

Typification of phytopigment concentration anomalies in the ocean by satellite data

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On the basis of long-term satellite measurements of surface concentration of chlorophyll in the ocean, zones were revealed with anomaly phytopigments changing on the background of normal dynamics (Shevyrnogov, G. Vysotskaya, E. Shevyrnogov. Spatial and temporal anomalies of sea surface temperature in global scale (by space-based data). *Advances in Space Research* Vol. 33, 7, pp 1179-1183, 2004). These zones are consist of separate different-time phenomena, which can occur in isolated place one time for several years, but unite in spatially adjacent areas, if all time of observation is considered. In this paper an analyses and classification of different types of chlorophyll concentration anomalies is done by SeaWiFS data (1997-2005). The quality and size of the data allow, besides of anomaly blooms, which are widely presented in different papers, to reveal anomalies of different types and to estimate statistically reliability of their appearance and distinction from norm. It allows revealing dynamics of different types of anomalies. Different criteria are developed, which enable to investigate positive and negative anomalies of phytopigment concentration with different spatial and temporal frequency.

The obtained classification provides a way to improve understanding of hydrobiological processes in the ocean in the global scale and their connection with hydrological structure of the ocean.