week earlier to the east than to the west. In individual years, the progression is much more patchy. Snowmelt over a contiguous area of the order of magnitude of $(1000\,\mathrm{km})^2$ is often observed in one week.

Some mountain areas, such as Pamir Highland/Himalayas, Altai Mountains, Stanovoi Highland/Yablonovyi Mountains, Alaskan and Canadian Rocky Mountains, etc. are characterized by late snowmelt season. In particular, snow cover lasts until June in the Stanovoi/Yablonovyi area, although the ground is only about 2000 m above sea level. In other mountain areas, such as the Tibetan Plateau, Mongolian Plateau and Rocky Mountains in the U.S.A., interannual variability of the "week of snowmelt" is large.

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ON GENERATION MECHANISM OF ICE-OCEAN EDDIES OFF HOKKAIDO COAST IN THE SEA OF OKHOTSK (ABSTRACT)

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Off the coast of Hokkaido in the Sea of Okhotsk, shore-based radars have revealed that an eddy-like pattern (ice-ocean eddy) or backward wave breaking pattern is sometimes observed in the ice floe distribution. A typical ice-ocean eddy is shown in an aerial photograph in the Asahi Shinbun, January 12, 1987. It shows that the ice-ocean eddy is composed of numerous pancake ice floes of diameter about 10 m.

First we investigated the characteristics of these eddies using radar images. These patterns seem to be generated when the ice concentration is small and the wind is weak after strong northerly wind blows. They are mostly observed off the coast of Esashi and Ohmu, near the Soya Strait. They often appear as a vortex train. The scale of the eddies is about 20–30 km and the wavelength of the vortex train is about 50 km.

Next we examine the generation mechanism of these eddies, assuming that sea ice floes act as a tracer for the ocean velocity. The Soya Warm Current which flows in this region is modeled. The model suggests that on this current wave motion is induced by barotropic instability. Using this model, we simulate the behavior of sea ice floes which are driven by wind and oceanic flow. We can reproduce quite similar pattern to observed eddy-like pattern or backward wave breaking pattern. This suggests that the wave motion occurs in the ocean and that the sea ice floes visualize such motion as a tracer.

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