



Uncertainties in source-receptor relationships for the Chernobyl release

P. Seibert and A. Frank

Institute of Meteorology, University of Natural Resources and Applied Life Sciences Vienna, Austria (contact: <http://www.boku.ac.at/imp/envmet/>)

The source term of the Chernobyl disaster and its variation with time and release height is still uncertain to some extent. Improvement with inverse modelling is an obvious possibility. As a first step in this direction, we investigate the source-receptor relationships for a vertically and temporally discretised source function and various receptors distributed over Europe. This shall indicate which parts of the (potential) release are well constrained by available data, and from which regions additional data would have to be acquired to improve or even enable a good inversion.

Source-receptor relationships are calculated with FLEXPART version 6.2, and in forward and backward mode in order to give a handle also on the dispersion modelling uncertainty. Furthermore, uncertainty with respect to precipitation and wash-out shall be investigated.

Results are illustrated as maps of the influence function for particular phases/heights of the release and as back projection of measurement phases at selected sites on the release function.

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