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Numerical simulation of a snow cloud band over the Sea of Okhotsk
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Numerical simulations were made to investigate the formation mechanism of a frequently appeared thick snow band over the Sea of Okhotsk along the northern coast of Hokkaido island. Weather Research and Forecast Model (WRF), a non-hydrostatic model with multiple domain setup was used for the simulations to reproduce the satellite observed snow band on December 26th 2008.

WRF Model was able to reproduce the observed snow band and its characteristics. North-east ward moving Synaptic scale system rotated the wind direction from northerlies to north westerlies to become parallel to the northern coast of Hokkaido island. The snow band generated along the coast line initially and was associated with a low level wind across the coast which pushed the snow band over to the relatively warm Sea of Okhotsk where the development was taken place.

The cold air from Sakhalin island as North-westerlies continued to blow to form a strip of convergence zone just above the northern coast of Hokkaido island. Sensitivity experiments revealed the presence topography over the Hokkaido island also contributed formation of the snow band.

キーワード: snow band, cloud, wrf, convection, hokkaido, simulation
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