ID: Type: **Oral**

4.1-O5. LOCAL WEATHER CONDITIONS EFFECTS ON DETECTION CAPABILITY OF SOUTH EASTERN AFRICAN INFRASOUND STATION

Station detection capability is important in infrasound technology, especially for International Monitoring System. Knowing detection capability helps in recognizing nuclear explosion signal. The purpose of this work is to check if effect of local weather condition varies according the station configuration or station location. Study was done for single station I3MG and is extended to other stations which have different configuration and different weather condition. Using the infrasound bulletin of I33MG, effects of local weather conditions are noticed. When processing infrasound data of south eastern African infrasound station, detected signal decreases when temperature or surface wind speed rises. To confirm, south and eastern African infrasound station are used for the study of the background noise behaviour under the action of local weather conditions such as temperature and surface wind. Data processing is performed with PMCC method. Data are filtered and split into four frequency bands, 0.0156 Hz, 0.0625 Hz, 0.25 Hz and 1 Hz in order to fit the frequency band of permanent sources such as: mountain associated waves, microbaroms and storm activities. Diurnal variation and seasonal variation of background noise power under the action of surface wind and temperature are studied.

Primary author: RAMANANTSOA, Andry Harifidy (Institute and Observatory of Geophysics of Antananarivo (IOGA))

Presenter: RAMANANTSOA, Andry Harifidy (Institute and Observatory of Geophysics of Antananarivo (IOGA))

Track Classification: 4. Performance Optimization