



Use of IMS data and its potential for research through global noble gases concentration maps

Lucrezia Terzi (1), Martin Kalinowski (2), Christophe Gueibe (1), Johan Camps (1), Abdelhakim Gheddou (2), Jolanta Kusmierczyk-Michulec (2), and Michael Schoeppner ()

(1) Belgian Nuclear Research Centre (SCK.CEN), Mol, Belgium (lucreziaterzi@hotmail.com), (2) Comprehensive Nuclear Test Ban Treaty Organization (CTBTO), Vienna, Austria

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) established for verification purposes a global monitoring system for atmospheric radioisotopes and noble gas radioactivity. Daily activity concentrations have been collected worldwide for over 15 years providing unique data sets with long term time series that can be used for atmospheric circulation dynamics analysis.

In this study, we want to emphasize the value of worldwide noble gas data by reconstructing global xenon concentration maps and comparing these observations with ATM simulations. By creating a residual plot, we can improve our understanding of our source estimation level for each region.