ID: Type: **Oral**

RESEARCH STATUS IN MADAGASCAR

Infrasound research in Madagascar started since the installation of I33MG in 2001. At that time, only data from this station were processed. Starting from 2010 Madagascar got access to IMS data and IDC products, and then after Madagascar NDC received the Capacity Building System, infrasound data from other IMS station was accessible and easily processed. Infrasound data from IMS stations I19DJ, I32KE, I33MG, I35NA, I47ZA and I52GB are continuously processed using PMCC method . Permanent signals from natural sources MAWs, microbaroms and thunderstorms are common to these stations. Besides, bolides, volcanoes and explosions are also detected. Source identification and location are performed with raytracing technics available Tau-P (Garces 1998) or Hamiltonian method (Virieux 2004) or with fullwave technic like FDTD (Hedlin 2010). Recent studies show that gravity waves signatures from deep convection and orographic source can be extracted using IMS infrasound stations. This approach is not only used in monitoring nuclear explosion but was also applied in civil application and in scientific research coupled with other fields such as seismology, oceanography and climatology. In this perspective inverse problem could mainly enhance atmospheric model in Madagascar and East african region where direct observation is very sparse.

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Track Classification: Analysis of Sources and Scientific Applications