SAOCOM-1 Products : Opening images in SNAP

The following tutorial shows how to read SAOCOM images in the SNAP free-use software. Please, keep in mind that depending on the version of SNAP and the operating system you have installed, you may notice differences with respect to what is indicated in this document; however, the guidelines shown is still valid.

In the following, the folder structure of the compressed file of the SAOCOM product is shown, how to decompress a SAOCOM image, how to load and edit its properties in SNAP and how to stack it.

1. Download the ftp site indicated in the email that was sent to you as a notification of product available, .xemt and .zip files.

   The .xemt file corresponds to the product metadata, including acquisition date, acquisition mode, polarization and image location among others.
   The .zip file contains the product data, including a quicklook, quality data and The bands of the image.

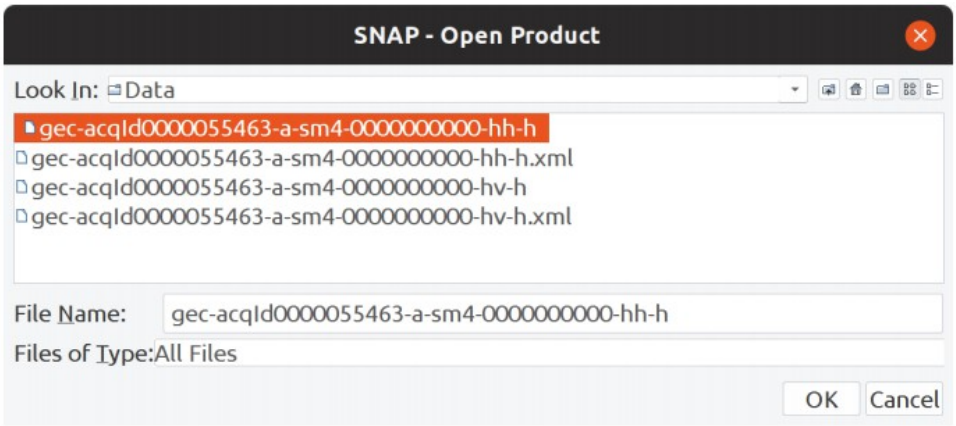
2. Unzip the .zip file and you will find the following folder structure

   Config - Contains configuration files of the processor used to obtain the product.
   Data - Contains the bands of the image and their corresponding metadata.
   Images - Contains the quicklook of the image and an .kml file for Google Earth.
   Quality - Contains image quality data

3. The image files are in GeoTIFF format. To open them in SNAP click on the menu

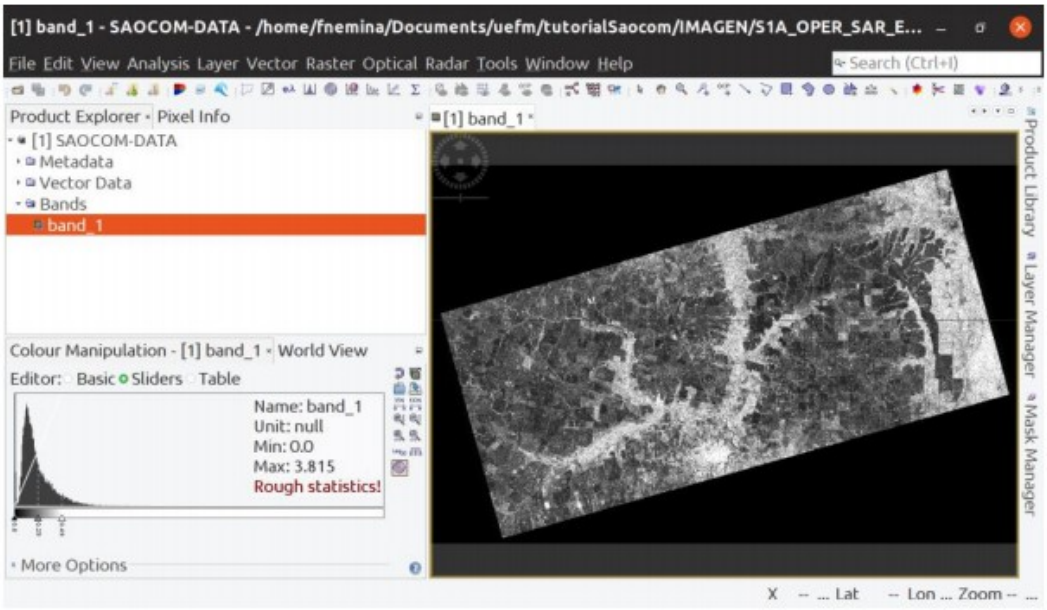
File > Open product

Select the first file without extension.

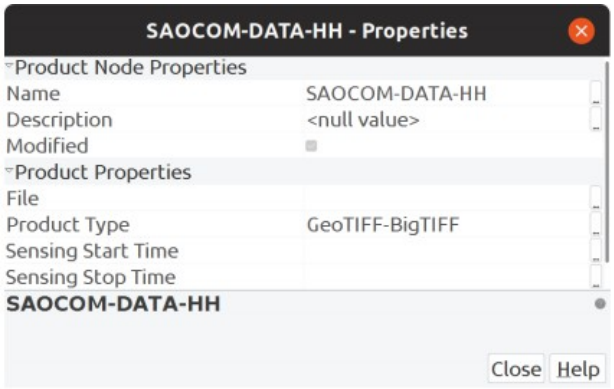


Click OK and the file will be added to the SNAP Product Explorer tab.

You can display the scene corresponding to this band by double clicking on the object band_1 that it is located within the Bands folder of the structure shown in Product Explorer for this image.



4. Rename the image. To do this, right click on SAOCOM-DATA and select Properties. Then, add the polarization of this band to the NAME field

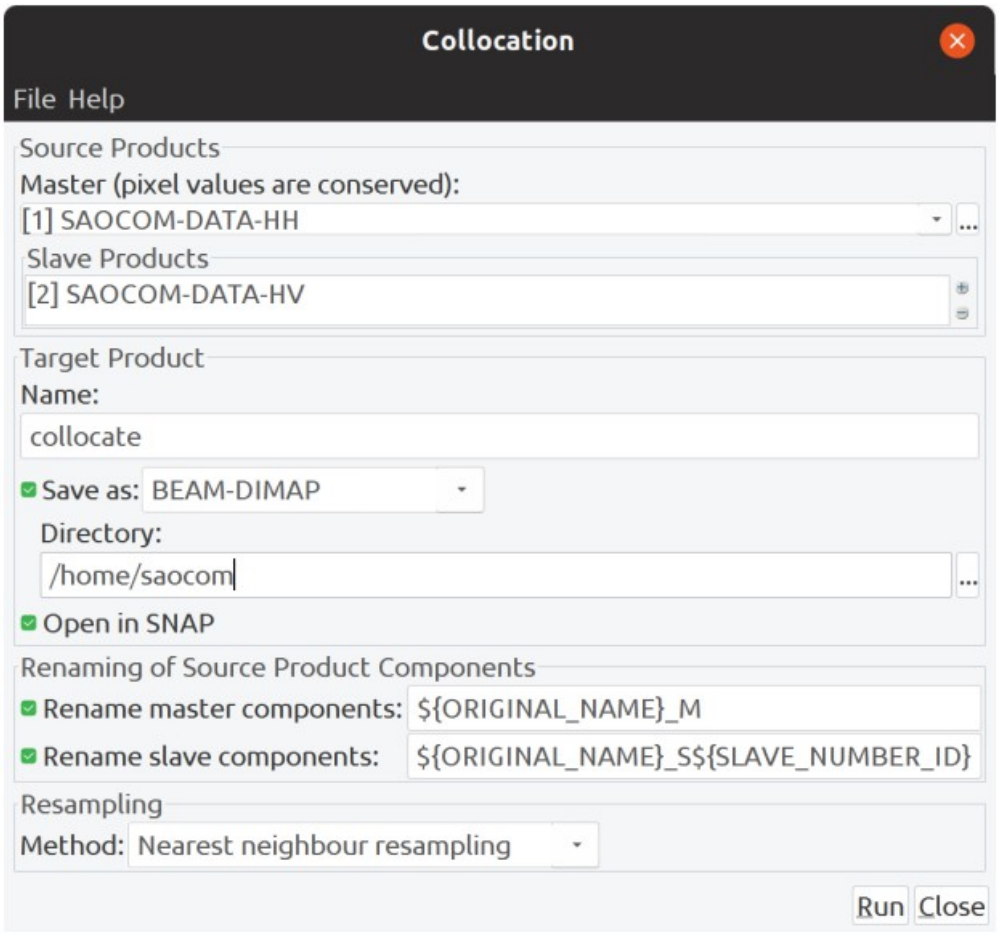


5. Rename the band by right clicking on the band_1 object and then clicking on Properties. Change the name of the band by polarization.

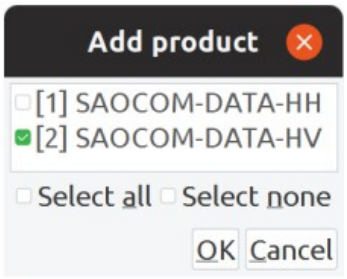
6. Repeat steps 3, 4 and 5 for all bands in the image.

7. To stack the bands click on the menu

Raster > Geometric operations > Collocation

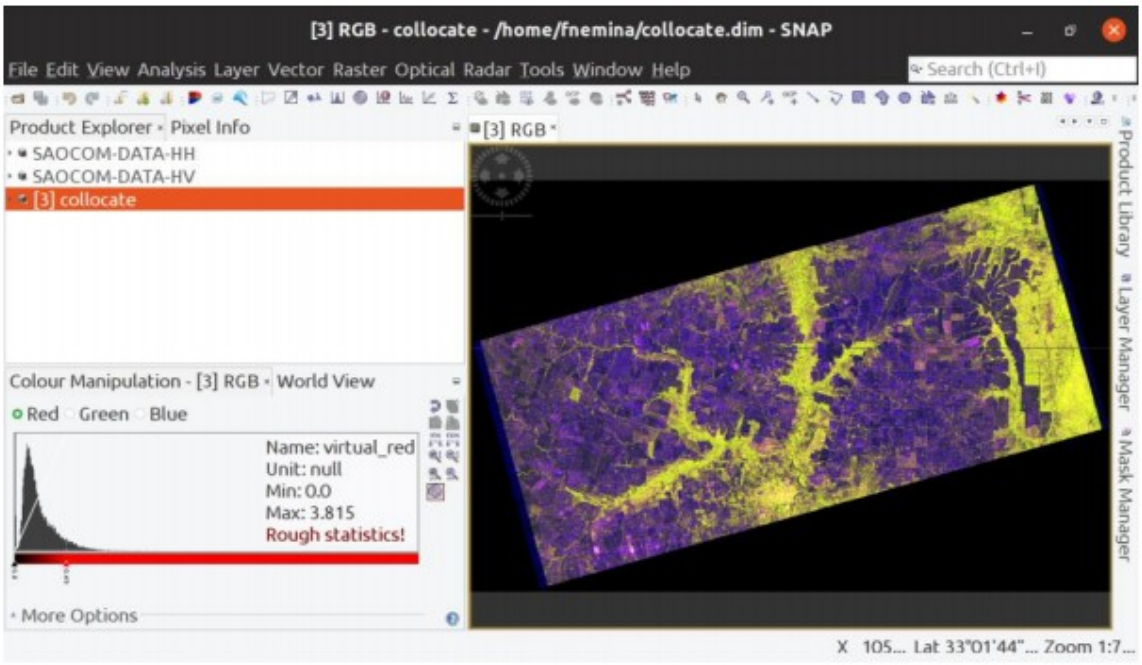


Select one of the bands as Master. Then, to add the other bands like Slave click on the ⊕ button to the right of the Slave Products field, and choose the Add option product (s) ... in the drop-down menu shown. Mark the rest of the bands, other than the Master band, in the window that appears.



Use the Name: and Directory: fields to choose the name of the output file and the folder where it will be saved, respectively. Click on Run to stack the bands.

8. You can display an RGB combination by right clicking on the stacked image and choosing Open RGB image window. Shown below is the combination of RGB bands HH, HV and HH / HV


[3] RGB - collocate - /home/fnemina/collocate.dim - SNAP
File Edit View Analysis Layer Vector Raster Optical Radar Tools Window Help
Search (Ctrl+I)
Product Explorer
Pixel Info
SAOCOM-DATA-HH
SAOCOM-DATA-HV
[3] collocate
[3] RGB
Colour Manipulation - [3] RGB
World View
Red
Green
Blue
Name: virtual_red
Unit: null
Min: 0.0
Max: 3.815
Rough statistics!
More Options
Product Library
Layer Manager
Mask Manager
X 105... Lat 33°01'44"... Zoom 1:7...