



## **In-situ OVOC measurements in the tropical marine atmosphere for the OCTAVE project**

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Oxygenated volatile organic compounds (or OVOCs) have a large impact on the atmospheric oxidative capacity and climate. The OCTAVE project aims to improve global OVOC budget estimates by improving the representation of photochemical OVOC sources/sinks and by reducing uncertainties in terrestrial emissions and ocean/atmosphere exchanges of OVOCs and their precursors. To achieve the latter, existing observations will be combined with newly retrieved global OVOC satellite data. Additional ground based measurements will be made in the tropical marine atmosphere where ground-based measurements are scarce. For this, a high sensitivity proton transfer reaction mass-spectrometry (PTR-MS) instrument was deployed in October 2017 at the high-altitude Maïdo observatory, located on Reunion island in the South-West Indian Ocean, to provide continuous OVOC measurements during a two-year period. The Maïdo observatory is strategically located. During daytime, marine boundary layer air flows upslope to the observatory allowing the study of meso-scale OVOC emission signatures in the PTR-MS data. At night the observatory is located in the free troposphere and air masses carrying emission plumes from distant sources can arrive at the observatory (e.g. biomass burning plumes from Africa or Madagascar).

The diurnal and long-term variability of PTR-MS measurements of OVOC and BVOC concentrations will be shown alongside a comparison between the in-situ PTR-MS data, FTIR column densities and preliminary results from the IMAGES/MAGRITTE and WRF-Chem chemical transport models.