

EGSIEM combination service: Validation

Uli Meyer

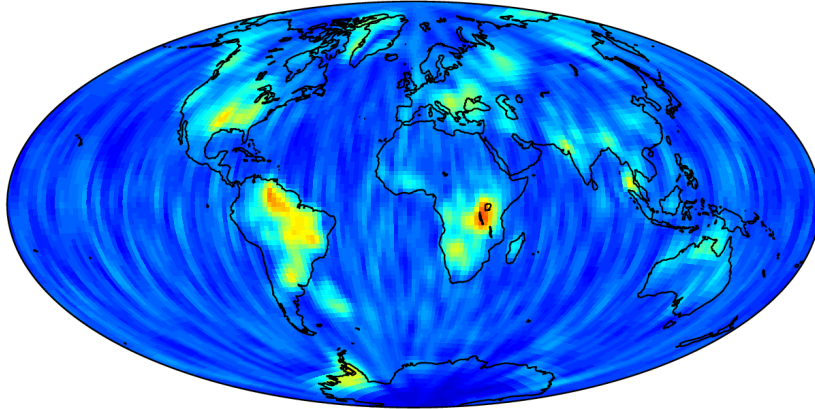
EGSIEM Final Review Meeting

Bern

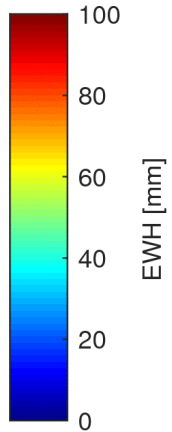
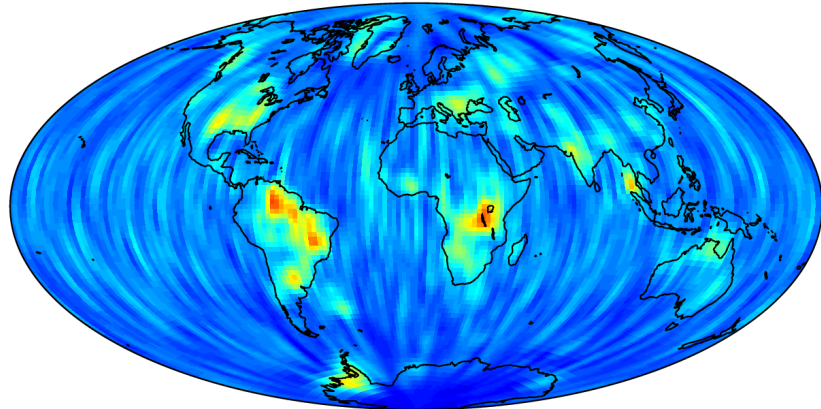
February 8 / 9th, 2018

Pre-EGSIEM: RMS of anomalies

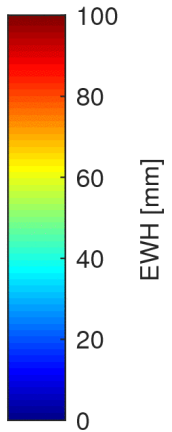
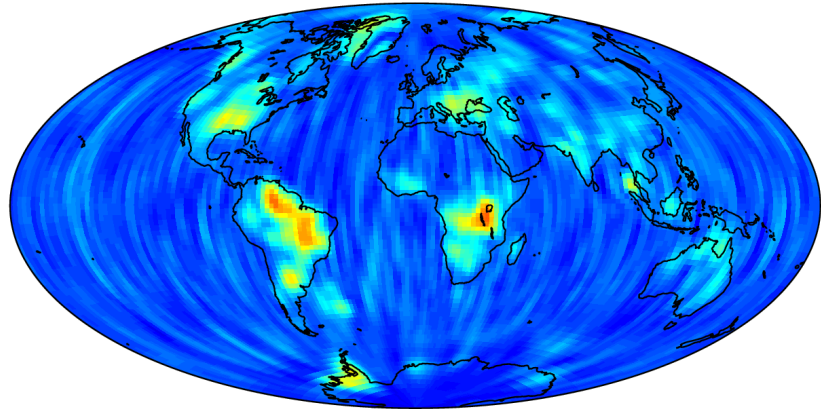
AIUB-RL02



GFZ-RL05a



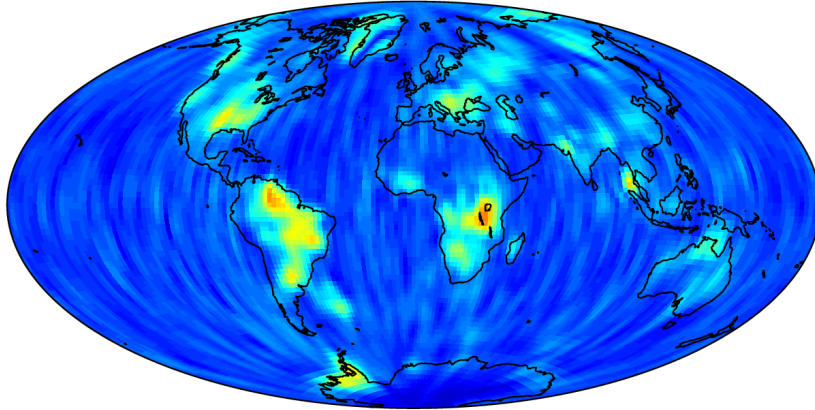
ITSG-2014



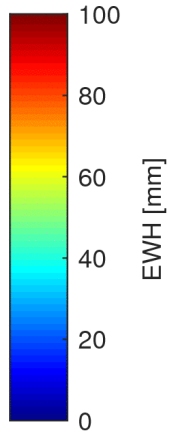
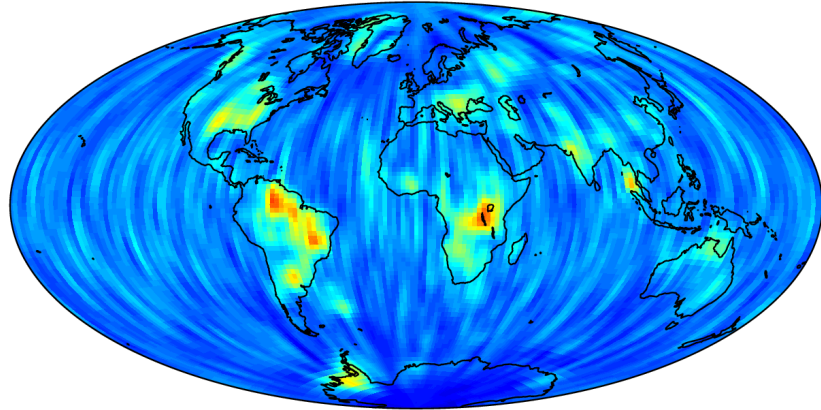
No free pre-EGSIEM
GRGS degree 90 time-
series for comparison.

RMS of anomalies

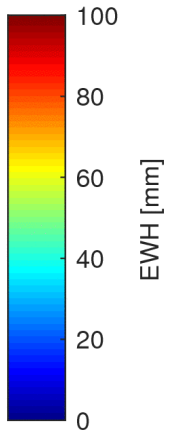
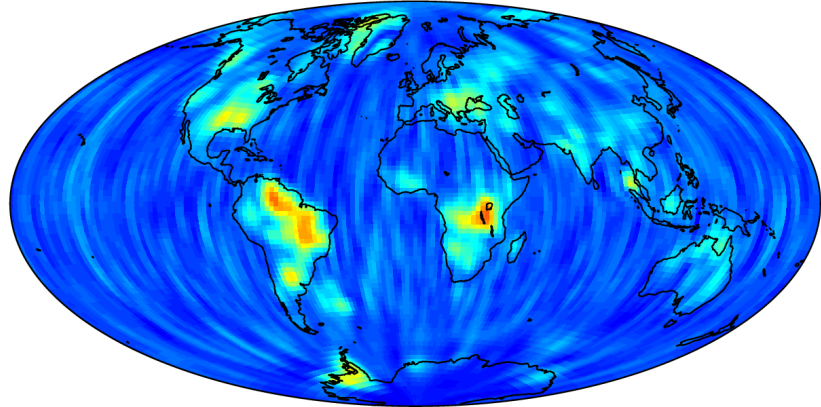
AIUB-EGSIEM



GFZ-RL05a



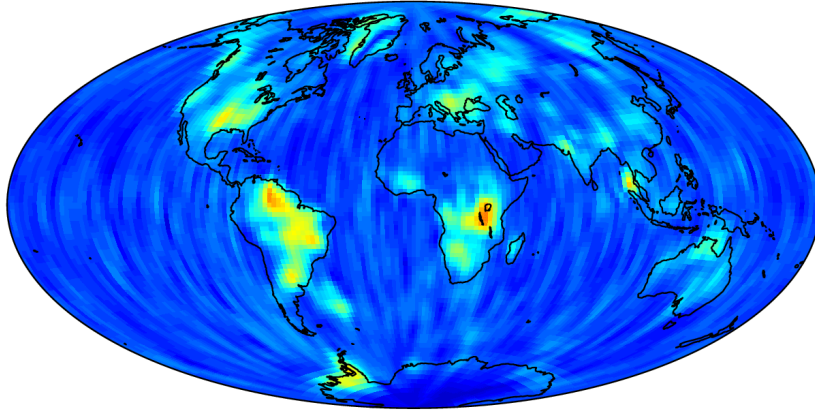
ITSG-2014



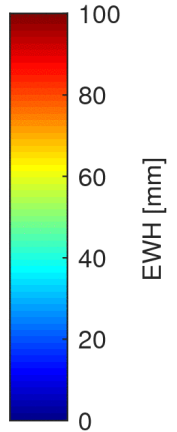
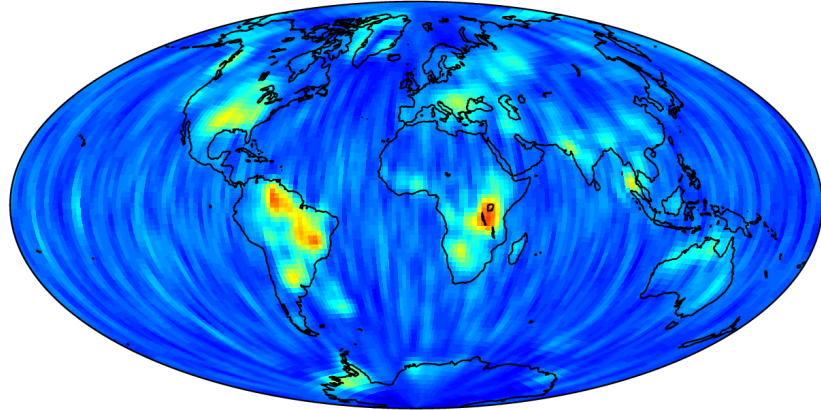
No free pre-EGSIEM
GRGS degree 90 time-
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RMS of anomalies

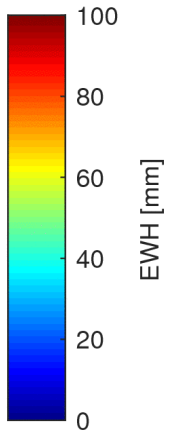
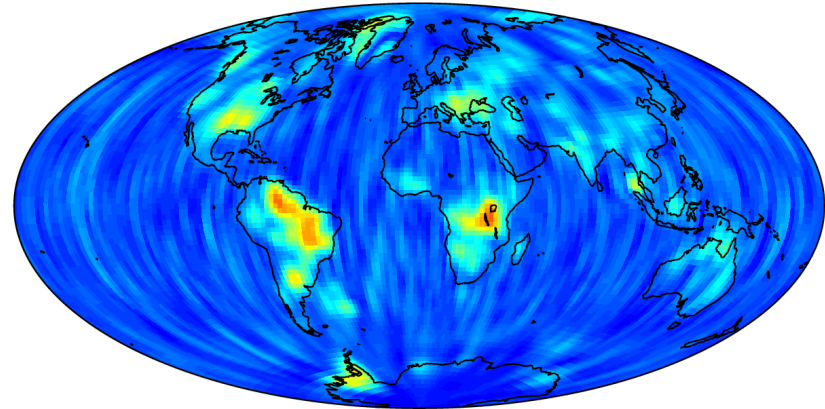
AIUB-EGSIEM



GFZ-EGSIEM



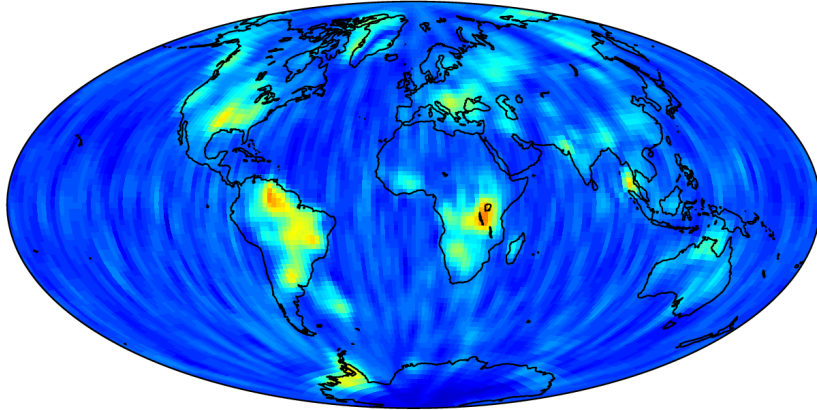
ITSG-2014



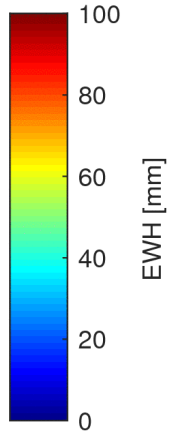
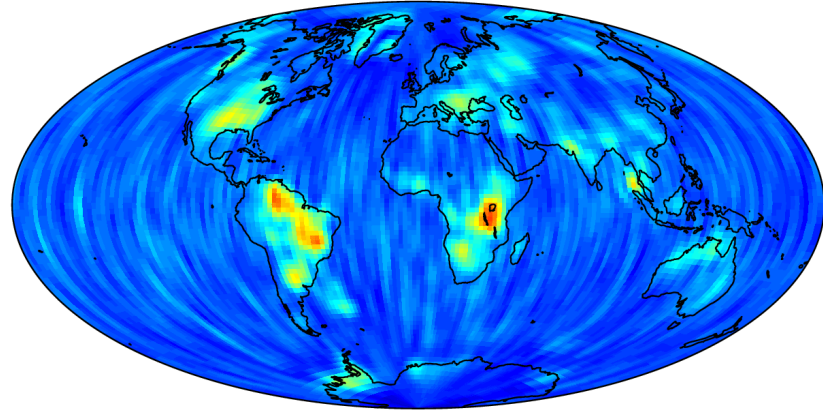
No free pre-EGSIEM
GRGS degree 90 time-
series for comparison.

RMS of anomalies

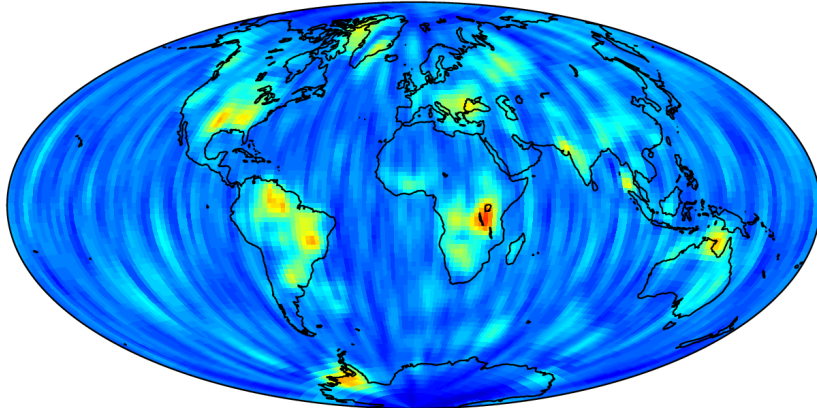
AIUB-EGSIEM



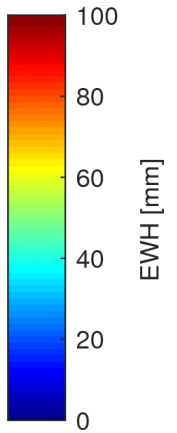
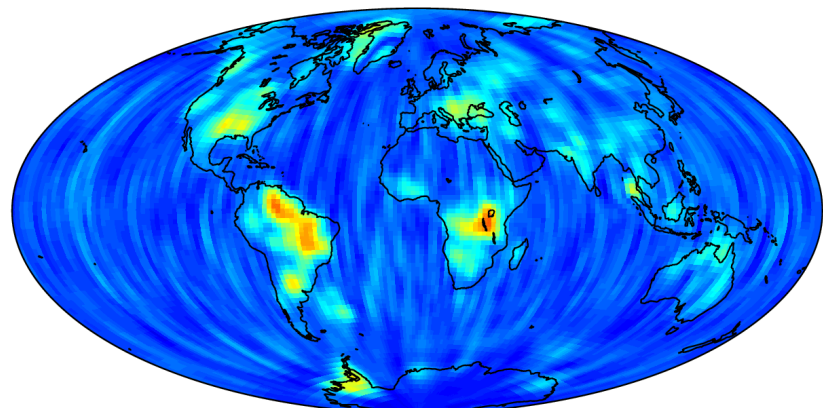
GFZ-EGSIEM



GRGS-EGSIEM

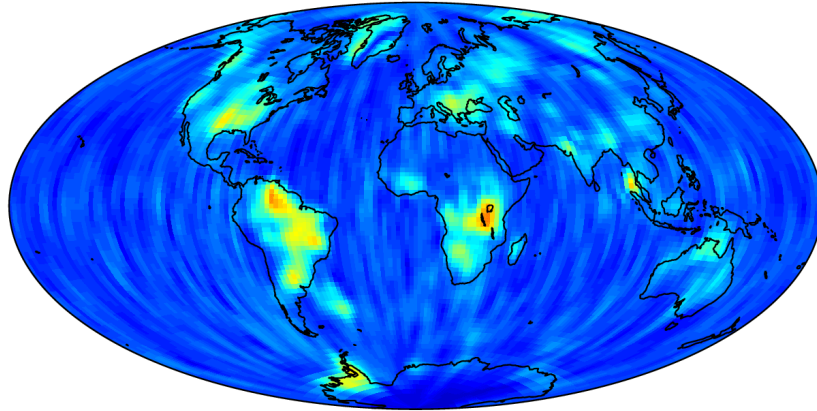


ITSG-2014

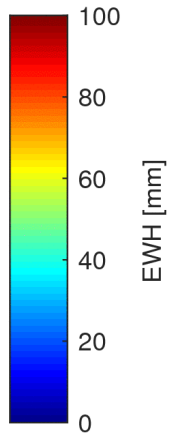
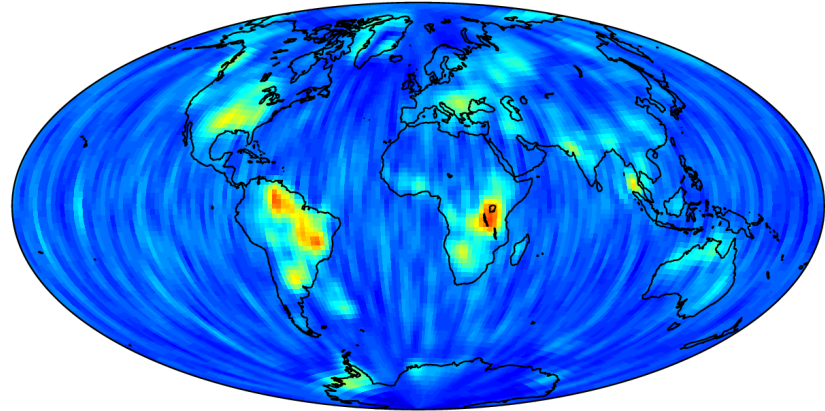


EGSIEM (WP2): RMS of anomalies

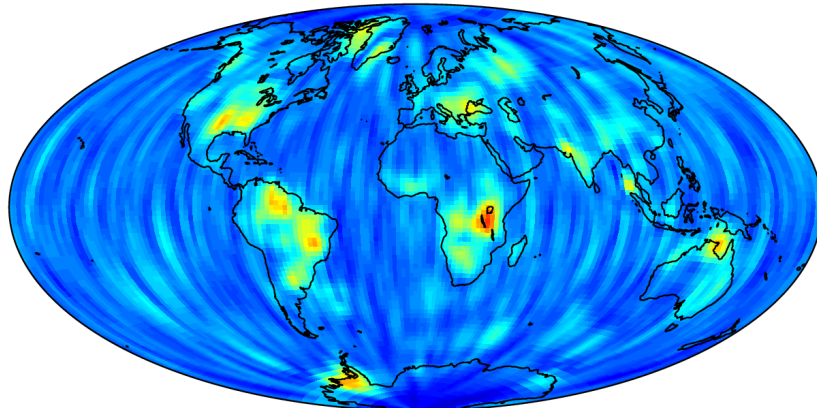
AIUB-EGSIEM



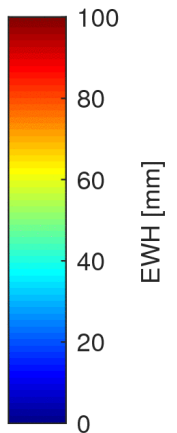
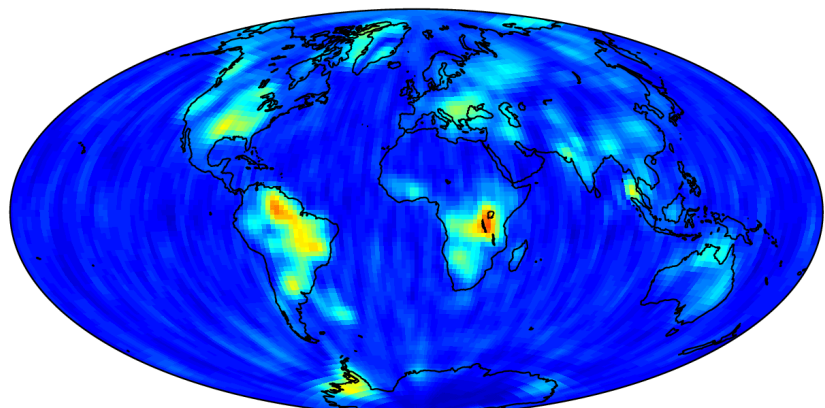
GFZ-EGSIEM



GRGS-EGSIEM

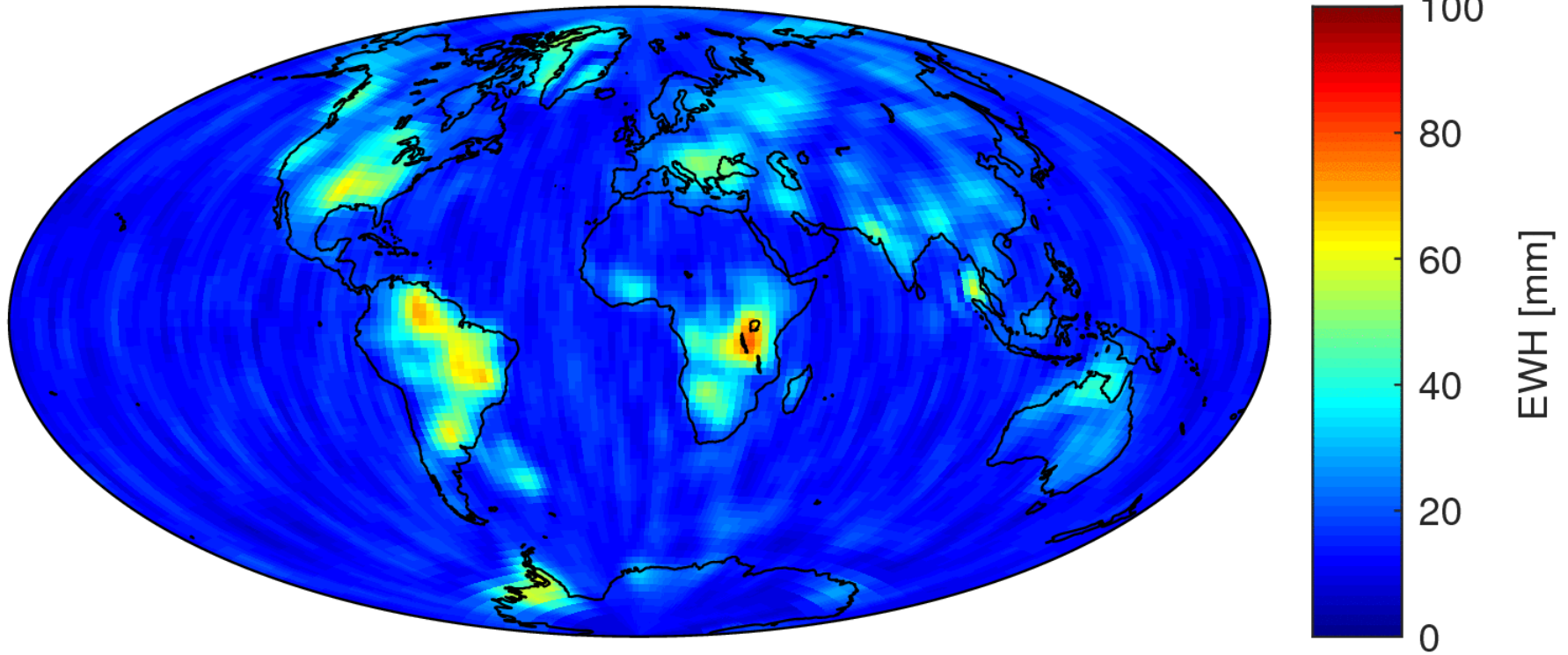


ITSG-EGSIEM



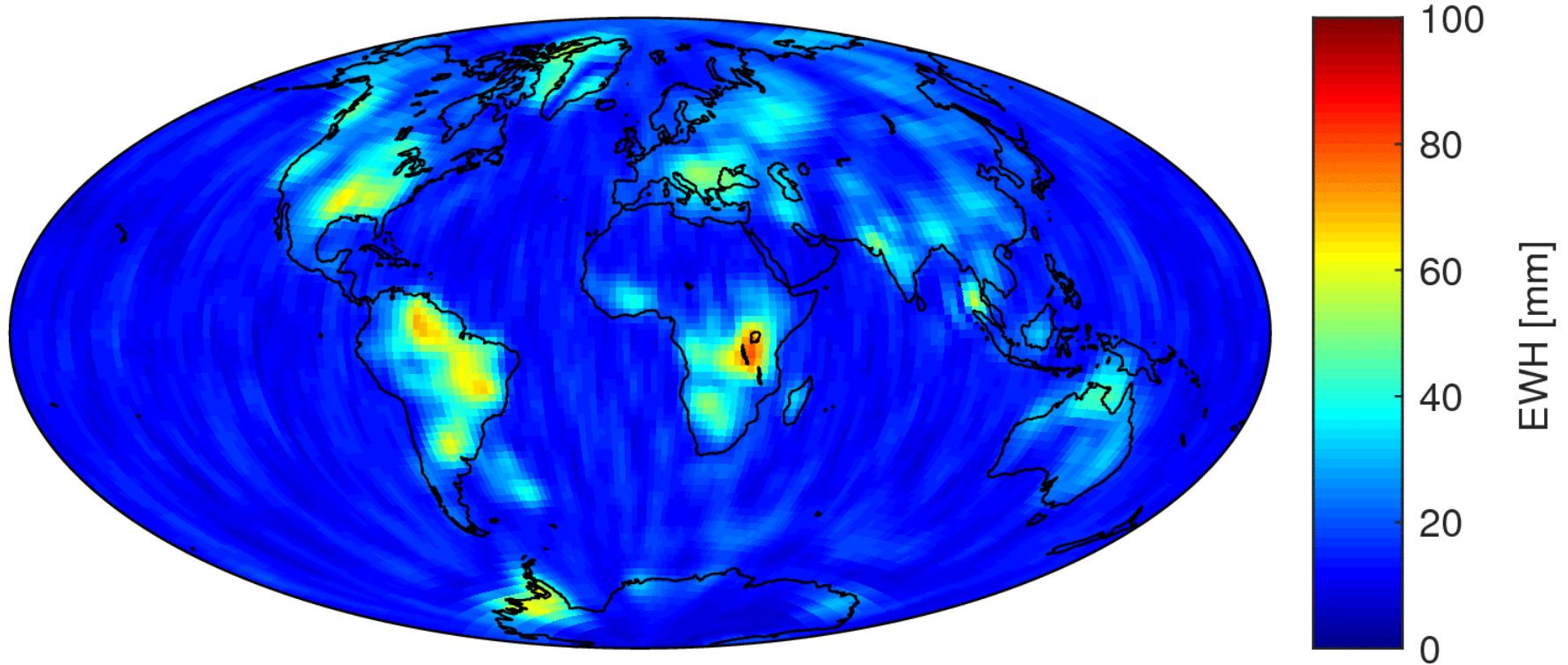
Combination on NEQ-level (with GRGS80)

EGSIEM-RL01p



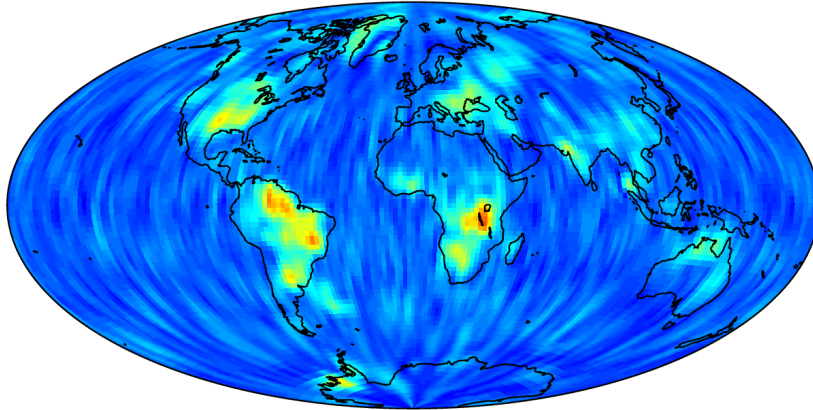
Combination on NEQ-level (with GRGS90)

EGSIEM-RL01

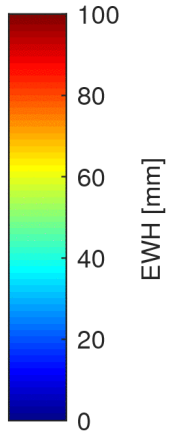
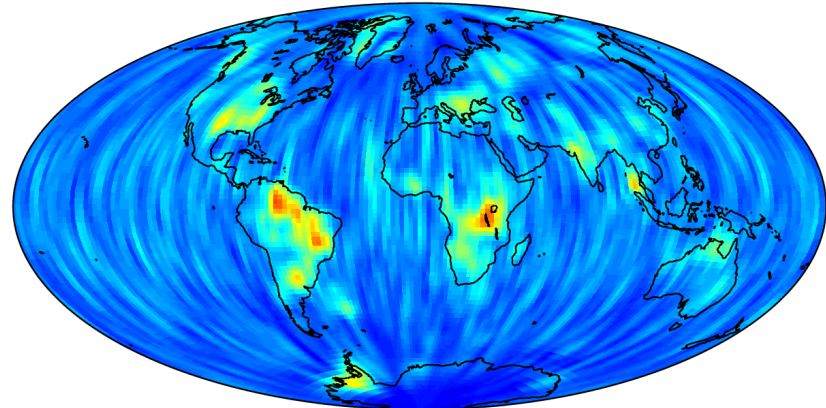


Validation in spatial domain

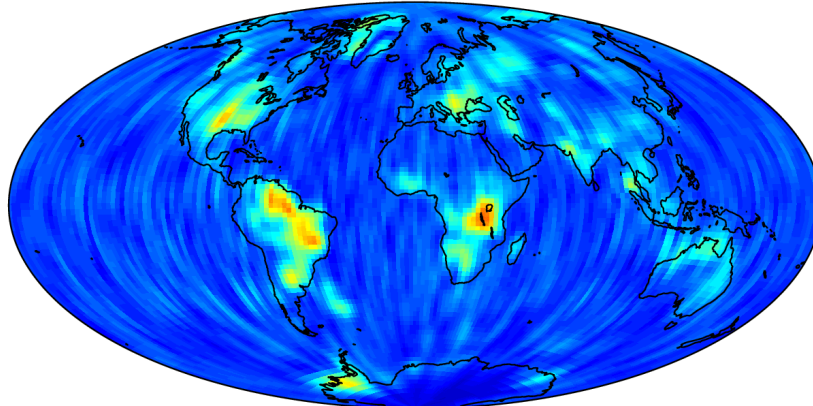
JPL-RL05



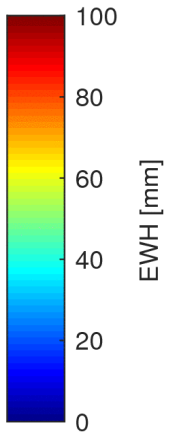
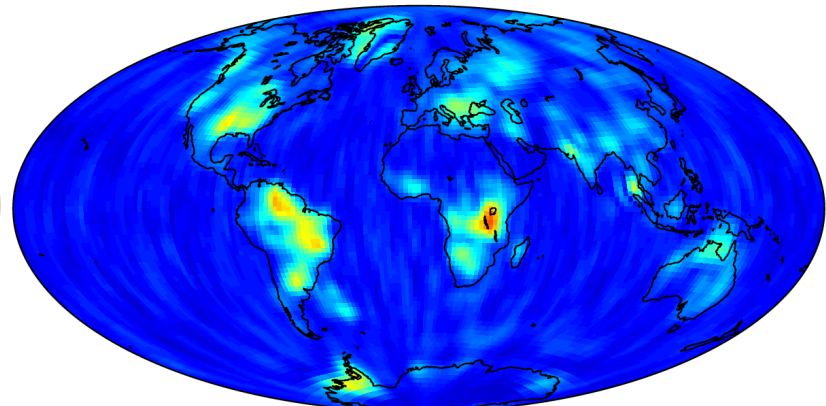
GFZ-RL05a



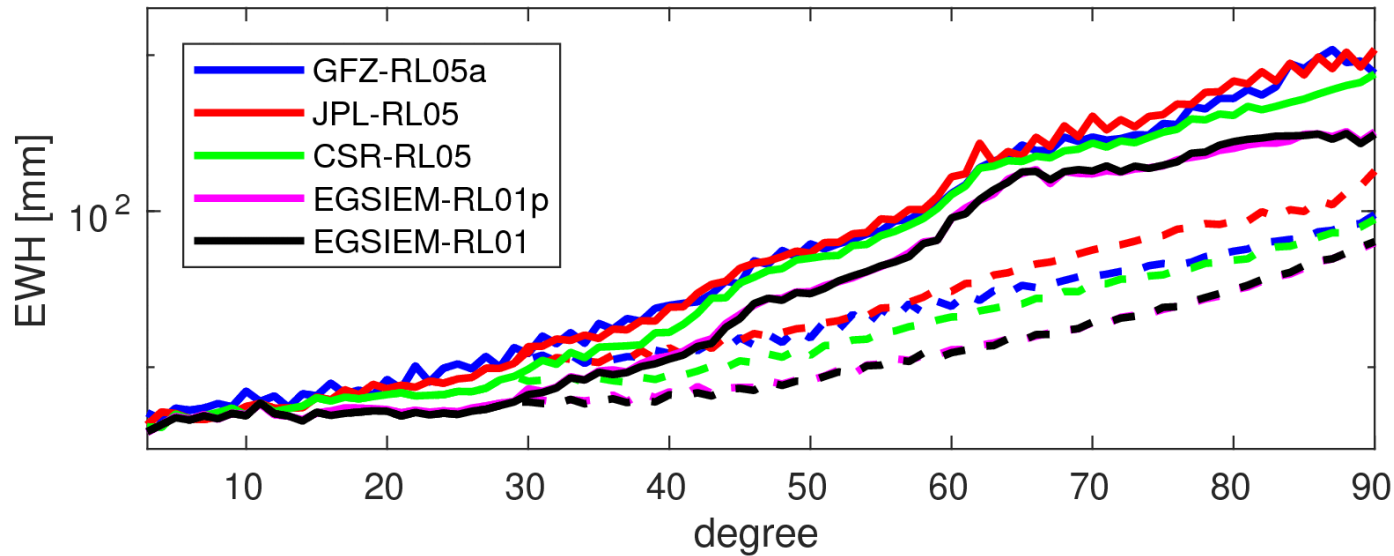
CSR-RL05



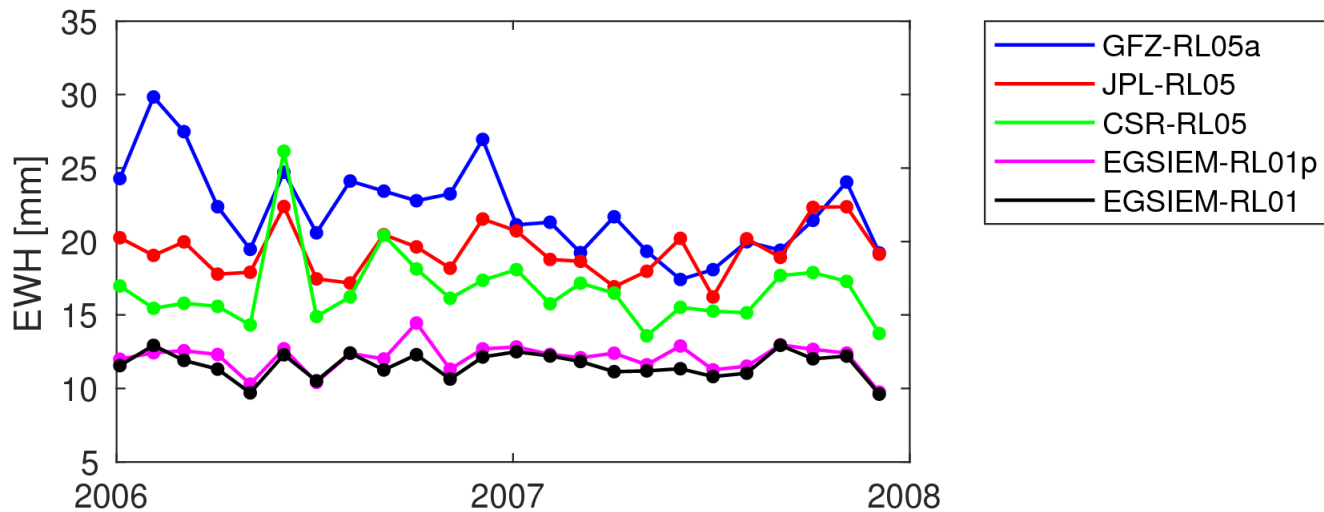
EGSIEM-RL01



Validation in spectral and time domain

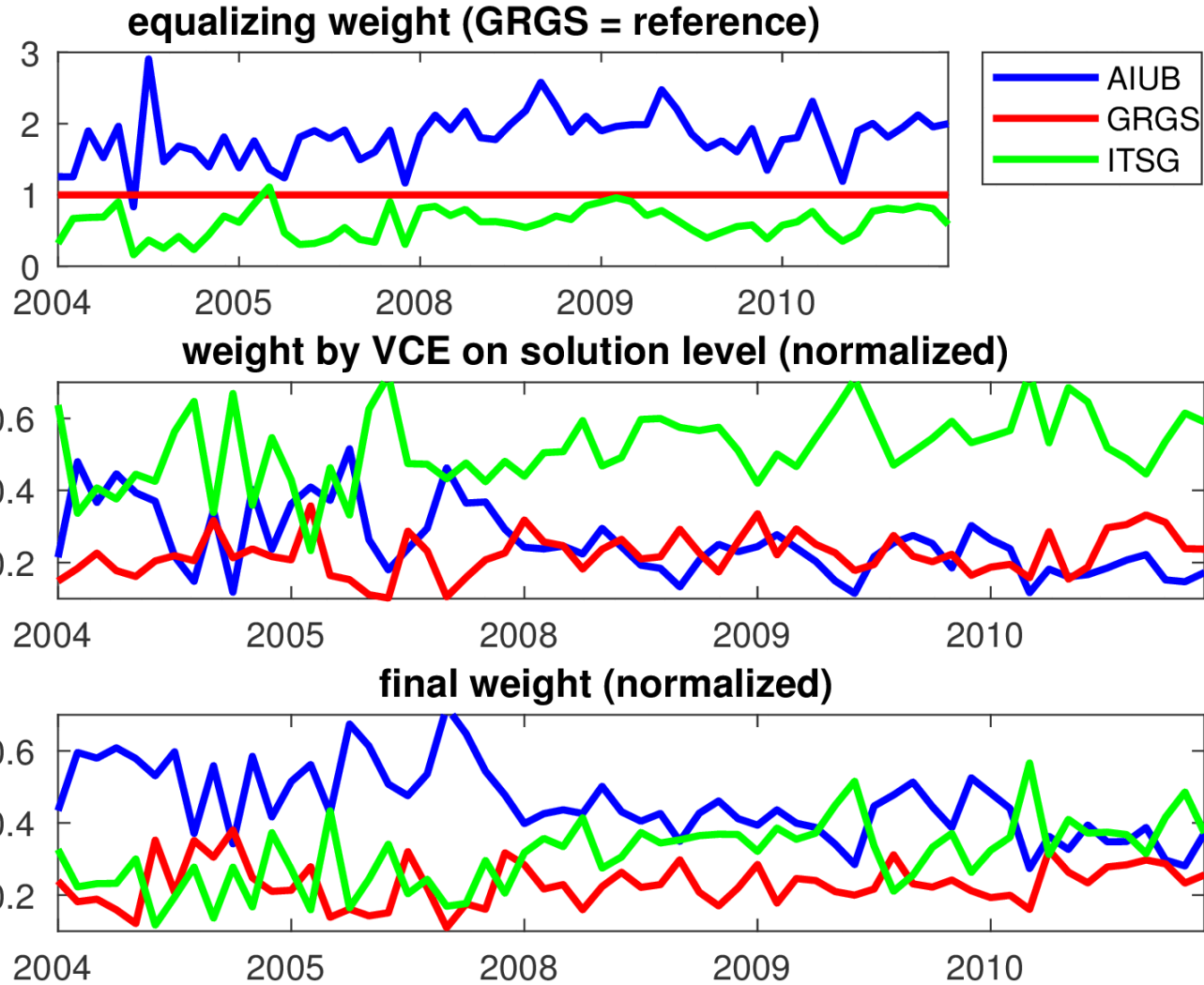


Degree amplitudes of anomalies (all orders / orders 0-29).

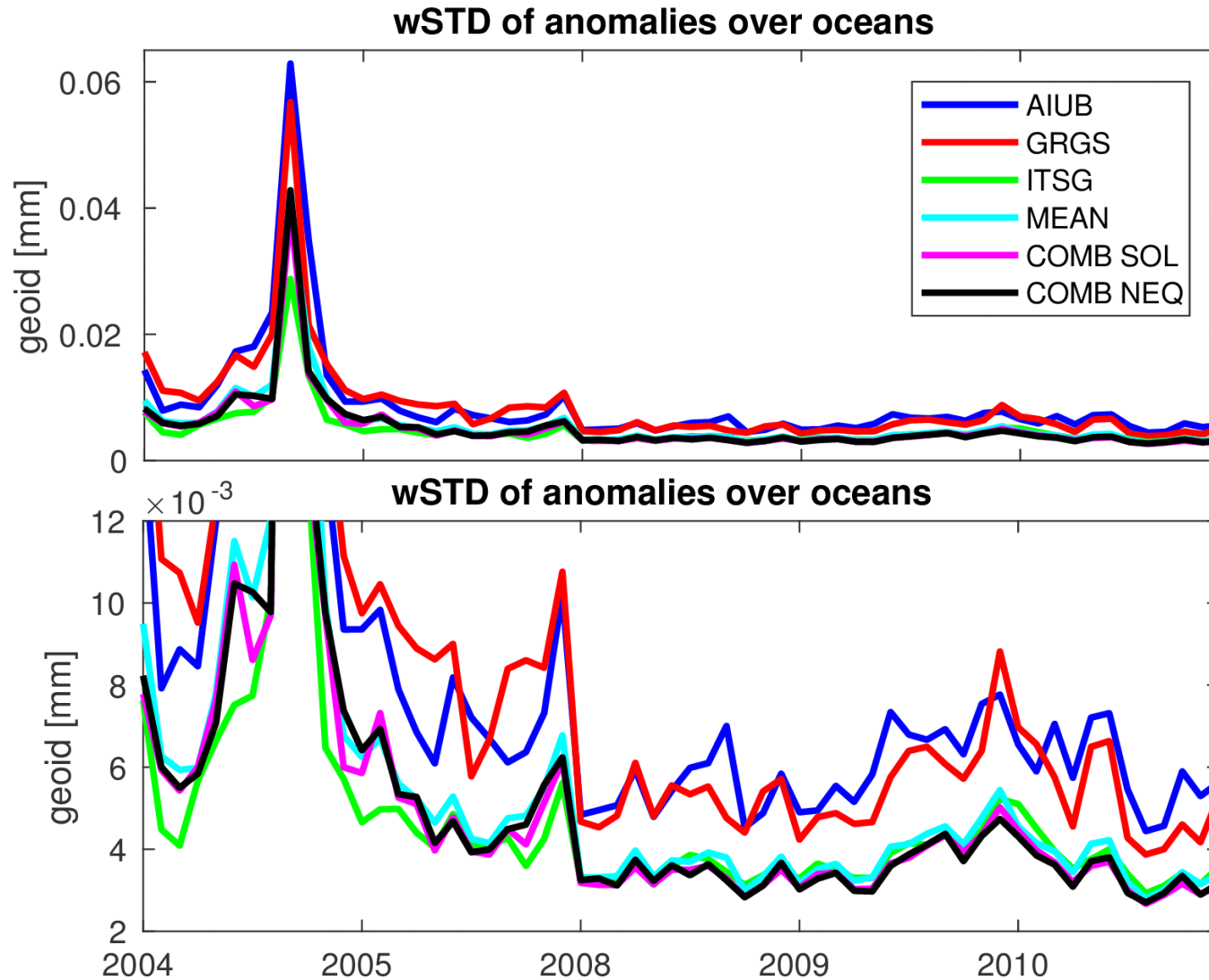


RMS of anomalies in ocean areas (smoothed by 400 km Gauss filter).

Long time-series: weights



Long time-series: noise in ocean areas



Outlook

- Presentation of long EGSiEM time-series (2004-2010) at EGU 2018.
- Continuation of the EGSiEM combination service as **International Combination Service for Time-variable Gravity Field Solutions (COST-G)** under the umbrella of the **International Gravity Field Service (IGFS)** of the **International Association of Geodesy (IAG)**
 - CSR has announced to provide their GRACE-RL06 NEQs in summer 2018 for combination.
- Combination of SWARM GPS-NEQs for SWARM DISC.
- Combination with LEO SLR-NEQs (colaboration with DGFI / TU Munich).