



Getting Started with CEOS Data Format Files: Viewing and Geocoding in ASF MapReady

This data recipe is for users who wish to view and geocode CEOS format files using ASF's MapReady software. (Without these steps, users can view only a jpeg browse image included with the products.) Data in CEOS format available through the ASF DAAC includes Level 1 JERS, ERS-1, ERS-2 and RADARSAT- 1, as well as Level 1.5 ALOS PALSAR.

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A) Background

ASF uses the CEOS (Committee on Earth Observation Satellites) format to release a number of historic SAR products. The CEOS format was originally developed to create a standard file format for the remote sensing community. Inconsistencies in adoption and vagueness in the original specifications, however, led to a number of different CEOS 'flavors,' of which ASF's is one.

B) Materials

- Windows PC
- [ASF MapReady](#)
- CEOS format data granule ([sample granule](#)) (Fig 1).

C) Sample Granule

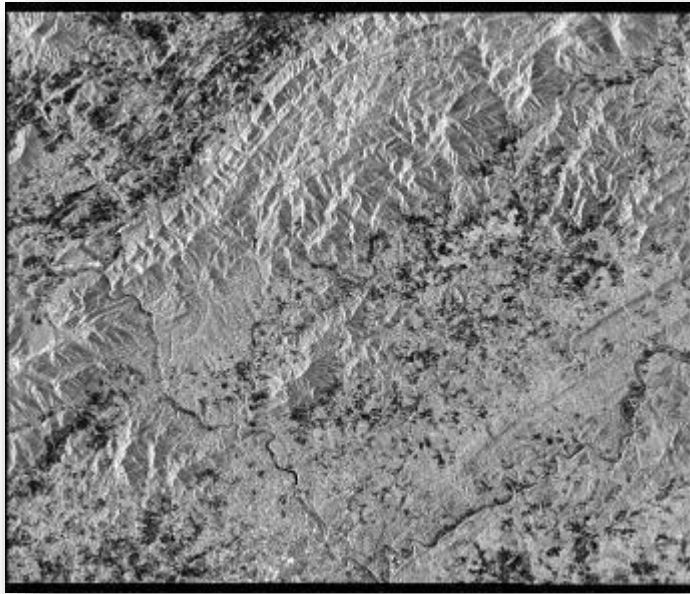


Figure 1: Sample granule image. Part of the Blue Ridge Mountains in Virginia. © JAXA/METI 2008.

D) Steps

1) Download Materials

- a) Download [ASF MapReady](#)
- b) Install MapReady using the Installation Wizard
- c) Download a CEOS formatted data granule from [Vertex](#) (CEOS formatted datasets include Level 1 JERS, ERS-1, ERS-2 and RADARSAT-1, as well as Level 1.5 ALOS PALSAR) or use the [Sample Granule](#).
- d) Create a working directory and extract the `.zip` file

2) View Data – Two Options

a) Option 1: *View Only*

Note: This option simply opens the granule for closer inspection. See Option 2 for projection and conversion to GeoTIFF.

- i. Open **ASF View**
- ii. Click the **Open File...** button in the sidebar (Fig. 2)

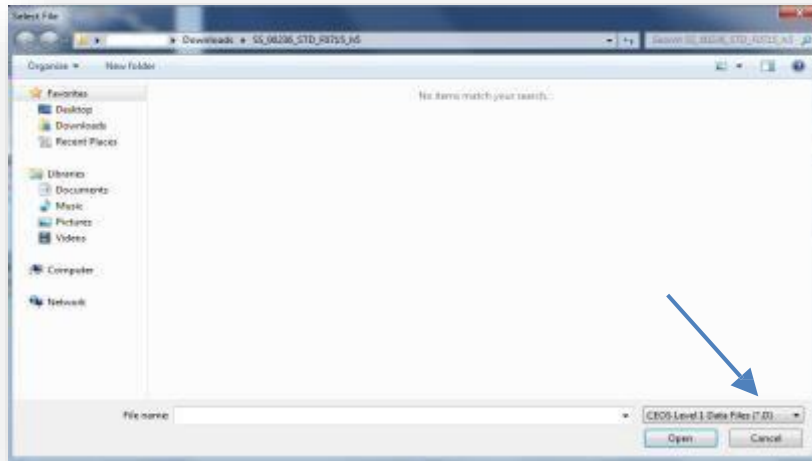


Figure 2: Data type menu within the Select File window

- iii. In the *Select File* menu, change the data type to **CEOS Level 1 Data Files** for non-PALSAR data or to **ALOS Image** for PALSAR data (Fig 2).
- iv. Navigate to your working directory.
- v. Double-click an image file to open it in the *View* window (Fig. 3).

Hint: Press the <End> key on your keyboard to view the entire image.

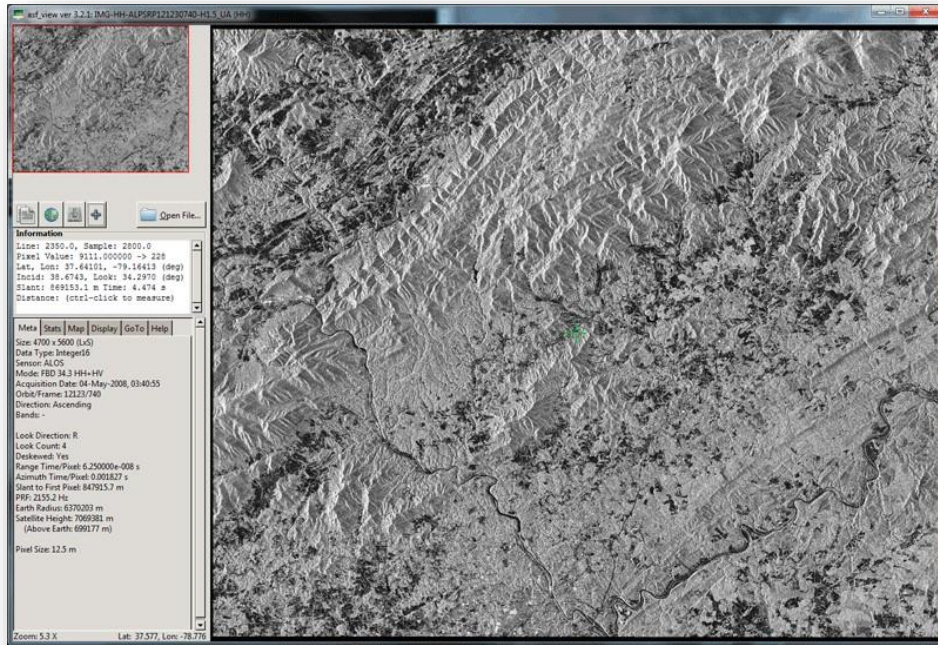
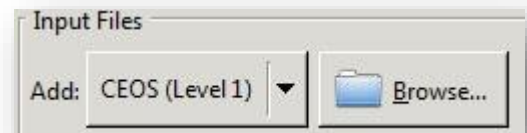


Figure 3: Blue Ridge Mountains, sample granule image displayed in ASF MapReady.
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b) Option 2: Geocode and Export to GeoTIFF in MapReady

Note: This option creates a GIS-ready GeoTIFF in a projection of your choice.

- i. Open *ASF MapReady*
- ii. In the *Input Files* section, ensure **Add:** is set to **CEOS Level 1** and click **Browse...**
- iii. Change the Select File menu to **CEOS Level 1 Files** for non-PALSAR data, or to **ALOS Image** for PALSAR granules, and navigate to your working directory.
- iv. Double-click an image file to load it into *MapReady*



- v. In the *General* tab under *Select Processing Steps*, check **Geocode to a Map Projection** and **Export to a Graphics File Format** (Fig 4).

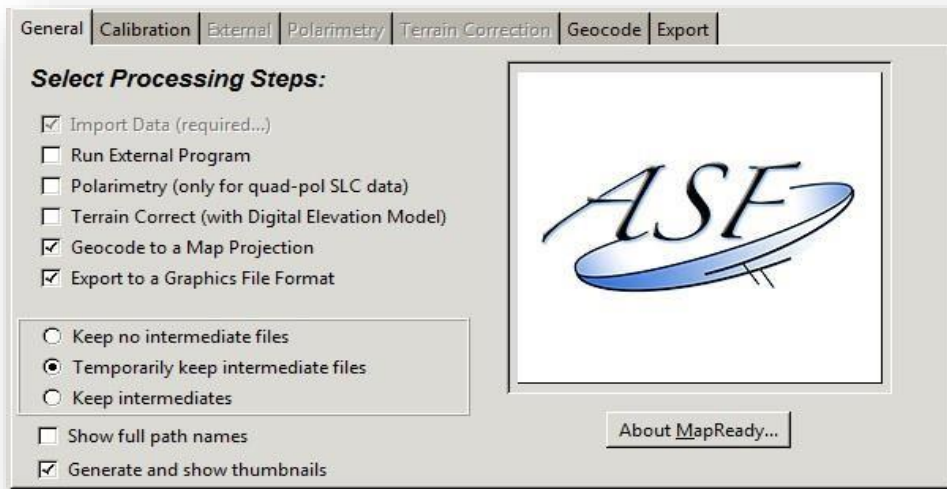


Figure 4: General tab with the correct processing steps for geocoding checked

- vi. Click on the *Geocode* tab, and select a *Map Projection* (Fig 5).

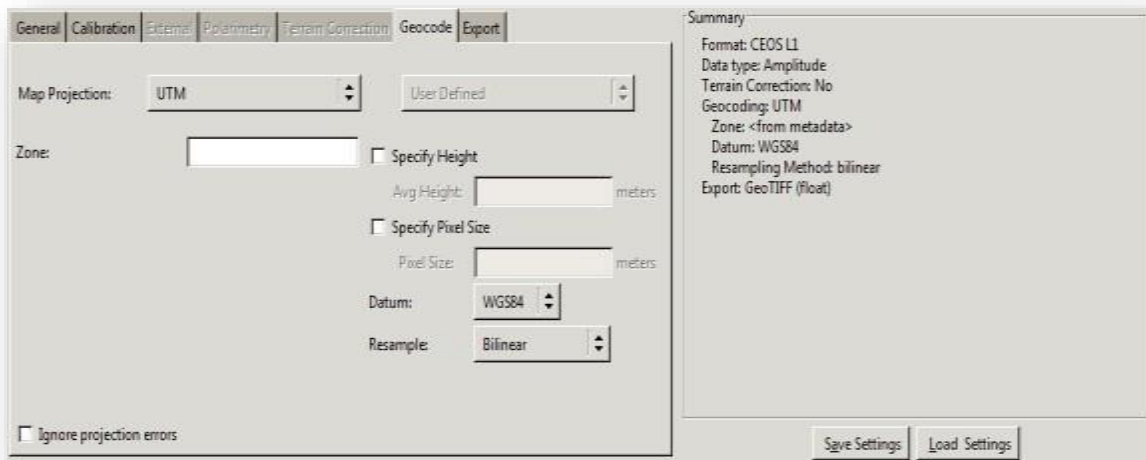


Figure 5: Geocode tab with UTM selected as the Map Projection

- vii. Change tabs to *Export* and select **GeoTIFF** from the *Export Format:* dropdown (Fig 6).

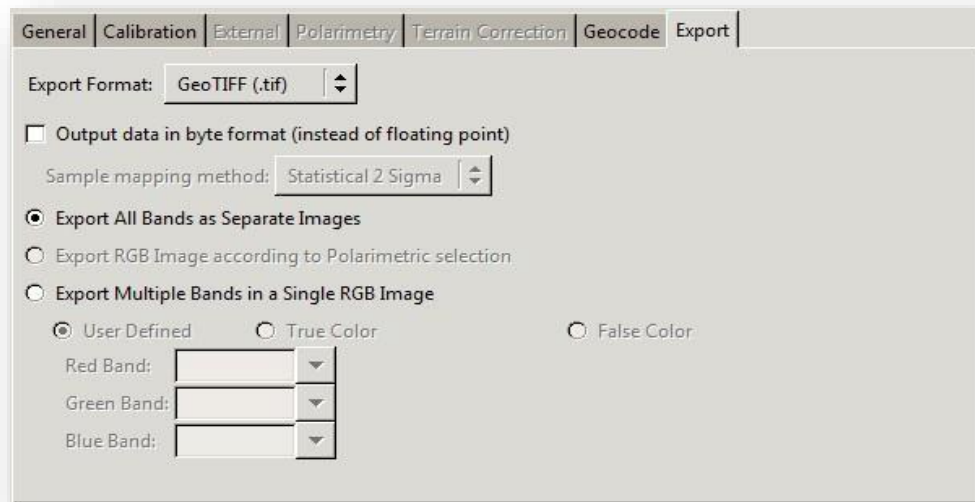


Figure 6: *Export* tab with GeoTIFF set as the *Export Format*

- viii. Finally, set a Destination Folder under *Output Settings* and click **Process All** to run the Geocoding process.