

Application of ocean color imagery for Japanese fisheries

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Abstract

Warm streamer was first discovered by satellite imagery. Warm streamer would be utilized for migrating from offshore to near shore by fish schools. And then warm streamer was cold as Fish Way. It was found that this fish way have favorable temperature and favorable volume of phytoplankton for sardine schools migration by research vessel and aircraft survey. It was made sure that warm streamer had favorable temperature and favorable volume of phytoplankton by OCTS imageries.

On the other hand, it has been known that skipjack has favorable temperature and color by Satellite Data. The most favorable temperature and color range for skipjack corresponded to 20.5-23.0°C and 0.12-0.16 $\mu\text{g}/\text{l}$ in Kuroshio. This is the most important information for the detection of fishing grounds. The skipjack fishing grounds were located at white area, which correspond to the water of both favorable temperature and color in the Kuroshio.

Furthermore, according to the movement of blooming area from middle of April to middle of May 1997, blooming would be regard as movement of frontal phenomena by satellite ADEOS/OCTS phytoplankton imageries, composed of 10 days imageries. Because, blooming was very much concerned with moving northward of isothermal map. The blooming was occurred by the temperature from 8 to 13°C. This temperature was very important factor for phytoplankton to occur blooming.