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# Achievements of the COST Action on Opportunistic Precipitation Sensing (OpenSense)

Monday 17 March 2025 11:45 (15 minutes)

The COST Action OpenSense (https://opensenseaction.eu) focuses on opportunistic sensing (OS) of precipitation using data from commercial microwave links (CML), satellite microwave links (SML) and personal weather stations (PWS). OpenSense brings together scientists, experts from national weather services, owners of sensor networks, and end-users of rainfall products. The main goals of OpenSense are, to improve the access to country-wide and continental-scale OS data, to establish OS data as a widely acknowledged data source capable of providing reliable operational rainfall data, and to facilitate the use of the OS data for weather and hydrological forecasts. OpenSense has been active since the year 2022 and currently has more than 140 participants.

Here we present the main achievements of OpenSense and its working groups. We will highlight the large datasets that have been curated and made openly available in a standardized format. We will introduce the software ecosystem which was developed to simplify and standardize how CML, SML and PWS data are being processed and evaluated. In addition we will show examples of OS data merging and application of OS rainfall products. Finally an outlook will be given on the activities of OpenSense which aim to facilitate OS data access and operational usage on a global scale, with a particular focus to bring OS rainfall estimation to regions where traditional observation networks are sparse.

VAT

### Session

From Classical to Integrated Remote Sensing: New observation strategies for clouds and precipitation (multi-frequency, spectral polarimetry, multi-sensor)

## **Preferred Contribution Type**

**Oral Presentation** 

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