

IMS Infrasound Records of Announced Rocket Launches

Infrasound technology as part of the verification regime plays a significant role in monitoring compliance with the CTBT. Low frequency acoustic waves under certain conditions can propagate thousands of kilometres until they arrive at infrasound arrays of the International Monitoring System (IMS). Recorded data are transmitted to the International Data Centre (IDC) and used for detection and characterization atmospheric events. Underground events like large magnitude earthquakes or surface explosions like quarry blasts may also generate infrasound signals. The aim of this study is to present a summary of infrasound records starting from the end of 2016 related to announced spaceflight activity that took place at the different space ports, i.e. Baikonur Cosmodrome, Vandenberg Air Force Base, Guiana Space Centre, Xichang Satellite Launch Centre etc. Signals detected by the IDC were recorded not only at regional distances but also at several thousands of kilometres from the source. An overview of records from certain families of launch vehicles, i.e. Long March and Soyuz provides information helping to identify and locate events occurring along the trajectory. Results of this study may facilitate analysis of signals generated by these complex infrasound sources.

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Track Classification: 1. The Earth as a complex system