

## Visit of Dr. Elisa Rindraharisaona to the Mauritius Oceanography Institute (MOI) between 7 and 16 November, 2019

The Mauritius Oceanography Institute (MOI) has been the collaborator in the ReNovRisk Project since its inception. The team working in the project has published/presented abstracts in international conferences such as American Geophysical Union (AGU) and European Geophysical Union (EGU). Recently, the group has also submitted a paper to the Geophysical Journal International (GJI).

During the visit of Dr. Elisa Rindraharisaona, data collected from 10 local seismic stations, deployed during the RHUM-RUM project (2012–2014) were used to analyze the cyclone Bejisa (27 December 2013–10 January 2014). Power spectral density (PSD) and the RMS amplitudes of the microseism during the occurrence of a cyclone were computed. Examples for station CORL are presented in Fig. 1 for PSD and the RMS amplitude shown in Fig. 2.

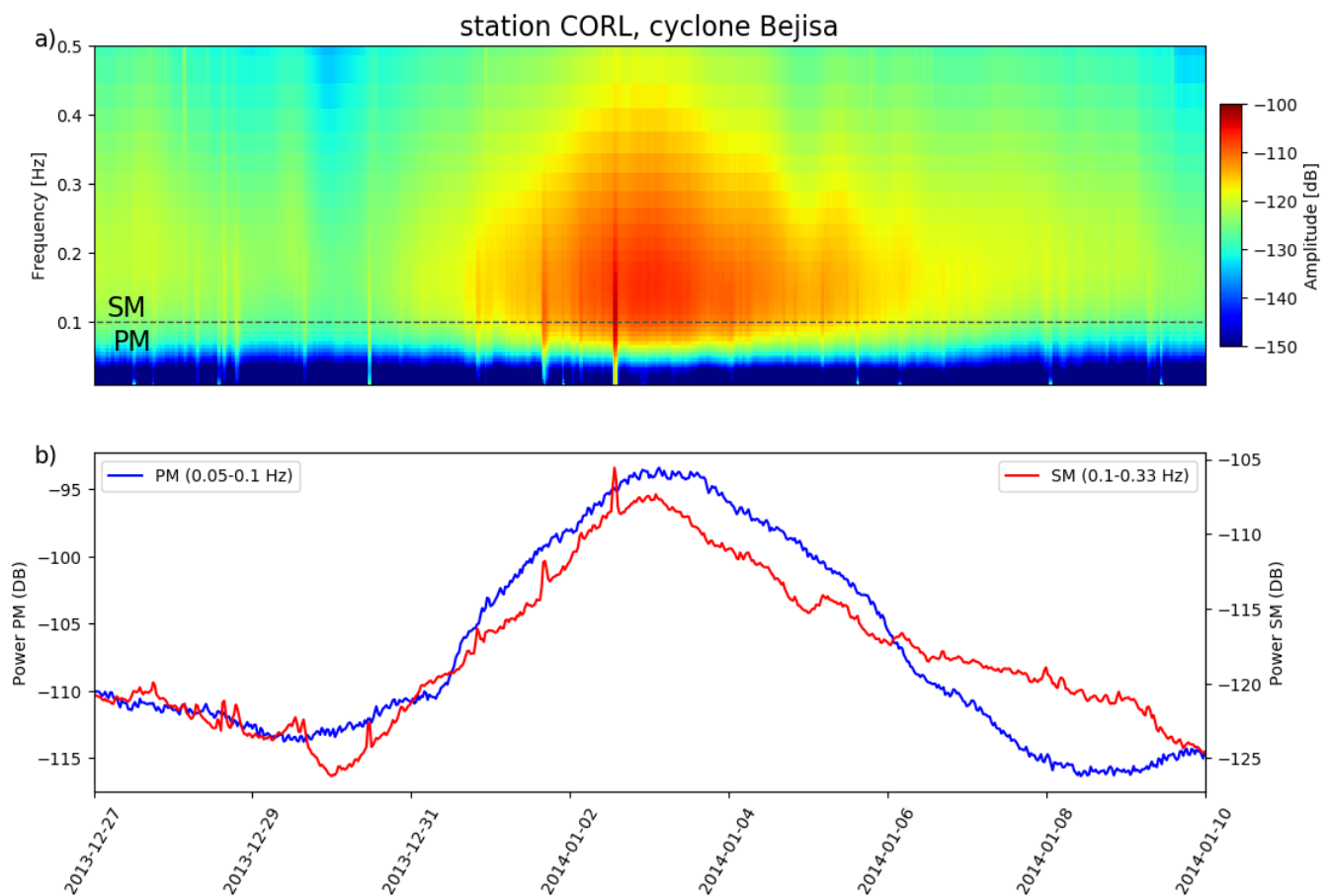


Figure 1: Power spectral density (PSD) of seismic noise converted into decibels relative to ground acceleration. a): Spectrograms of vertical component from 27 December 2013 to 10 January 2014 at station CORL. The 10s (0.1 Hz) period limit between PM and SM is indicated by the horizontal dashed line. b): Time evolution of the PM (blue) and SM (red).

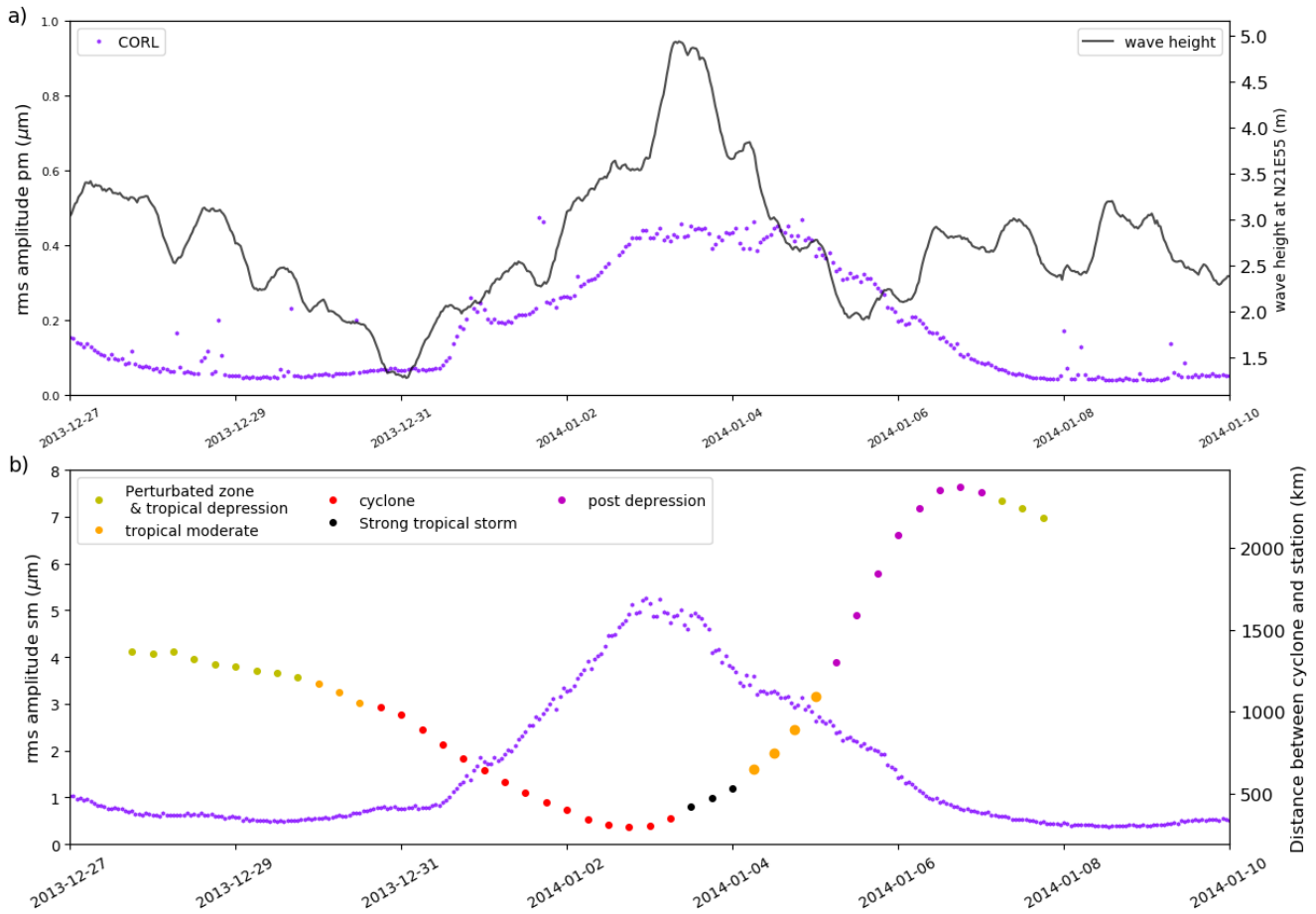


Figure 2: Wave height (black) vs primary microseism (PM) amplitude (purple dots) for the seismic data from station CORL, filtered in the 10-20s period band. There is a good correlation between the wave heights and the PM amplitude during the cyclone period. b) Secondary microseism (SM) amplitudes (seismic data filtered in the 3-10 s period band) vs distance between the cyclone and the seismic station. The seismic station started to record the cyclone at distance around 2000 km.