

# Variability and Frontogenesis in the Large-Scale Oceanic Frontal Zones: Global Approach

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## Abstract

A global approach to investigation of the large-scale oceanic frontal zones (OFZ), i.e. consideration of OFZ as a part of single interconnected global ocean-atmosphere system and coherent analysis of the variability and frontogenesis over the whole World ocean, is presented. Global satellite sea surface temperature (SST) data for the period of 1982–97, global satellite phytoplankton pigment concentration measurements for 1978–86 and estimates of the surface forcing due to wind stress and net heat flux are used to investigate a global monthly climatology of large-scale oceanic frontal zones, the variability of SST gradient in several frontal zones, the large-scale meridional frontogenesis in the North Pacific and some features of spatio-temporal variability of pigment concentration.