

Combining Sentinel-1 and ALOS-2 observations for soil moisture (SM) retrieval

Objective: to investigate the integration of multi-frequency & multi-platform SAR measurements for a consistent and harmonized SM retrieval

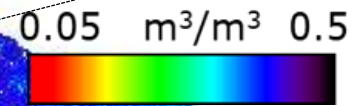
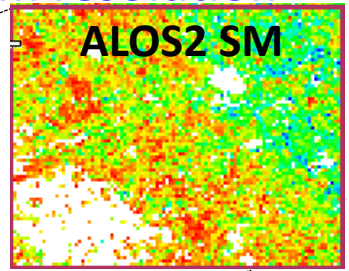
Case study: JAXA-ESA agreement → ALOS2 systematic acquisitions over the Apulian Tavoliere (Southern Italy) and Selhausen (Germany) sites

- ✓ Temporal resolution from ~3 days (S1) to ~ 2 days (ALOS2&S1)

Retrieval algorithm: Dense time series of SAR data → incoherent short term change detection – **SMOSAR** code working at C- & L- band

Balenzano et al. "Sentinel-1 soil moisture at 1km resolution: a validation study," submitted to RSE

Composite S1&ALOS2 SM @1km resolution on 02/08/19: similar patterns



S1 and ALOS2 SM vs SM observed over the Apulian Tavoliere hydrologic network

