



## **The South-Iceland Wake**

H. Ólafsson (1,2), G. N. Petersen (3), J. E. Kristjánsson (4), I. Renfrew (3) and G. W. K. Moore (5)

(1) Bergen School of Meteorology, Geophysical Institute, University of Bergen, Norway, (2) University of Iceland, (3) University of East Anglia, UK, (4) University of Oslo, Norway, (5) University of Toronto, Canada

In Northeasterly flow, a strong wake is sometimes generated downstream of S-Iceland. During the IPY project the Greenland Flow Distortion Experiment (GFDEX), extensive observations were made of the S-Iceland wake. Inside the wake, winds were calm, while in the S-Iceland barrier jet the winds exceeded 35 m/s. The observed wind gradients were stronger than simulated with a state-of-the-art numerical model at high resolutions. No return flow was observed within the wake, but observed winds and high salt concentrations inside the wake indicate lateral flow from the barrier wind into the wake. Due to the complexity of the topography, the S-Iceland wake covers a large area in Smith's wake diagramme and the dissipation of kinetic energy takes presumably place on many spatial scales, including mesoscale wave breaking.