

GRACE Residual Daily RMS Difference of v05 with v06 and v08

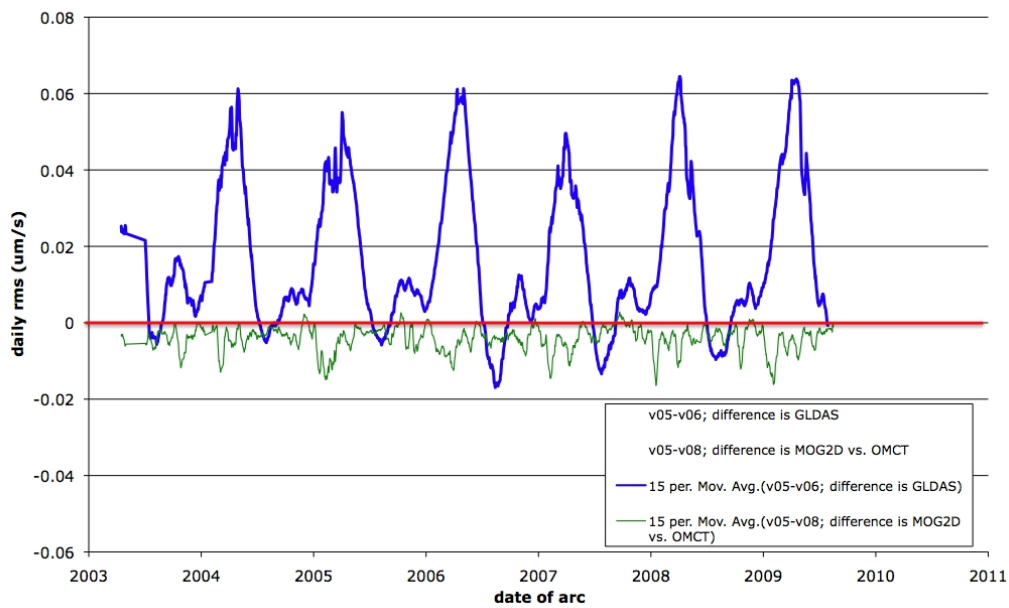


Figure 1: RMS differences of GRACE KBRR residuals with different models, positive values indicating an improvement. The blue curve shows the improvement when continental hydrology variations are estimated using the GLDAS/Noah model. In green, we show that the official ocean model (OMCT) used to reduce the high frequency oceanic circulation (mostly forced by air pressure and wind variations) is not as accurate than the MOG2D model we used.

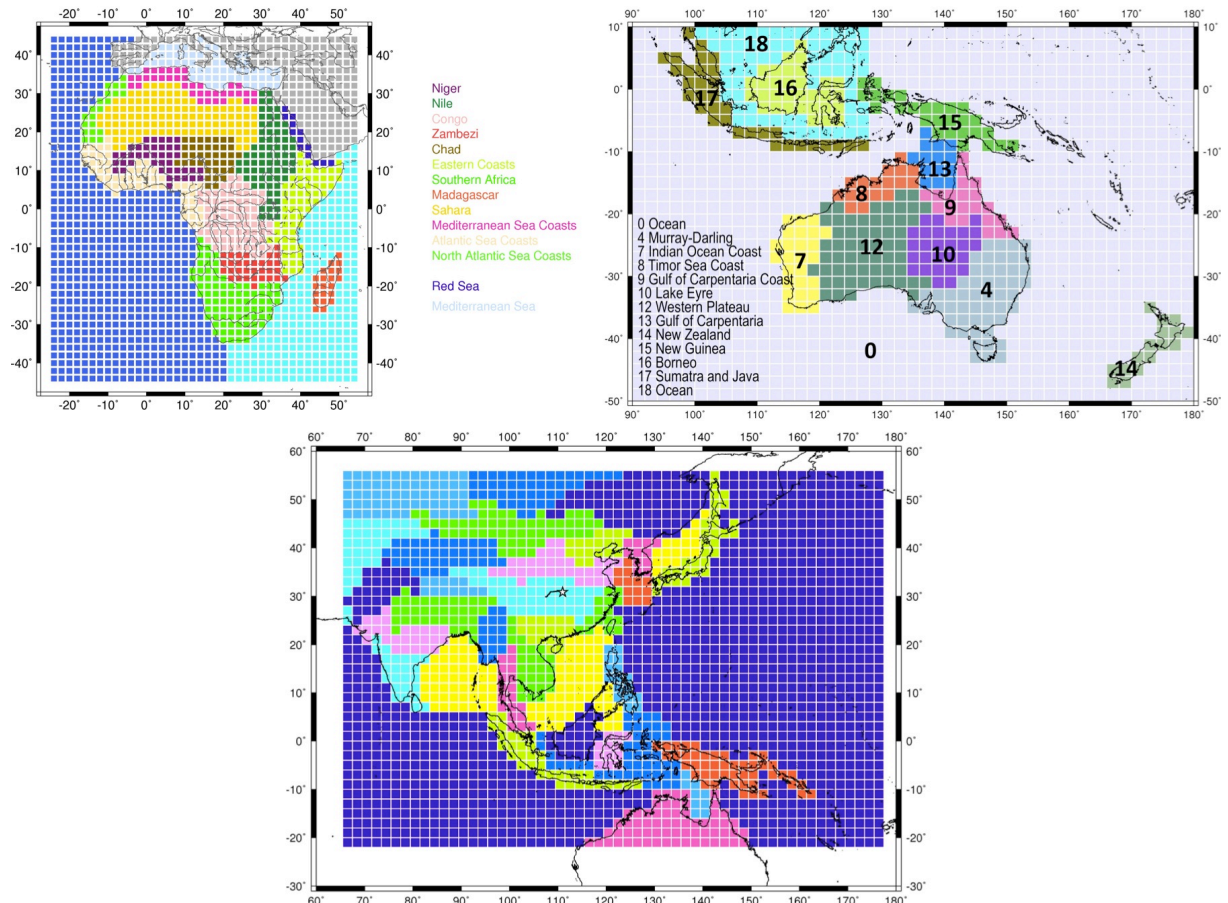


Figure 2: Regional solutions for Africa, Australia and Asia. The colors indicate the different regions where constraints are independently applied.

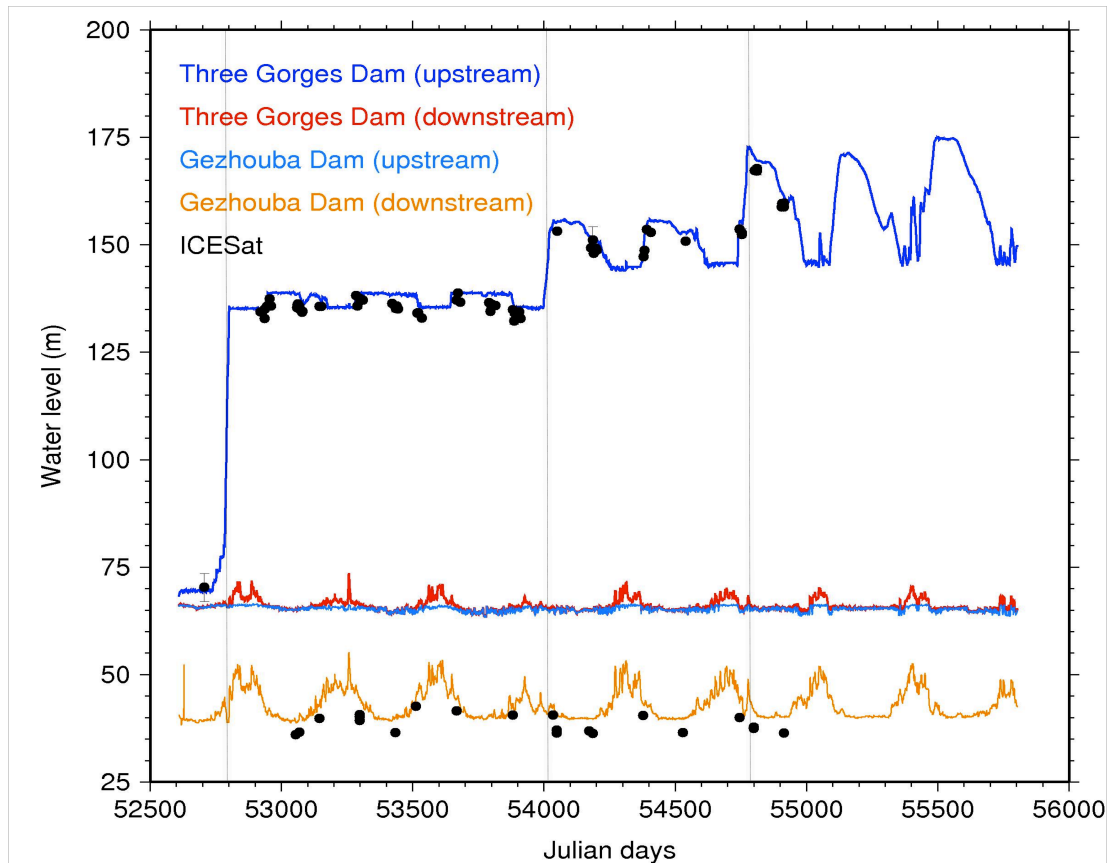


Figure 3: ICESat water level measurements (black dots) along the Yangtze river, showing the three impoundment stages (June 2003, October 2006 and November 2008) and comparison with in-situ water level measurements at the Three Gorges Dam (blue) and Gezhouba Dam (downstream of TGD) (red).

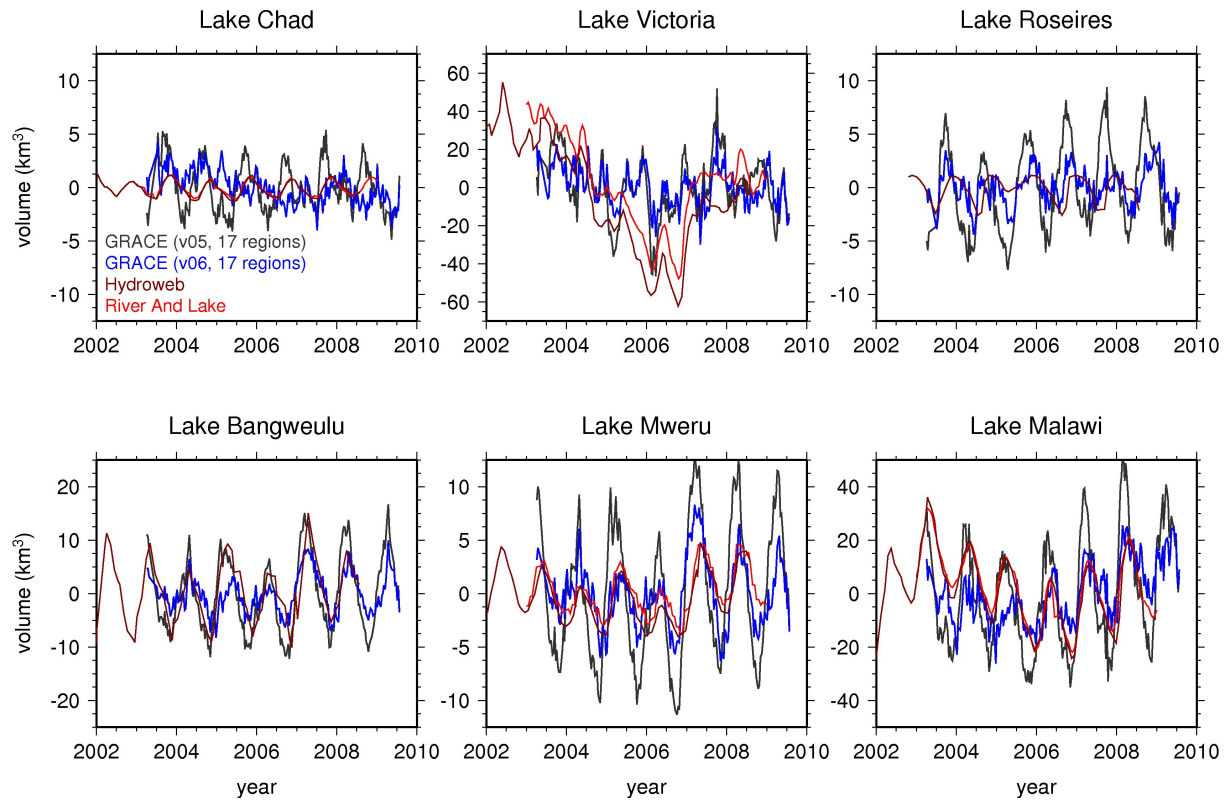


Figure 4: GRACE derived lake volume variations (in grey when hydrology is not forward modeled, in blue when GLDAS/Noah is forward modeled) for six lakes and reservoirs in Africa, and comparison with estimates derived from two radar altimetry products (brown and red).

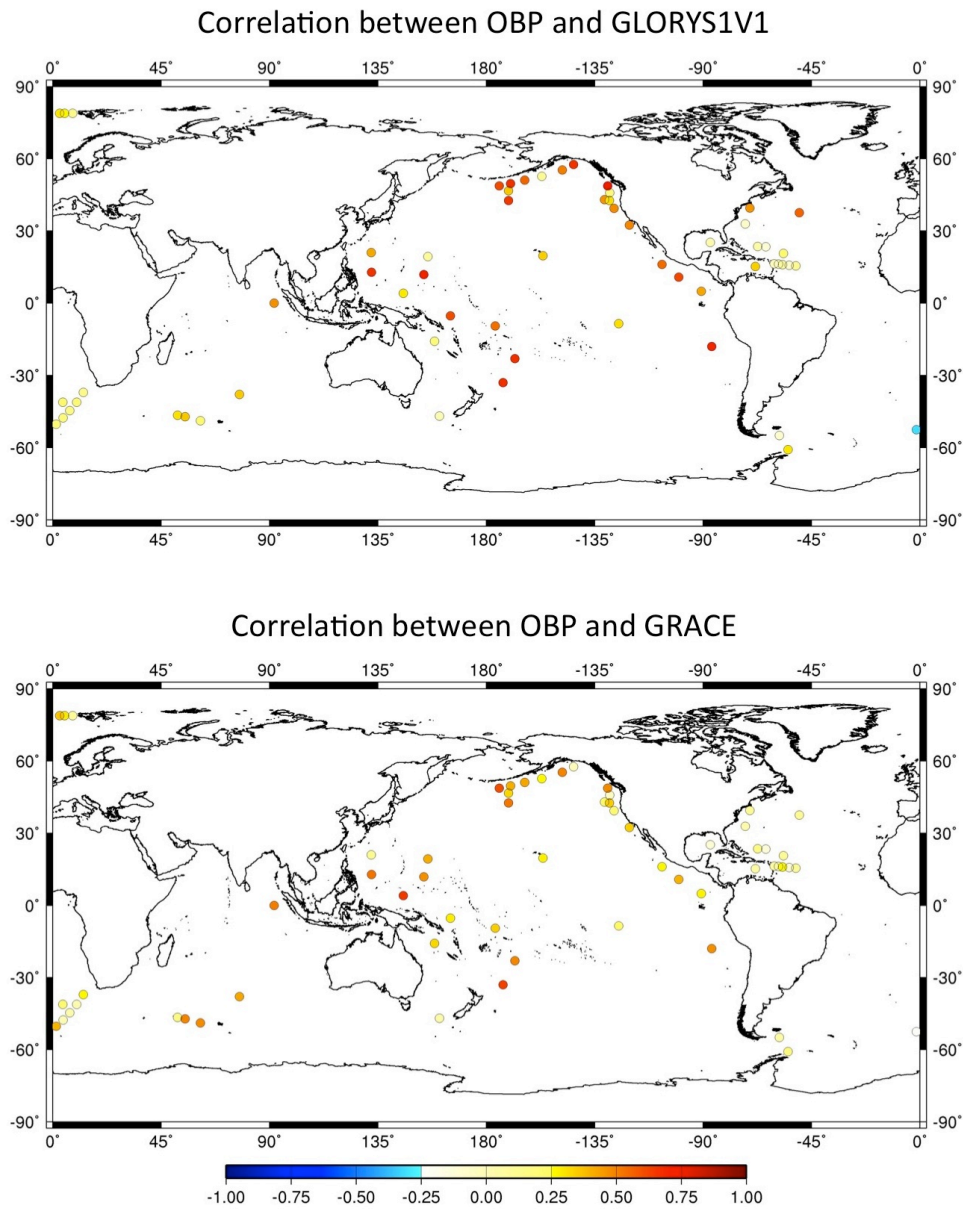


Figure 5: Correlation of ocean bottom pressure measurements with GLORYS1V1 reanalysis (top) and GRACE (bottom) derived mass changes. All series have been decimated to 10-day samples.