



GRACE Recovery of Regional Water Mass Variations with High Resolution

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We use the principle of energy conservation to process GRACE low-low range-rate (KBR change) and accelerometry data into in situ geopotential differences for a regional inversion of temporal gravity field signals with a spatial resolution as fine as <500 km and with a temporal resolution of biweekly or less. In this paper, we present our recent results of regional time-variable gravity field observed by GRACE to study hydrological mass anomaly estimates (over river basins such as Amazon, Mississippi, Bay of Bengal, and Zaire) and their comparison with in situ data and hydrological models.