



## Abstract View

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## On the Development of a Seasonal Change Sea-Ice Model

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### ABSTRACT

A three-dimensional thermodynamical model of sea ice has been developed which is capable of simulating seasonal changes over the arctic and antarctic regions. The model is patterned after the earlier work of Maykut and Untersteiner (1971) and Semtner (1976). Instead of specifying the fluxes of energy at the top of the ice, as is usually done in sea ice modeling, the components of surface energy balance are computed from observed climatological atmospheric data. Also, a new parameterization of leads by Semtner (1976) is tested and shown to improve the simulation. The model results agree with observations in the Arctic, but they are less successful in the Antarctic. Possible reasons for deficiencies of the model are that ice transport is not included and oceanic heat flux is not properly accounted for. These aspects will be added and improved in future development of the model.

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