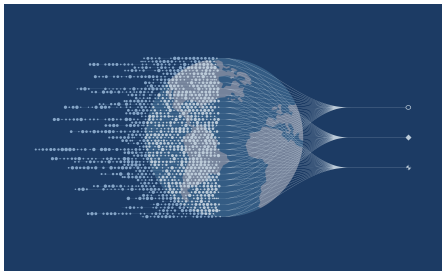

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2011-2020: A decade of global volcanic events observations at the IMS infrasound network

The Global Volcanism Program (GVP) includes comprehensive list of the 1281 Earth's active volcanoes and their eruptions over the last 12,000 years. In this work, we used the web-based GVP database of the Smithsonian Institute to correlate detections from the International Monitoring System (IMS) infrasound network in the period 2011-2020. According to GVP data, 360 eruptions (or confirmed eruptive activity) occurred from 138 volcanoes. Among those, we selected 79 confirmed eruptions originated from 47 volcanoes with Volcanic Explosive Index (VEI)>3: 64 events were ranked with VEI=3, 14 events with VEI=4 and 1 event with 1 VEI=5. Data from 44 IMS infrasound stations were processed and analysed in the specified time window using the Progressive Multi-Channel Correlation (PMCC) algorithm. A station-to-source back-azimuth deviation of 5° and 10° was considered, using a cross-bearing azimuth methodology. We present here that the IMS network infrasound detections show correlation with the selected volcanic events. We present as well the correlation of the volcanic events with the events listed in the Latest Events Bulletin (LEB), Standard Event Lists (SEL3) and Reviewed Event Bulletin (REB) of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) International Data Centre (IDC).

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