



Engineering and development projects for the sustainment and enhancement of the IMS infrasound network

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The Provisional Technical Secretariat (PTS) of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) has a continuous interest in enhancing its capability in infrasound source localization and characterization. This capability is based on the processing of data recorded by the infrasound network of the International Monitoring System (IMS). This infrasound network consists of sixty stations, among which forty-five are already certified and continuously transmit data to the International Data Center (IDC) in Vienna, Austria. Each infrasound station is composed of an array of infrasound sensors capable of measuring micro-pressure changes produced at ground level by infrasonic waves.

It is the responsibility of the Engineering and Development Section of the IMS Division to ensure the highest quality for IMS infrasound data. This includes the design of robust and reliable infrasound stations, the use of accurate and calibrated infrasound measuring chains, the installation of efficient wind noise reduction systems and the implementation of quality-control tools. The purpose of this paper is to present ongoing PTS infrasound engineering and development projects related to the testing and validation of wind noise reduction system models, the implementation of infrasound data QC tools, the definition of guidelines for the design of IMS power supply systems and the development of a portable infrasound calibrator and of field kits for site survey and certification.