

---

# Detection, location and characterization of VLF events during the 2018-2019 seismovolcanic crisis in Mayotte

Angèle Laurent<sup>\*1</sup>, Claudio Satriano<sup>2</sup>, and Pascal Bernard<sup>2</sup>

<sup>1</sup>Institut de Physique du Globe de Paris – Institut national des sciences de l'Université, IPG PARIS, Université Paris Diderot - Paris 7 : UMR7154, Université de la Réunion, Institut national des sciences de l'Université – France

<sup>2</sup>Institut de Physique du Globe de Paris (IPGP) – IPG PARIS – IPGP, 1 rue Jussieu, 75238 Paris cedex 05, France

## Résumé

During the seismovolcanic crisis of Mayotte, that started in May 2018 to the east of the island, an energetic very low frequency signal (VLF) was recorded on November 11, 2018. In this study we detected and analyze several hundredths of such signals, all along the duration of the Mayotte crisis. We used two different type of detectors: a STA/LTA triggering and one based on the signal spectrogram. Event location is performed through spatial 3D back-projection of station-pair cross-correlation functions (Poiata et al., 2016). To investigate the possible physical origin of such signals, we propose and discuss different type of resonating sources.

---

<sup>\*</sup>Intervenant