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IMPROVEMENT OF ANTARCTICA GPS HEIGHT TIME SERIES FROM A LATEST OCEAN LOADING MODEL AND A TROPOSPHERE MAPPING FUNCTION

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Recent research shows the latest ocean loading model FES2004 and global mapping function (GMF) which is based on numerical weather model data can benefit estimation of Antarctica GPS height time series. The Australian regional CGPS network, including 7 Antarctica CGPS sites has been reprocessed for the last three years using the ocean loading model FES2004 and GMF mapping function. Compared with GOT00.2 ocean loading model and the Neill mapping function, the repeatability of GPS height time series is slightly improved and magnitudes of seasonal signals become small when using FES2004 and GMF. However, no significant improvement for velocity estimation of Antarctica GPS height time series has been obtained. This presentation will illustrate the impact of these improved models.