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Chaotic oceanic excitation of low-frequency polar motion variability

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Comparison of hydrological excitation series

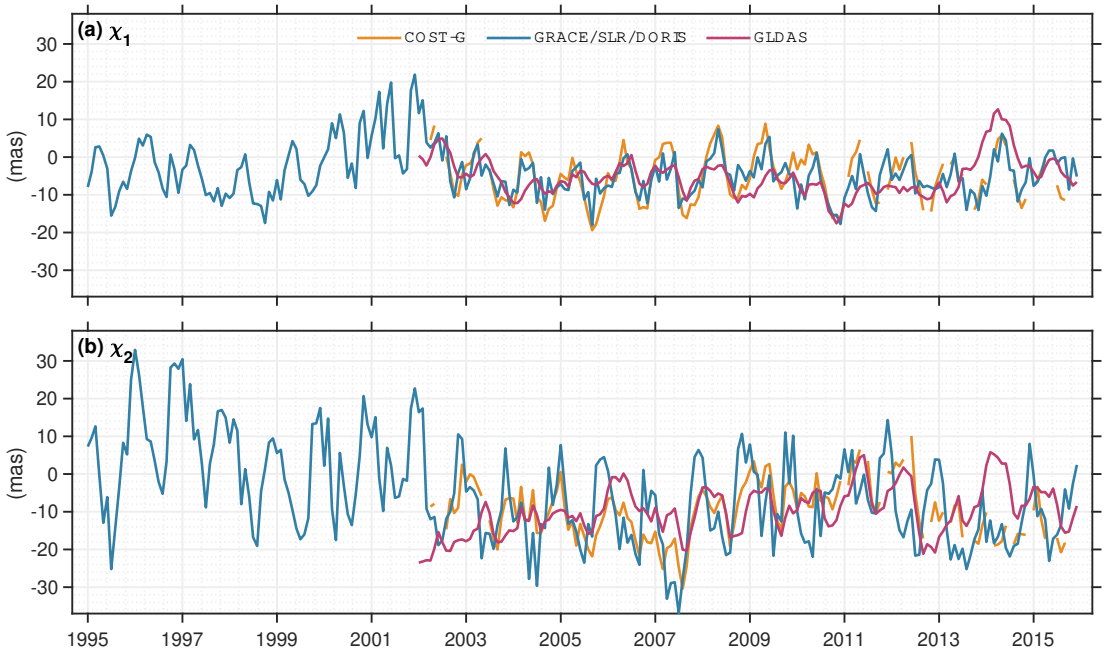

Figure S1. Hydrological contribution $\hat{\chi}^{\mathrm{H}}$ to polar motion excitation $\hat{\chi} = \chi_1 + \mathrm{i}\chi_2$ (mas) deduced from the monthly GRACE/SLR/DORIS gravity field solution described in the main text (1995/01–2015/12, blue curves), the COST-G GravIS RL01 continental water storage anomalies (2002/04–2015/08 with gaps, yellow curves, Boergens et al., 2020), and the Global Land Data Assimilation System (GLDAS, 2002/01–2015/12, purple curves, Rodell et al., 2004). The COST-G and GLDAS time series have been adjusted such that their trends and mean values agree with those of GRACE/SLR/DORIS over the respective common time period, starting early 2002. Note that GRACE/SLR/DORIS was detrended over 1995–2015, as in the main text.

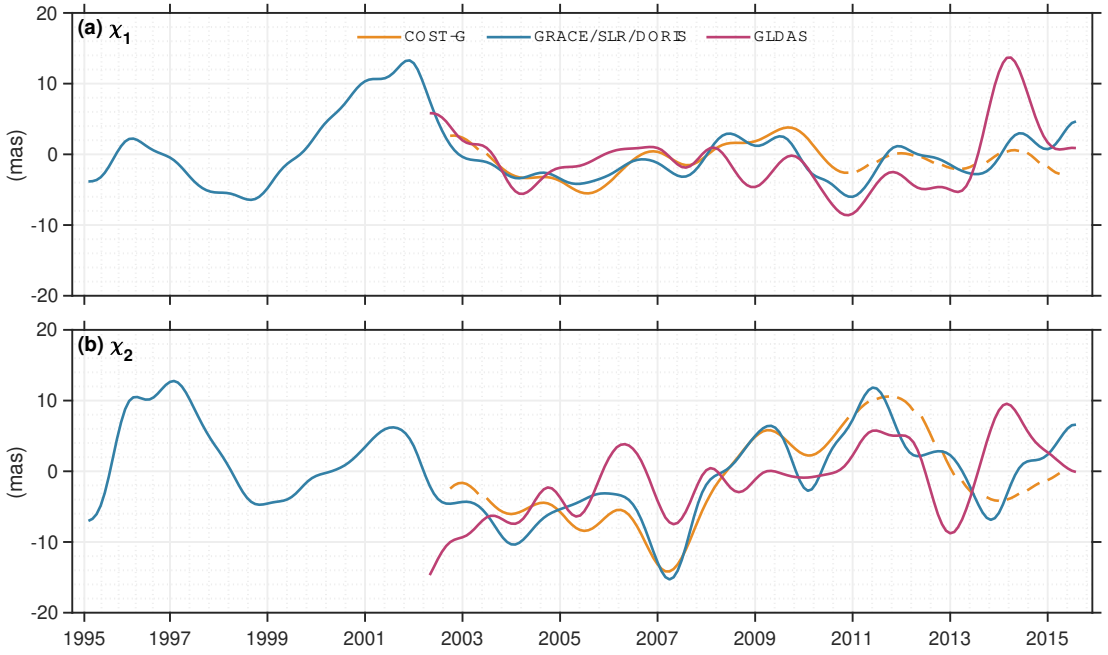

Figure S2. As in Fig. S1 but with each χ_1 and χ_2 time series filtered to periods longer than 14 months and cut back by 4 months at the respective end points.

References

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