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Analysis of time-space variability of the Caspian sea unperturbed or daturence surface by satellite altimetry and hydrodynamic simulation data

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The time-space analysis of a unperturbed or daturence surface of the Caspian Sea was conducted under the following scheme. At first from the TOPEX/Poseidon and Jason-1 satellite altimetry data were eliminated synoptic and seasonal variation of sea surface height for all pass of each exact repeat cycle. Then the dynamic topography computed by hydrodynamic model was deducted the obtained data. At last phase the daturence sea surface was constructed as function of a latitude, longitude and time.

For example, the analysis of time-space variability daturence surface was conducted on a difference average for year of values of two subsequent years. In outcome has received, that the maximum increase was 22.8 cm/yr was watched in central area of the Caspian Sea middle part (1993–1995). In this area decrease speed has falled with -28 cm/yr to -8 cm/yr since 1997 to 1999, and it has falled with -24 cm/yr to -10 cm/yr along coast as contrasted to by previous time frame (1995-1997). As a whole it is possible to say, that the given approach is perspective for research of the daturence surface Caspian Sea in oceanography and geodesy.

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