

Geophysical Research Abstracts,  
Vol. 10, EGU2008-A-00732, 2008  
SRef-ID: 1607-7962/gra/EGU2008-A-00732  
EGU General Assembly 2008  
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## **Application of the isotopic ratio based method for discrimination between nuclear tests and nuclear reactors on various data sets**

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The monitoring of atmospheric radionuclides is a crucial element in the verification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT). In order to discriminate between legitimate nuclear reactor emissions and nuclear explosions, the isotopic activity ratios can be used. Various data sets are used to demonstrate the discrimination capability of the isotopic ratio method. These include daily and annual emission reports from nuclear power plants and atmospheric observations at various sites. Five air samples are of special interest. They were measured a few days after the North Korean nuclear test in October 2006.