



## **Noble Gas Measurements applied to CTBT On-Site Inspections**

### **A. Axelsson** (1) and OSI Noble Gas Collaboration

(1) Provisional Technical Secretariat of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization, Vienna, Austria, (2) V. G. Khlopin Radium Institute, St. Petersburg, Russian Federation, (3) Swedish Defence Research Agency, Stockholm, Sweden, (4) Radiation Safety and Applications Seibersdorf, Austrian Research Centers, Seibersdorf, Austria

Equipment has been developed with the support of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) to carry out mobile measurements of noble gas activity concentrations in the atmosphere and in subsurface gas. The equipment is intended for use in CTBT On-Site Inspections (OSI). The objective of an OSI would be to clarify whether a nuclear explosion in violation of the treaty has been carried out in a specified area (up to 1000 km<sup>2</sup>) and to gather information which might assist in identifying any possible violator. Initial technical testing has been carried out on the equipment developed and field testing will be organized in parallel with the development of appropriate strategies for deployment in a CTBT OSI context.