

AOGS 1st Annual Meeting > Ocean and Atmospheres > (OA3) TO DUST STORMS CENTRES IN THE ARAL SEA REGION >

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Title: (OA3) TO DUST STORMS CENTRES IN THE ARAL SEA REGION

Abstract: The Aral Sea coast is the second major center of dust storms in Central Asia (the first one is situated in Central Karacum and Kopetdag foothills). For last decades Aral Region is a zone of the ecological crisis caused by the fall in the Sea level. The database (MO ACCESS) has been developed for analysis of a current situation of dust storm occurrences in that region. Basis of the database are the observations which have been carried out at nine meteorological stations for period 1990-2002. There is information regarding 1670 dust storm observations registered at the Aral Sea Region in the database. Following characteristics were obtained using the database: duration of dust storms; daily, annual variations and interannual change of dust storms for each meteorological station; geographic distribution of intensity and duration of dust storms occurrences; wind speed spectrum. Results of the analysis have confirmed presence of the dust storms centre in the coast zone (stations Jaslyk, Karakalpakiya, Muynak) and have shown that at Takhtakupyr station region, which is remote from the seaside, is found one more, constantly acting centre of dust storms. The total duration of dust storms phenomena for period 1990-2002 reaches at Takhtakupyr station 1 840 hours, at Jaslyk station – 799.2 hrs., at Karakalpakiya station – 576.1 hrs. at Muynak station - 193.7 hrs. The meteorological observations at Takhtakupyr station have been conducted since 1986 so more detailed investigations have been organized. The series of the observations was considered for the period of 1986-2002. This phenomena particularities have been revealed for Takhtakupyr station for the following categories: repeatability events, features of visibility during dust storms, intensity of the process. The comparative analysis have been conducted for stations, located in adjoining regions and types of main meteorological processes under which the dusts storms situations appear in this region have been considered.

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