ID: Type: **Poster**

Global radioxenon emission inventory for 2014 by normal operational releases from nuclear power plants and medical isotope production facilities

Global radioactivity monitoring for the verification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) includes the four xenon isotopes 131mXe, 133Xe, 133mXe and 135Xe. These four isotopes are serving as important indicators of nuclear explosions. Various peer-reviewed publications establish the global radioxenon emission inventory by normal operational releases from certain types of facilities: nuclear power plants, medical isotope production facilities, and most recently also for nuclear research reactors. The integrated emission inventory presented here collects the best estimates for all relevant sources world-wide. As much as possible it presents the real 2014 emissions with variations over time as reported by the facility operators. Otherwise, it applies the best available estimated for a generic year. This emission inventory can be used for source-receptor studies with atmospheric transport models and for comparing the simulated and observed radioxenon concentrations at the locations of the noble gas systems that are part of the CTBT International Monitoring System (IMS). The purpose is to provide a scientific solid data set to be used for calibration of screening IMS noble gas observations and to assess the performance of IMS stations.

Primary author: KALINOWSKI, Martin B. (CTBTO Preparatory Commission)

Presenter: KALINOWSKI, Martin B. (CTBTO Preparatory Commission)

Track Classification: Theme 2. Events and Nuclear Test Sites