



## Testing daily homogenization methods in parallel series data base

Erik Engström (1), Javier Sigró (2), and Mary Curley (3)

(1) Swedish Meteorological and Hydrological Institute, Climate Information and Statistics, Norrköping, Sweden (erik.engstrom@smhi.se), (2) Universitat Rovira i Virgili, Departament de Geografia -Facultad de Turismo y Geografía, Vila-Seca, Sweden (javier.sigro@urv.cat), (3) Met Éireann, Climatology and observations division, Dublin, Ireland (Mary.Curley@met.ie)

A data base of daily meteorological observational data from nearby stations were used to create composite stations. The southern region of Sweden (under latitude  $62^{\circ}$ ) was chosen to identify nearby stations that had common measurement periods. From these pairs of "parallel" stations, composite series have been built combining both stations. In this way we obtain a composite series from a station 1, which on a given date we replace by station 2, within the common measurement period.

The parameters that were used were maximum temperature, minimum temperature, precipitation, sea surface pressure, humidity, sunshine duration and wind speed.

These composite stations with known shifts were then used to test the adjustments of different methods of homogenization at daily scale. The tested methods were Homer, Mash, Splidhom, Climatol and Acmant. The performances of the methods were similar and improved the quality of the data for shifts above the 30th or 40th percentile.