ASF

View Seasat HDF5 Files in ASF MapReady

This data recipe is for users who wish to view Seasat HDF5 files.

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A) Background

To distribute digitally processed 1978 Seasat SAR data in 2013, engineers used the most recent version of the Hierarchical Data Format, or HDF5 file format. These Seasat HDF5 files are viewable using the ASF MapReady image processing software. Each HDF5 file consists of a metadata group and a data group, which contain the SAR data as backscatter values in the HH layer, as well as latitude, longitude, and temporal data.

Seasat data had been archived on magnetic tapes, and images processed from the tapes were available only as optical images of film strips or scanned digital images. Neither the tapes nor the film allow the quantitative analysis possible with the new digital archive.

B) Materials

- Windows PC
- ASF MapReady ver. 3.1.24
- HDF5 format Seasat Granule or Sample Granule (Fig. 1)
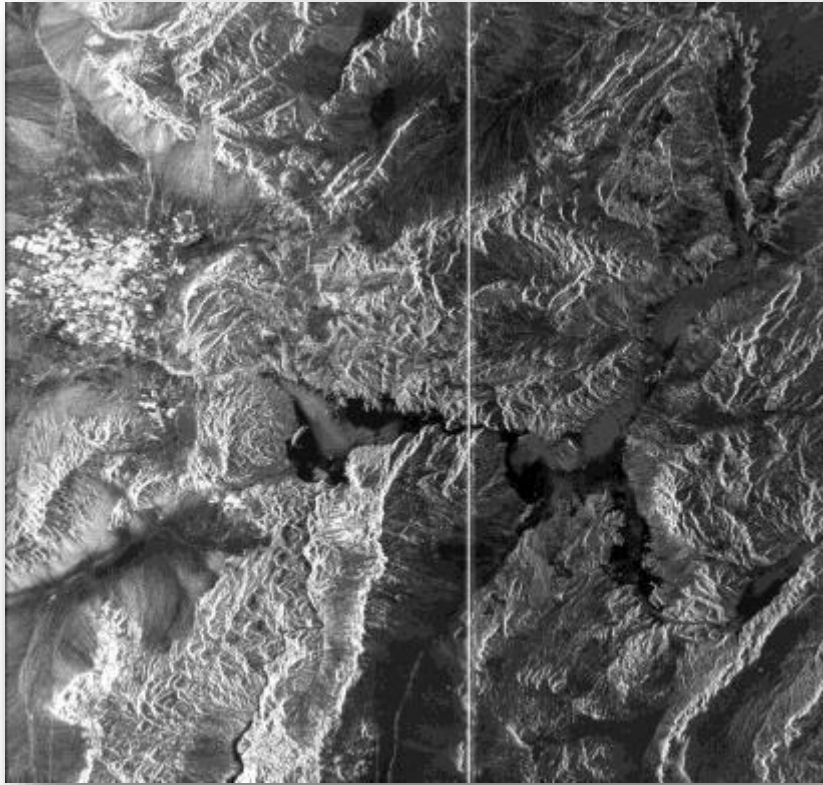
C) Sample Granule

Figure 1. The sample granule shows Las Vegas in the upper left of a Seasat image of parts of Nevada and Arizona. The white vertical line is from a calibration pulse. Credit NASA 1978, processed by ASF DAAC 2013.

D) Steps

1) **Download Materials**
   a) Download ASF's MapReady ver. 3.1.24
   b) Install MapReady using the Installation Wizard
   c) Download an HDF5 formatted data granule from the Seasat collection using Vertex, or use the Sample Granule
   d) Create a working directory and extract the *.zip* file

2) View Data – 2 Options
a) Option 1: ASF View
    i.   Click on the Windows Start button
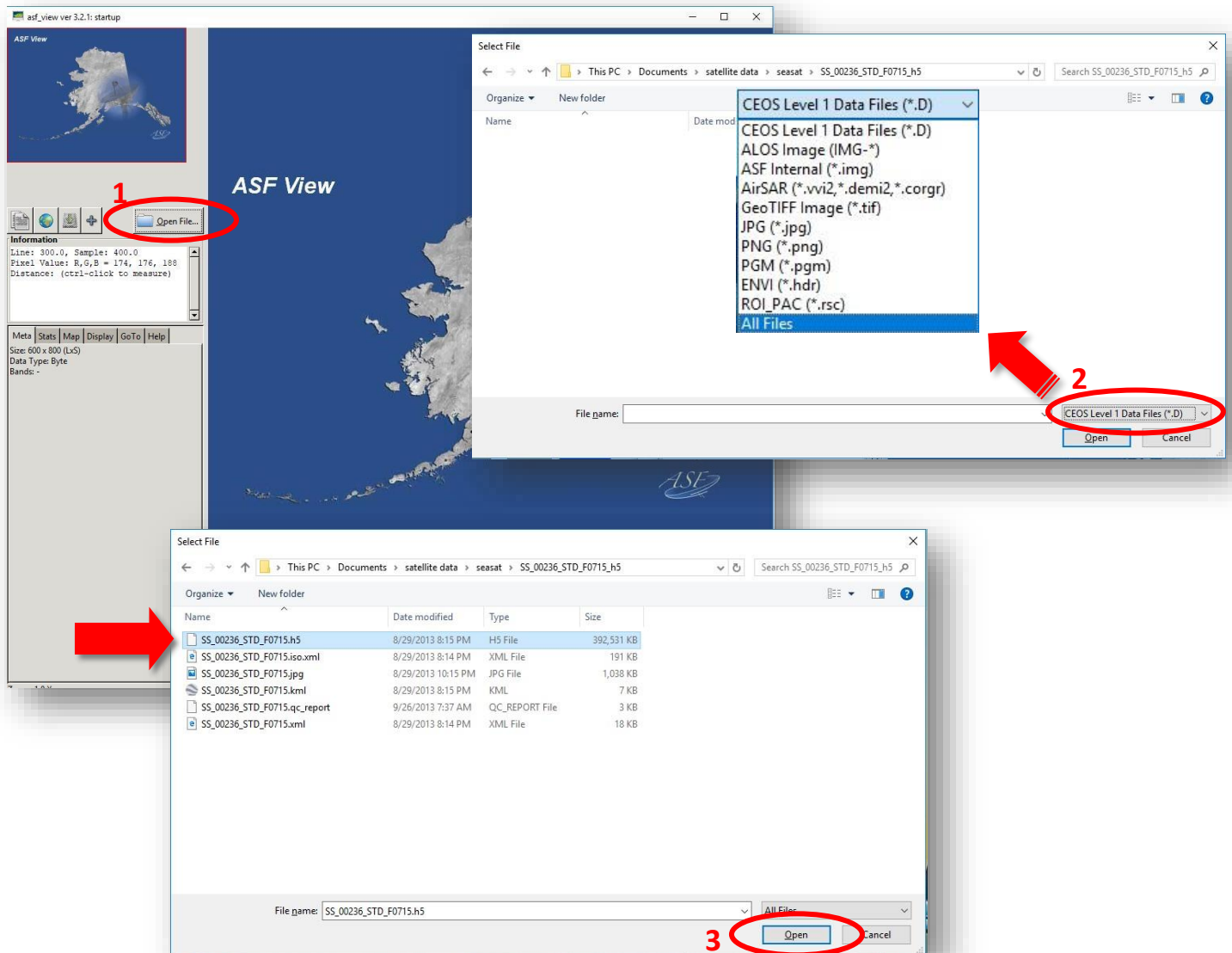
 Windows 7   Windows 10

    ii.   Open **ASF View**

    iii.   Click on **Open File…** (1) and navigate to the folder that contains the Seasat file you downloaded

    iv.   Click to expand the file type menu in the bottom right corner and select **All Files** (2)

v.   Then select the *.h5* file and click **Open** (3), in which the Seasat image and metadata will be displayed (*Fig. 4*)
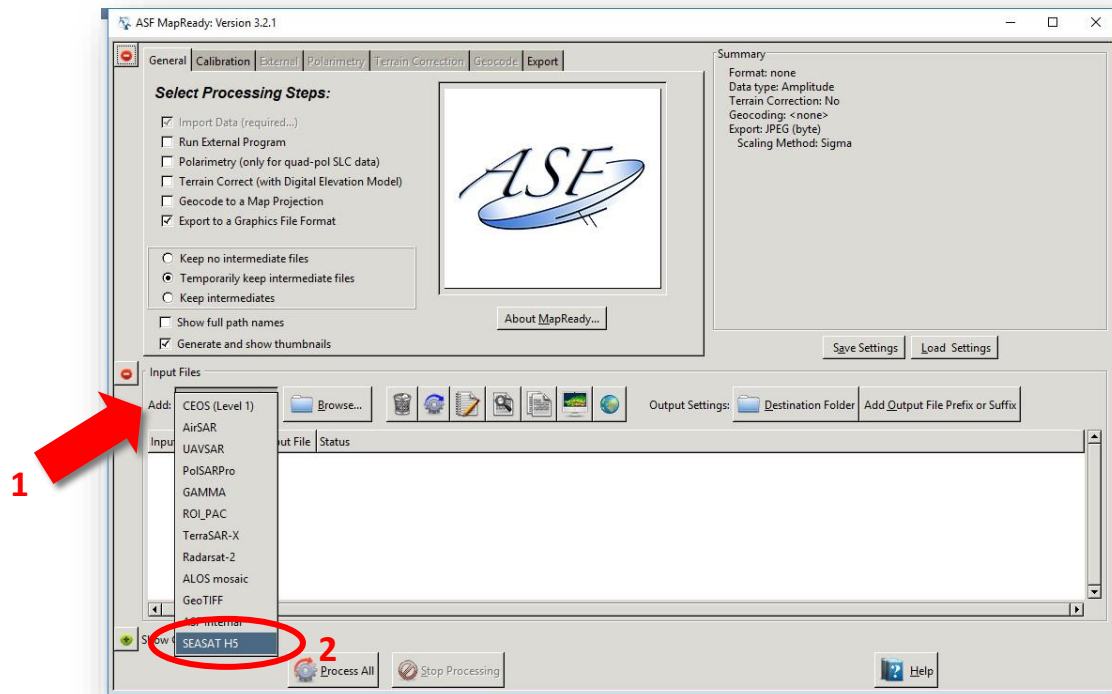
b) Option 2: ASF MapReady
   i.   Open *ASF MapReady*

   ii.   In the *Input Files* section, click the button next to **Add**: (1) to expand the menu, then select **SEASAT H5** (2) *(Fig. 2)*
   iii. Click on the **Browse…** button (3) and navigate to the folder with the Seasat file you downloaded *(Fig. 3)*
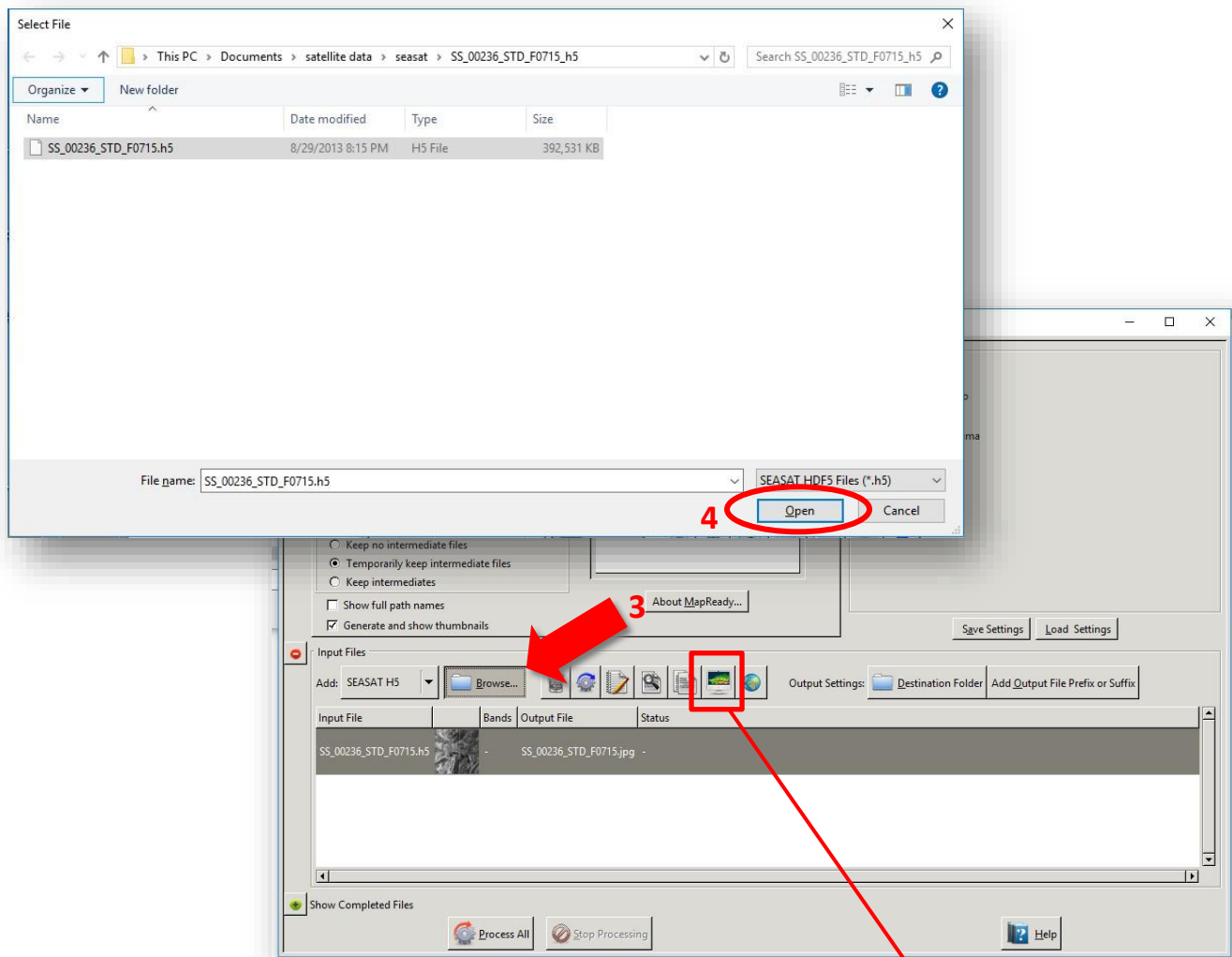   iv.   Select the *.h5* file and click **Open** (4) *(Fig. 3)*

Figure 3.

v.   The Seasat file will be displayed in the *Input File* window

vi   Click on the *viewer* button in the toolbar to view the file

vii. The image will open in ASF View, a viewer application which can also display CEOS format data and many other image processing formats *(Fig. 4)*

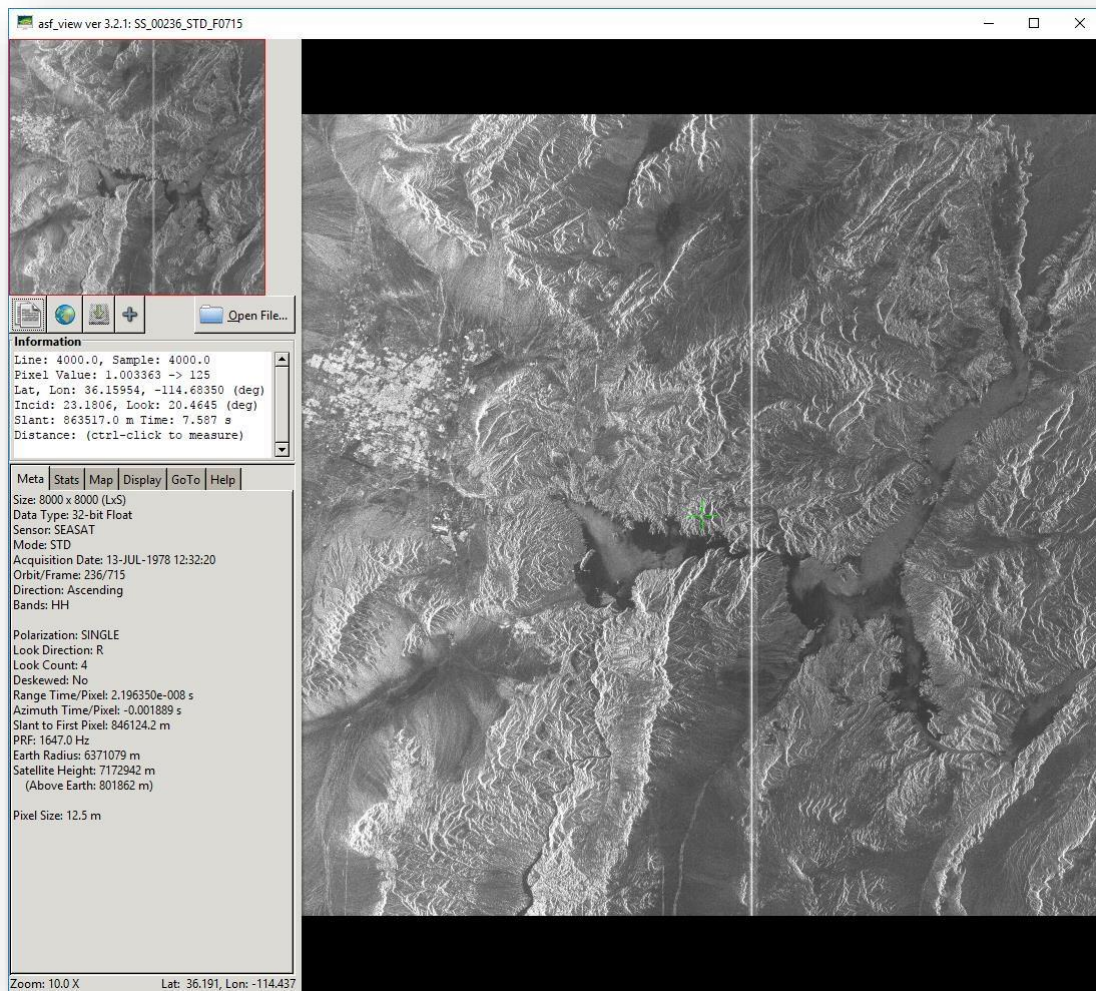*Hint:* Press the <**End**> key on your keyboard to zoom out and view the entire image

Figure 4. Viewing the sample granule in ASF View, which is part of the MapReady tool suite

Note: ASF View can be opened directly by navigating to the

C:\Program Files (x86)\ASF_Tools\MapReady 3.2

folder and double-clicking on *asf_view.exe*