

Virtual Data Exploitation Centre (VDEC) as a Way to Access Data Collected by the International Monitoring System

Tuesday, 20 June 2023 09:43 (1 minute)

Data collected by the International Monitoring System (IMS) represent four complementary technologies: seismic, hydroacoustic, infrasound and radionuclide. The main objective of acquiring IMS data is to detect and identify nuclear explosions on land, in the oceans, and in the atmosphere. However, the data are also extremely valuable for scientific studies e.g., to investigate the migration pattern and population density of marine mammals, or to track radiation on a global scale. These applications provide a benefit to the main purpose of detecting nuclear explosions by improving monitoring algorithms and our ability to discriminate between explosion signals and what is considered noise from the CTBT perspective. The vast amount of IMS data archived over two decades can be accessed via the virtual Data Exploitation Centre (vDEC). After signing a zero-cost vDEC contract (which contains legal requirements), scientists and researchers from many different disciplines and from around the globe, can get access to the IMS data to conduct research and to publish new findings. This presentation provides insights related to the vDEC platform and gives a statistical overview of all past and current scientific applications, including several examples of topics addressed with IMS data accessed under vDEC contracts.

E-mail

jolanta.kusmierczyk-michulec@ctbto.org

Promotional text

How to get access to the IMS data for scientific purposes? VDEC

Oral preference format

Primary authors: KUSMIERCZYK-MICHULEC, Jolanta (CTBTO Preparatory Commission); Mr PHIRI, Remmy (CTBTO Preparatory Commission)

Co-authors: Mr SARAGIOTIS, Christos (CTBTO Preparatory Commission); Ms SLINKARD, Megan (CTBTO Preparatory Commission); Mr MIALLE, Pierrick (CTBTO Preparatory Commission); Mr KALINOWSKI, Martin B. (CTBTO Preparatory Commission); Mr OLIVEIRA, Tiago (CTBTO Preparatory Commission); Mr LAPUT, Riche (CTBTO Preparatory Commission)

Presenter: KUSMIERCZYK-MICHULEC, Jolanta (CTBTO Preparatory Commission)

Session Classification: Lightning talks: P1.3, P1.4, P5.2

Track Classification: Theme 5. CTBT in a Global Context: T5.2 Synergies with Global Challenges