



Technical status of the International Monitoring System for the Comprehensive Nuclear-Test-Ban Treaty

P. Grenard

Engineering and Development Section, IMS Division, CTBTO, PO Box 1200, 1400 Vienna, Austria,
Patrick.Grenard@ctbto.org

The International Monitoring System (IMS) for the Comprehensive Nuclear Test-ban-Treaty Organization is a global Network of stations for detecting and providing evidence of possible nuclear explosions. Upon completion, the IMS will consist of 321 monitoring facilities and 16 radionuclide laboratories distributed worldwide in locations designated by the Treaty. Many of these sites are located in areas that are remote and difficult to access, posing major engineering and logistical challenges.

The IMS uses seismic, hydroacoustic and infrasound monitoring waveform technologies to detect signals released from an explosion or a naturally occurring event (e.g. earthquakes) in the underground, underwater and atmospheric environments.

The radionuclide technology as an integral part of the IMS uses air samples to collect particular matter from the atmosphere. Samples are then analyzed for evidence of physical products created by a nuclear explosion and carried through the atmosphere.

The certification process of the IMS stations assures their compliance with the IMS technical requirements. In 2008 significant progress was made towards the completion of the IMS Network. So far 75% of the IMS stations have been built and certified.