

# On-the-fly orthorectification, calibration, RCS equalisation and terrain flattening of Sentinel-1 data

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## Abstract

1. On-the-fly (OTF) processing - New ecological paradigm
2. OTF orthorectification of Sentinel-1 GRD L1B products
  - 2.1 Physical "Zero-Doppler model
  - 2.2 Selecting different DEMs - comparison of orthorectification results
  - 2.3 Ascending / descending orthorectifications comparison
  - 2.4 Comparison with ALOS PALSAR orthorectifications
  - 2.5 OTF mean of S1 time series
3. Calibration of S1 -  $\sigma_0$ ,  $\gamma_0$ ,  $\beta_0$ 
  - 3.1 Rendering on different landscapes (LU/LC)
  - 3.2 OTF difference between calibrations - Ex. ( $\sigma_0 - \gamma_0$ )
4. Radar Cross Section Equalisation (RCSE)
  - 4.1 Setting a given mean and standard deviation
  - 4.2 Masking continental part
  - 4.3 Some latest oil spills !
  - 4.4 Mean of time series to detect and locate oil platforms
5. Terrain flattening
  - 5.1 Selecting a good DEM
  - 5.2 Comparison of ascending / descending products

**Keywords** - Analysis Ready Data (ARD)