STATUS OF THE INFRASOUND COMPONENT OF THE INTERNATIONAL MONITORING SYSTEM, COMPREHENSIVE NUCLEAR-TEST-BAN TREATY

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ABSTRACT

The infrasound component of the International Monitoring System (IMS) for verification of the Comprehensive Nuclear-Test-Ban Treaty will consist of 60 ultra-sensitive array stations distributed as uniformly as possible over the surface of the globe. This network will be capable of detecting and locating any atmospheric nuclear explosion with yields of 1 kT or more. The detection threshold will be significantly less than 1 kT in many parts of the world.

All of the infrasound stations in the IMS network are new stations. The establishment of each of these array stations requires a careful site survey to ensure that the station is located in a low-noise environment, the installation of equipment at each array element, and a testing and evaluation period followed by station certification. The infrasound site survey program is well advanced. The establishment of equipment is underway or has been completed at a number of IMS stations, and a few of these stations are now undergoing testing and evaluation. It is expected that 15% or more of the infrasound stations in the global network will be in operation by the end of this year.
Many of the technical issues related to station installation have now been resolved. The remaining issues are primarily concerned with station certification requirements, station performance evaluation and operational and maintenance procedures for certified stations.

Key Words: infrasound stations, International Monitoring System