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Seasonal and Interannual Variability of the Caspian Sea Evaporation on Remote Sensing Data

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During recent century the water level of the Caspian Sea has been fluctuating dramatically, giving rise to the necessity of further investigations of its water balance. Irregularity in the distribution of the climatic characteristics over the sea creates considerable difficulties in the estimation of the water budget components, in particular of the evaporation. The water balance of the Caspian Sea includes the following main components: the total river inflow (the Volga river runoff comes average 80% of total water flow into the Caspian Sea), the outflow from the Caspian Sea to Kara-Bogaz-Gol Bay, the precipitation, the ground water runoff, the evaporation. There is no any device allowing to carry out accurately direct measurements of the each water balance component of the Caspian Sea (for example the evaporation from the sea surface and the Kara-Bogaz-Gol outflow). In this study we are going to use remote sensing data to calculate some component of the sea water balance. Satellite altimetric data was maked to analysis temporal variability the Volga river runoff and outflow to the Kara-Bogaz-Gol Bay. Radiometric data of sea surface temperature, surface wind (speed)and columnar water vapor was used to calculated of the evaporation. This work was partly supported by the Russian Fund of Basic Research, Grant No. 06-05-64871