Geophysical Research Abstracts, Vol. 7, 07500, 2005
SRef-ID: 1607-7962/gra/EGU05-A-07500

Operational sea-ice forecasting for the Baltic Sea

J. Haapala (1), B. Cheng (1), T. Vihma (1) and K. Wang (2)

(1) Finnish Institute of Marine Research, Helsinki, Finland (jari.haapala@fimr.fi) (2) Technical University of Helsinki, Ship Laboratory, Espoo, Finland

The Finnish Institute of Marine Research provides daily forecast of ice motion, concentration, thickness, ridges and deformations for the Baltic Sea. Presently, third generation operational sea-ice model, which include prognostic calculations of the ice thickness distribution, drift and thermodynamics, is used for a prediction of sea-ice evolution in the Baltic Sea. The model is a multicategory sea-ice model developed originally for the climate research. The model physics and numerics are same both in operational and climate simulations. The only differences are in the horizontal resolution and atmospheric forcing used. The model resolves ice thickness distribution, i.e. ice concentrations of variable thickness categories, redistribution of ice categories due to deformations, thermodynamics of sea-ice, horizontal components of ice velocity and internal stress of the ice pack. Horizontal resolution of the model is 1 nm. The sea ice forecast out to 54 hours are made once a day. Sea ice model is forced by the HIRLAM forecasts. Initial SST is obtained from the ice charts. In this presentation, the sea-ice prediction system is presented and verification of the predictions are shown.