

of the Russian Fireball 2013 from Signals Recorded by I33MG

In the framework of the International Monitoring System (IMS), sixty infrasound stations were installed around the world to detect nuclear test of more than 1 kiloton. Besides, these stations can detect and measure waveforms from natural event such as ocean swell, volcanoes, severe weather or from man-made source such as chemical explosion, quarry blast, missile's path etc. On 15 February 2013 at 03:22 AM, a meteor broke up over Russia's Ural Mountain which was the largest fireball ever detected by IMS station. I33MG station in Antananarivo was among the 17 infrasound stations that detect the blast. Signals from exploding meteor are unique because the sources travels so the azimuth changes as the fireball moves and it's not a single explosion. WinPMCC based on the PMCC method (Progressive Multi-Channel Correlation) is used to process data, and TauP method (Garcès, 1998) to simulate the propagation through the atmosphere. The azimuth detected is around 13°.

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