



Contribution ID: 25

Type: **Poster presentation**

The implication of the X-band rain radar ROXI in the EXAEDRE project

ROXI (Rain Observation with an X-band Instrument), is a X-band Doppler ground-based radar (9.4 GHz) for rain observations. It was designed at LATMOS, for the study of the microphysical properties of precipitating systems, the vertical structure of clouds and precipitations by measuring the vertical reflectivity and Doppler velocity profile. The measurements extend from 100m to 12.8 km.

The EXAEDRE (EXploiting new Atmospheric Electricity Data for Research and the Environment) project took place this summer in Corsica. It aims at consolidating the HyMex (HYdrological cycle in the Mediterreanean EXperiment) activities collected during the field campaign in relation with atmospheric electricity.

During the campaign, a suite of data was acquired simultaneously from the zenith pointing radars ROXI and BASTA. In situ measurements were also collected from airborne microphysics probes and the 95 GHz Doppler radar RASTA onboard the SAFIRE French Falcon20 aircraft.

Thanks to ROXI, we can retrieve the mean duration of the precipitating events, the characteristics of the bright band in relation the ice properties, the precipitating rate, the particles Doppler velocity, and the work on the Z-R relation.

In addition, and thanks to the joint airborne measurements, we can extract information on the microphysics of the particles in the precipitating clouds.

Primary authors: Dr MARTINI, Audrey (LATMOS-Univ Paris Saclay); Dr VILTARD, Nicolas (LATMOS-UVSQ Paris Saclay)

Presenter: Dr MARTINI, Audrey (LATMOS-Univ Paris Saclay)

Track Classification: Workshop: Observational campaigns for better weather forecasts