

Spatial distribution of pigment concentration around the East Korean Warm Current region derived from Satellite data

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Spatial distribution of phytoplankton pigment concentration (PPC) and sea surface temperature (SST) around the East Korean Warm Current (EKWC) was described, using both ocean color images and advanced very high resolution radiometer (AVHRR) images.

Water mass in this region can be classified into five categories in the horizontal profile of PPC and SST, nLw(normalized water-leaving radiance) images: (1) coastal cold water region associated with concentrations of dissolved organic material or yellow colored substances and suspended sediments, (2) cold water region of thermal frontal occurred by a combination of phytoplankton absorption and suspended materials, (3) warm water overlay region by the phytoplankton absorption than the suspended materials; (4) warm water region occurred by the low phytoplankton absorption, and (5) offshore region occurred by the high phytoplankton absorption. In particular, the highest PPC area appeared in the ocean color and SST images with a band shaped distribution of the thermal front and ocean color front region, which is located the coastal cold waters along western thermal front of the warm streamer of the EKWC.