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Interannual variations of the terrestrial water s in the Lower Ob' Basin from a multisatellite appr

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Abstract. Temporal variations of surface water volume over inunda areas of the Lower Ob' Basin in Siberia, one of the largest contribu freshwater to the Arctic Ocean, are estimated using combined obs from a multisatellite inundation dataset and water levels over rive floodplains derived from the TOPEX/POSEIDON (T/P) radar altimetr computed time-series of monthly maps of surface water volume ov common period of available T/P and multisatellite data (1993–2004 results exhibit interannual variabilities similar to precipitation estim and river discharge observations. This study also presents monthly estimates of groundwater and permafrost mass anomalies during 2004 based on a synergistic analysis of multisatellite observations hydrological models. Water stored in the soil is isolated from the to water storage measured by GRACE when removing the contributio both the surface reservoir, derived from satellite imagery and rada altimetry, and the snow estimated by inversion of GRACE measure The time variations of groundwater and permafrost are then obtai when removing the water content of the root zone reservoir simul hydrological models.

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