

2nd International Conference and Exhibition on

Satellite & Space Missions

July 21-23, 2016 Berlin, Germany

Synoptical monitoring of climatic thermic fronts on the surface of the Southern Ocean by means of satellite remote sensing and in situ measurements

Victor V Ionov

St. Petersburg State University, Russia

The Southern Ocean contains several oceanic fronts that together form the largest Antarctic Circumpolar Current. The methodology of synoptical monitoring of fronts is based on observations during the seasonal maritime operations for supply of Russian Antarctic stations. It happens by use of continuous registrations of variability of horizontal gradients of temperature of sea surface layer (SSLT) in situ, and horizontal gradients of surface temperature (SST) from satellite infrared (IR) data, which are taken in real-time on board of research vessel. This makes possible more detailed definition of the horizontal gradients of thermic characteristics and latitudinal extent of the fronts zones. It can be done by means of continuous data of SSLT from vessel's automatic meteorological station, with simultaneous GPS-registration of their spatial location, on the one side; and by precise definition of geographical position of fronts zones of SST from satellite high resolution IR-images of the ocean surface, on the other side. Such data obtained during regular sub-meridional voyages of research-supply vessels between Africa and Antarctica, helps more confident than before to judge about presence/absence of trends in inter-annual changes in the latitudinal location of the main fronts in the Southern Ocean. Such a trends can be considered as an evidence of substantial change of water circulation and as the manifestations of global warming in the Ocean surface layer. During 2009-2015, tendency in inter-annual shifts of seasonal positions of climatic fronts to the north or south on the surface of the Indian sector of the Southern Ocean, is not appeared.

Biography

Victor V Ionov graduated from SPb (former Leningrad) State University in 1971. He has completed his PhD in Oceanology from St. Petersburg State University and was an exchange researcher at the Department of Oceanography, Florida State University, Tallahassee, USA, for seven months in 1984. He is an Associate Professor, Department of Oceanology and Director of Division of Baltic and Arctic Projects SPbSU. He has published more than 25 papers in reputed journals and took part in several marine Antarctic Expeditions.

ionovvictor@gmail.com**Notes:**