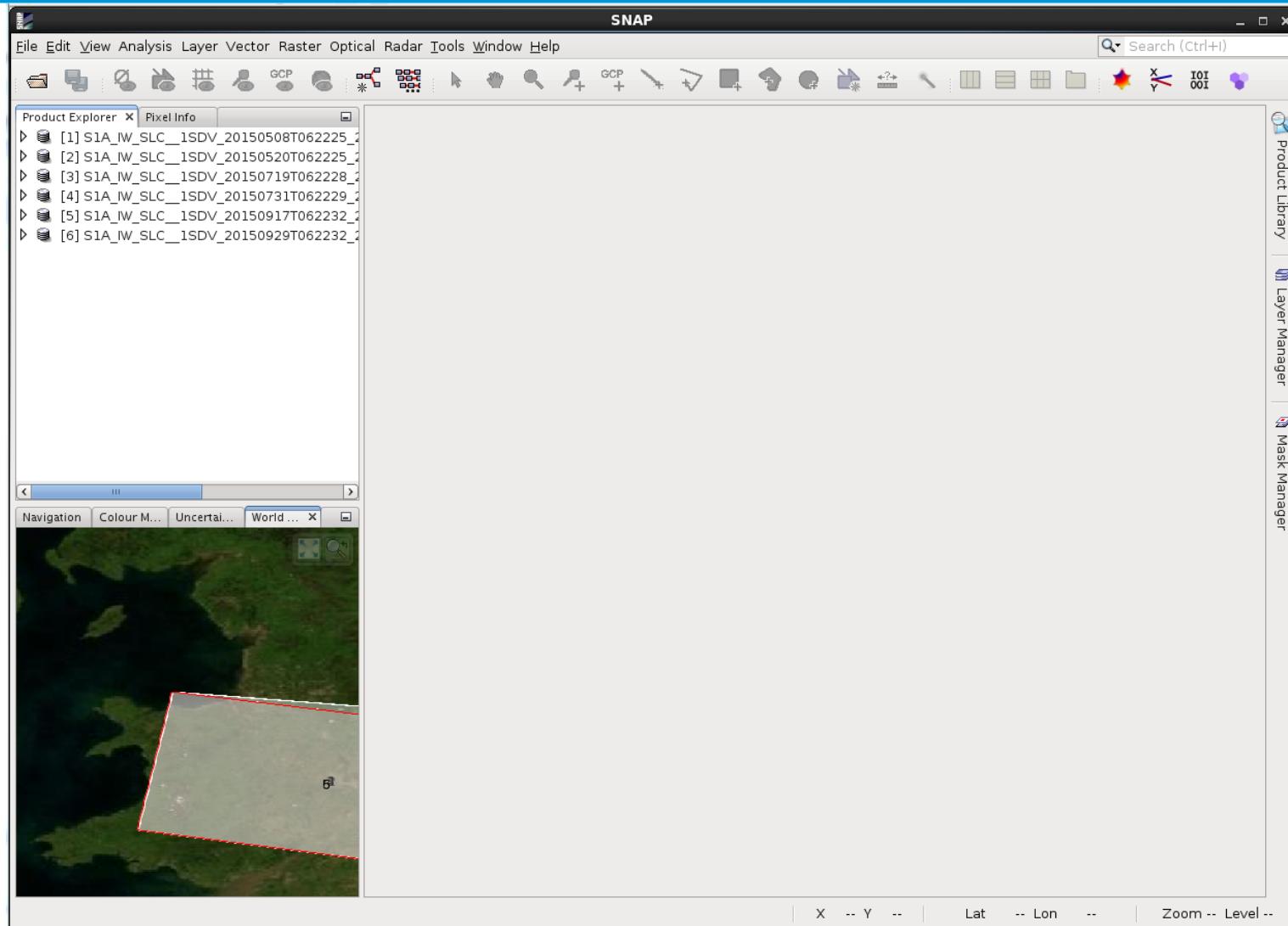


Sentinel 1 backscattering coefficient from SLC data

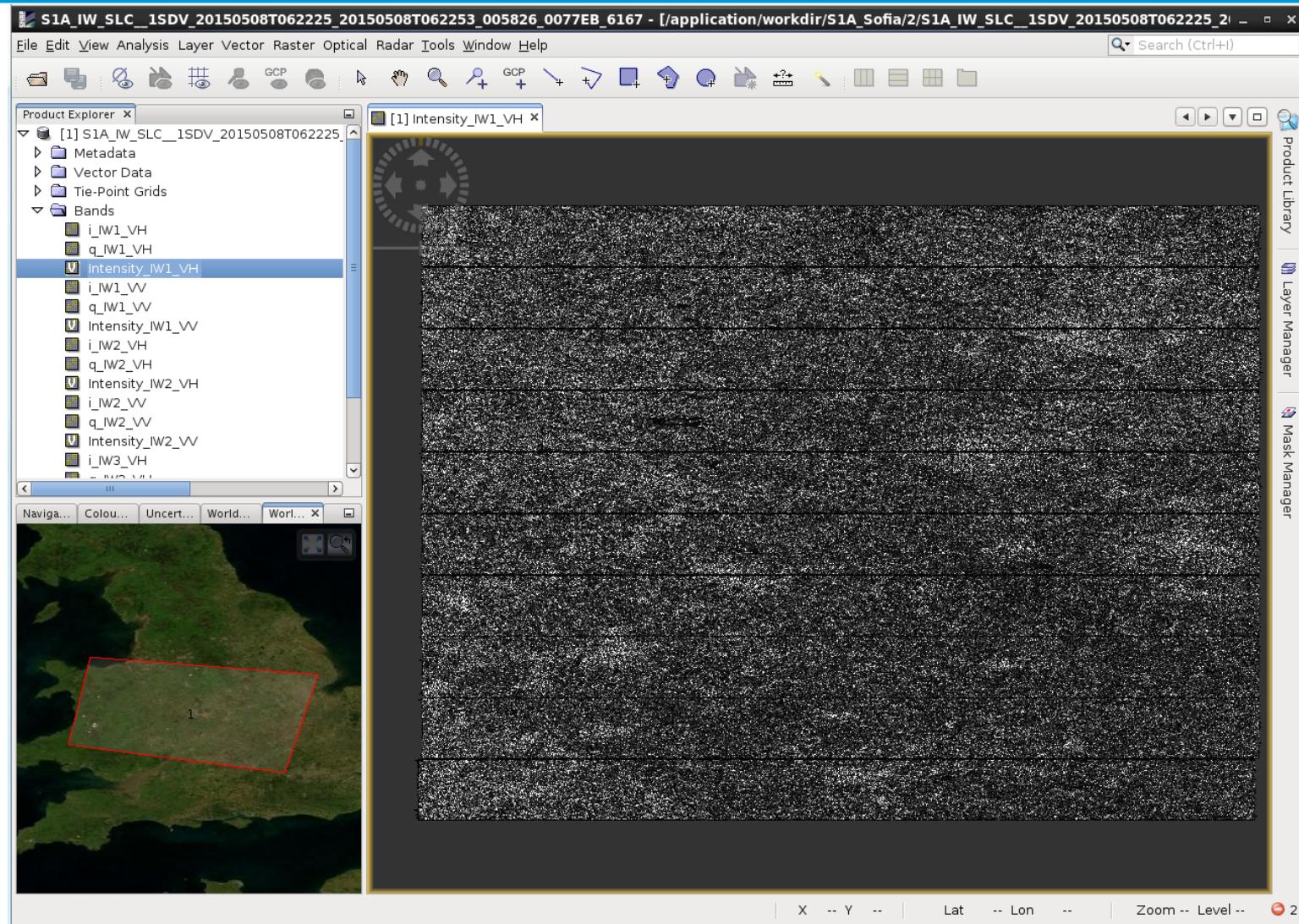
Processing chain

1. Splitting the data (single sub-swath, single polarisation)
2. Applying orbits
3. Radiometric calibration
4. TOPS deburst
5. Multilooking
6. Coregistration (DEM assisted + cross correlation)
7. Multitemporal speckle filtering

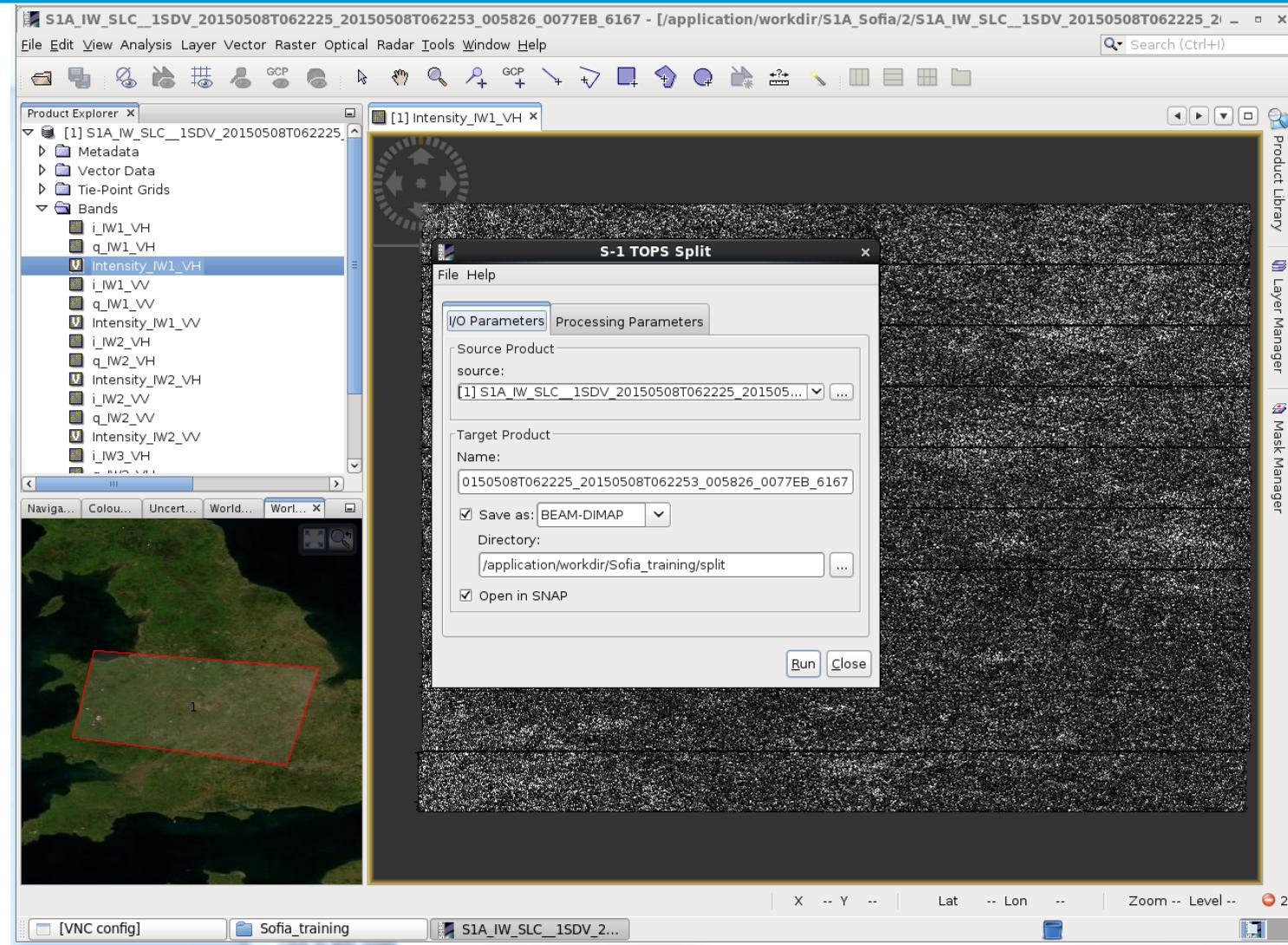
Opening the dataset



Visualisation of SLC data



Splitting the image into subswaths



TOPSAR Split with Batch Processing



SNAP

File Edit View Analysis Layer Vector Raster Optical Radar Tools Window Help

Search (Ctrl+F)

Product Explorer X

- [1] S1A_IW_SLC_1SDV_20150508T062225_20
- [2] S1A_IW_SLC_1SDV_20150520T062225_20
- [3] S1A_IW_SLC_1SDV_20150719T062228_20
- [4] S1A_IW_SLC_1SDV_20150731T062229_20
- [5] S1A_IW_SLC_1SDV_20150917T062232_20
- [6] S1A_IW_SLC_1SDV_20150929T062232_20

Batch Processing : split.xml

I/O Parameters TOPSAR-Split

| File Name | Type | Acquisition | Track | Orbit |
|---------------------|------|-------------|-------|-------|
| S1A_IW_SLC_1SDV_... | SLC | 08May2015 | 154 | 5826 |
| S1A_IW_SLC_1SDV_... | SLC | 20May2015 | 154 | 6001 |
| S1A_IW_SLC_1SDV_... | SLC | 19Jul2015 | 154 | 6876 |
| S1A_IW_SLC_1SDV_... | SLC | 31Jul2015 | 154 | 7051 |
| S1A_IW_SLC_1SDV_... | SLC | 17Sep2015 | 154 | 7751 |
| S1A_IW_SLC_1SDV_... | SLC | 29Sep2015 | 154 | 7926 |

+ + - + ↑ ↓ ⏪ ⏩

6 Products

Navigatio... Colour M... Uncertain... WorldWi... X

Arctic Ocean

NORTH AMERICA ASIA

EUROPE

North Atlantic Ocean

AFRICA

2 3 4 5 6

2000 Km

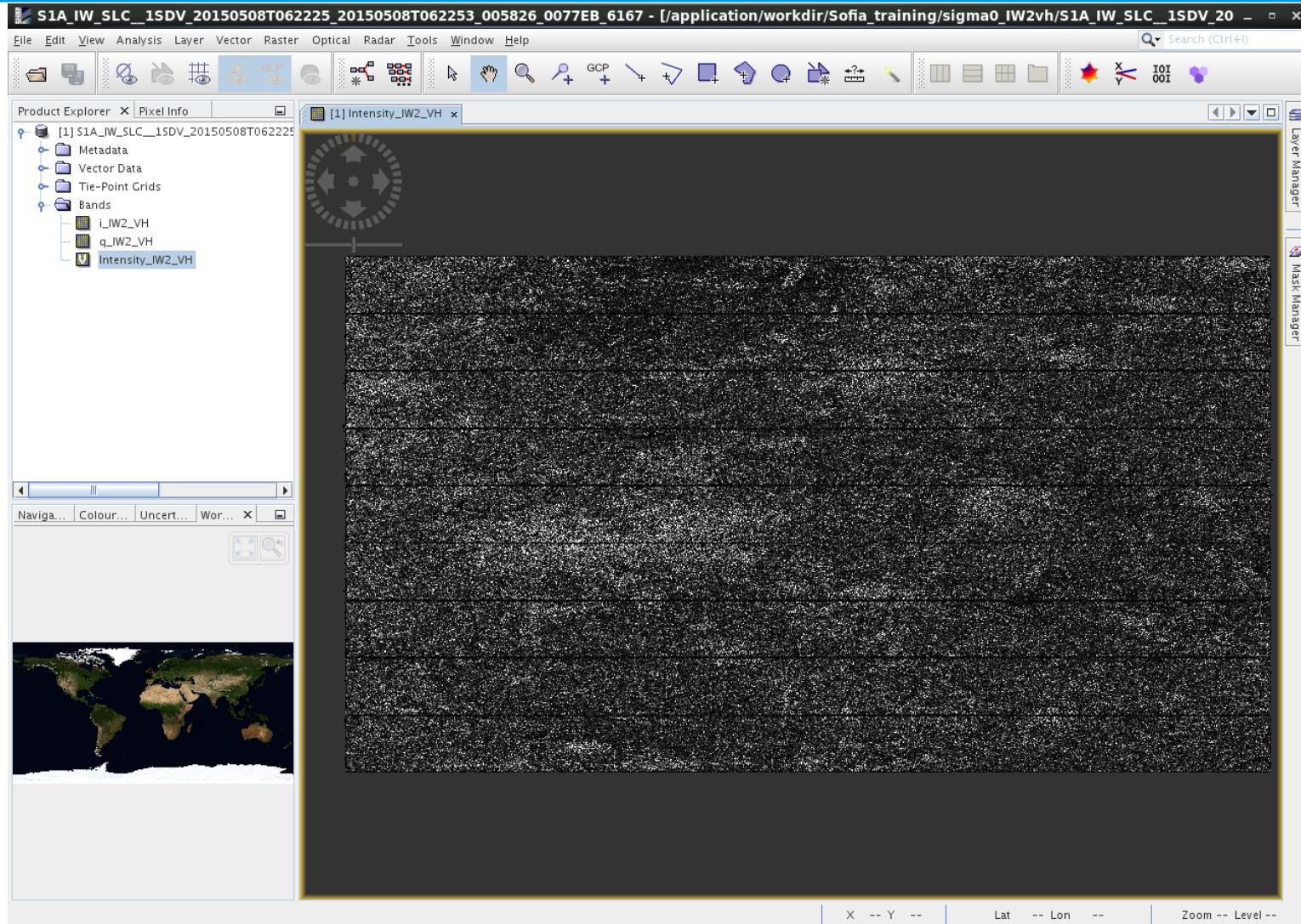
Off Globe

Product Library Layer Manager Mask Manager

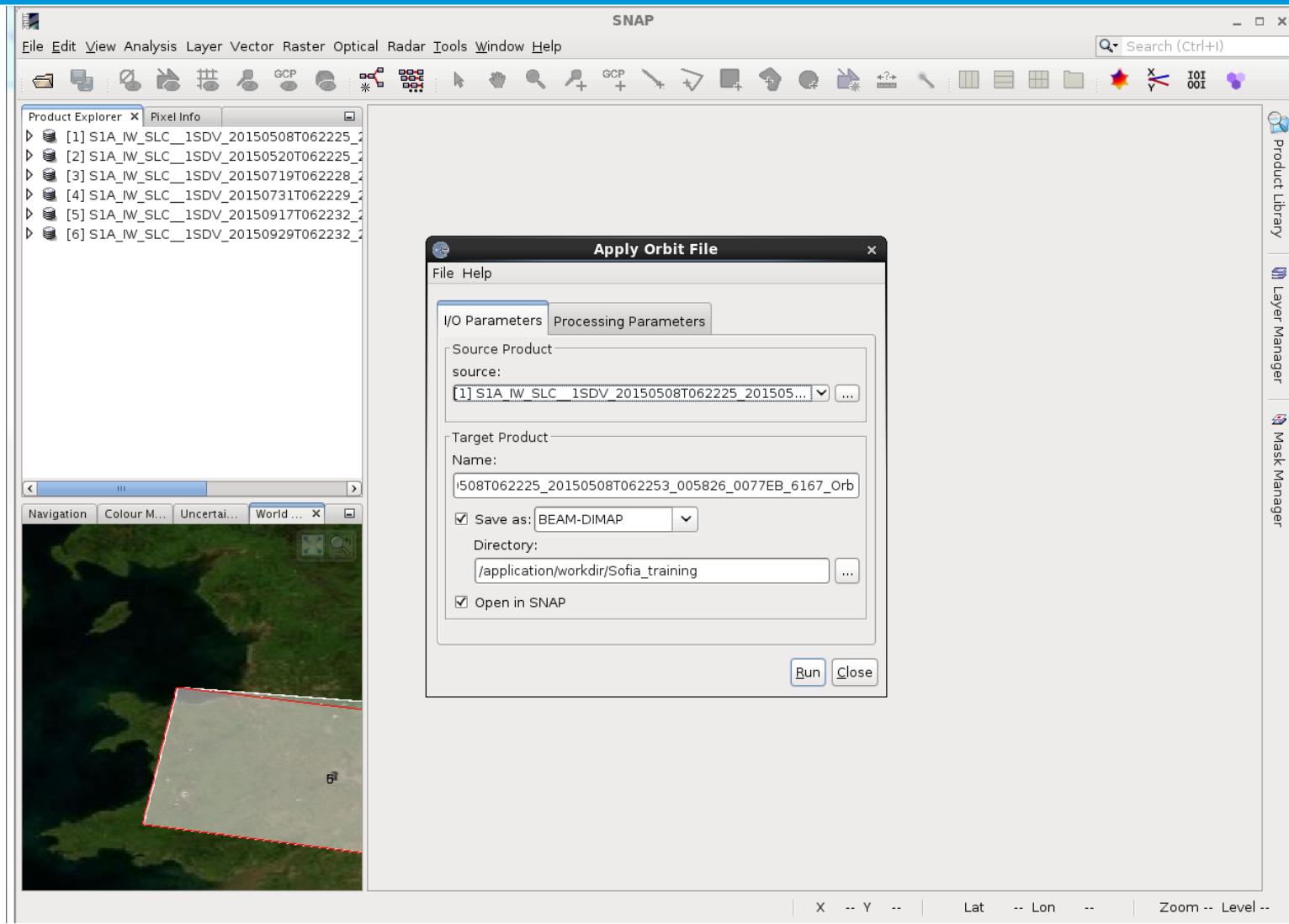
Load Graph Run Close Help

2

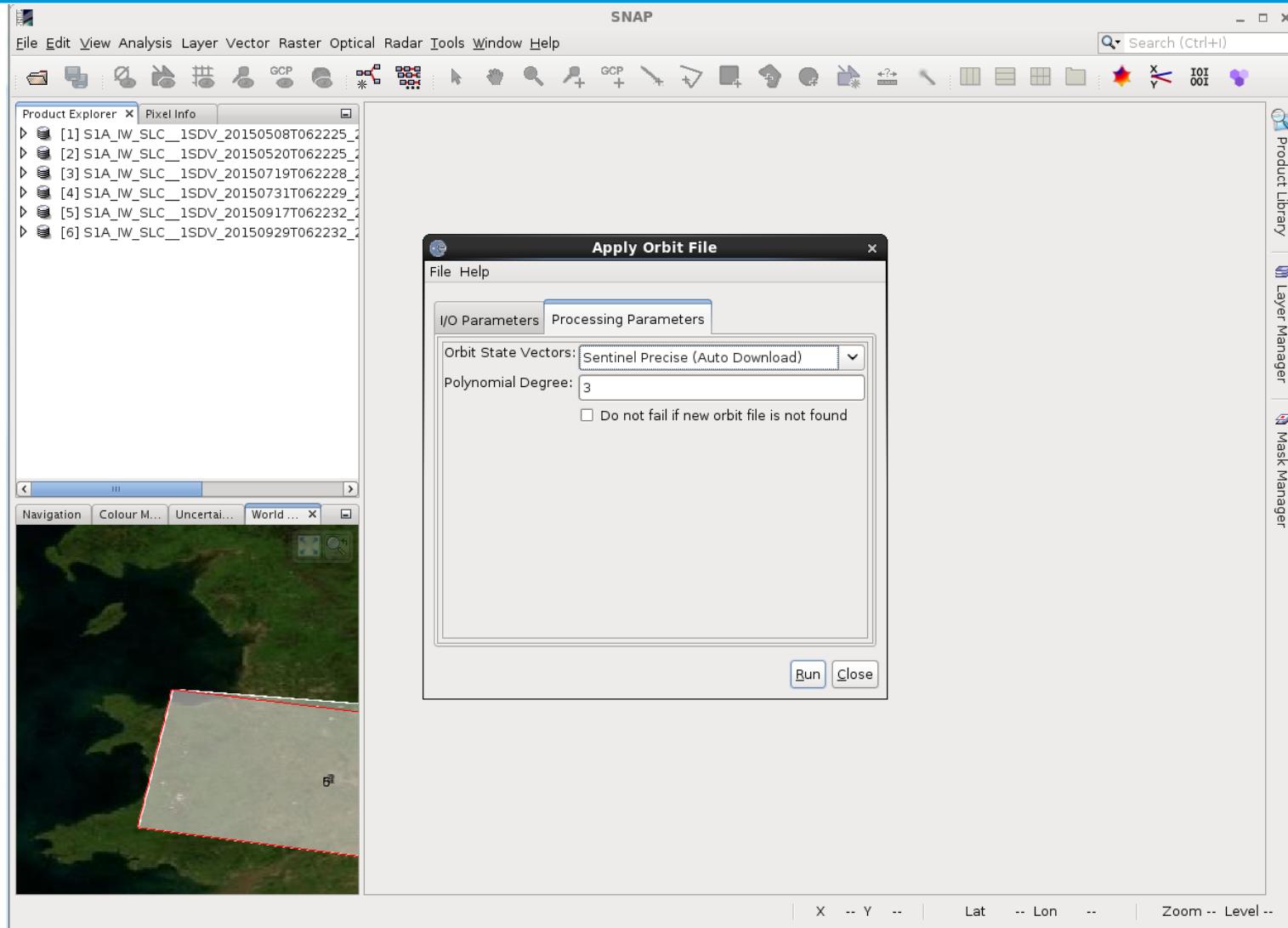
Visualisation of single sub-swath (IW2) polarisation VH



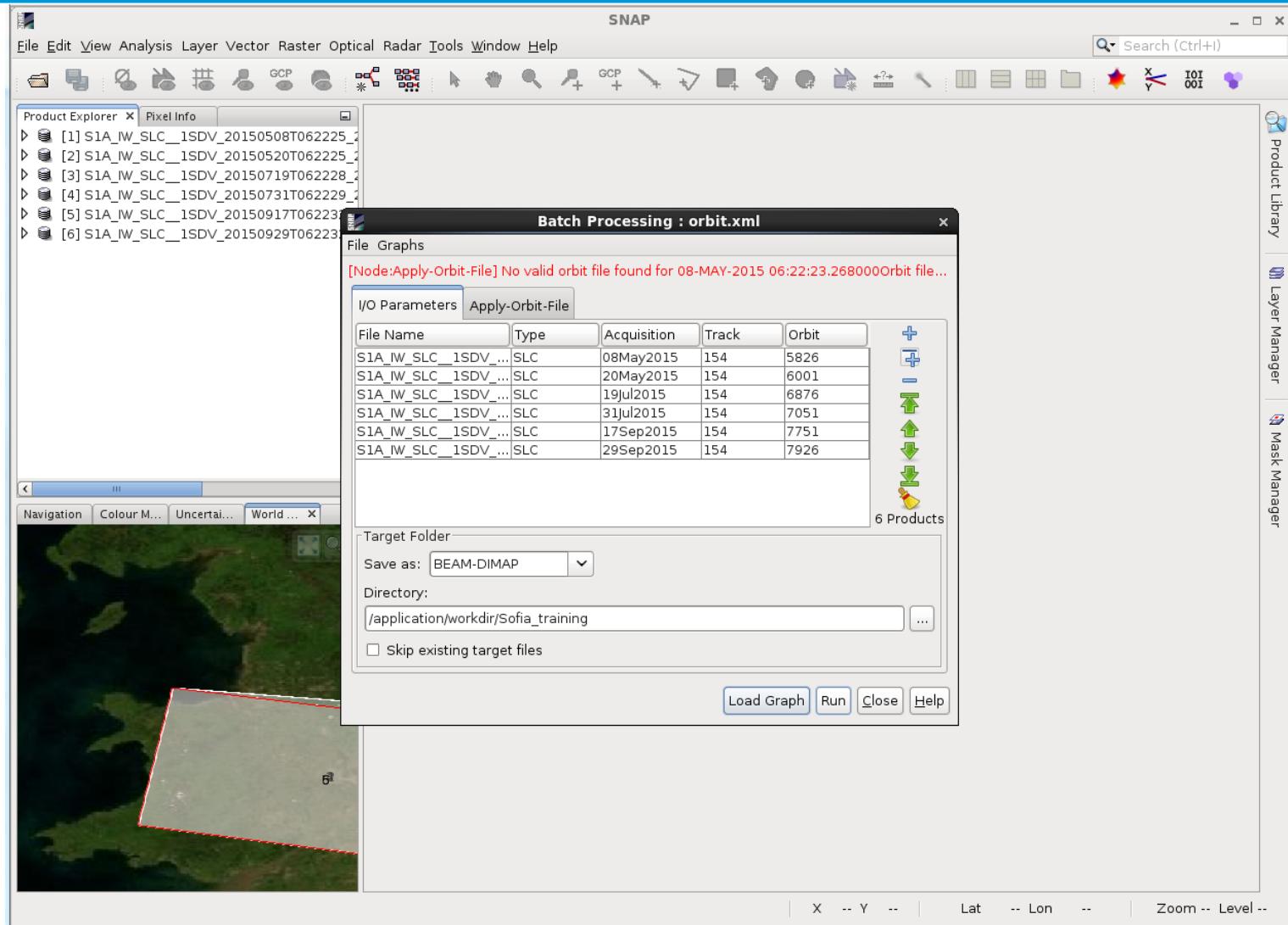
Applying orbits



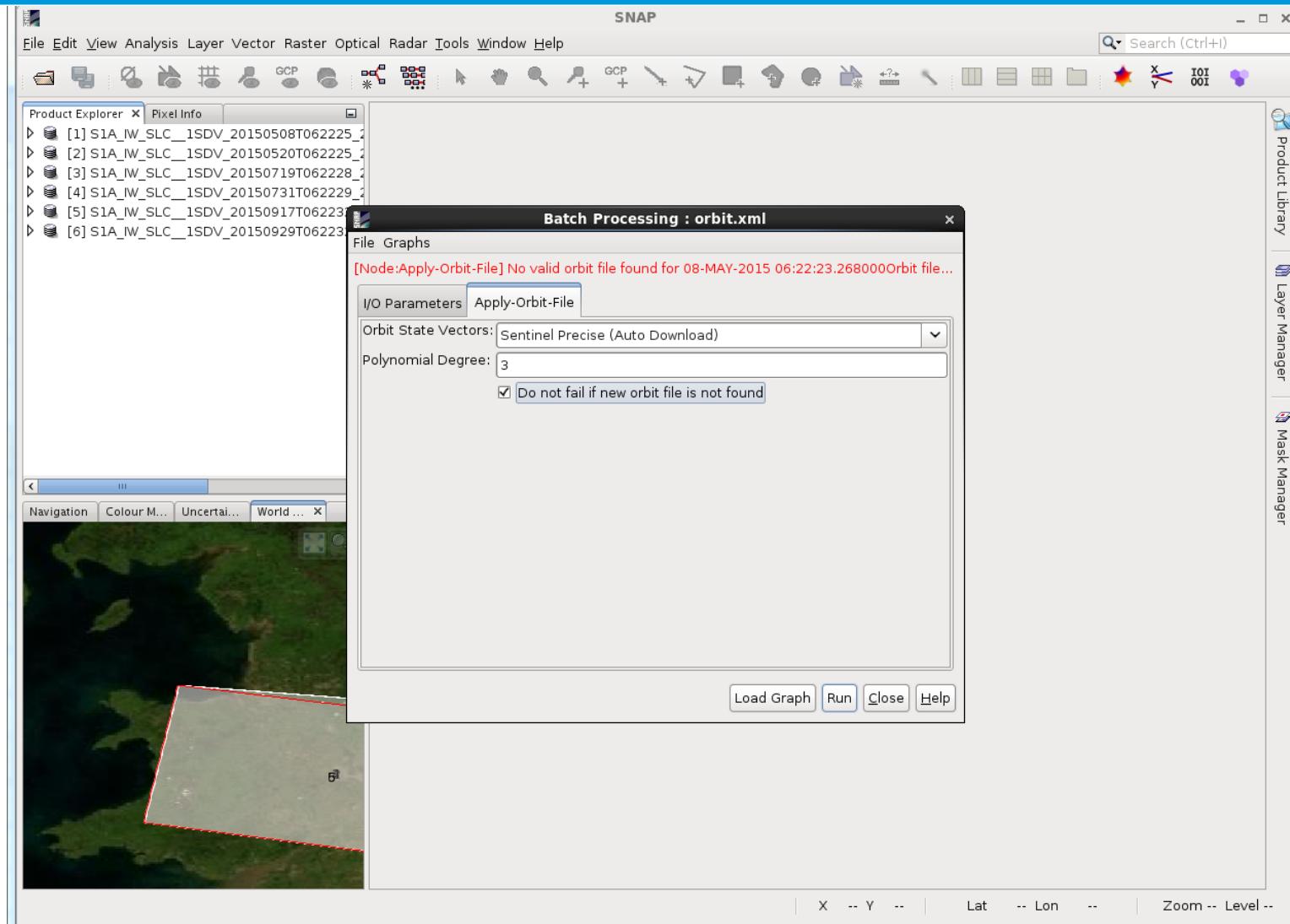
Applying orbits



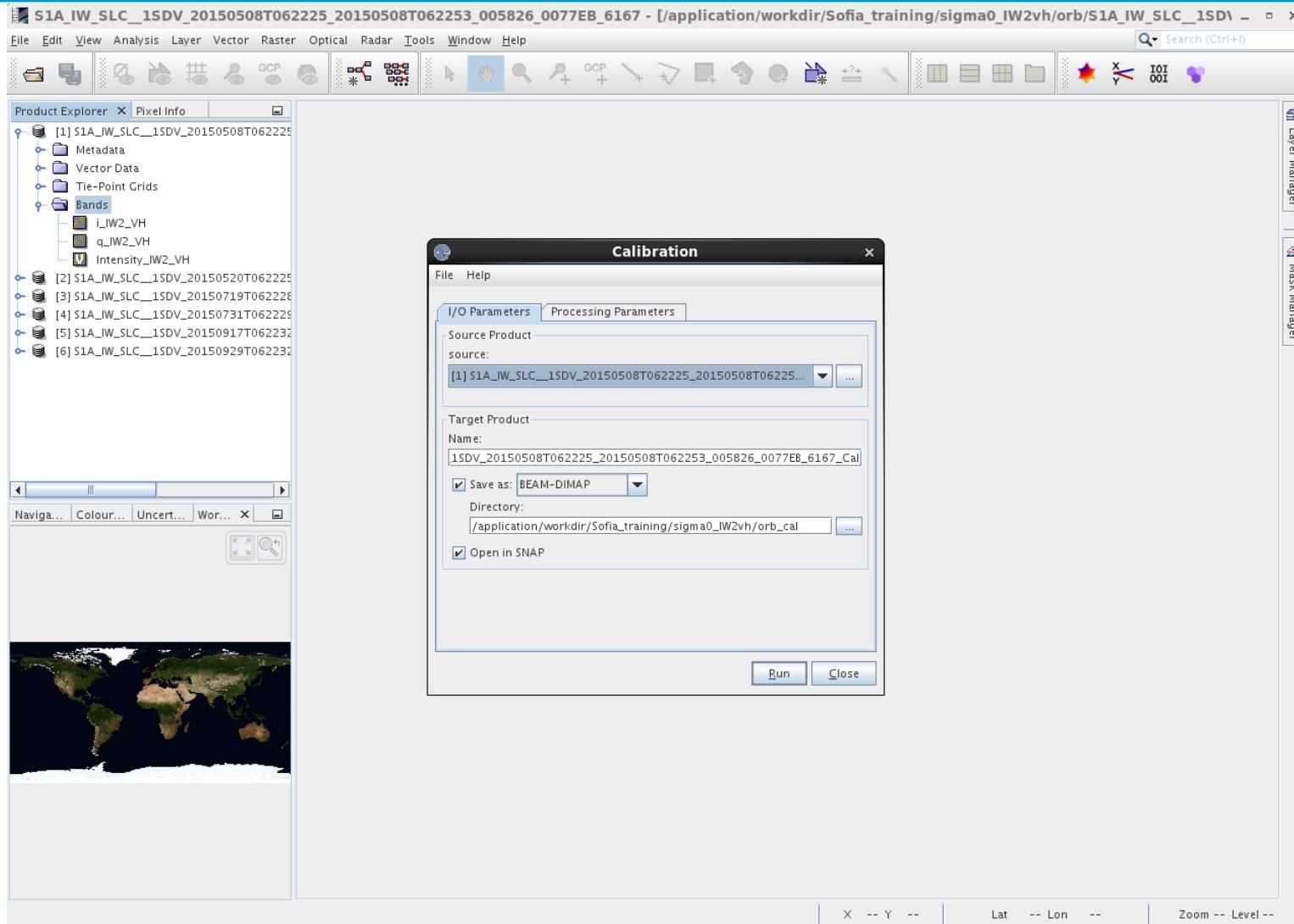
Applying orbits in Batch Processing



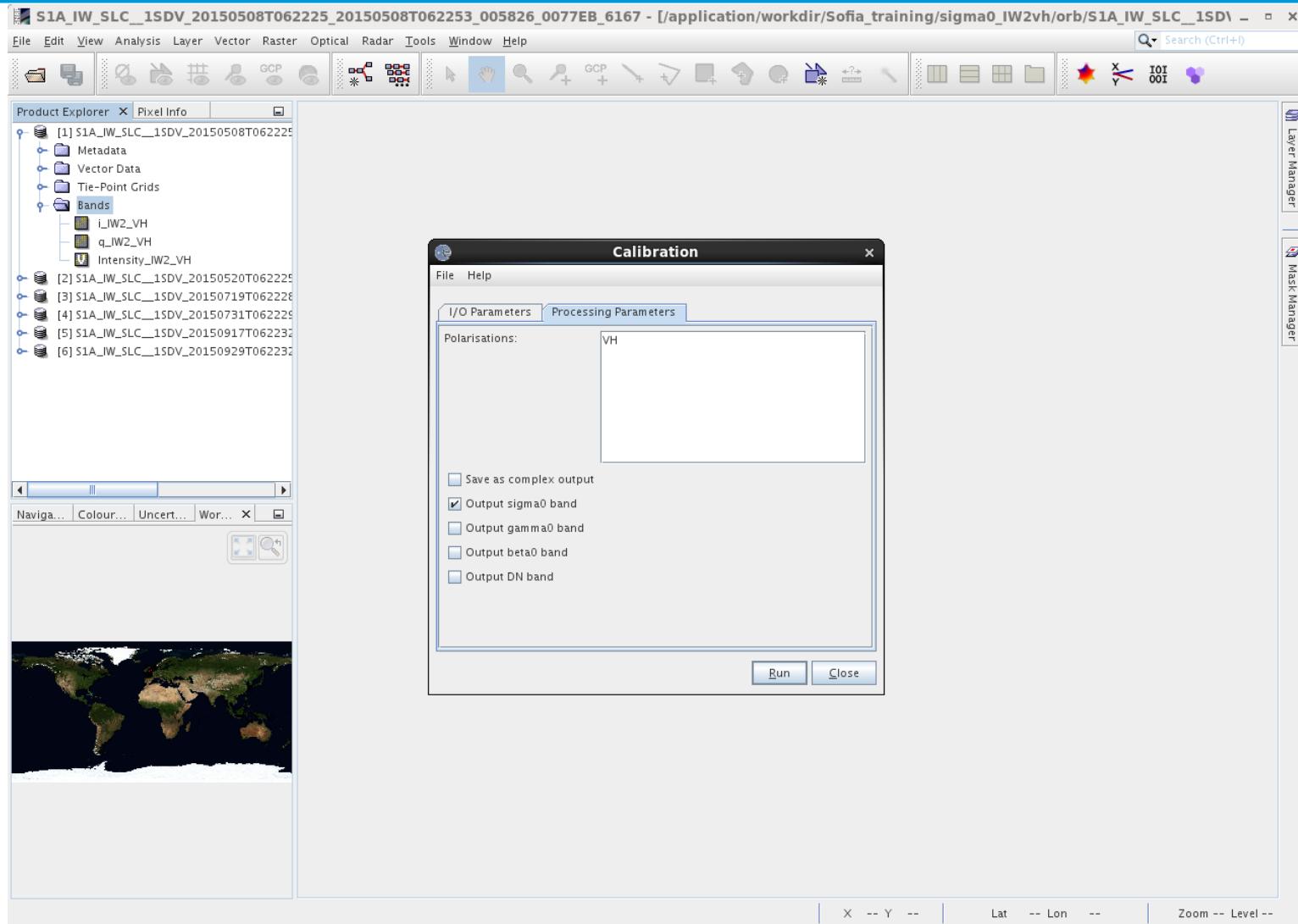
Applying orbits in Batch Processing



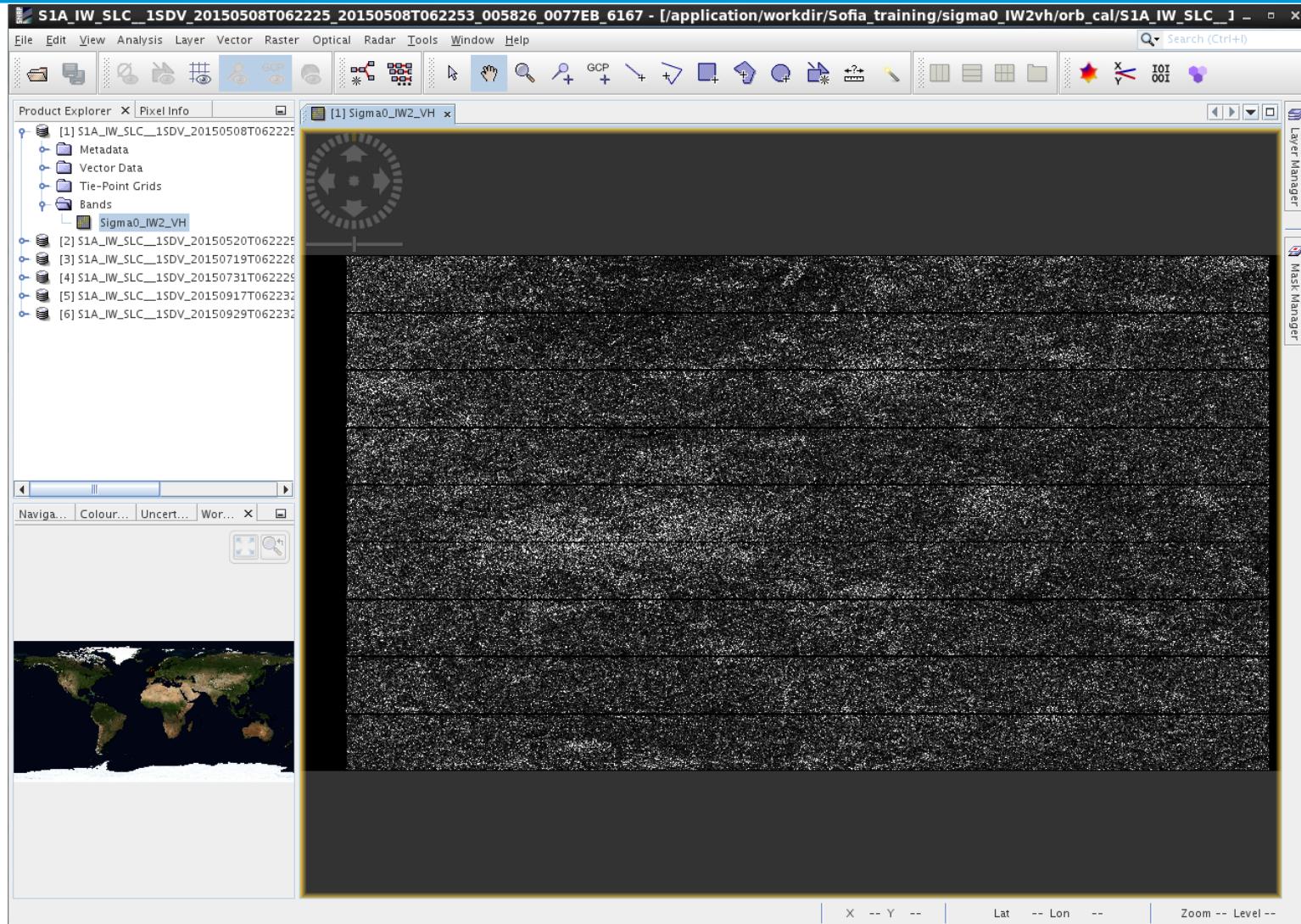
Radiometric calibration



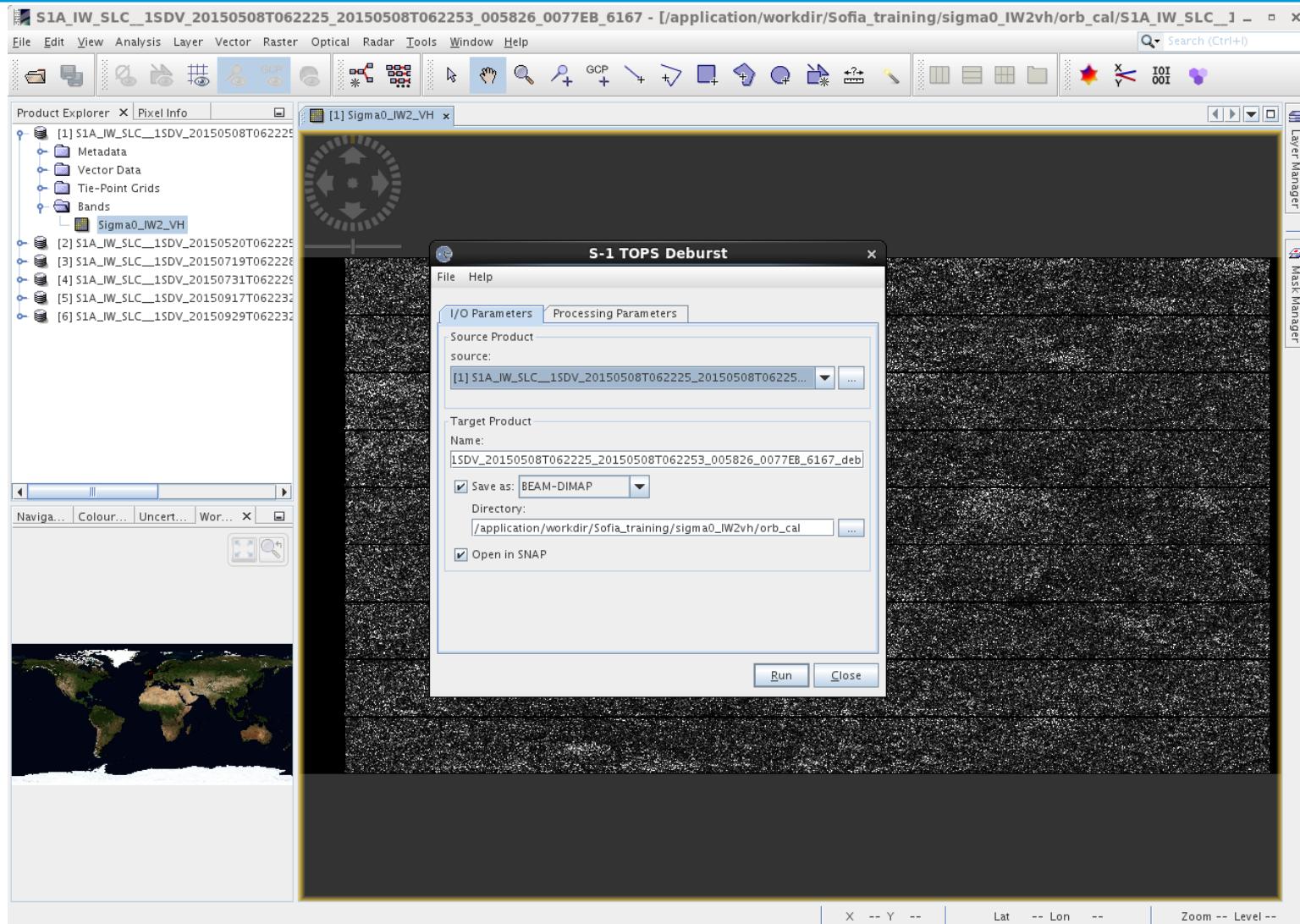
Radiometric calibration



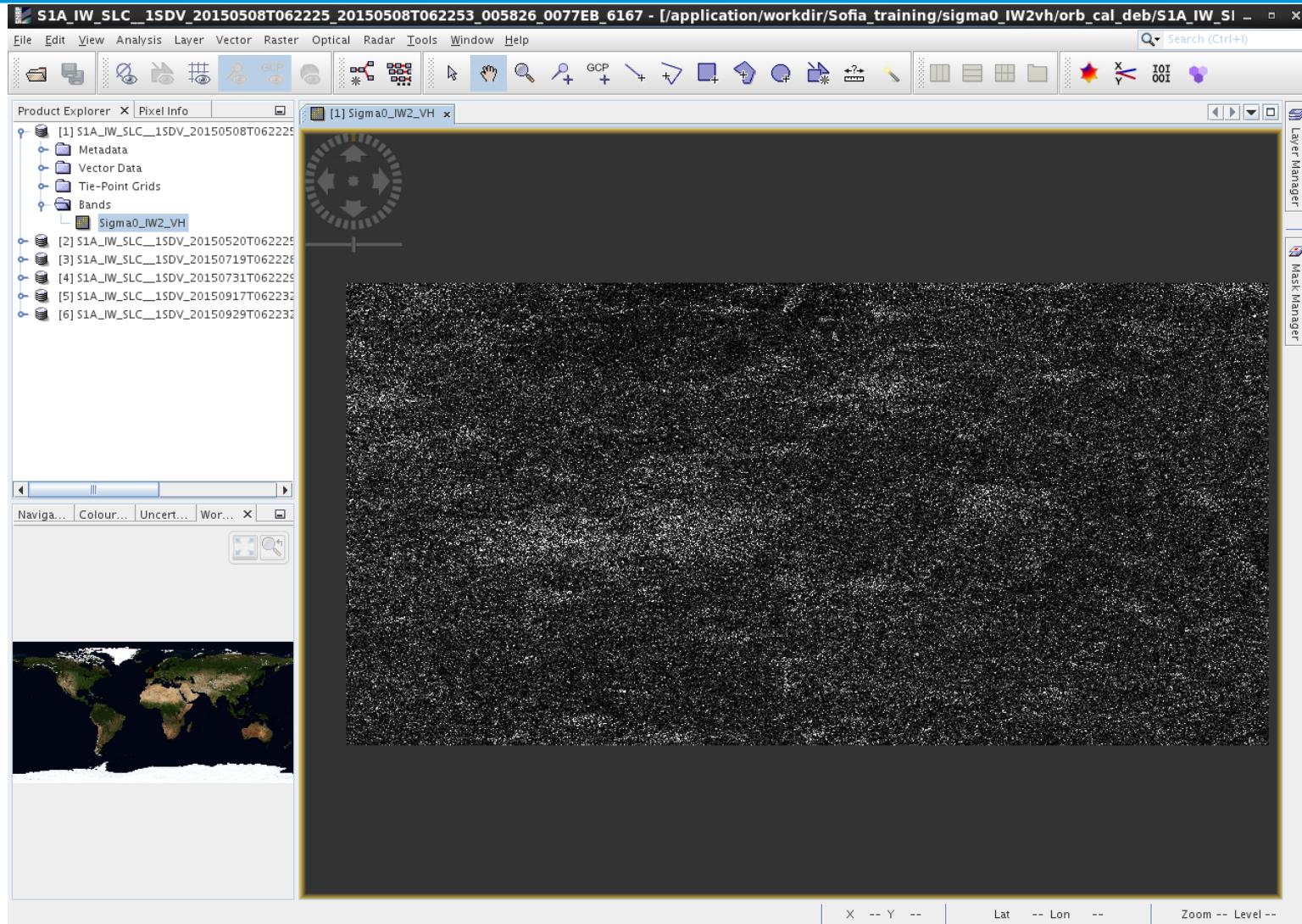
Radiometric calibration



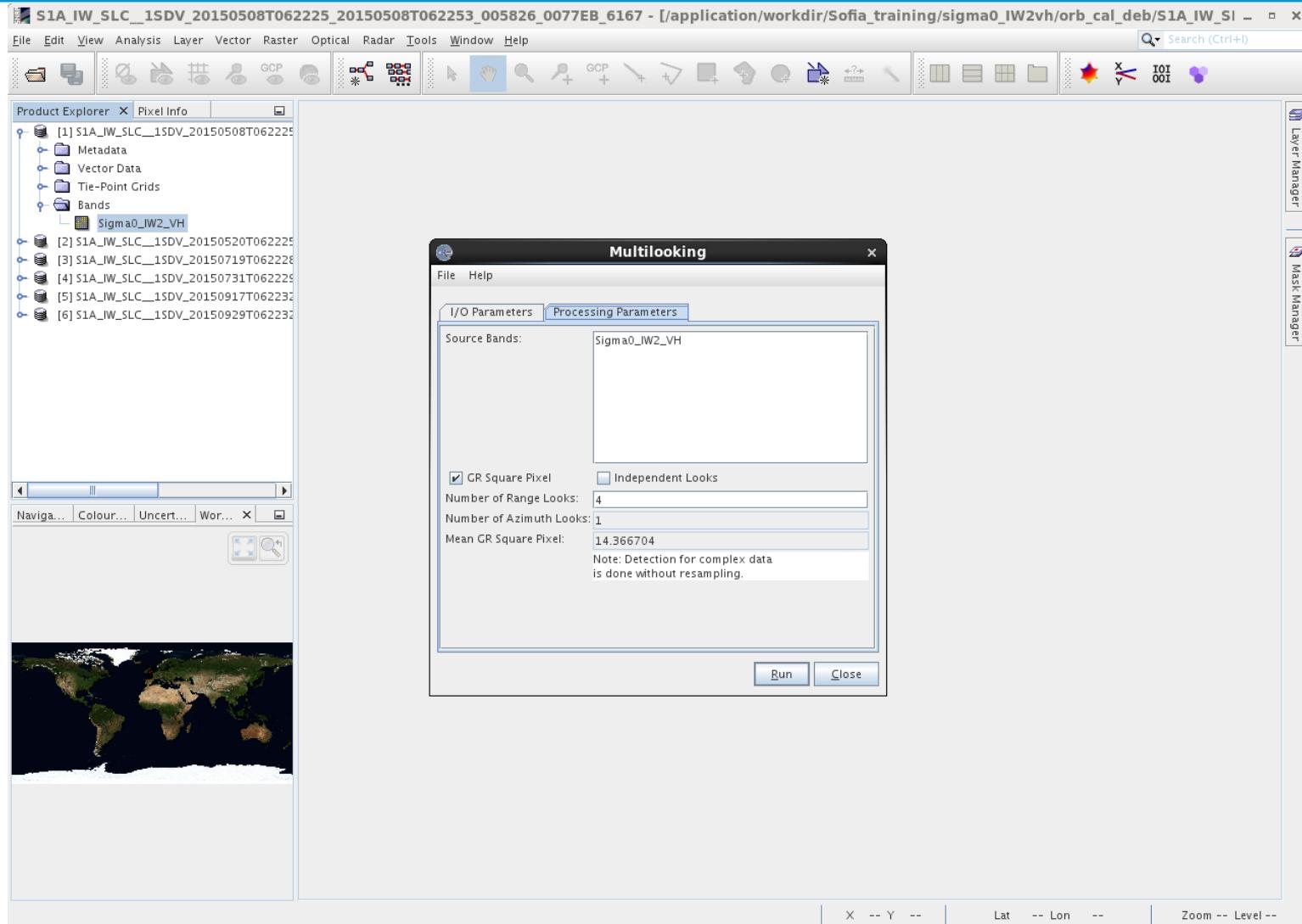
TOPS Deburst



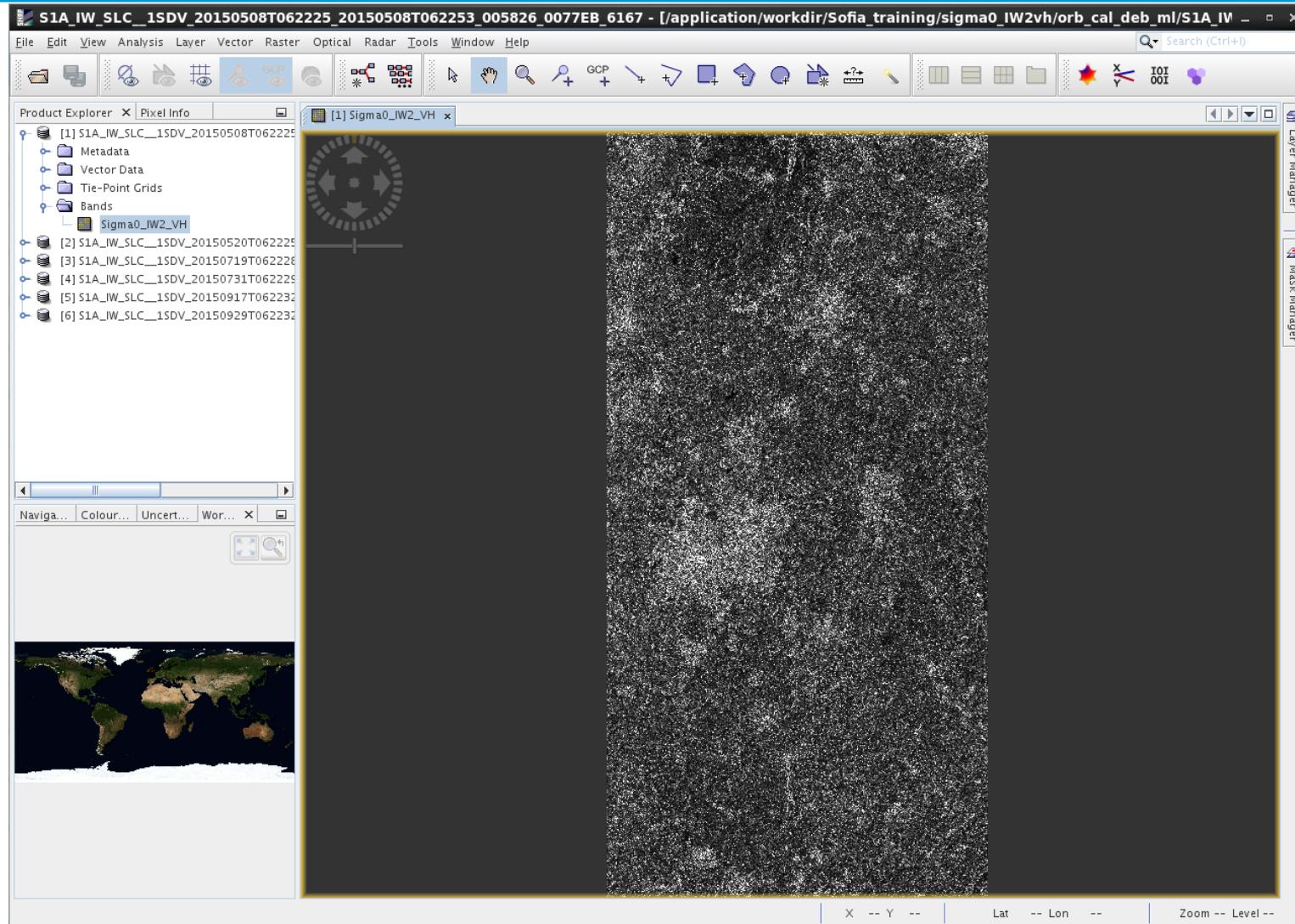
TOPS-Deburst



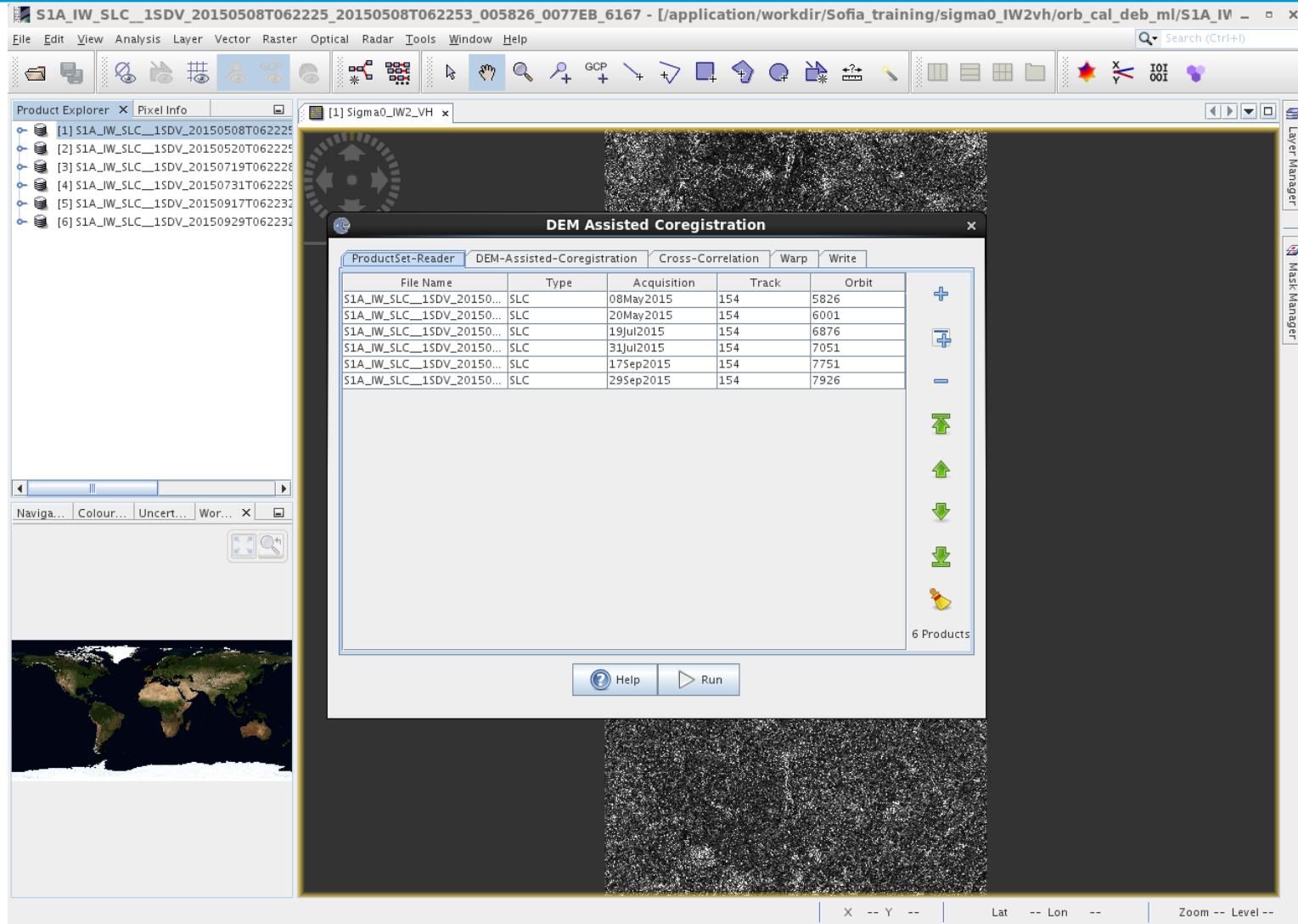
Multilooking



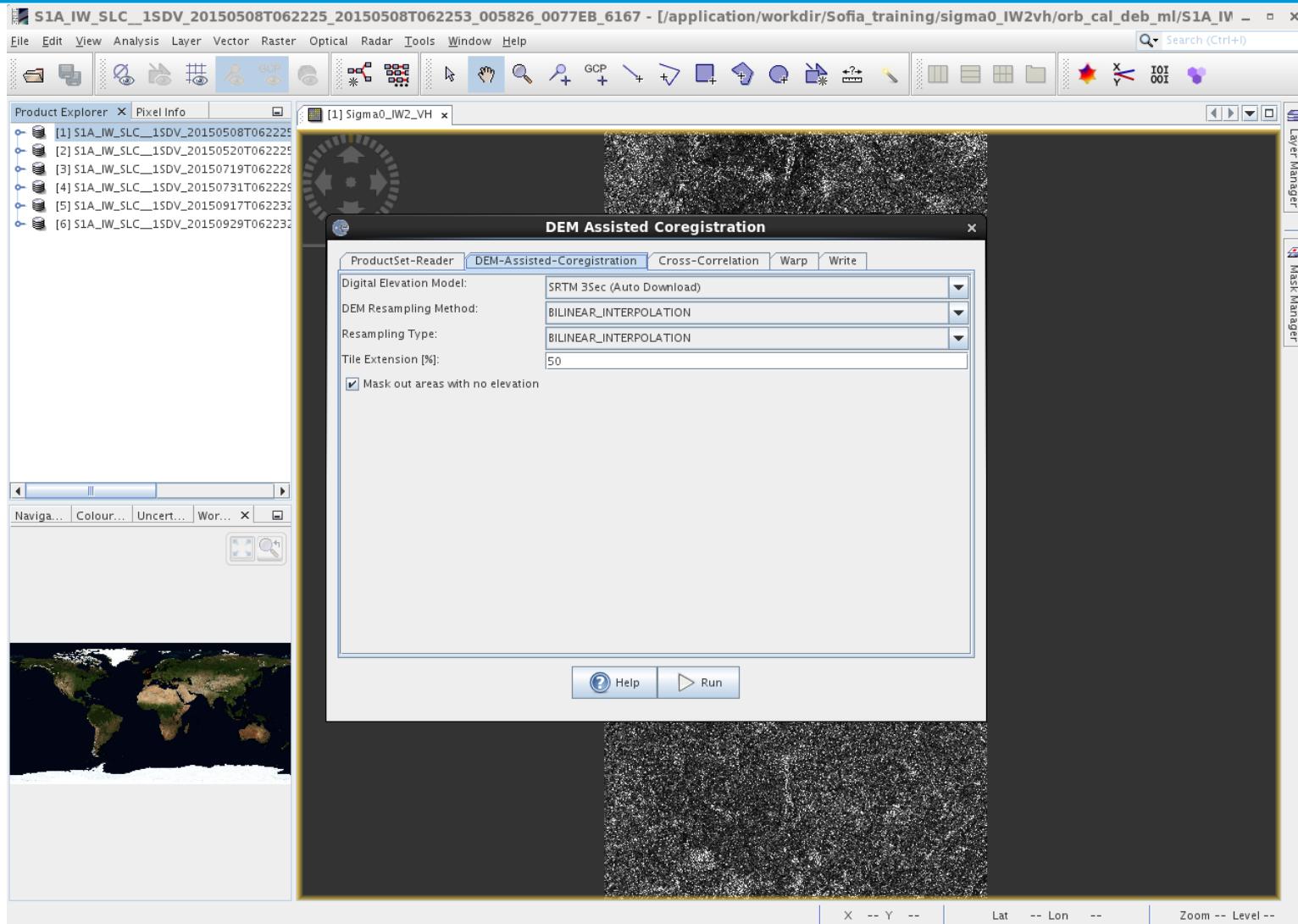
Multilooking



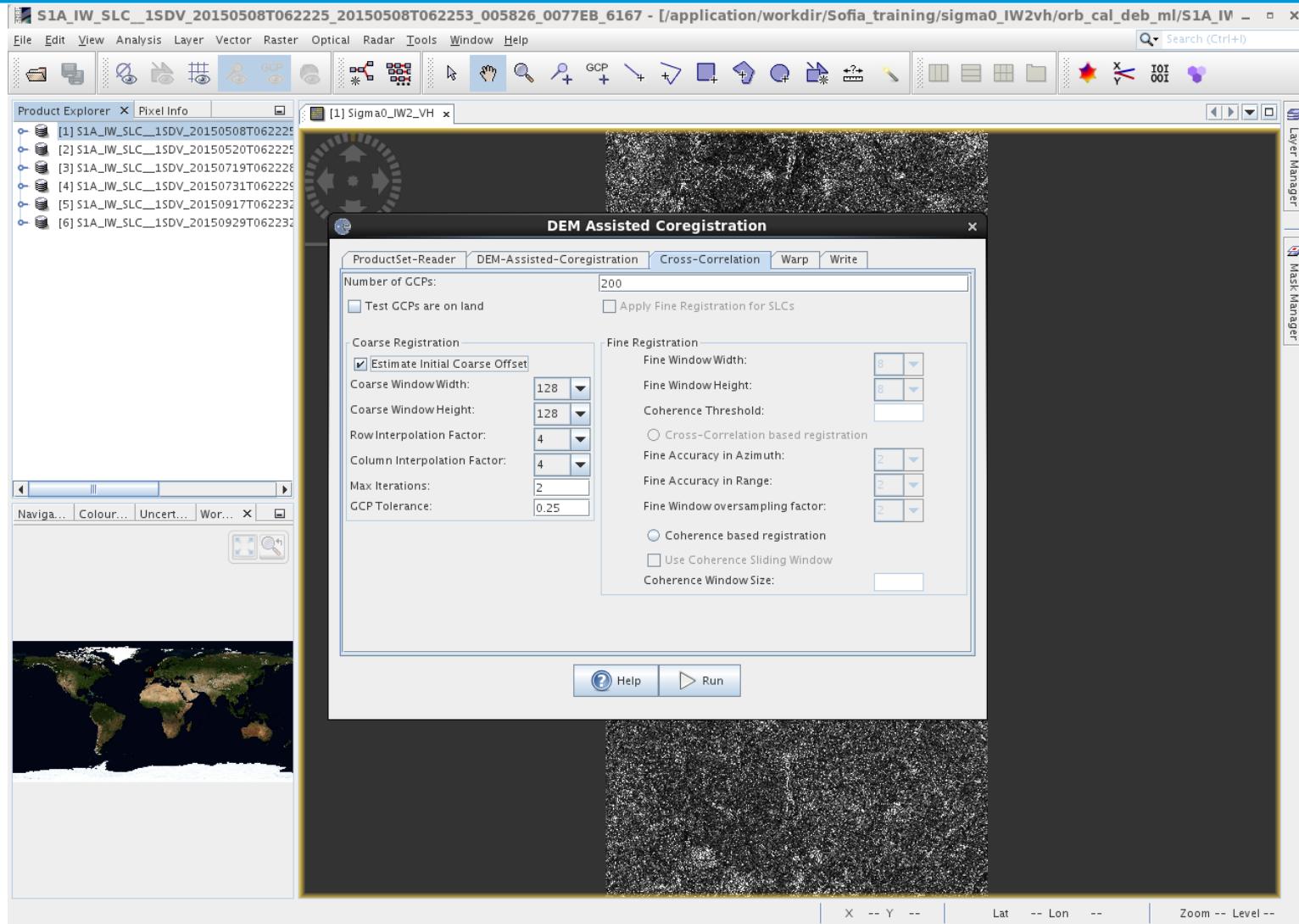
DEM Assisted coregistration



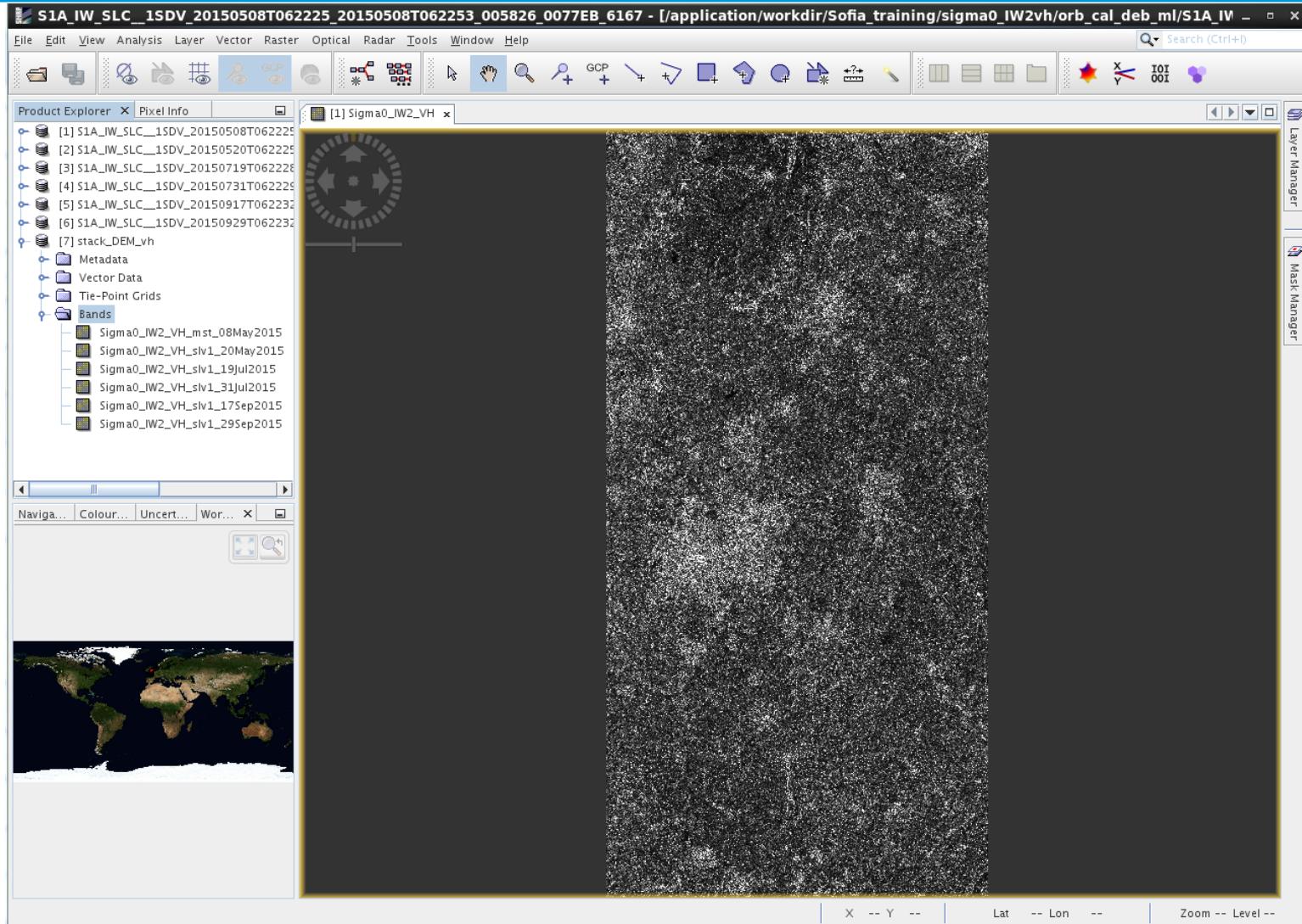
DEM Assisted coregistration



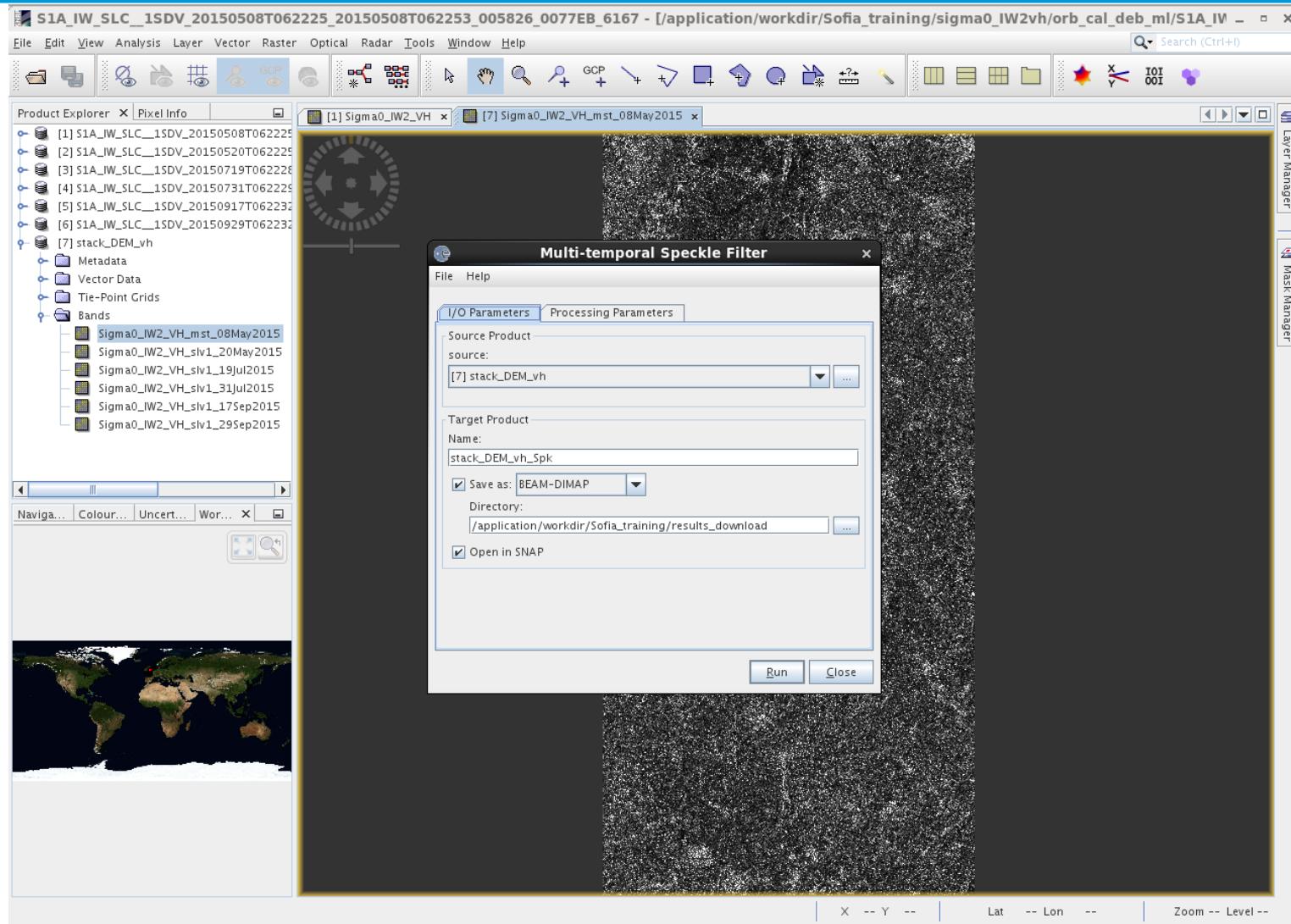
DEM Assisted coregistration



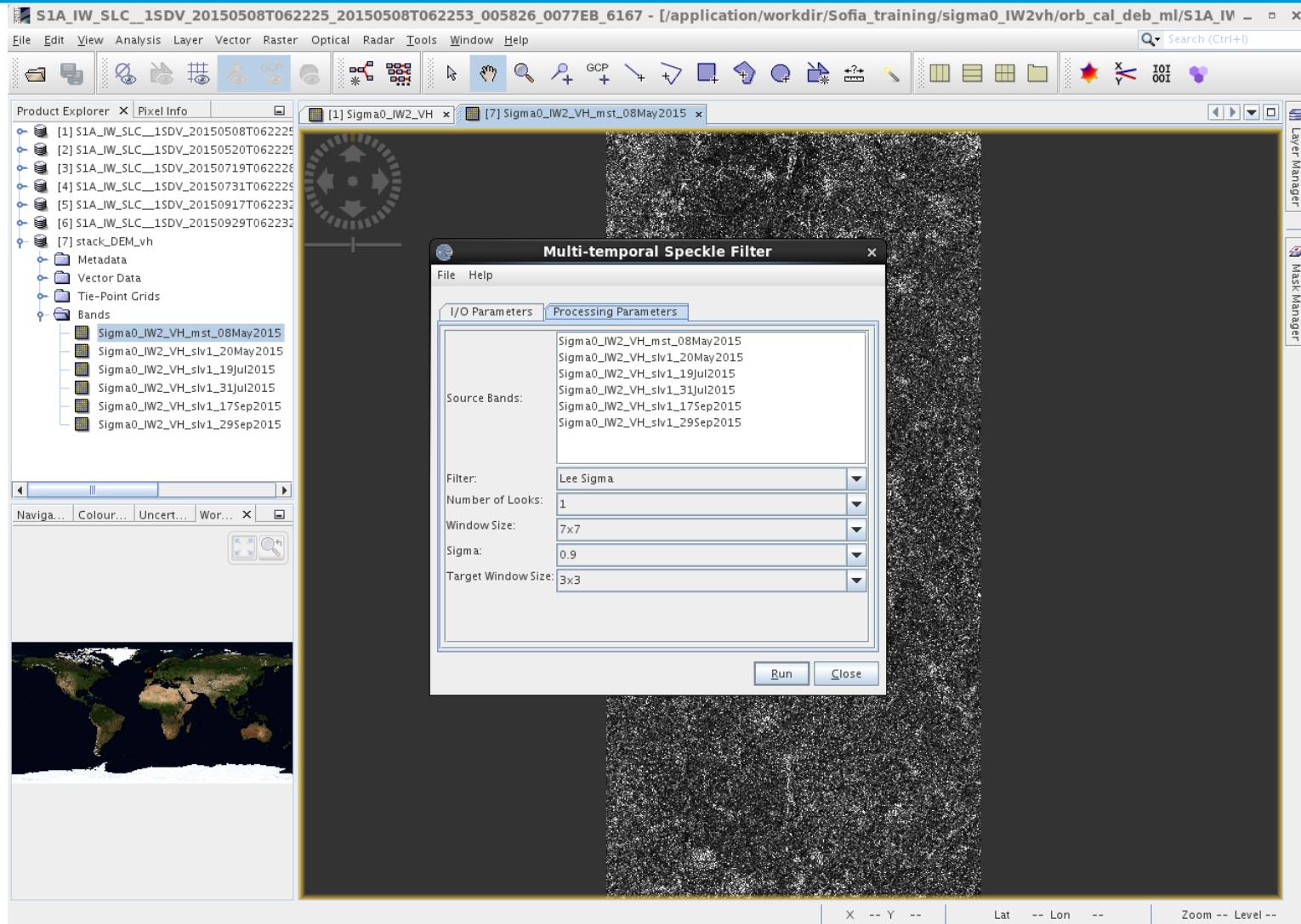
Data stack



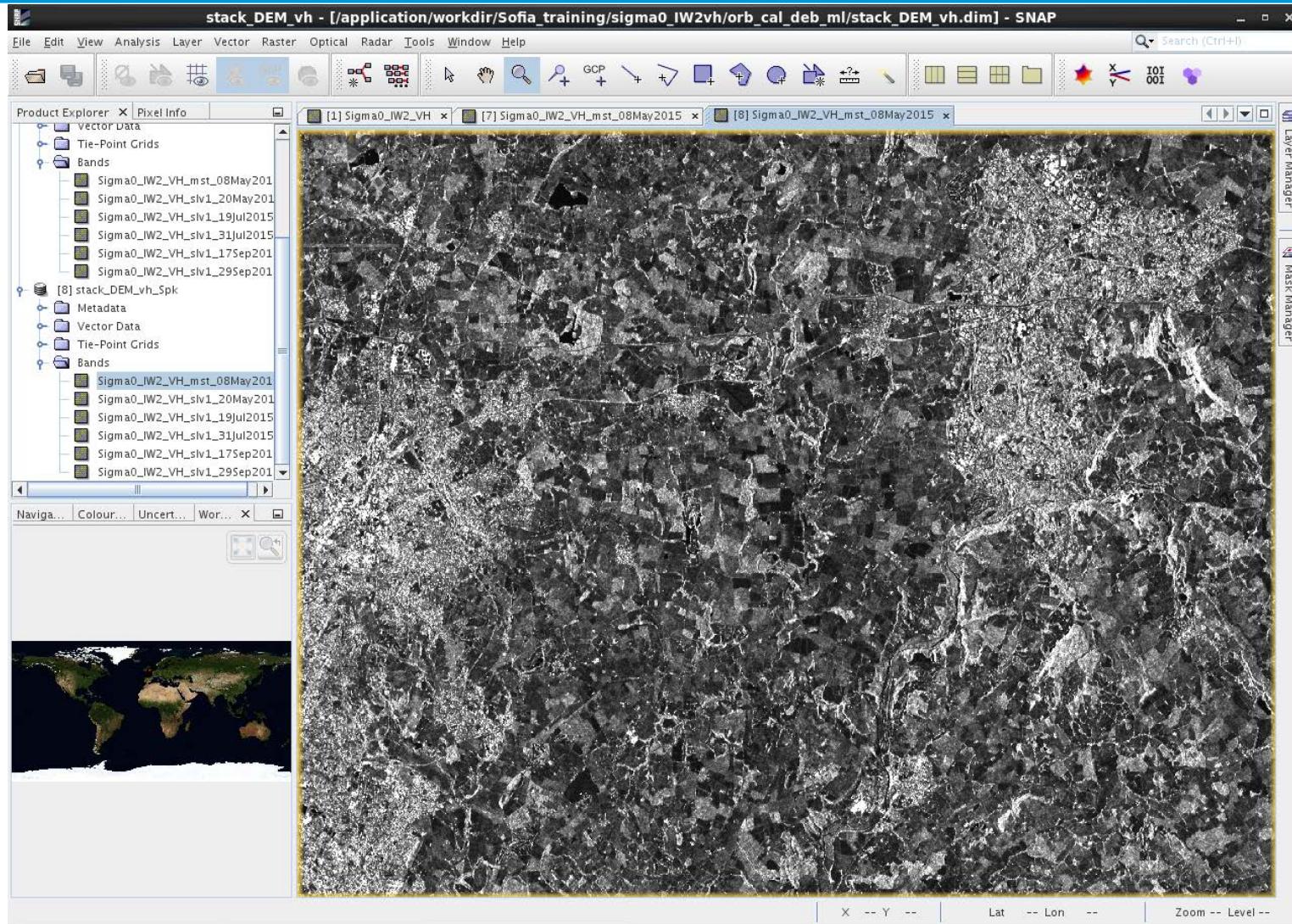
Multitemporal speckle filtering



Multitemporal speckle filtering



Multitemporal speckle filtering

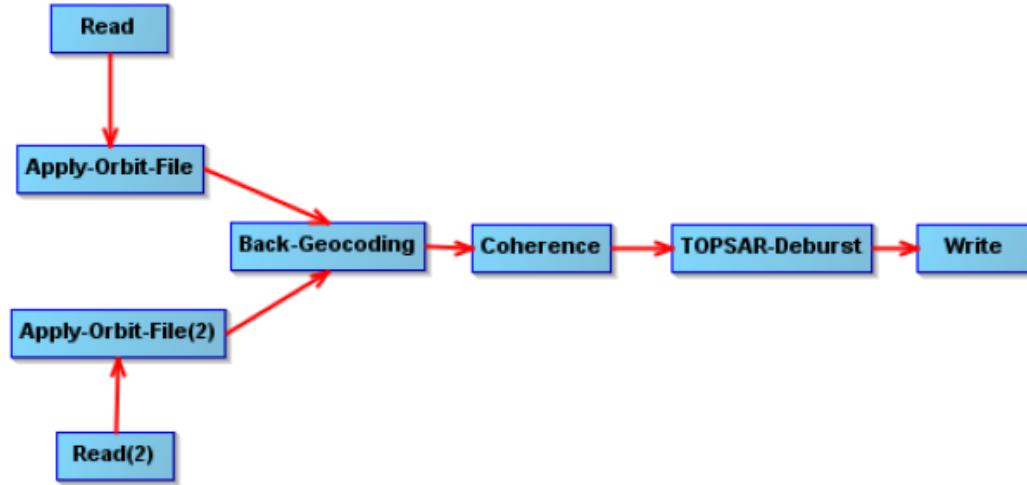


Sentinel 1 interferometric coherence

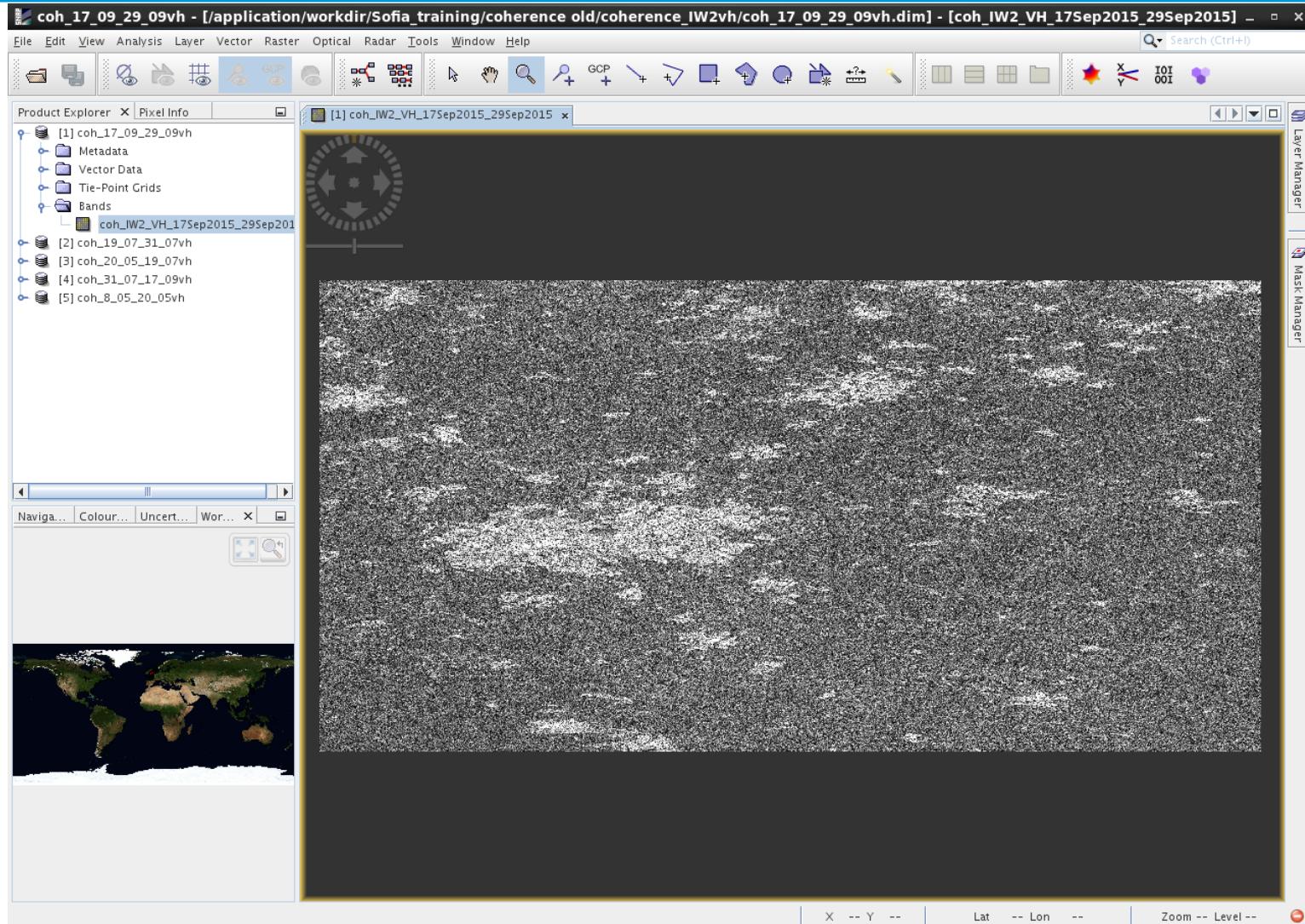
Processing chain

1. Data preparation (Slice assembly, Split)
2. Applying orbits
3. Back-Geocoding
4. Coherence
5. TOPSAR-Deburst
6. Multilooking

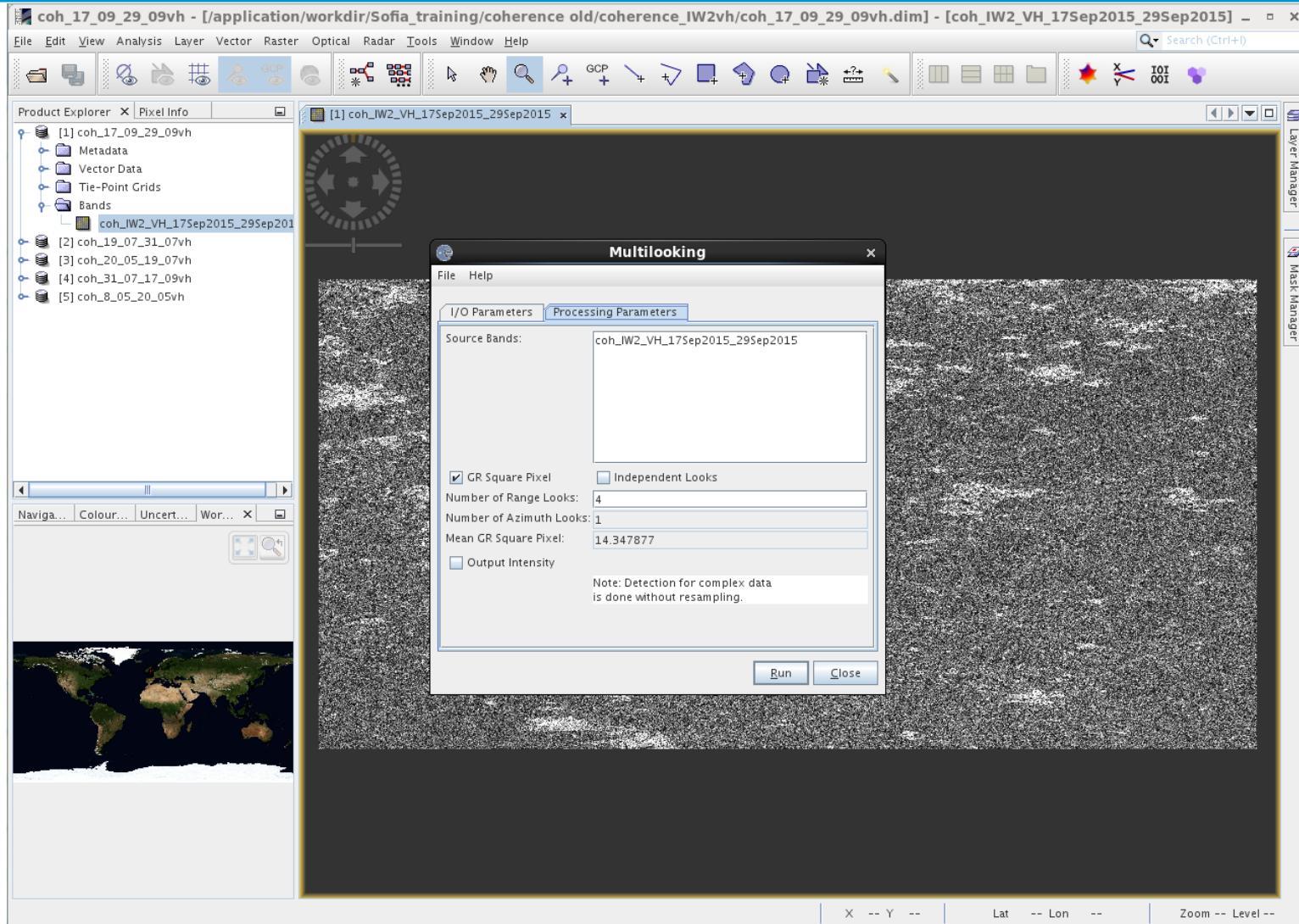
Coherence Estimation



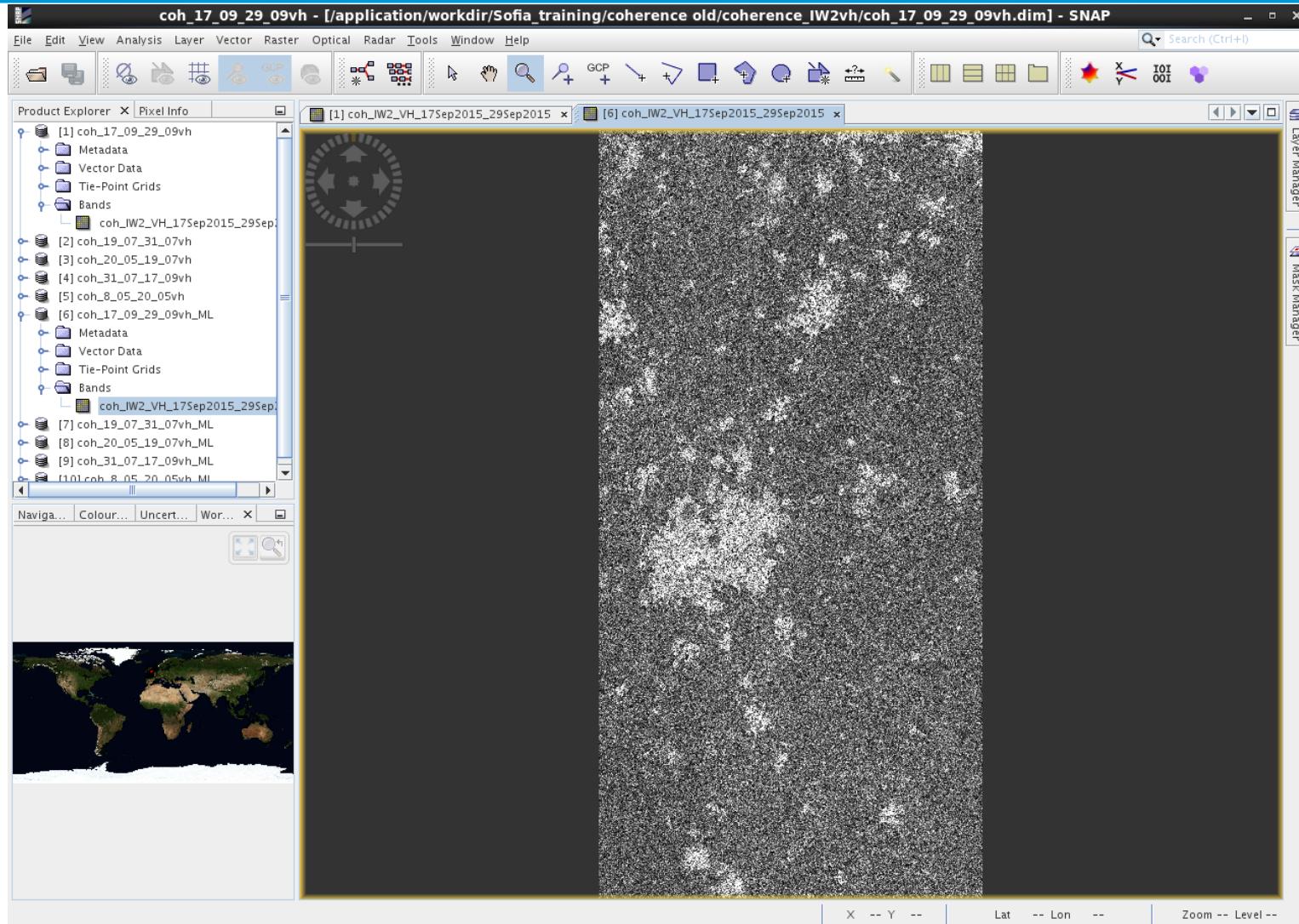
Coherence Estimation



Multilooking



Multilooking



Sentinel 1 RGB composites (backscattering and coherence)

Image statistics – Stack tools

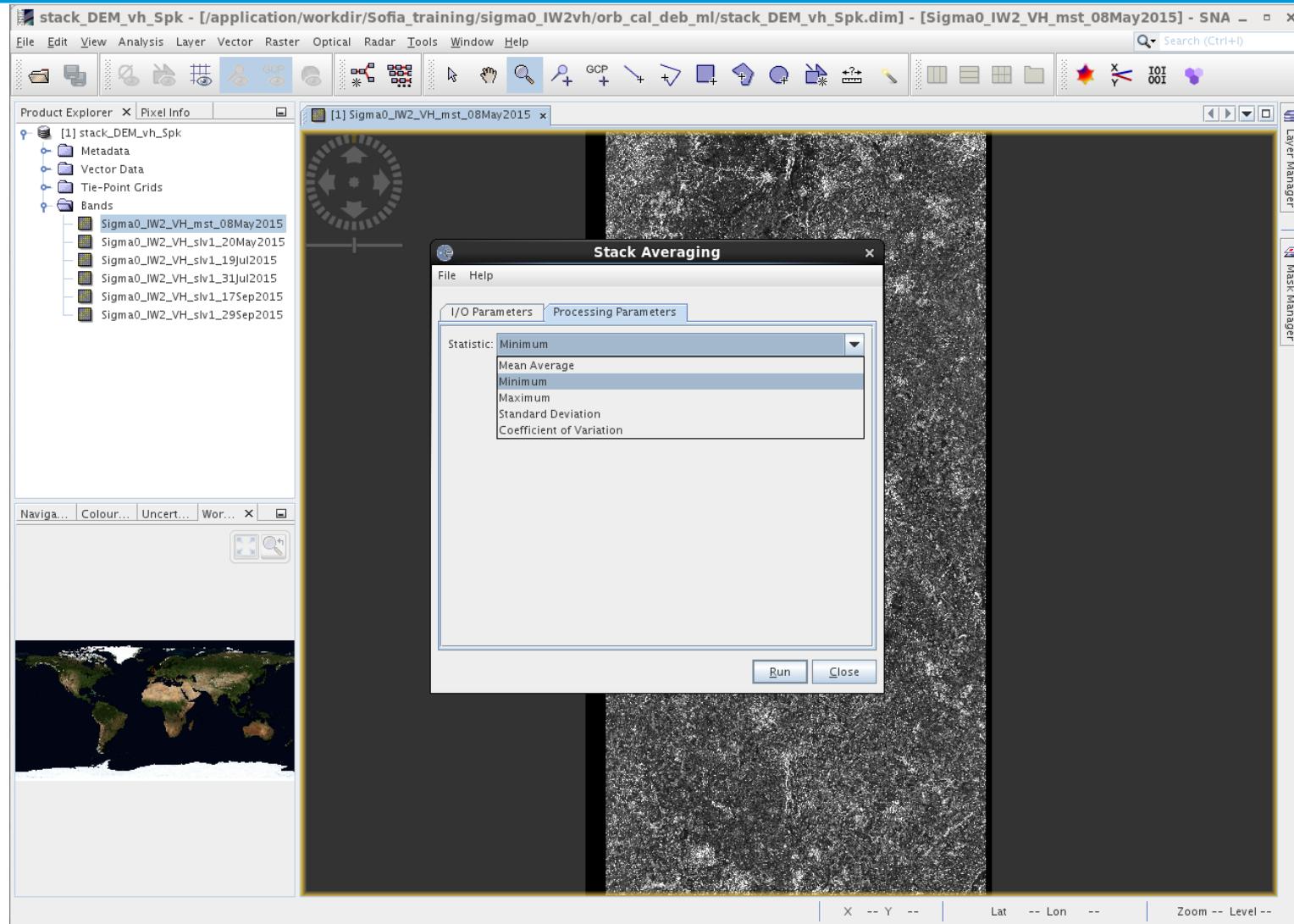
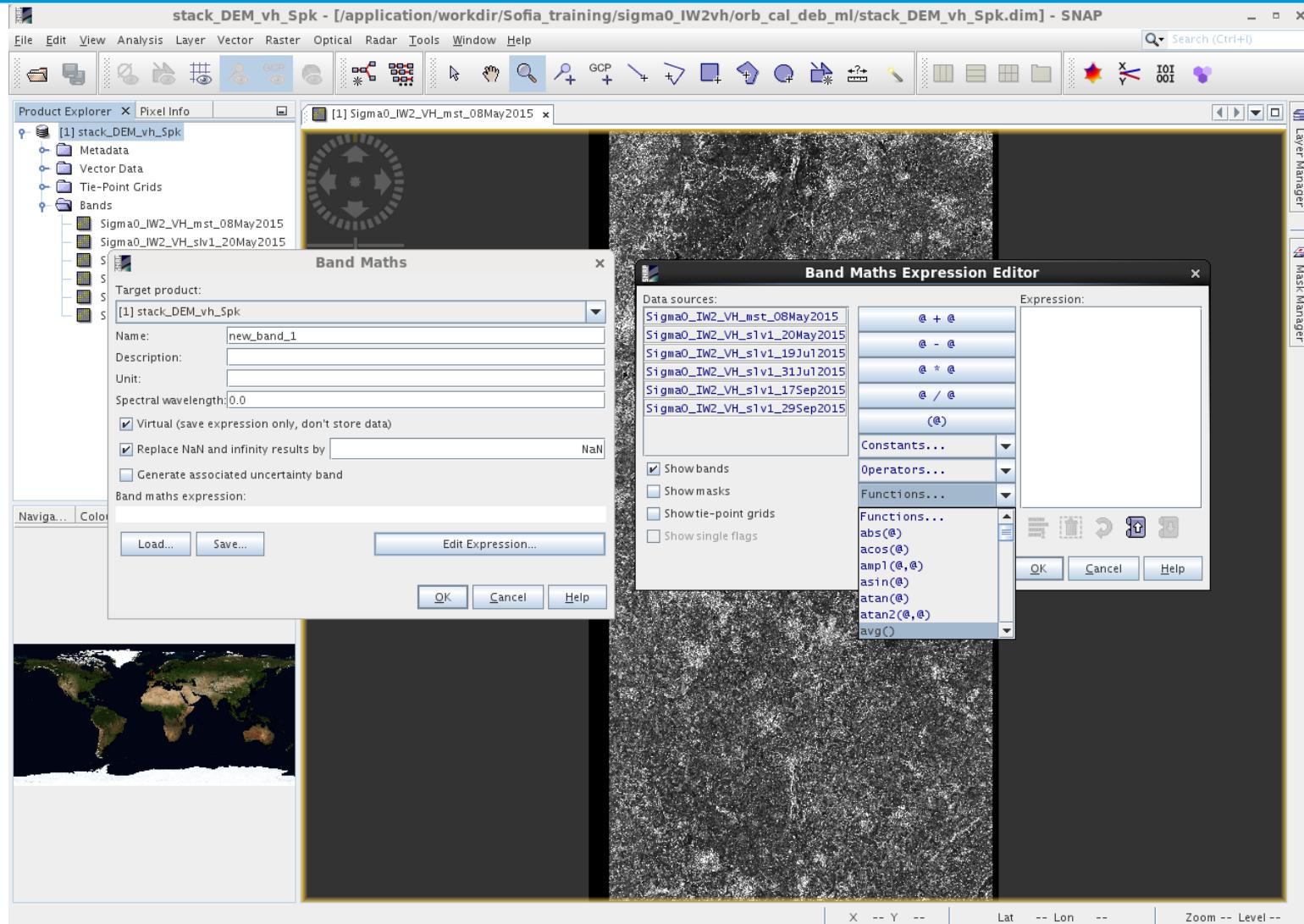
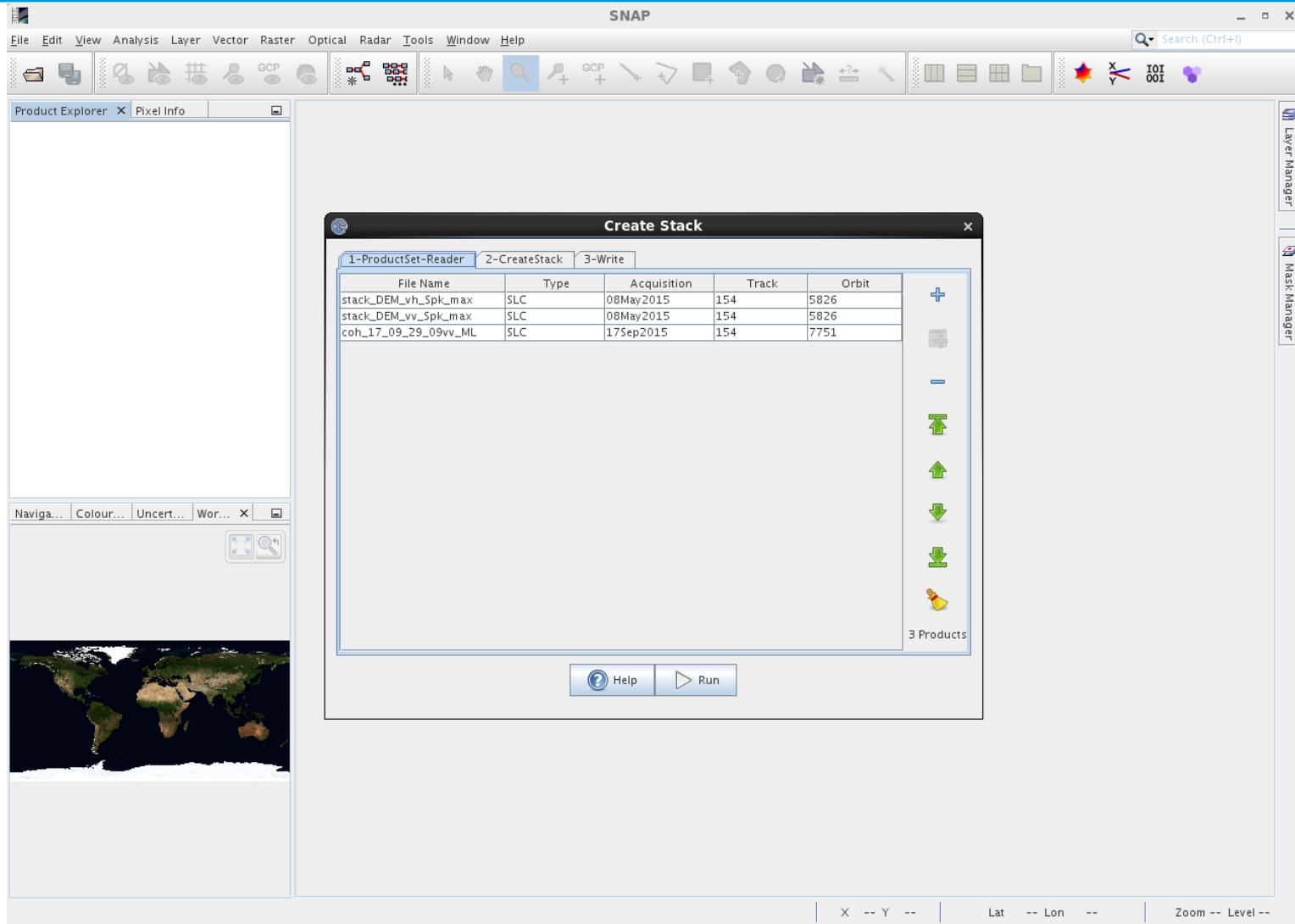


Image statistics – Band math



Creating stack



stack_DEM_vv_Spk - [/application/workdir/Sofia_training/sigma0_IW2vv/orb_cal_deb_ml/stack_DEM_vv_Spk.dim] - SNAP

File Edit View Analysis Layer Vector Raster Optical Radar Tools Window Help

Product Explorer X Pixel Info

- [1] stack_DEM_vh_Spk
- [2] stack_DEM_vv_Spk**
- [3] coh_17_09_29_09vh

Layer Manager

Mask Manager

Create Stack

1-ProductSet-Reader 2-CreateStack 3-Write

Master: stack_DEM_vh_Spk

Resampling Type: NEAREST_NEIGHBOUR

Initial Offset Method: Orbit

Output Extents: Master

Find Optimal Master

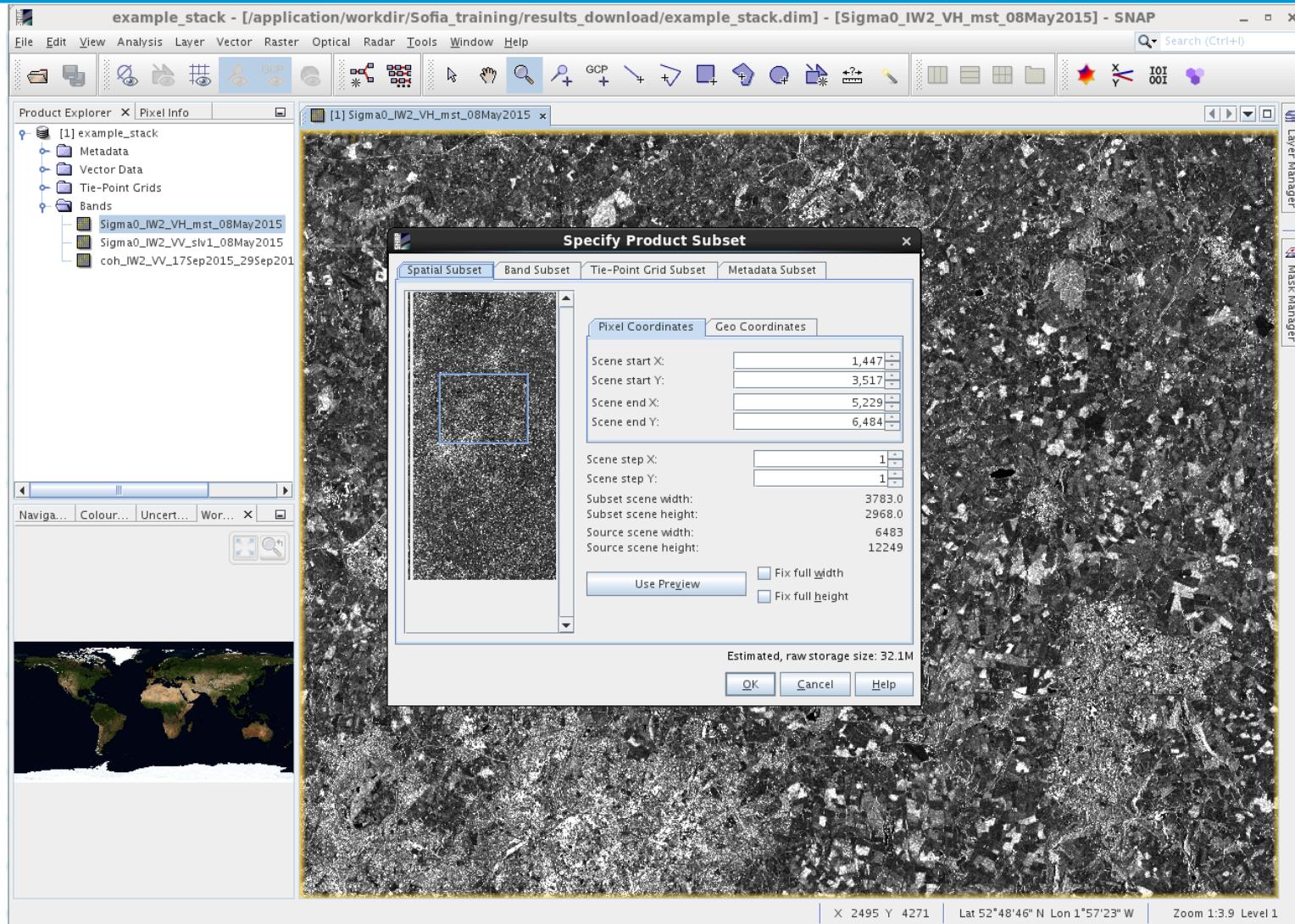
Help Run

Navig... Colour... Uncert... Wor... X

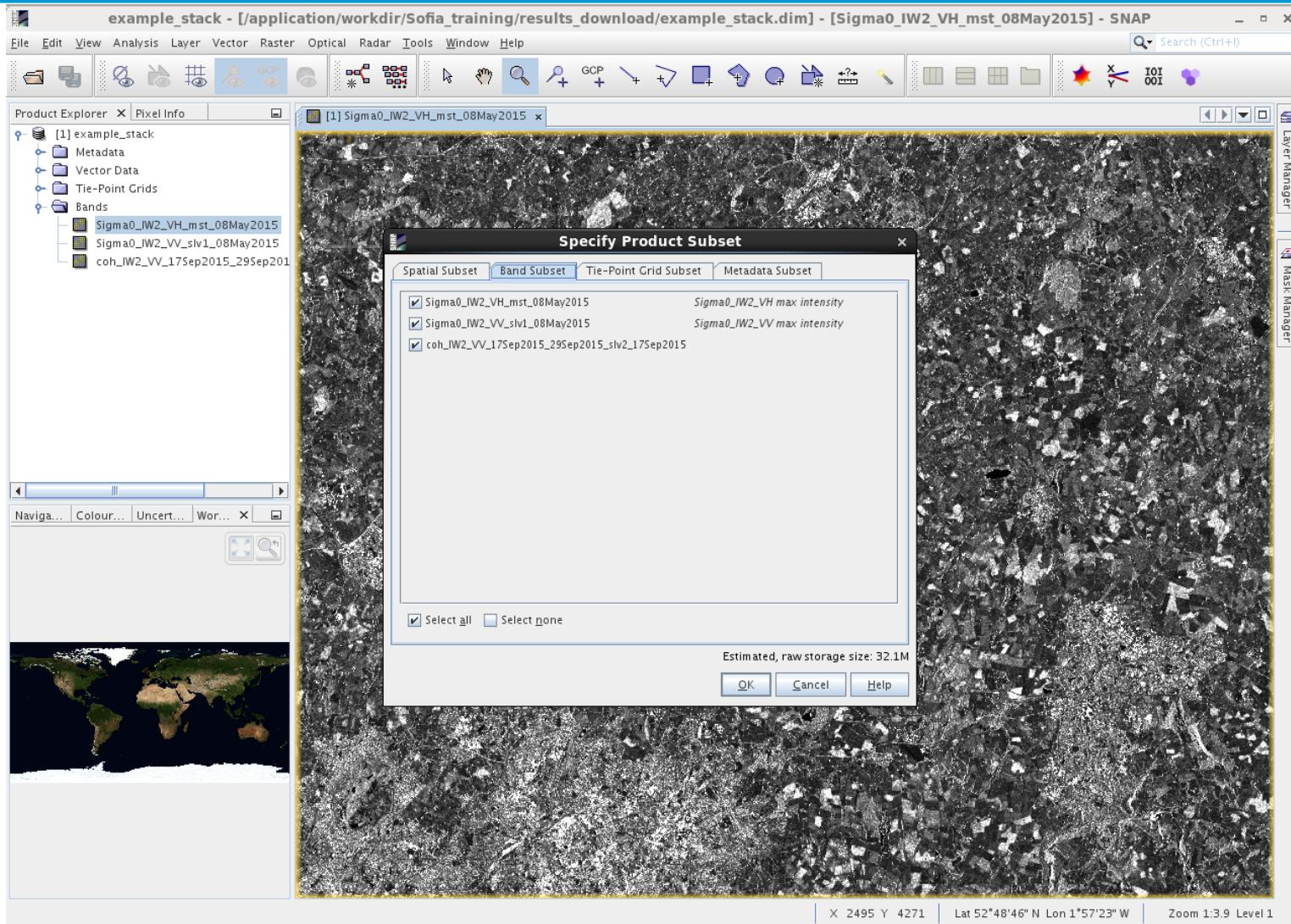


X -- Y -- Lat -- Lon -- Zoom -- Level --

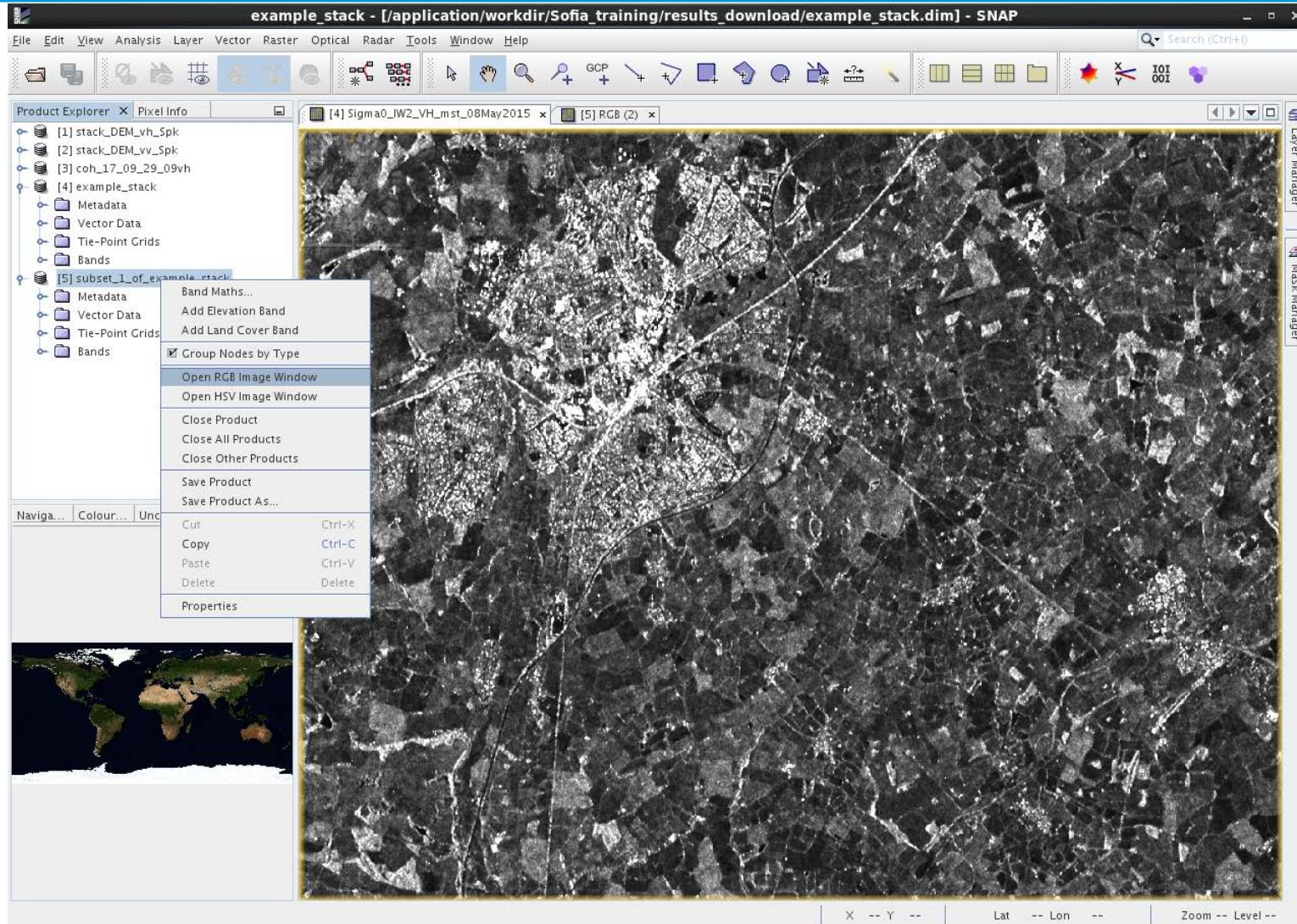
Spatial subset from view



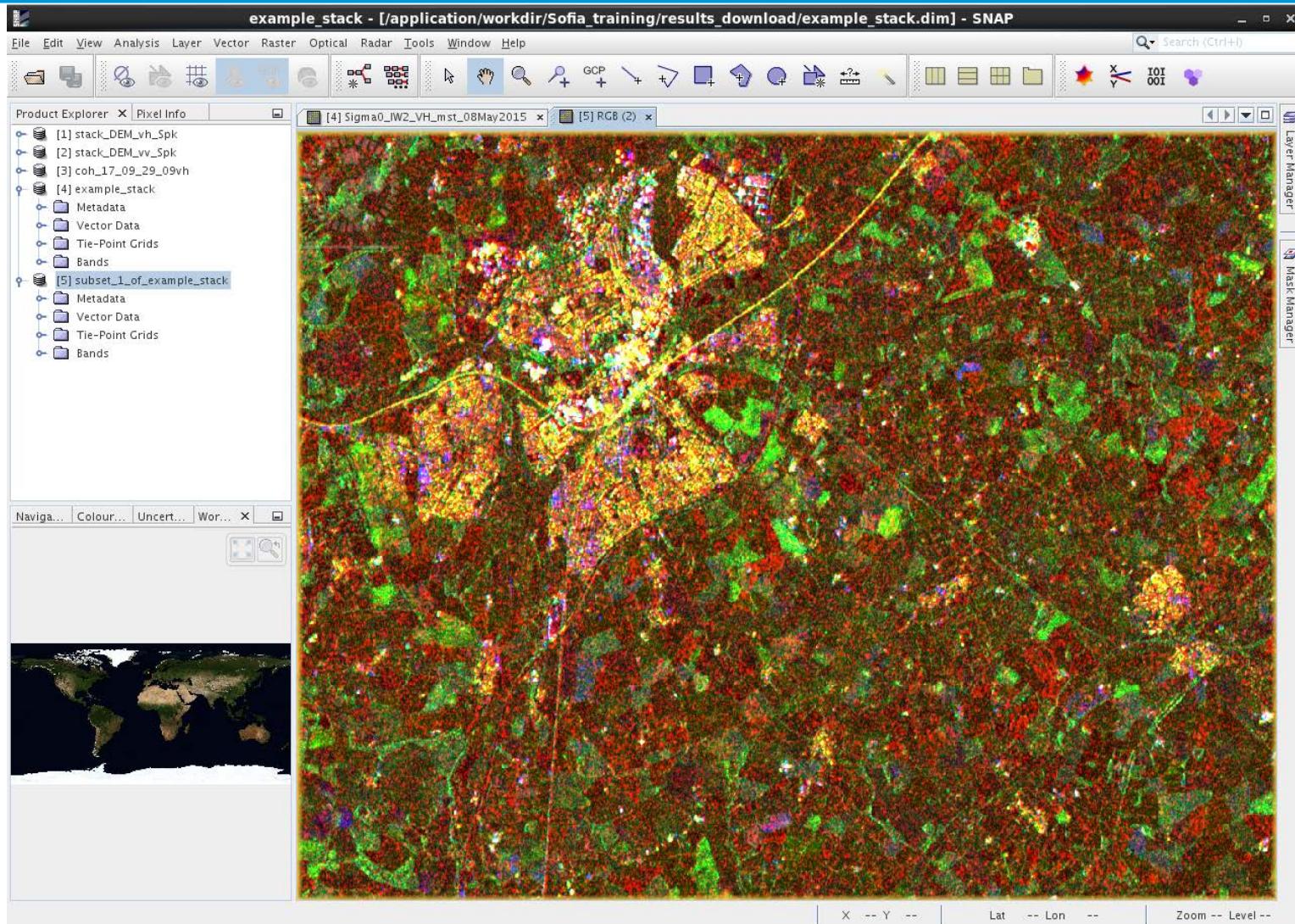
Spatial subset from view



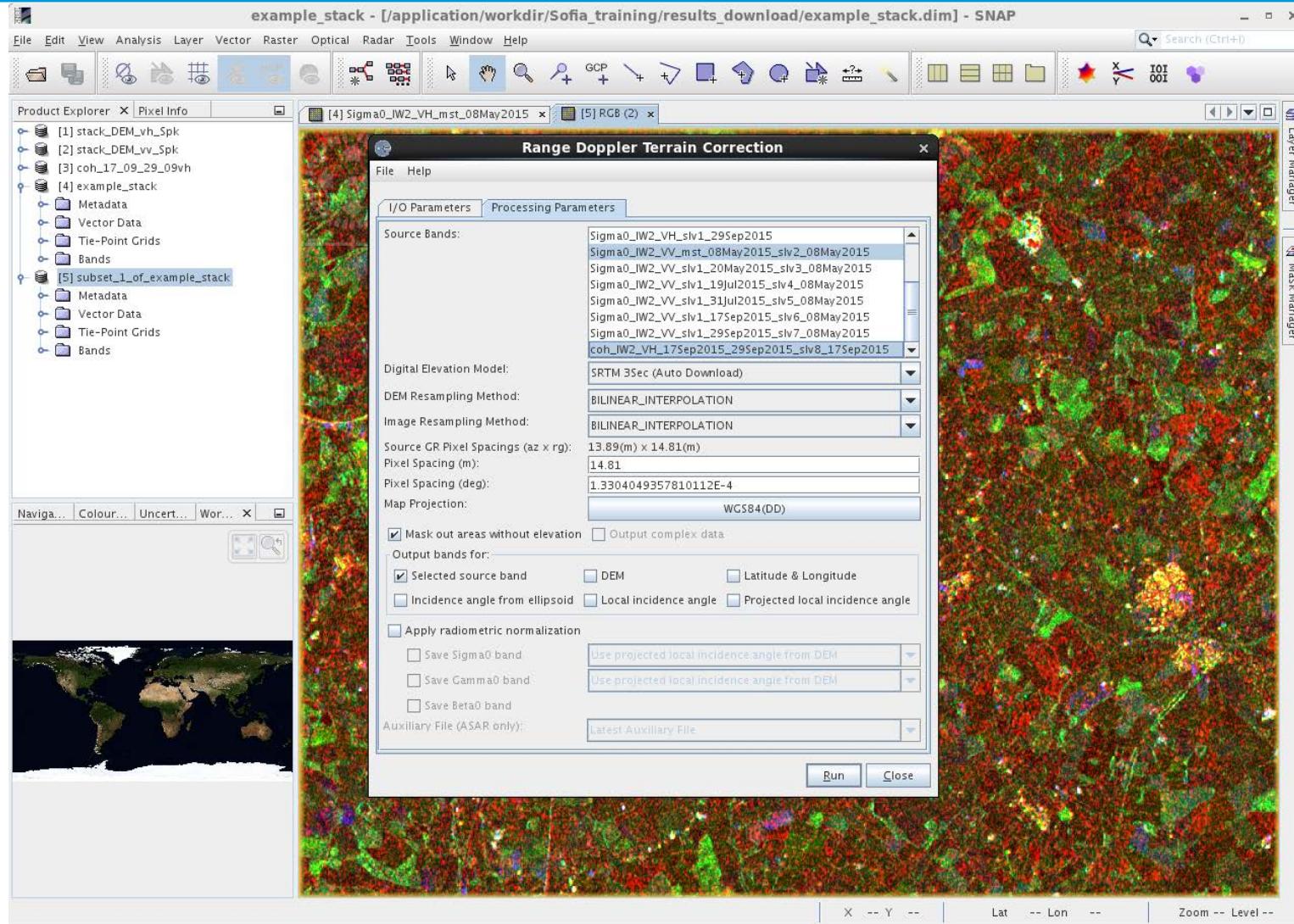
RGB composite



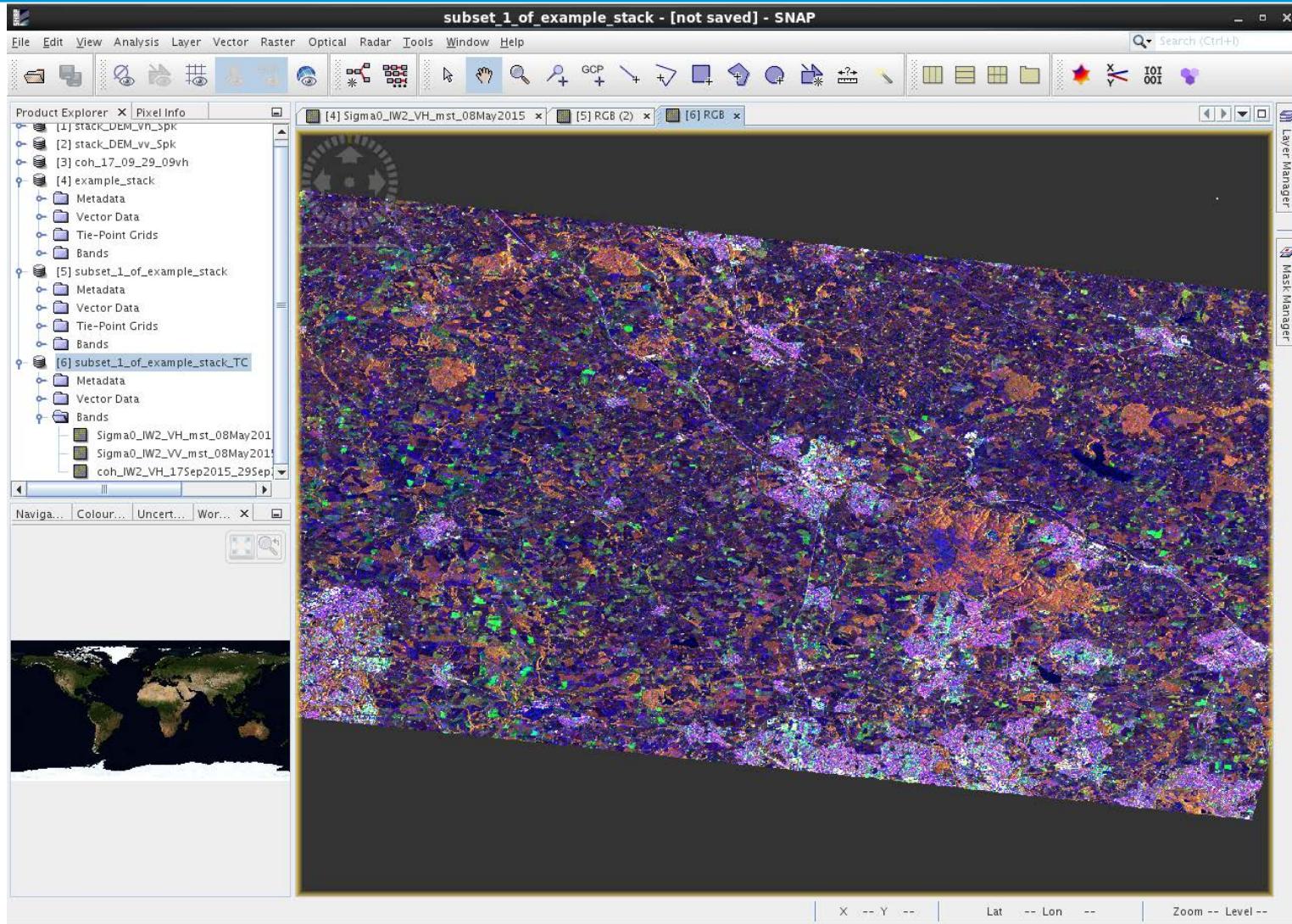
RGB composite



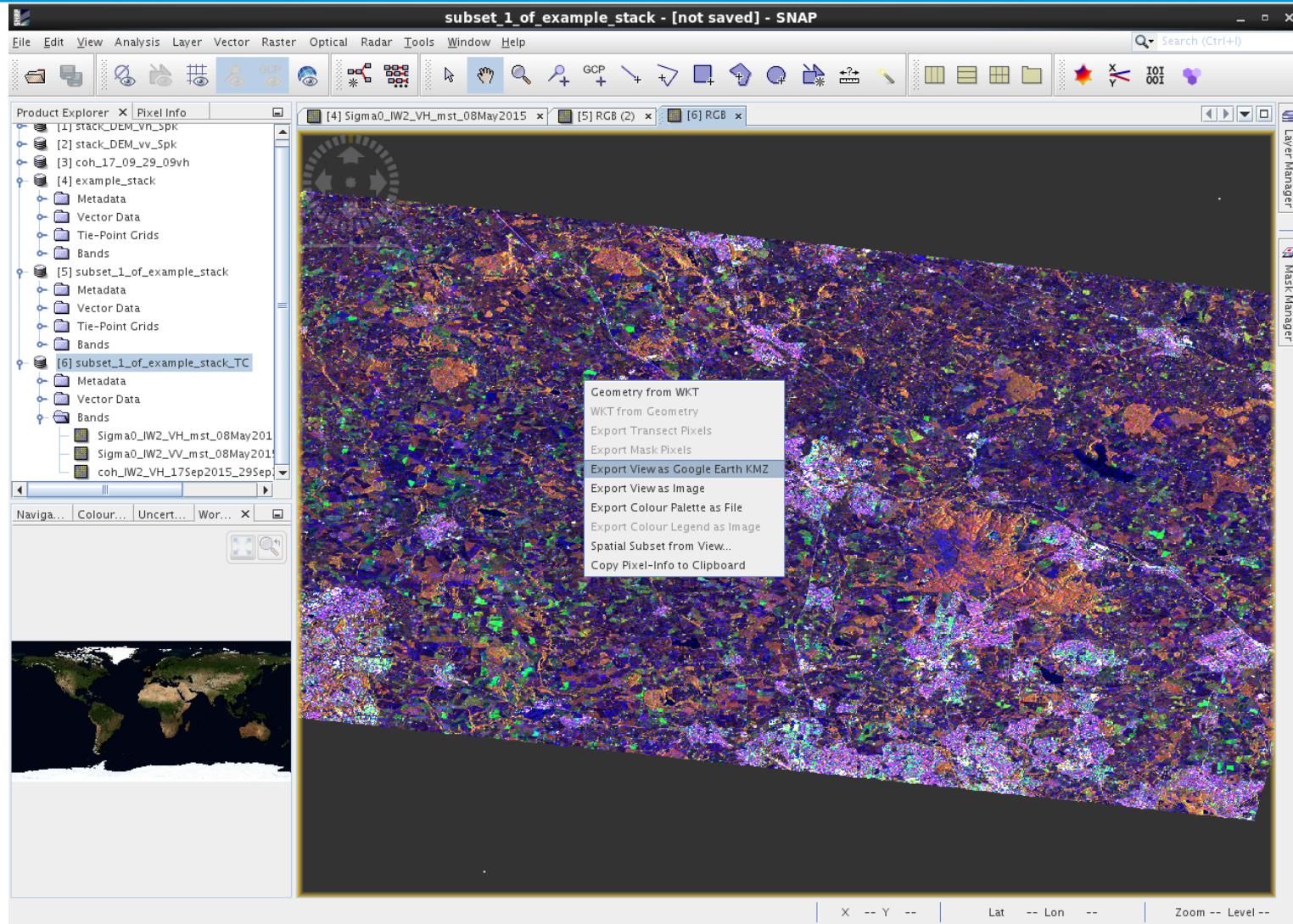
Terrain correction



RGB composite – terrain corrected



Export to kmz



Google Earth View

