

TIGA - 2nd GNSS Reprocessing 1994-2012

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Content

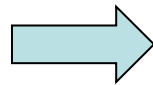
- Introduction TIGA
- TIGA Reprocessing activity at GFZ
- Station coordinate solution validation
- Satellite orbit validation
- Summary

Introduction TIGA



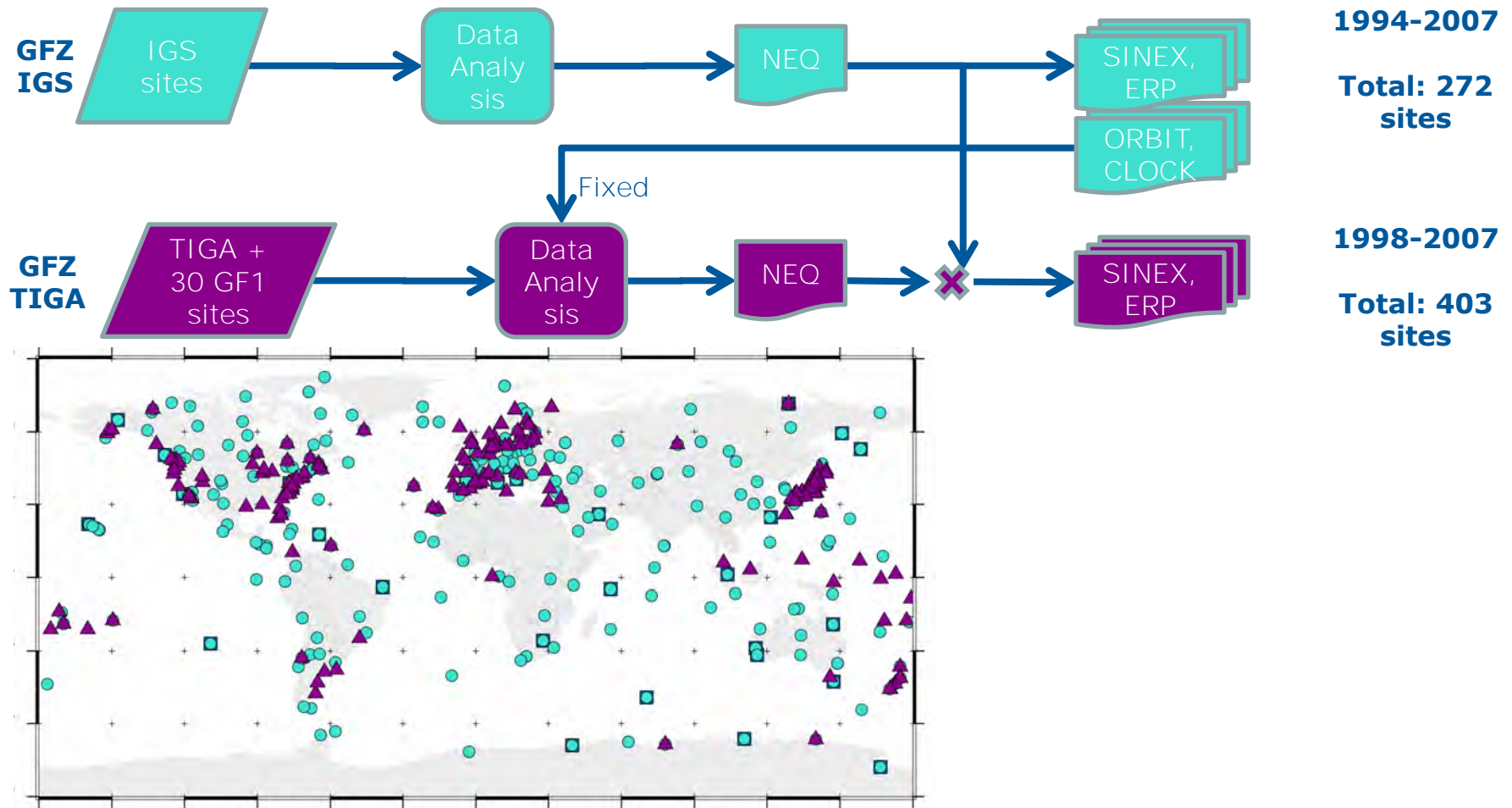
GNSS controlled **Tide Gauge** stations in Indonesia

vertical geocentric
positions, motion and
displacements



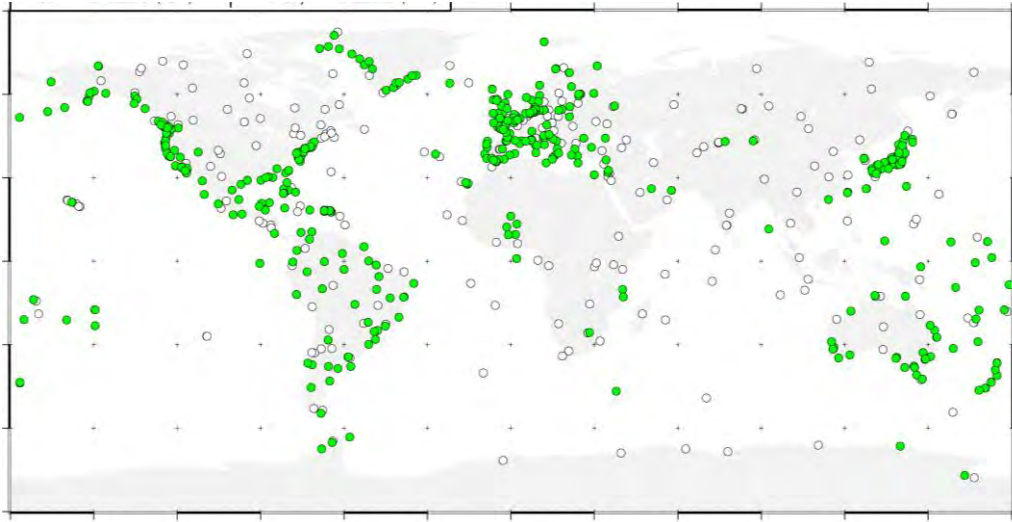
- sea level change studies
- radar altimetry calibrations
- sea level hazard monitoring
- World Height System.

GFZ contribution to TIGA Repro1 (2008)



(Uhlemann et al. 2010, IGS workshop)

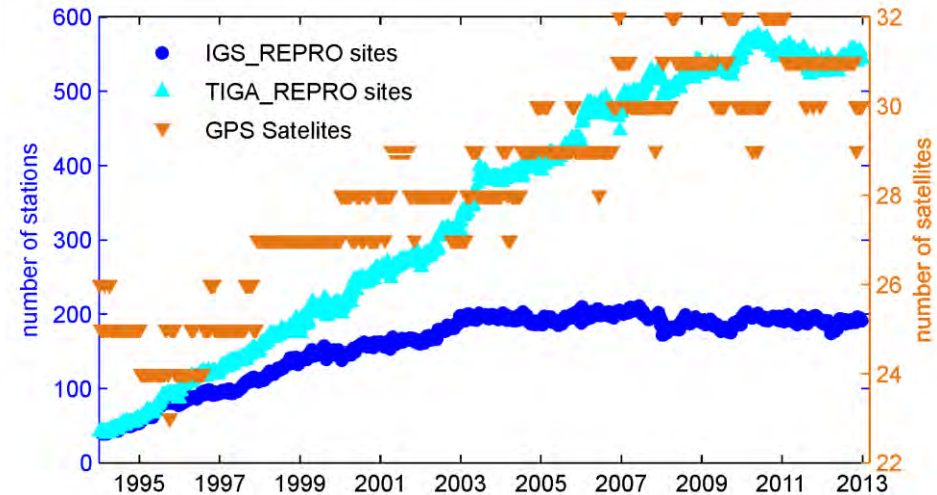
GFZ TIGA Reprocessing 2 (2014)



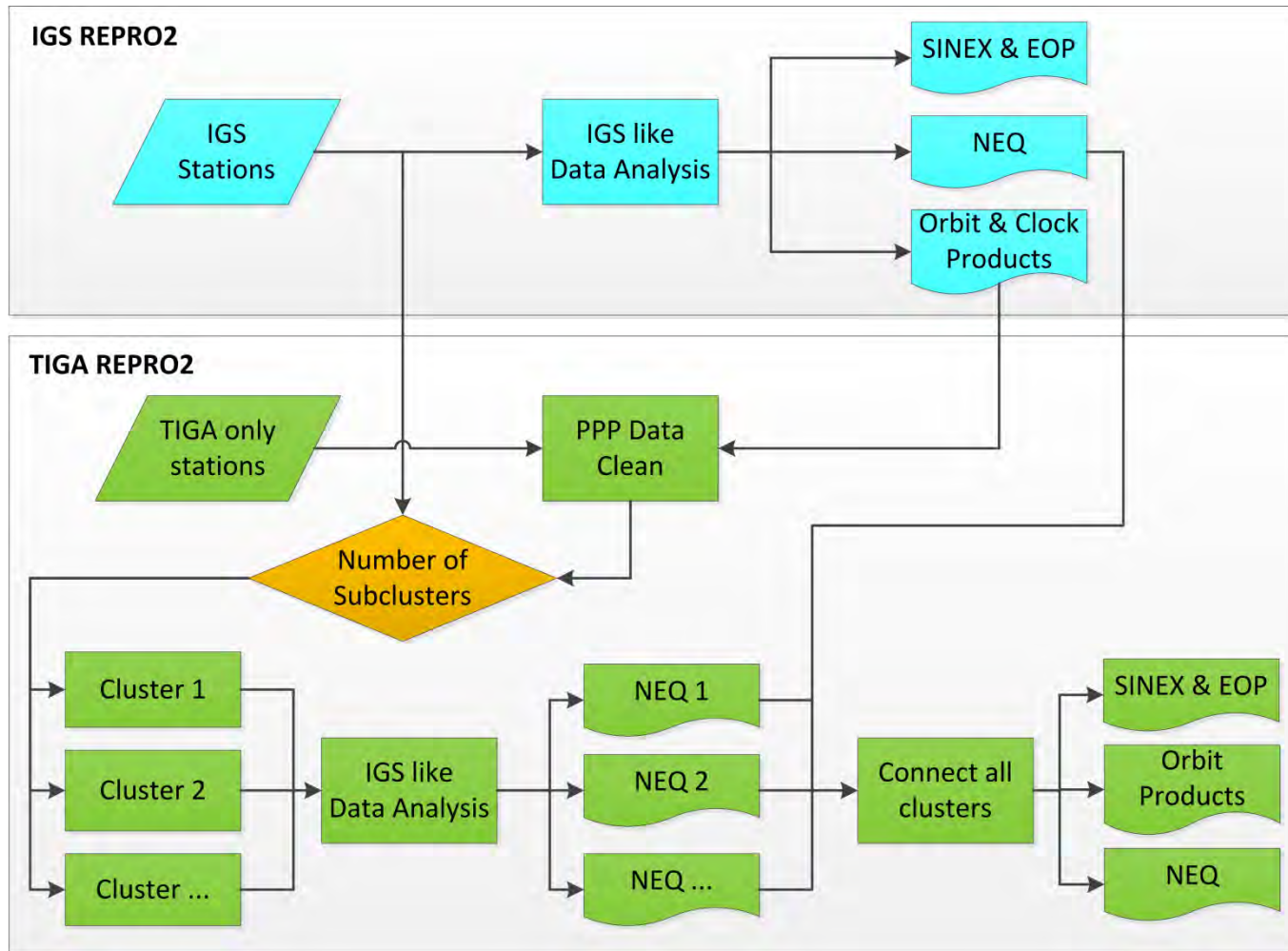
- **Products**

- GF2: 15 min. GPS SP3 orbit
5 min. clock correction
daily SNX & ERP
- GT2: 15 min. GPS SP3 orbit
daily/weekly SNX

- **Two solutions GF2 & GT2**
GF2: 317 stations (white dots)
GT2: 794 stations (white+green dots)



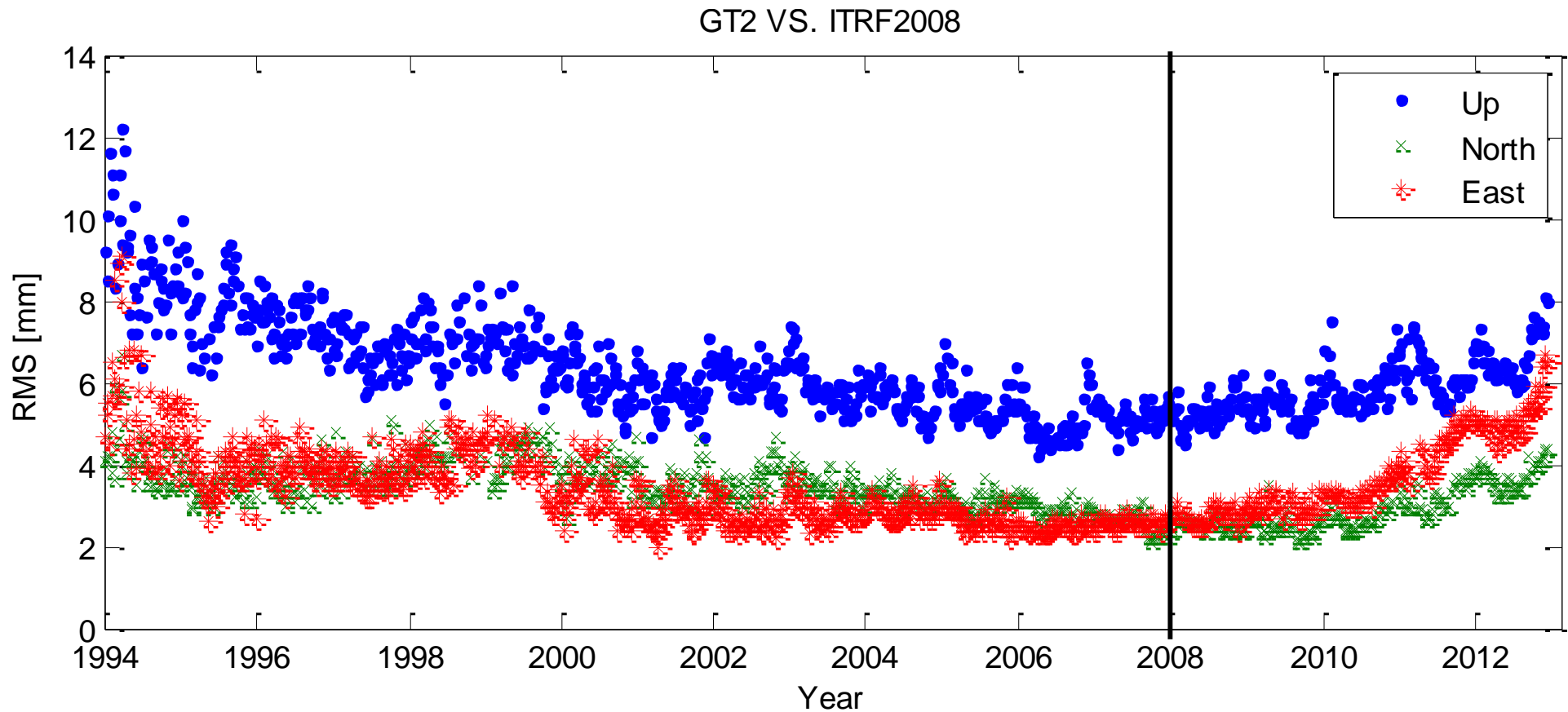
Processing Schemes



IGS Products

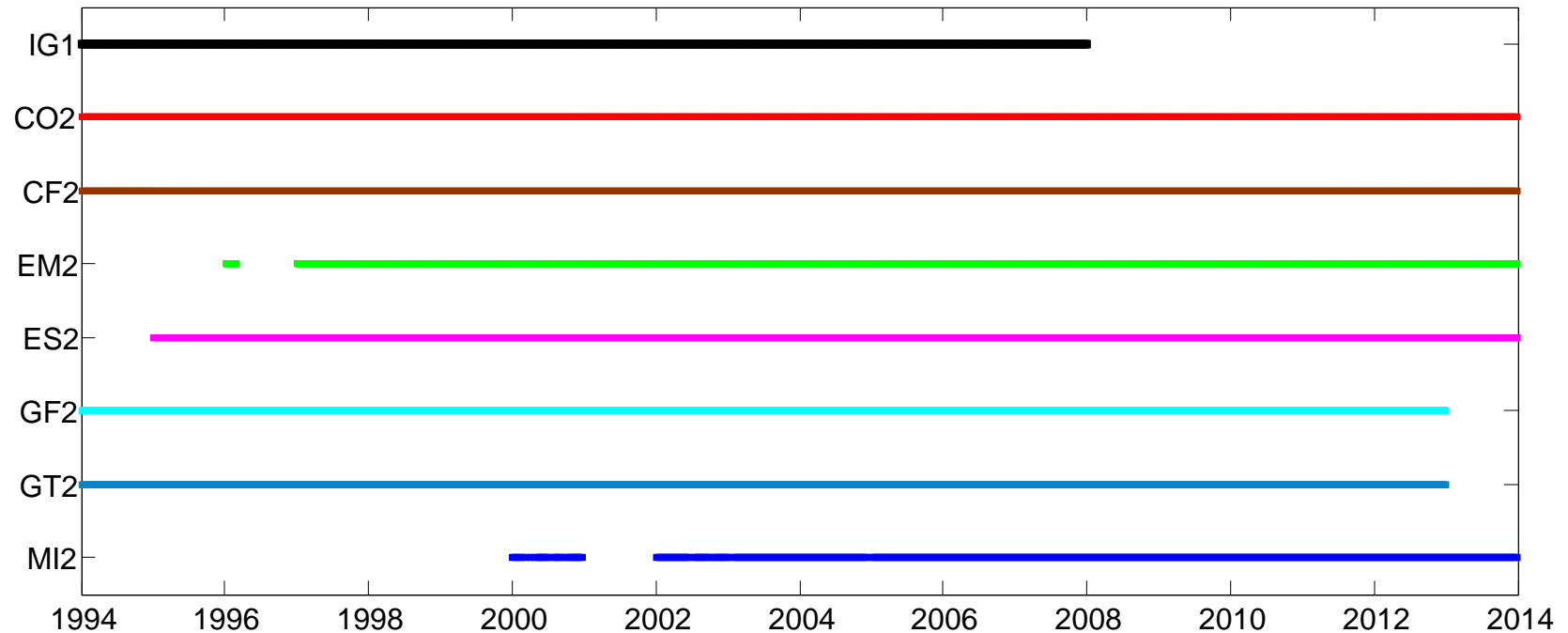
TIGA Products

TIGA Repro2 Coordinate solution



RMS of the TIGA weekly solutions with respect to International Terrestrial Reference Frame (ITRF)2008.

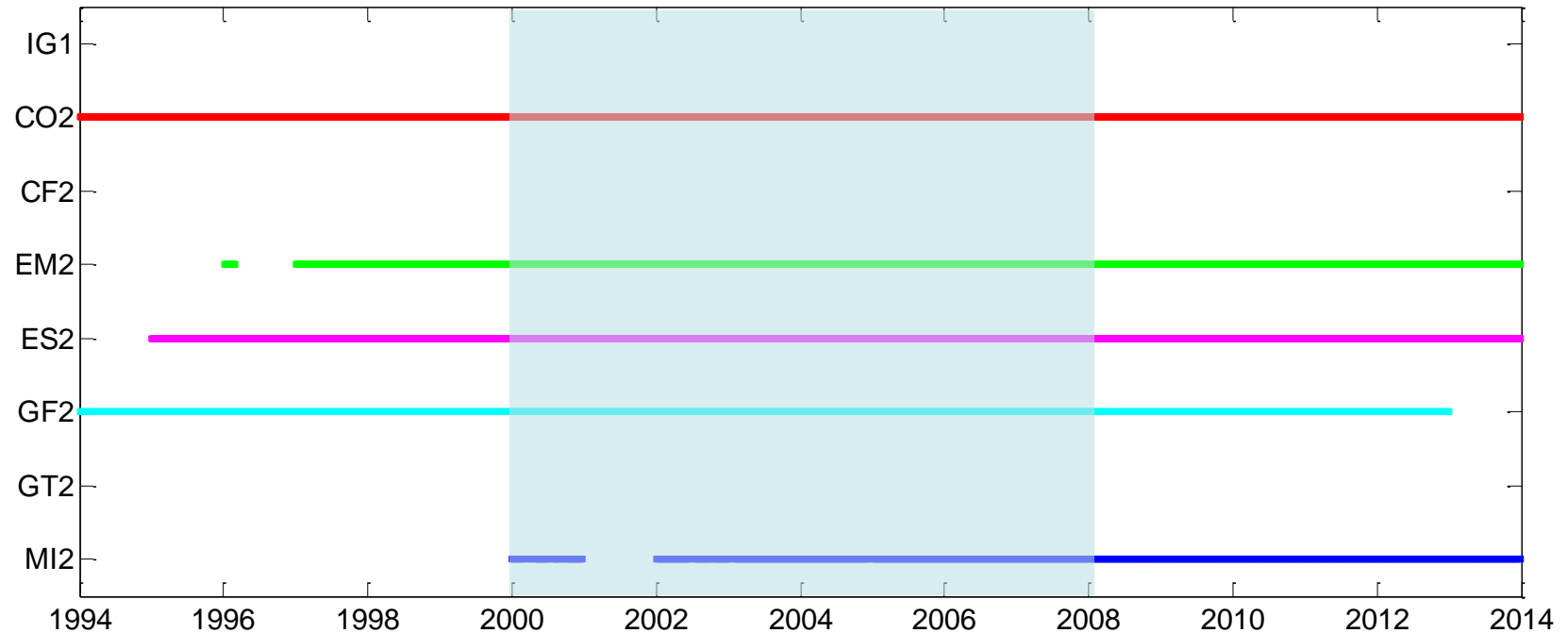
IGS Repro2 products availability



Status: June 04 2014

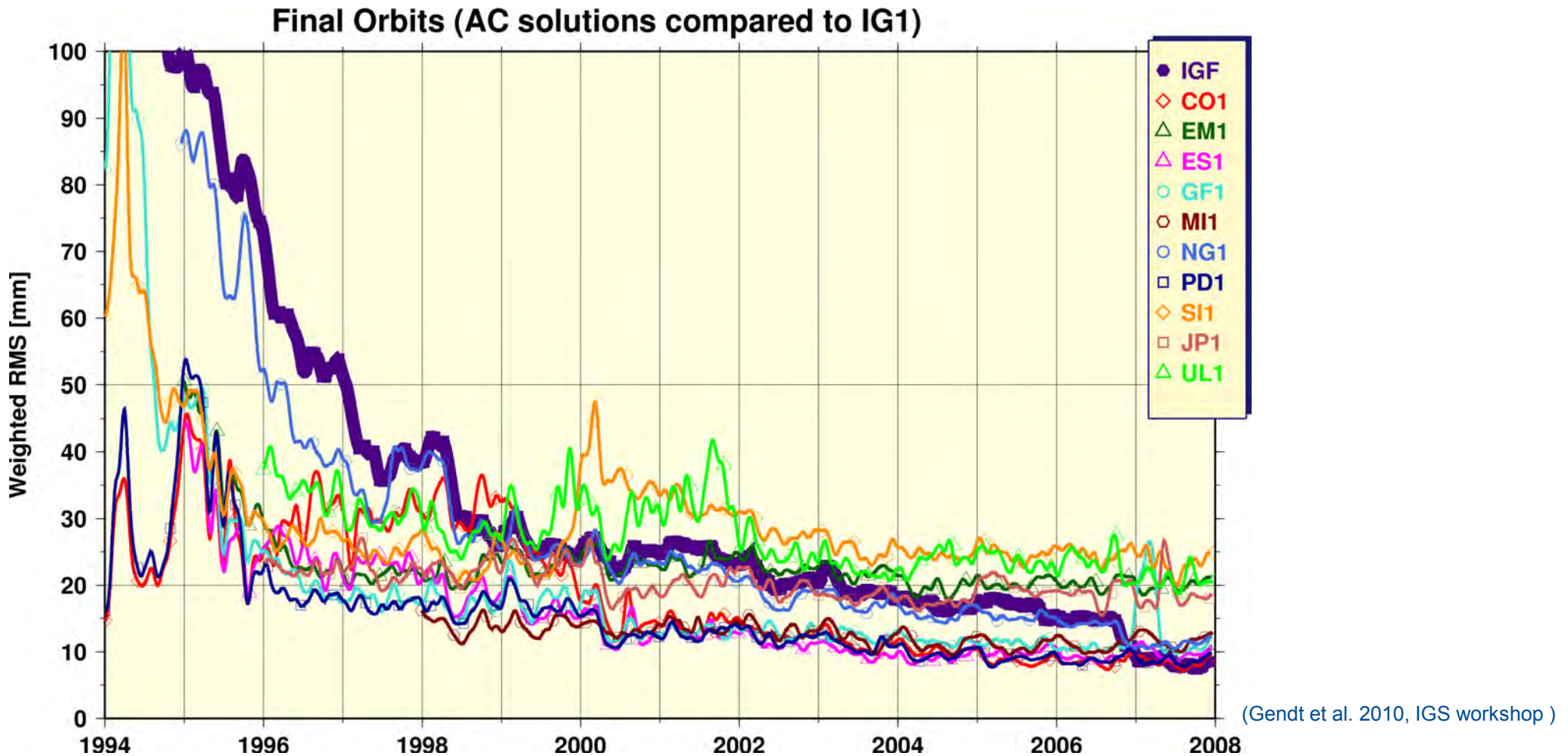
IGS Repro2 products availability

Orbit combination: GFZ_COMB2

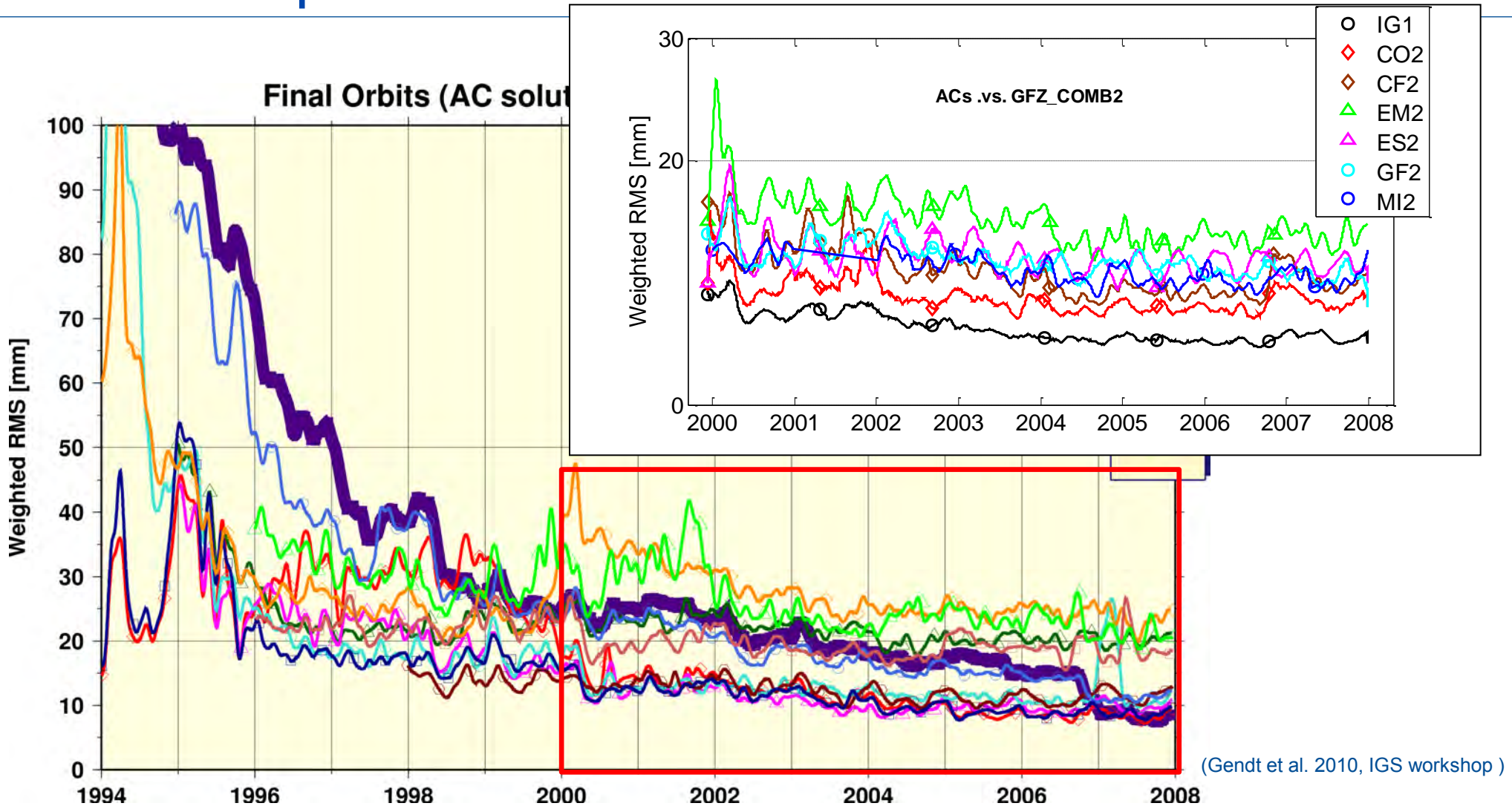


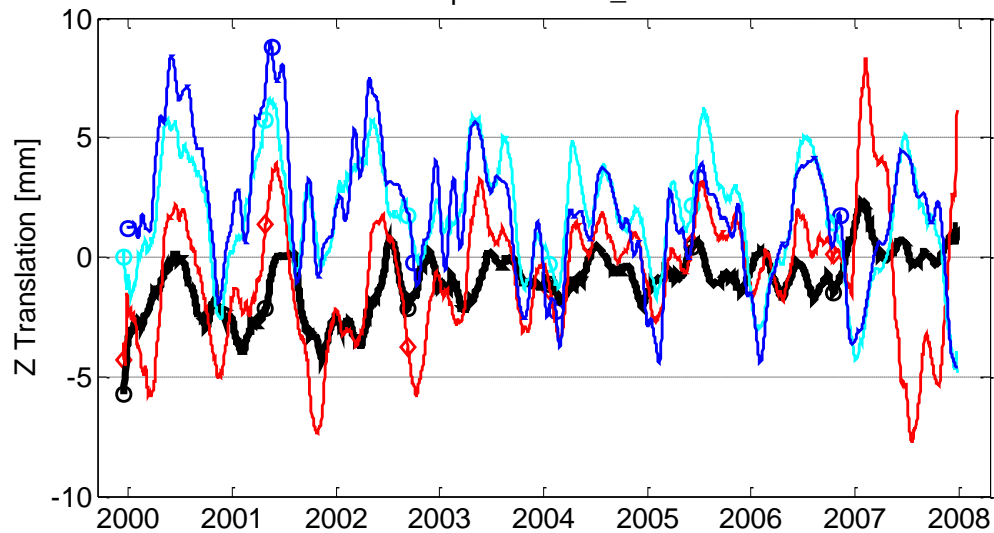
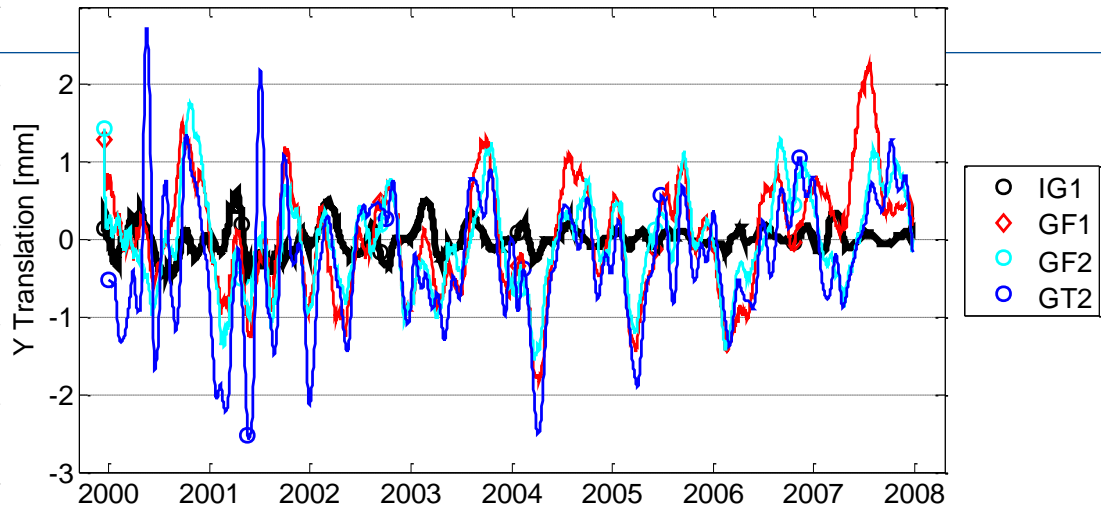
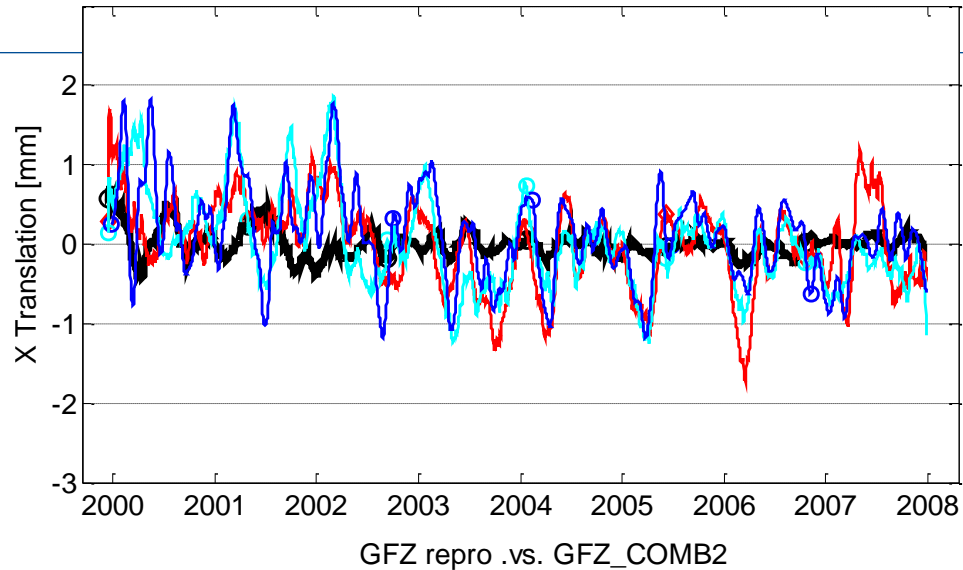
Status: June 04 2014

IGS Repro2 orbit validation



IGS Repro2 orbit validation





- GF2>2: same software and processing, different network
- Significant annual signal in translations

Conclusions

- globally distributed tracking network of 794 stations (1994 ~ 2012)
- Products are aligned to coordinate and transformation (IGb08)
- Significant improvement in quality and homogeneity of delivered products w.r.t. first reprocessing.
- Orbit validation shows good internal consistency among ACs
- TIGA product sets available at CDDIS & GFZ FTP

Thank you for your attention