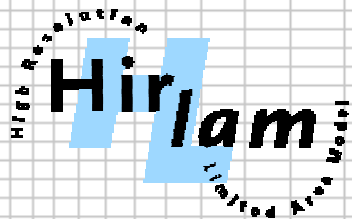**SMHI**

The current status and future plans in observation handling/assimilation of radar data in the HIRLAM community

Martin Ridal, Martin Grønsleth

Bjarne Amstrup, Mats Dahlbom, Carlos Geijo, Siebren de Haan, Günther Haase, Tomislav Kovacic, Magnus Lindskog, Jeanette Onvlee, Roger Randriamampianina, Eoin Whelan
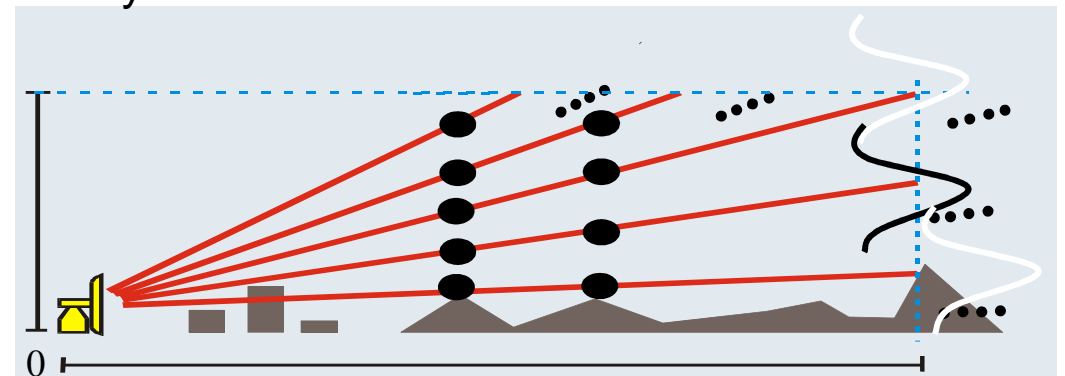
HARMONIE assimilation: Challenges

- Different data formats
  - HDF5, BUFR, internal formats…
  - Many countries are aiming for the OPERA Information Data Model (ODIM) in HDF5 or BUFR file format

- Different grid types
  - Most countries use polar coordinates (azimuth angle and range)
  - Different volume sizes

- Different scan strategies
  - Different for different elevations
  - Different for reflectivity and radial velocity

- Different quality of the data
 - Different levels of quality control in each country

HARMONIE assimilation: Plans

- CONRAD
  - CONversion of RADar data
  - Common preprocessing tool
  - IN: Your local data (format, projection, QC...)
 - OUT: MF-Bufr (uniform projection, same QC-level...)

- BATOR
  - Reads the MF-Bufr files
  - First data thinning or super observations

- Re-write of BATOR to handle
  - Polar coordinates
  - Different scan strategies
  - Different volume sizes
  - Different thinning for different gridtypes
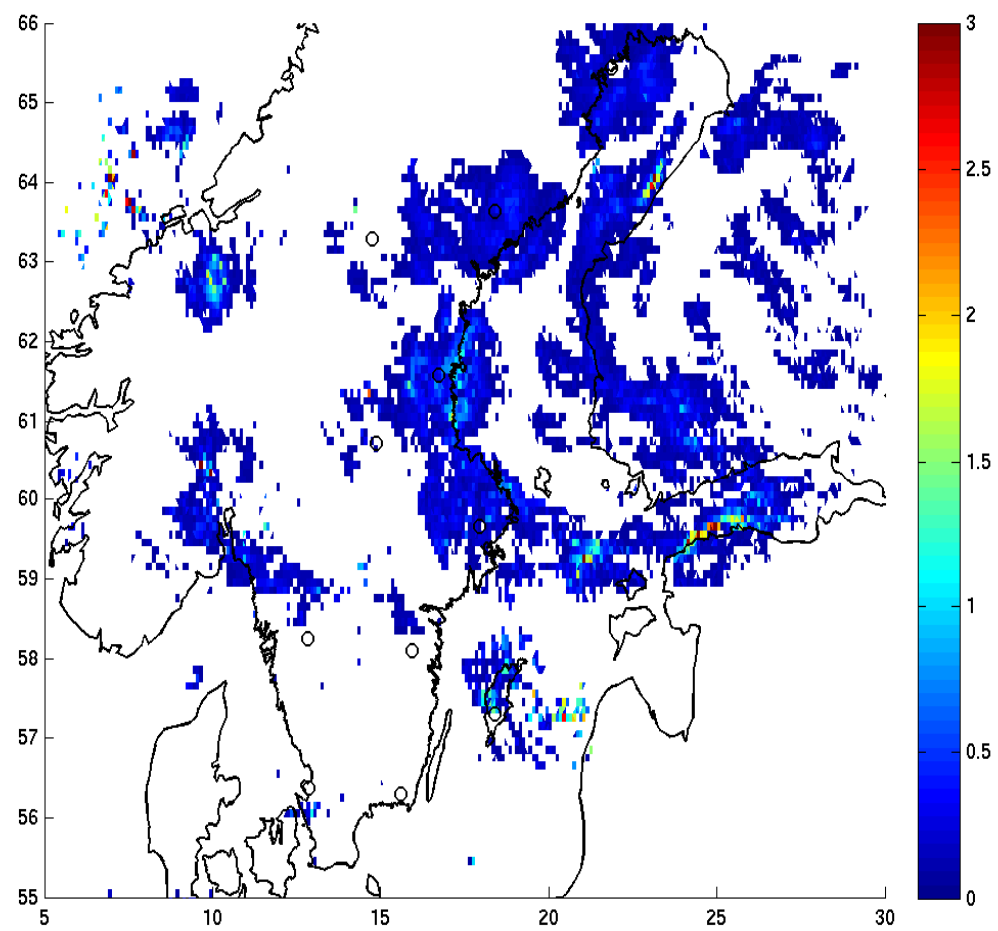 - Quality control in BATOR?

- Coordinated impact studies
  - The DMI area
  - 2 week period in August 2010
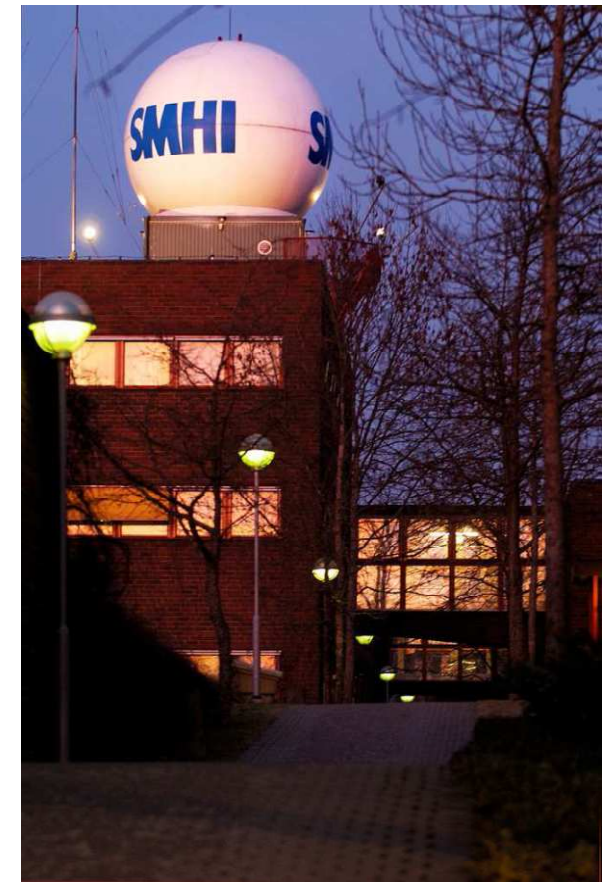
Radial wind after screening
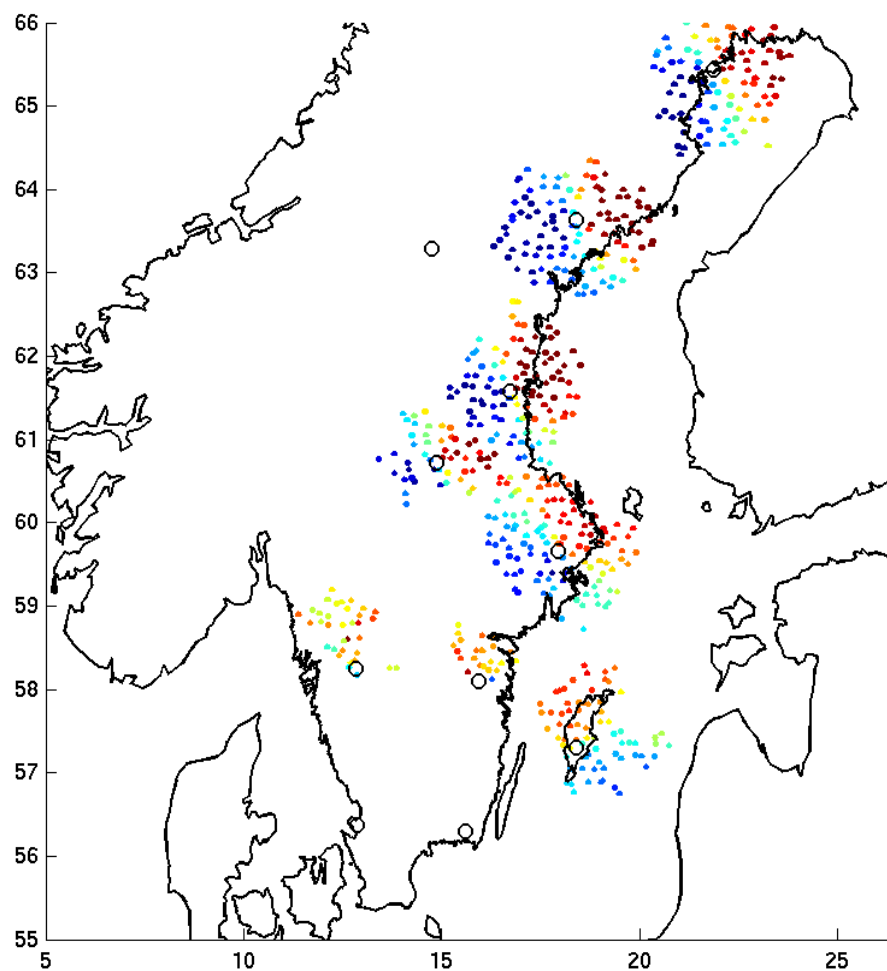
Corresponding radar echoes

Analysis difference: $AN_{refl} - AN_{norefl}$