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A column model for the Arctic Ocean ice cover

K. Borenäs (1,2), G. Björk (2)

(1) Swedish Meteorological and Hydrological Institute, Västra Frölunda, Sweden

(2) Earth Sciences Centre, Göteborg University, Sweden

(karin.borenas@smhi.se / Fax: +46-31-7518980 / Phone: +46-31-7518967)

A coupled atmosphere-ice-ocean column model is used to calculate the Arctic ice cover and its sensitivity to changes in the forcing parameters. The model comprises formulations for ridging and ice export, two processes that are important for the ice thickness distribution. The study will focus on how the ice cover reacts to changes in the cloud distribution and to varying albedo. The effect of changes in the atmospheric heat flux will also be considered.