Séminaire ven 16 Avr 2010 11h / Seminar Fri Apr 16th 2010 11h

Conférencier/Lecturer:	Yi-Ching Chung
Sujet/Subject:	Evaluation of an 1-D Multilayer Blowing Snow/Snow/Sea Ice Coupled System Using Sheba Observations
Présentation/Presentation:	Anglais / English
Lieu/Room:	Salle des vents (Dorval)

iweb: http://web-mrb.cmc.ec.gc.ca/mrb/rpn/SEM/
web: http://collaboration.cmc.ec.gc.ca/science/rpn/SEM/index.php

Résume/Abstract

The NEW-RPN model, a coupled system including a multi-layer snow model (SNTHERM) and the sea ice model used in the Meteorological Service of Canada (MSC) operational forecasting system, was evaluated in a one-dimensional mode using meteorological observations collected during 1997-98 from SHEBA's Pittsburgh site in the Arctic Ocean. Results show that NEW-RPN better agrees with observations for the timing of snow depletion and for ice thickness. Of particular interest in NEW-RPN's simulation is the strong temperature stratification of the snowpack, which indicate that a multi-layer snow model is needed in the SHEBA scenario. In addition, a one dimensional (1D) blowing snow model, called PIEKTUK, has been incorporated into this coupled system. Intercomparison of simulations performed with and without this effect show that including blowing snow for this particular numerical experiment significantly improves the simulation of snow depth, of temperature at the snow/ice interface, and of the onset of ice melt.