

Events Detected by the Indian Ocean Network of Hydroacoustic IMS Stations

The International Monitoring System (IMS) is based on four technologies: seismic, hydroacoustic, infrasound and radionuclide. The hydroacoustic network, which consists of underwater hydrophone stations and T-stations (on-land seismometers), is essential for detection and location of underwater sources. Hydrophone stations are more sensitive than T-stations and provide azimuth information therefore they are more capable of detecting events and estimating event location. The Indian Ocean is the only area covered by three hydrophone stations, thanks to the recently installed HA04 at Crozet Island. During routine analysis of seismo-acoustic events analysts focus on either associating hydroacoustic signals (T phases) to seismic events or on verifying automatically formed hydroacoustic events from H phase detections. The installation of HA04 gave analysts an opportunity to examine underwater events missed by the automatic processing. This study will provide an overview of events recorded by hydroacoustic stations located in the Indian Ocean Basin (HA01, HA04 and HA08) since the recent deployment of the new HA04 station.

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