ID: Type: **Oral**

effect on MAWs from Drakensberg Mountain using IS35 and IS47

IMS Infrasound stations detect mostly signals from Mountain Associated Waves at frequency range [0.015 - 0.1Hz]. MAWs are generated as hydrodynamic oscillation in the turbulent wind-stream in the lee of high mountain ranges (Meecham, 1971). Drakensberg mountain located in SouthAfrica is used as source for studying the amplitude attenuation (Bass & Sutherland, 2003) at two infrasound stations IS47, South Africa and IS35, Namibia. PMCC (Cansi, 1995) is used to process infrasound data. ECMWF (from CTBTO) and HWM07/NRLMSISE00 atmospheric models are used in the acoustic propagation through the atmosphere and attenuation are achieved with Finite Difference Time-Domain (C. De Groot-Hedlin, 2008) and hamiltonian raytracing (Virieux, 2004). IS47 detects signal from Drakensberg Mountain almost over the year. However with IS35, this source is observed only from December to March and from June to July. In first approximation, amplitude is decreasing with range however amplitude is higher than its trend on stratospheric arrival.

Primary author: RANDRIANARINOSY, Fanomezana (Institute and Observatory of Geophysics of Antananarivo (IOGA))

Presenter: RANDRIANARINOSY, Fanomezana (Institute and Observatory of Geophysics of Antananarivo (IOGA))

Track Classification: 5. Analysis of Sources and Scientific Applications