Fine-scale Observations and Simulations of the Atmosphere over Bergen, W-Norway

Haraldur Ólafsson (1,2,3), Ole Edvard Grov (5), Jan Asle Olseth (3), Øystein Berentsen (6), Ólafur Rögnvaldsson (3,4), Hálfdán Ágústsson (4,1)

(1) University of Iceland (haraldur68@gmail.com), (2) Icelandic Meteorological Office, (3) Bergen School of Meteorology, Geophysical Institute, University of Bergen, Norway, (4) Institute for Meteorological Research, Reykjavik, Iceland (Reiknistofa í veðurfræði), (5) Centre of School’s Science Education, University of Bergen, Norway, (6) Municipality of Bergen, Norway

With increasing computing power, new opportunities emerge to reproduce and forecast weather and climate at fine spatial scales. This is particularly important in the vicinity of complex terrain, where the spatial variability of the state of the atmosphere close to the ground can be large.

A new project within the framework of the Bergen School of Meteorology is emerging. This project includes the mounting of about 55 automatic weather stations in the city of Bergen (Bjørgvin) at the west coast of Norway. The weather stations will serve to map the spatial variability of the atmosphere, not only for research and forecasting, but for education at all levels, and the data will be available online in real time. At the same time, high-resolution numerical simulations of the atmosphere over Bergen and its surroundings are performed in real time and the output is made available on the web. The data from the automatic weather stations and the numerical simulations is expected to be of great value for research of fine-scale features of the atmosphere in the future.