

SAOCOM-1 Products Opening images in SNAP

The following tutorial shows how to read SAOCOM images in the free SNAP¹ 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.

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



	SNAP - Open Product	8
Look <u>I</u> n: 🗖 Da		
■ gec-acqId0 □ gec-acqId00 □ gec-acqId00 □ gec-acqId00	000055463-a-sm4-000000000-hh-h 000055463-a-sm4-000000000-hh-h.xml 000055463-a-sm4-0000000000-hv-h 000055463-a-sm4-0000000000-hv-h.xml	
File <u>N</u> ame: Files of Type	gec-acqId0000055463-a-sm4-0000000000-hh-h All Files	
Thes of Type.	Autrics	OK Cancel

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.





SAOCOM	-DATA-HH - Properties	×
Product Node Properties	5	
Name	SAOCOM-DATA-HH	
Description	<null value=""></null>	
Modified		
Product Properties		
File		
Product Type	GeoTIFF-BigTIFF	_
Sensing Start Time		
Sensing Stop Time		
SAOCOM-DATA-HH		0
	Clos	se <u>H</u> elp

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.

нн	- Properties	8
Product Node Propertie	25	
Name	HH	
Description	<null value=""></null>	
Modified		
Raster Band Properties		
Unit	<null value=""></null>	
HH	<i>ei</i>	۲
7955 x 5014 pixels		
		Close <u>H</u> elp

- 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



Collocation				
File Help				
Source Products Master (pixel values are conserved): [1] SAOCOM-DATA-HH Slave Products				
[2] SAOCOM-DATA-HV				
Target Product Name:				
collocate				
Save as: BEAM-DIMAP Directory:				
/home/saocom				
Open in SNAP				
Renaming of Source Product Components				
Rename master components:	\${ORIGINAL_NAME}_M			
Rename slave components:	\${ORIGINAL_NAME}_S\${SLAVE_NUMBER_ID}			
Resampling				
Method: Nearest neighbour res	sampling -			
	Run <u>C</u> lose			

Select one of the bands as Master. Then, to add the other bands as Slave click on the \oplus 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.

Add product 🛛 😣		
□[1] SAOCOM-DATA-HH ■[2] SAOCOM-DATA-HV		
□ Select <u>a</u> ll □ Select <u>n</u> one		
<u>OK</u> <u>C</u> ancel		

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





