



## **Inverse modelling for the Nuclear Test-Ban Treaty with consideration of model uncertainties – first test**

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Compliance with the Comprehensive Nuclear Test Ban Treaty (CTBT) shall be monitored by global seismic, hydroacoustic, infrasonic and radionuclide measurement networks combined with appropriate evaluation of the data to detected and localise suspicious events. In the case of radionuclides, a network of 80 stations with daily measurements is available (Wotawa et al., 2003; see also presentations by G. Wotawa and A. Becker at this EGU). Source localisation requires atmospheric transport modelling in combination with appropriate inversion techniques. Atmospheric transport modelling will include calculations from a number of transport models operated by various institutions. Thus, a multi-model ensemble of source-receptor relationships will be available. While statistical measures of the the (dis-)agreement between the models can be easily provided, using this uncertainty to improve the inversion results is not trivial. A methodology based on a simplified version of Seibert (2001) is being developed. This methodology will be presented together with first results from the 2005 CTBTO-WMO experiment on source location.

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### **References**

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