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Gravimetric polar motion excitation functions from different series of gravimetric coefficient

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Since its lunch in February, the Gravity Recovery and Climate Experiment (GRACE) has been source of data of temporal changes in Earth's gravity field. These gravity fields can be used to determine the changing mass field of the Earth caused by redistribution of the geophysical fluids, and from that excitations of polar motion.
The so-called Level 2 gravity field product are available, in the form of changes in the coefficients: Cnm Snm
Since 2002 until the present time there are still attempts to better process these data. In this study we estimate gravimetric excitation of polar motion using a recent series of C21, S21 coefficient. In our calculations we use several series developed by nine centers. Firstly, we compare these gravimetric functions with each other. Then we examine the compatibility of these functions with hydrological signal in observed geodetic excitation function. We focus on seasonal and subseasonal time scales. The main purpose is to explore which from these several solutions are closed to observation.