

# SAOCOM-1 Products

## Opening images in SNAP

The following tutorial shows how to read SAOCOM images in the free SNAP<sup>1</sup> software. Please note that depending on the version of SNAP and the operating system you have, you may notice differences from what is stated in this document; however, the guidelines shown are still valid.

The following shows the structure of folders of the SAOCOM product zip file, how to unzip a SAOCOM image, how to load it and edit its properties in SNAP, and how to stack the image bands.

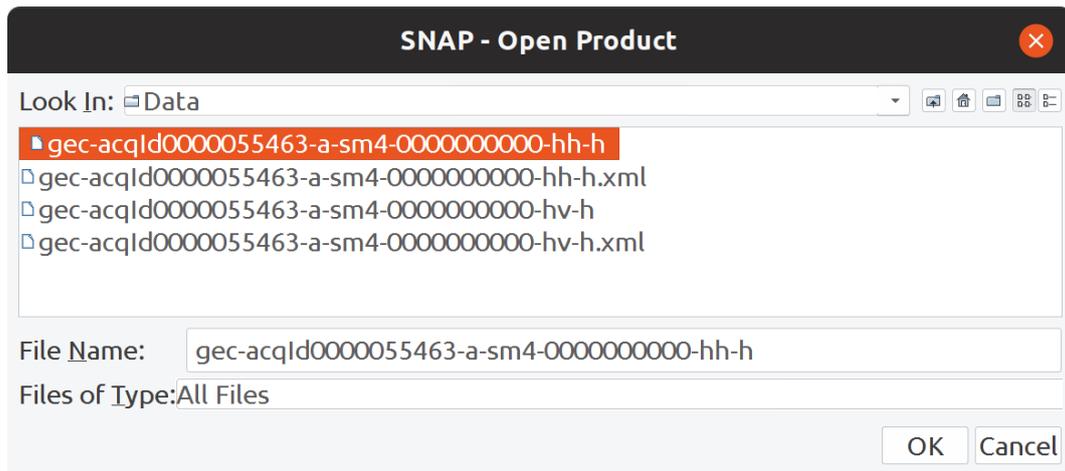
1. Download the .xemt and .zip files from the ftp site listed in the email sent to you under notice of available product.
  - The .xemt file refers to the metadata of the product, including acquisition date, acquisition mode, polarization and image location among others.
  - The .zip file contains the product data, including a quicklook, image quality data, and image bands.
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 image bands and their corresponding metadata.
  - Images - Contains the quicklook of the image and a .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.

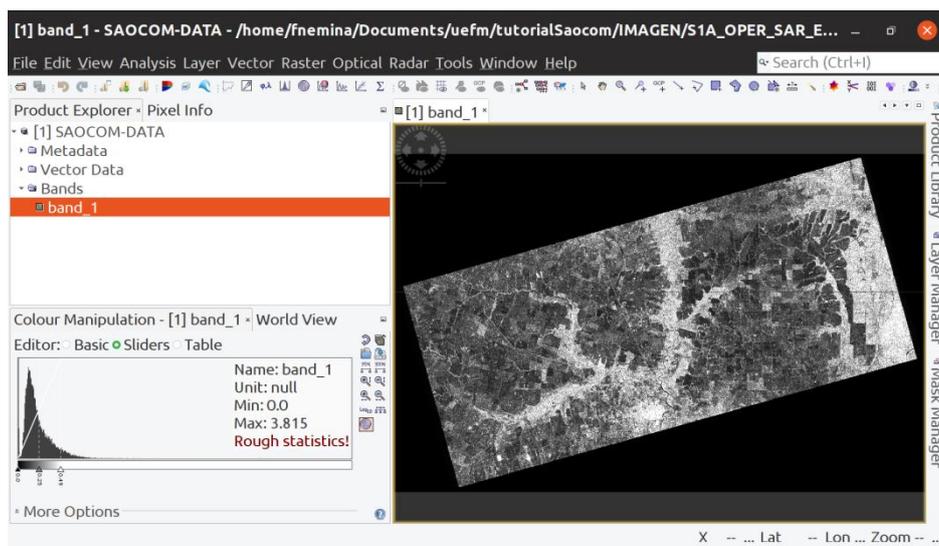
---

<sup>1</sup> <https://step.esa.int/main/download/snap-download/>

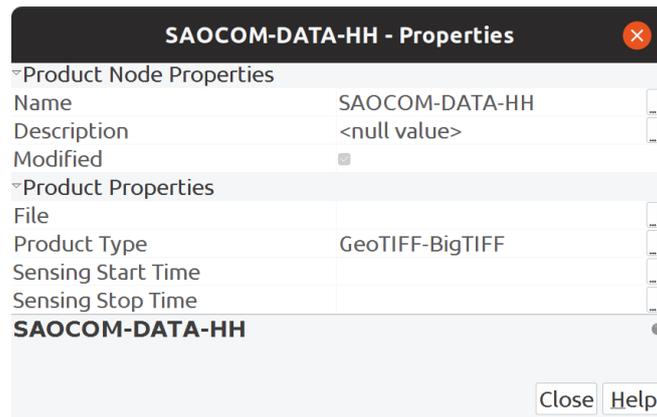


Click OK and the file will be added to the SNAP Product Explorer tab.

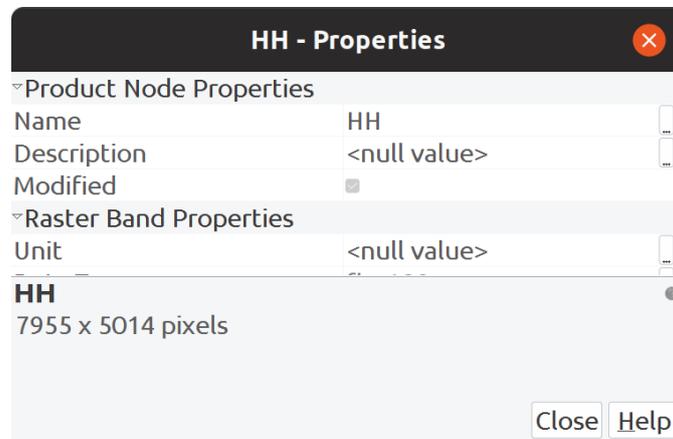
You can view the scene corresponding to this band by double-clicking on the band\_1 object within the Bands folder of the structure shown in Product Explorer for this image.



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.

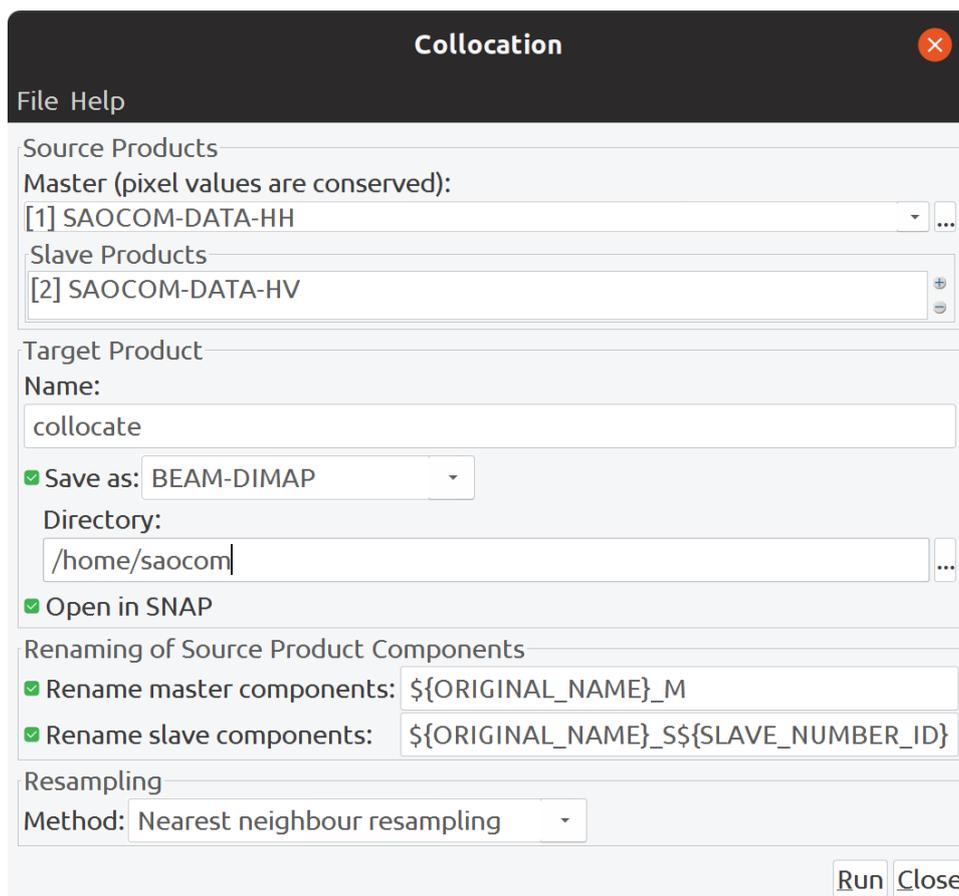


5. Rename the band by right-clicking on the band\_1 object and then clicking Properties. Change the name of the band for the polarization.

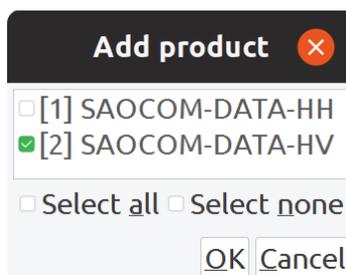


6. Repeat steps 3, 4, and 5 for all bands in the image.
7. To stack the bands click on the menu

Raster > Geometric operations > Collocation



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



Use the Name and Directory fields to choose the name of the output file and the folder where it will be saved, respectively. Then click 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. The combination of RGB bands HH, HV and HH/HV is shown below

