

# Uppsala seismology group

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*Network seismology, tomography, and method development*

- We operate the Swedish National Seismic Network (SNSN) with 65 broadband seismic stations.
- We also operate 20-25 portable broadband seismographs in temporary project deployments, on a local to regional scale, e.g. in Iceland.
- The SNSN network applies the same recording and analysis software, written in Uppsala, as IMO's SIL network, and the Uppsala group has been IMO's closest collaborator through its 20-year history.

*The Uppsala geophysics group also has strengths in reflection seismology, electromagnetic methods and geodynamic modelling.*

# Uppsala's Futurevolc project

*To develop tools to incorporate three-dimensional variations of seismic velocities into absolute earthquake locations.*

- Build a regionalized velocity model and test it against observations.
- Incorporate 3D tomographic modelling results into regionalized model and test against data.
- Build 3D travel time tables from model description of velocity heterogeneity for earthquake location.
- Build 3D travel time tables empirically from travel-time observations for earthquake location.
- Location by non-linear grid search methods with error analyses.

*These are also objectives of the SNSN*

# Project logistics

Uppsala Futurevolk project leader: **Ólafur Gudmundsson**

Uppsala group participants: **Whole SNSN=seismology group**

**PhD student:** Project funds 60% of a PhD student who will start at Uppsala in the beginning of 2013 (advertisement done – selection in process).

We need **tomographic models of the Icelandic crust** (we stand for much of what exists).

**SIL data** for testing models and building empirical travel-time tables.