



ID: Is3-381

Type: **Special oral**

## **processing system at the IDC, from rudimentary to maturity**

*Thursday, 1 July 2021 17:15 (30 minutes)*

In 2001, when the first data from an IMS infrasound station started to arrive in near real-time at the IDC, its infrasound processing system was in a premature state. The IDC then embarked for a multi-year design and development of its dedicated processing system, which led to operational IDC automatic processing and interactive analysis systems in 2010. The IDC went on in the next ten years to produce over 40,000 infrasound events reviewed by expert analysts.

In an effort to continue advancing its methods, improving its automatic system and providing software packages to CTBTO users, the IDC focused on several projects. First, the automatic system for the identification of valid signals was redesigned with the development of DTK- PMCC (Progressive Multi-Channel Correlation), which is made available to CTBTO users within NDC-in-a-Box. And second, an infrasound model was developed for automatic waveform network processing software NET-VISA with an emphasis on the optimization of the network detection threshold by identifying ways to refine signal characterization methodology and association criteria.

Future improvements of the IDC processing system are planned to further reduce analyst workload that includes atmospheric propagation modeling and enhancements of the automatic pipeline components.

### **Promotional text**

A review of 20 years of infrasound technology at the IDC, from the first IMS data received to the introduction into IDC operations, and a glimpse into the future IDC infrasound system.

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**Session Classification:** Series of talks on 25 years of CTBT: Infrasound technology

**Track Classification:** Theme 3. Verification Technologies and Technique Application: T3.7 - 25 years of CTBT: progress on verification technologies and looking towards the future 25 years and beyond