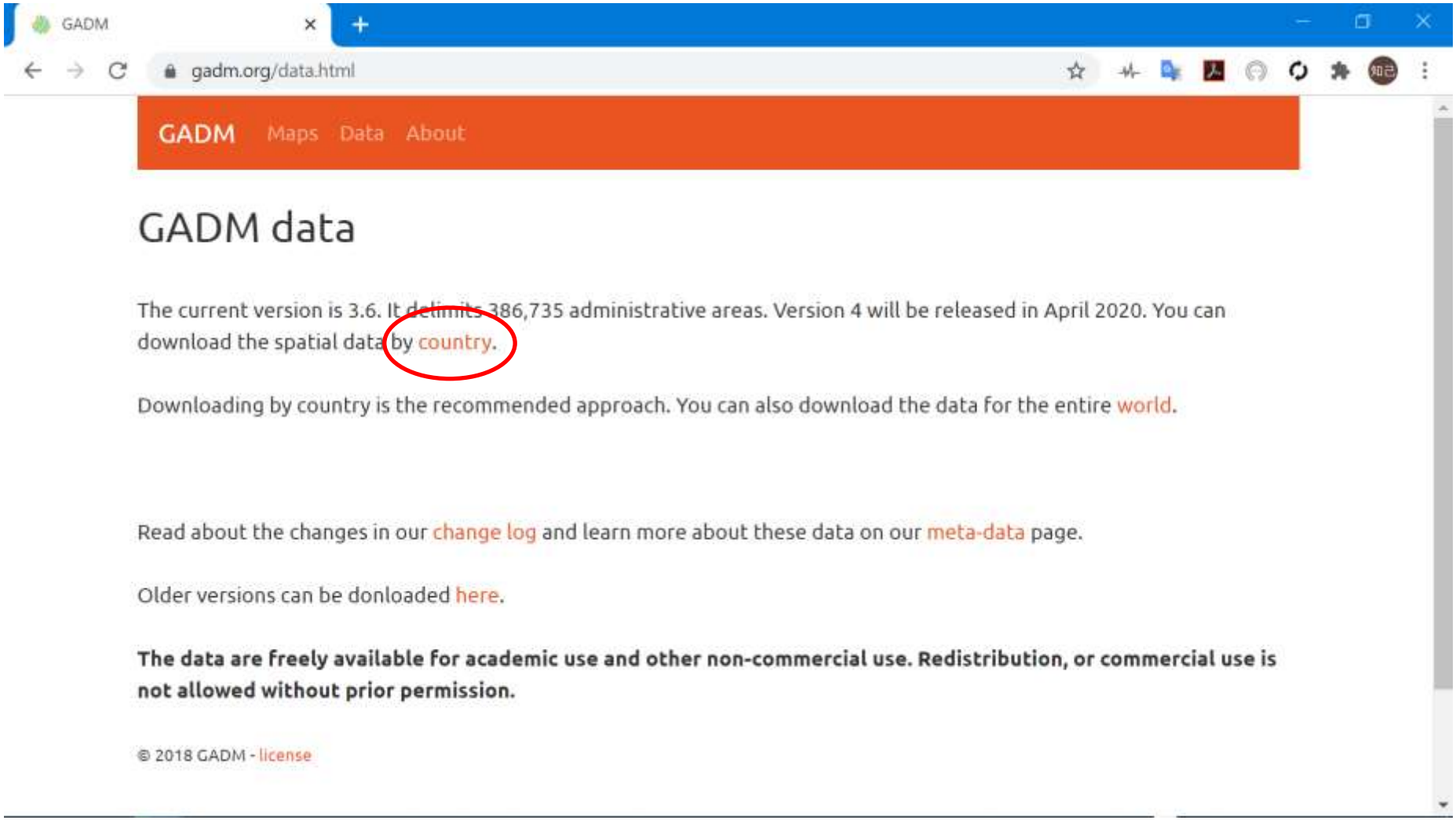


GADM

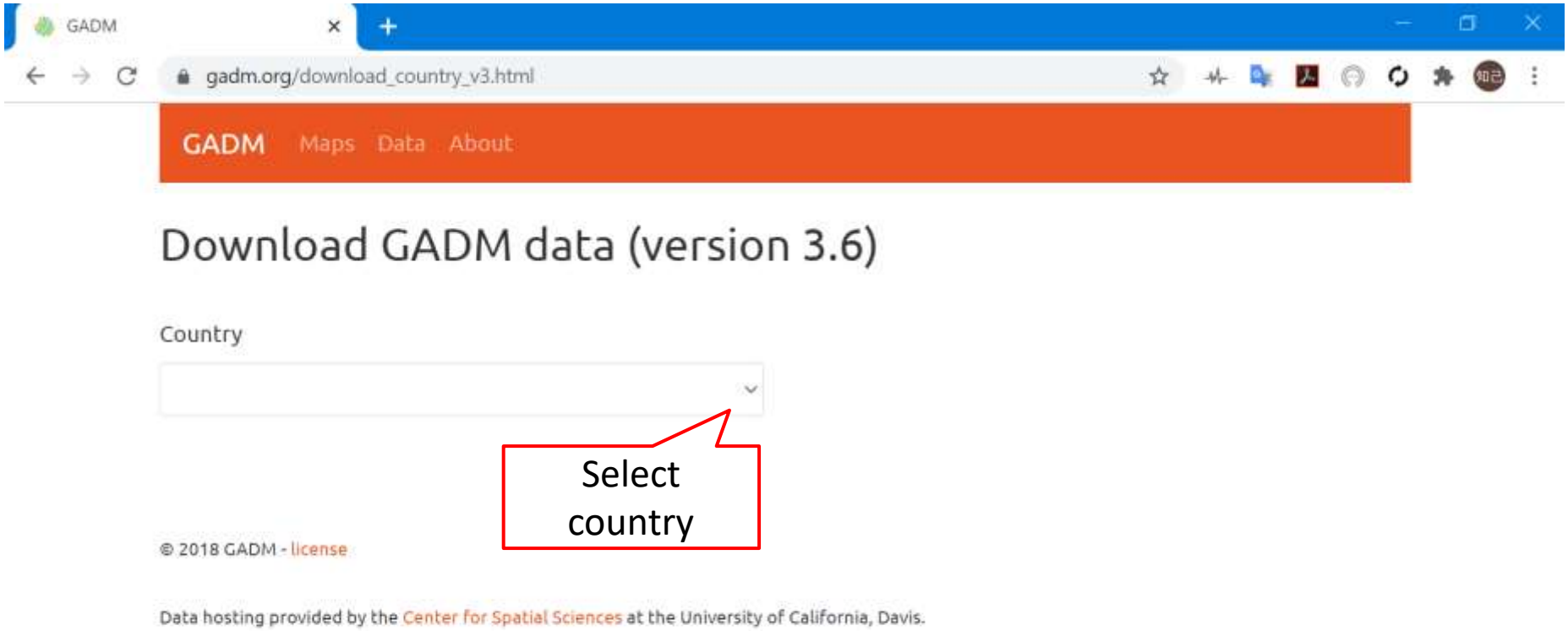
- Open link of Data.



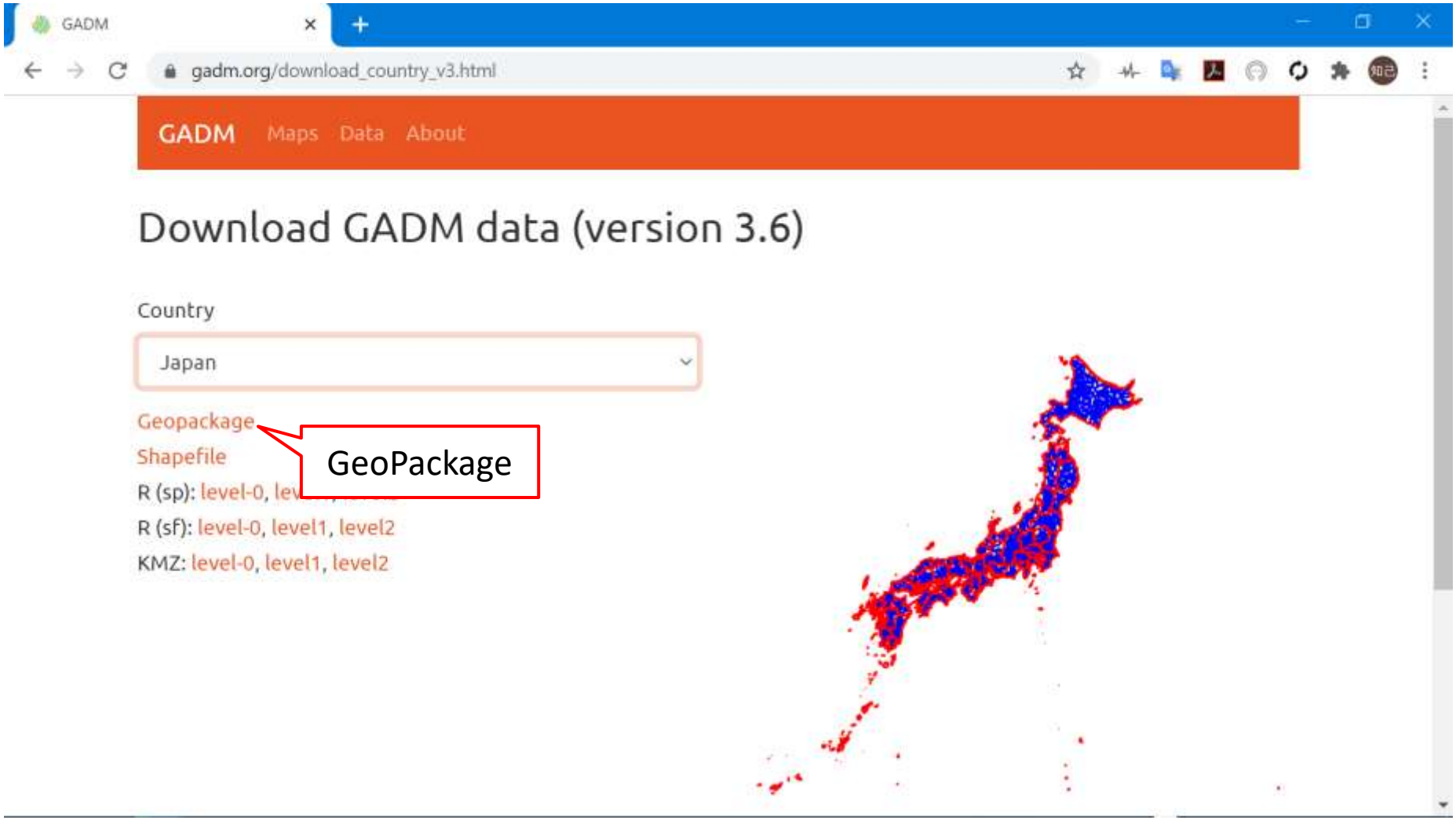
- Open link of country.



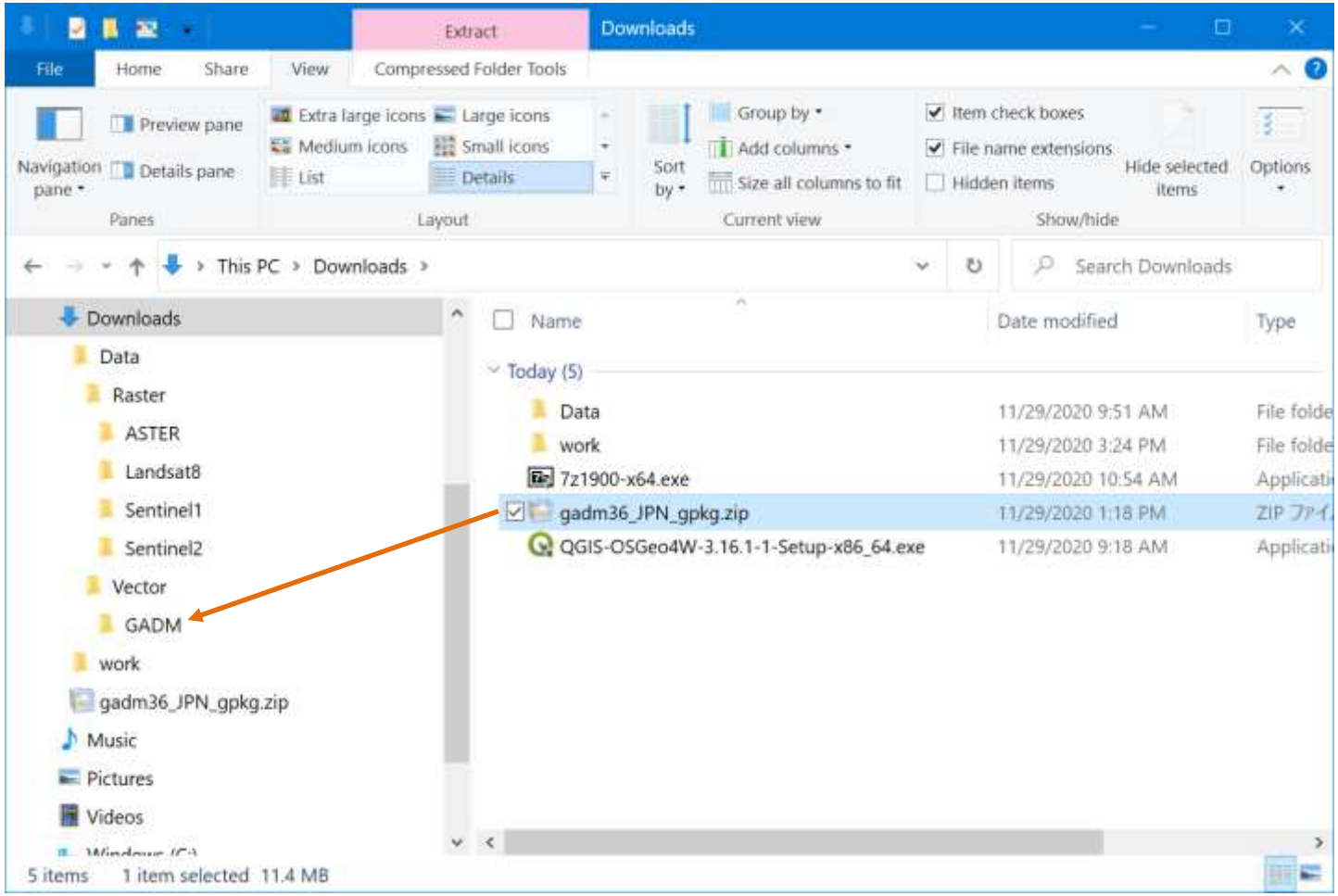
- Select country.



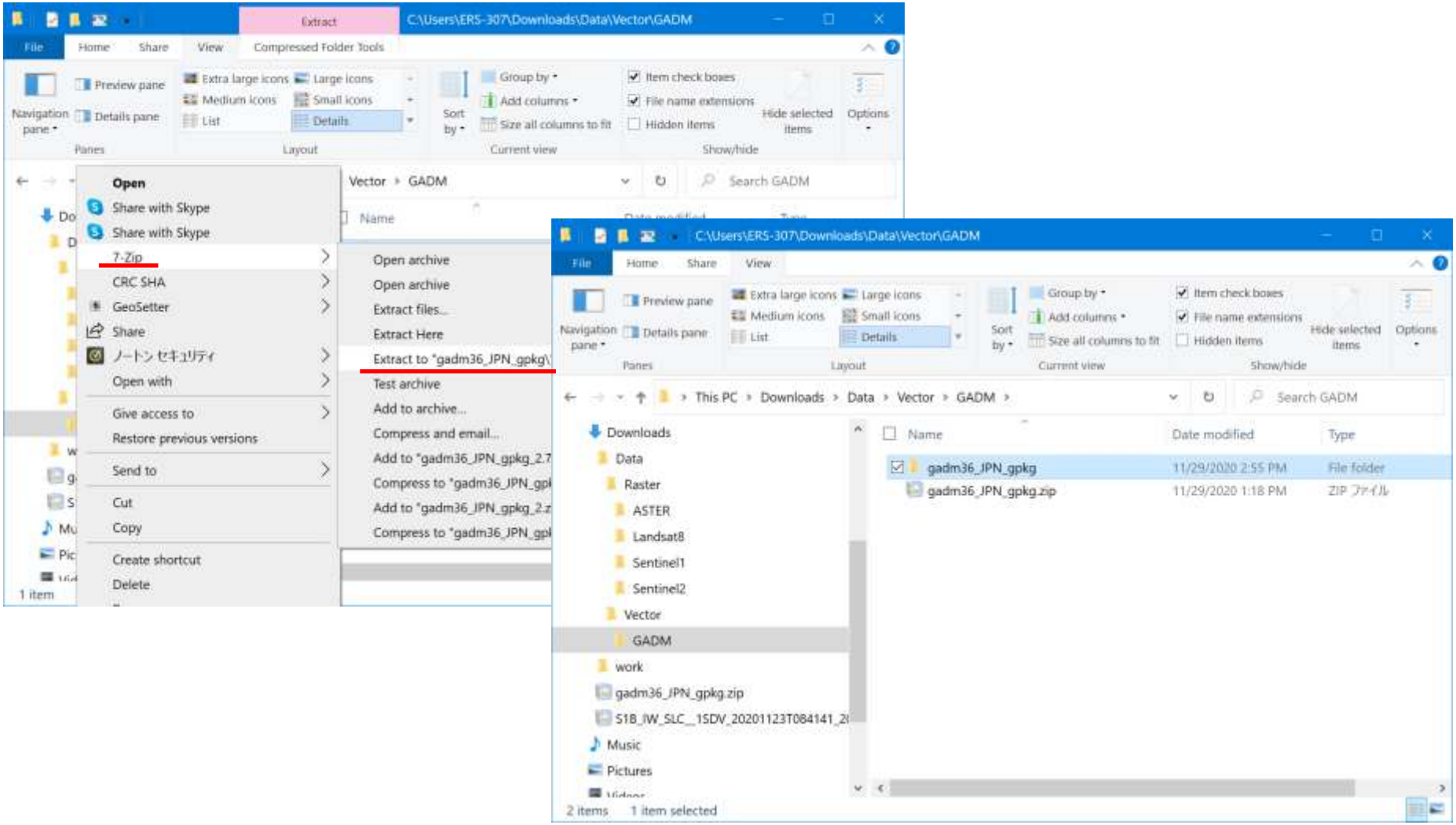
- Click “Geopackage” to start download.



- Move downloaded file to GADM folder.



- Extract zip file to “gadm36_JPN_gpkg¥”.



- Administrative border file is extracted.