

Status of the ITRF2008 Development



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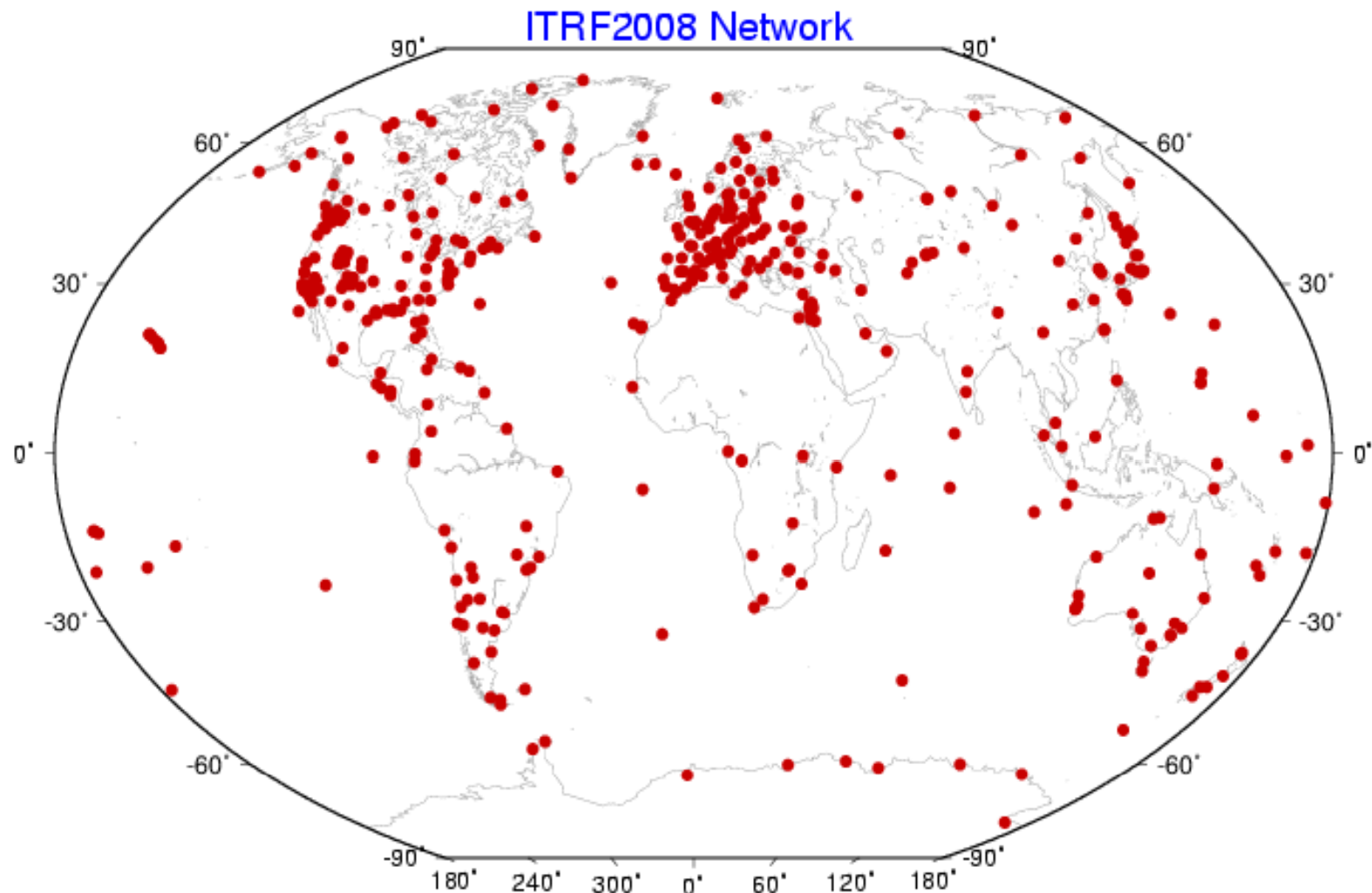
CfP of ITRF2008

- Same strategy as for ITRF2005
- Inputs from Techniques in the form of time series
- Full history of all techniques
 - Since the eighties for VLBI and SLR
 - 1993 – 2008 for DORIS
 - GPS: at least 2000 – 2008
- Requested solutions with no correction for any geophysical fluid loading effects

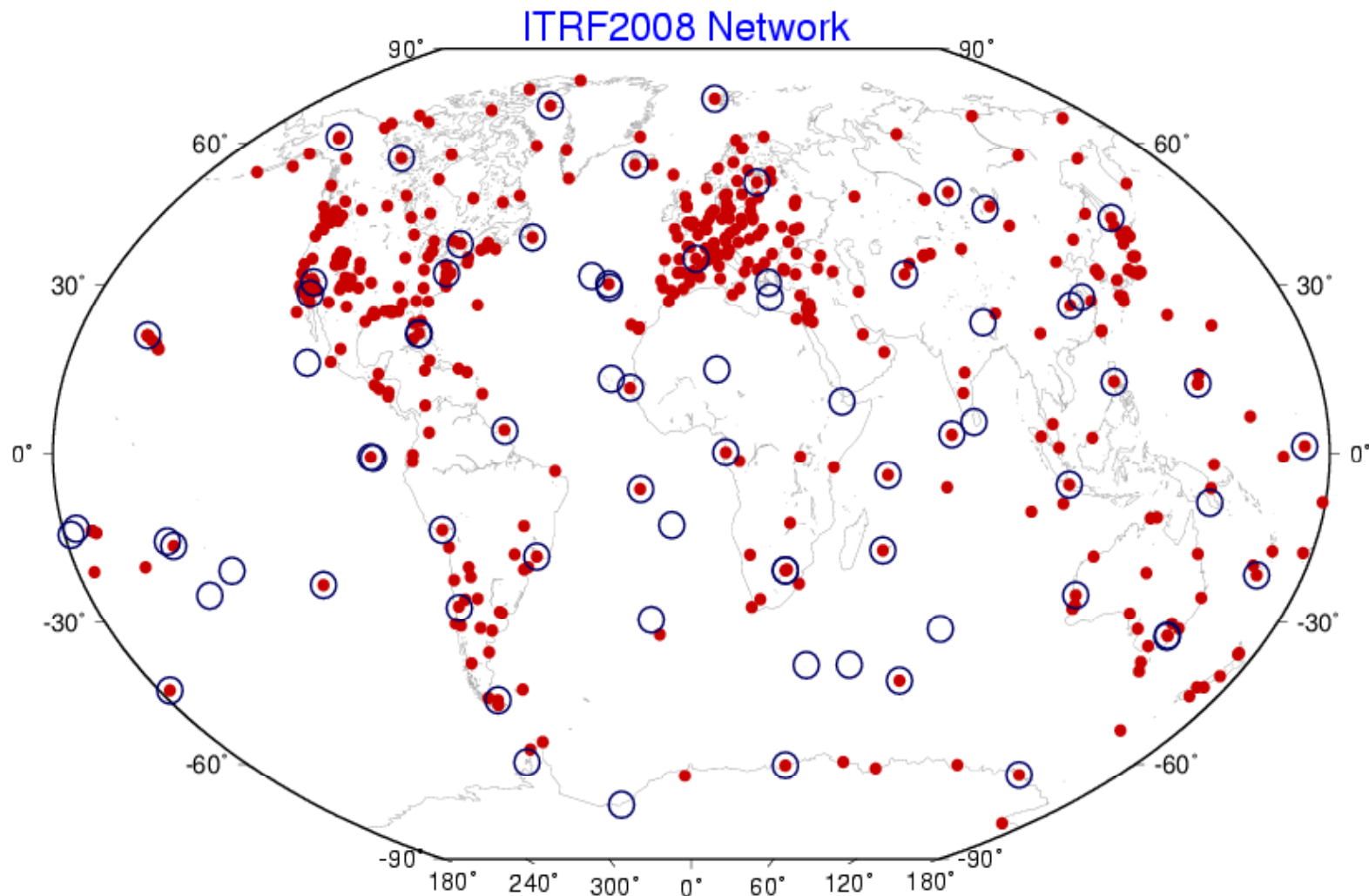
Status of technique contributions

- IGS: Submitted Feb. 12 (2000.0 – 2009.0)
 - IDS: Preliminary solution (1993.0 – 2009.0)
 - ILRS: Preliminary solution (1984.0 – 2009.0)
 - IVS: Submitted April 9 (1980 -2009.0)
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- New local ties since ITRF2005:
 - Tahiti : GPS SLR DORIS
 - Tsukuba: GPS VLBI
 - Herstmonceux: GPS SLR
 - Medicina: GPS VLBI
 - Greenbelt: VLBI SLR GPS DORIS

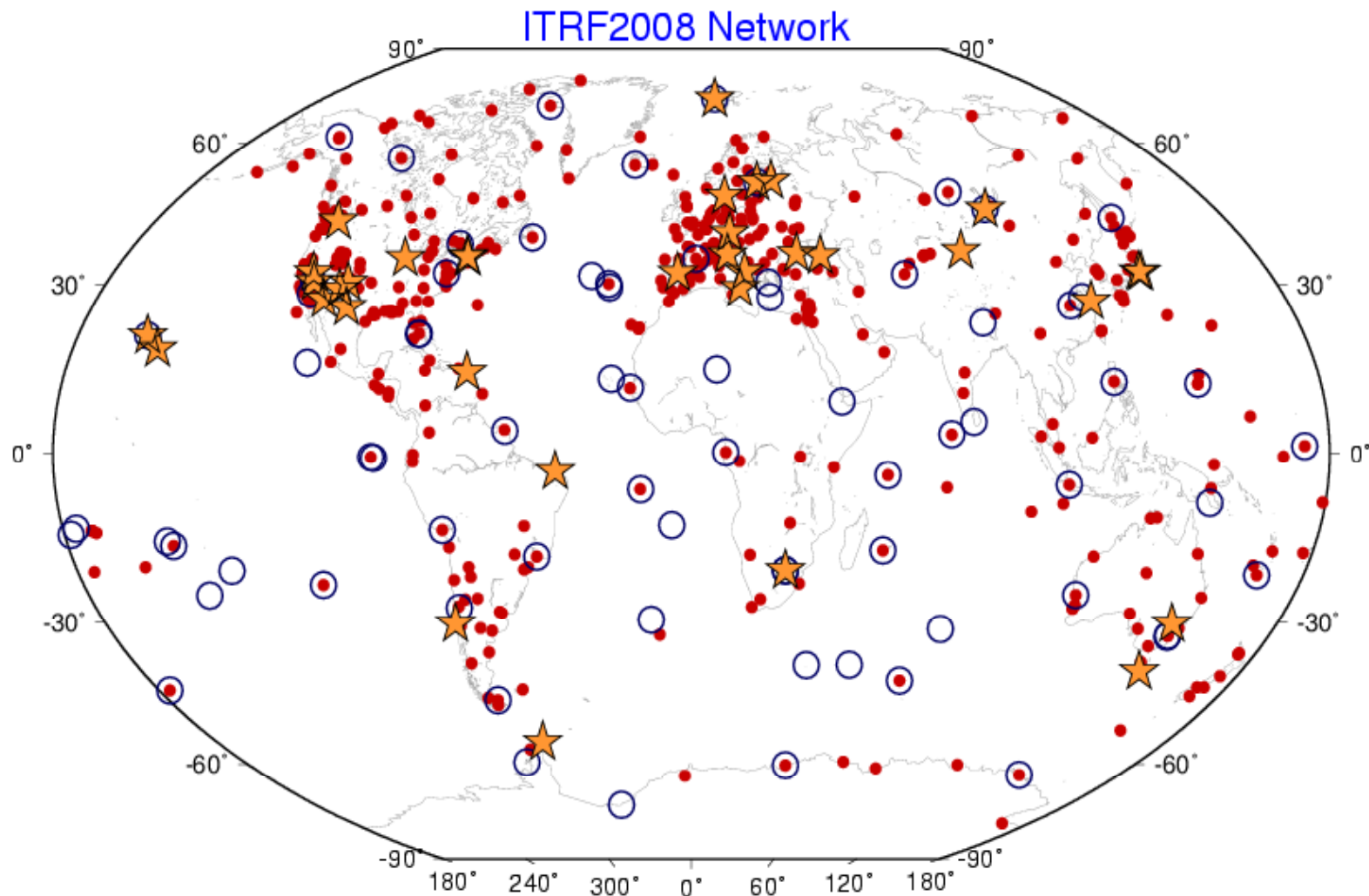
ITRF2008 Network: GPS



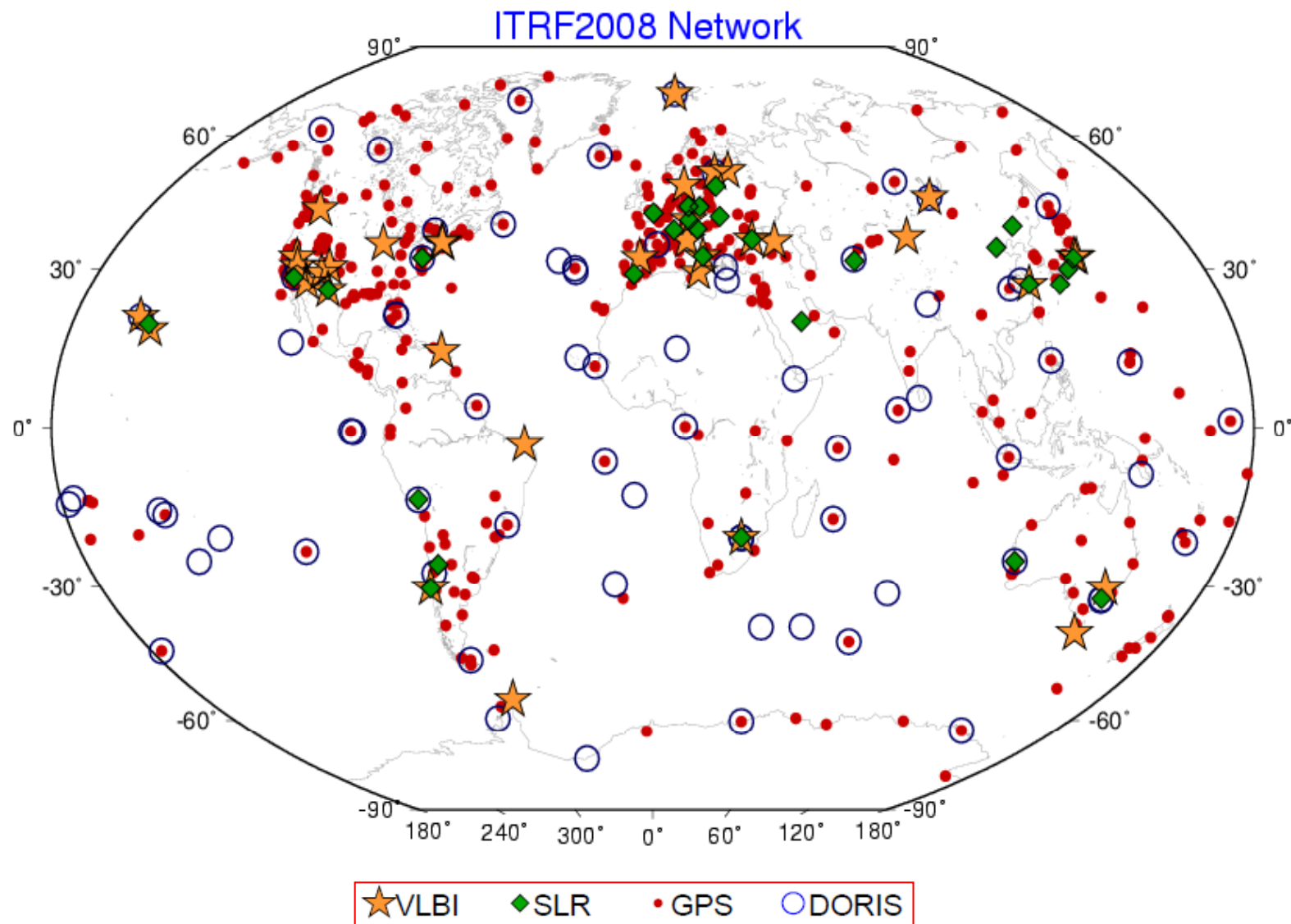
ITRF2008 Network: GPS + DORIS



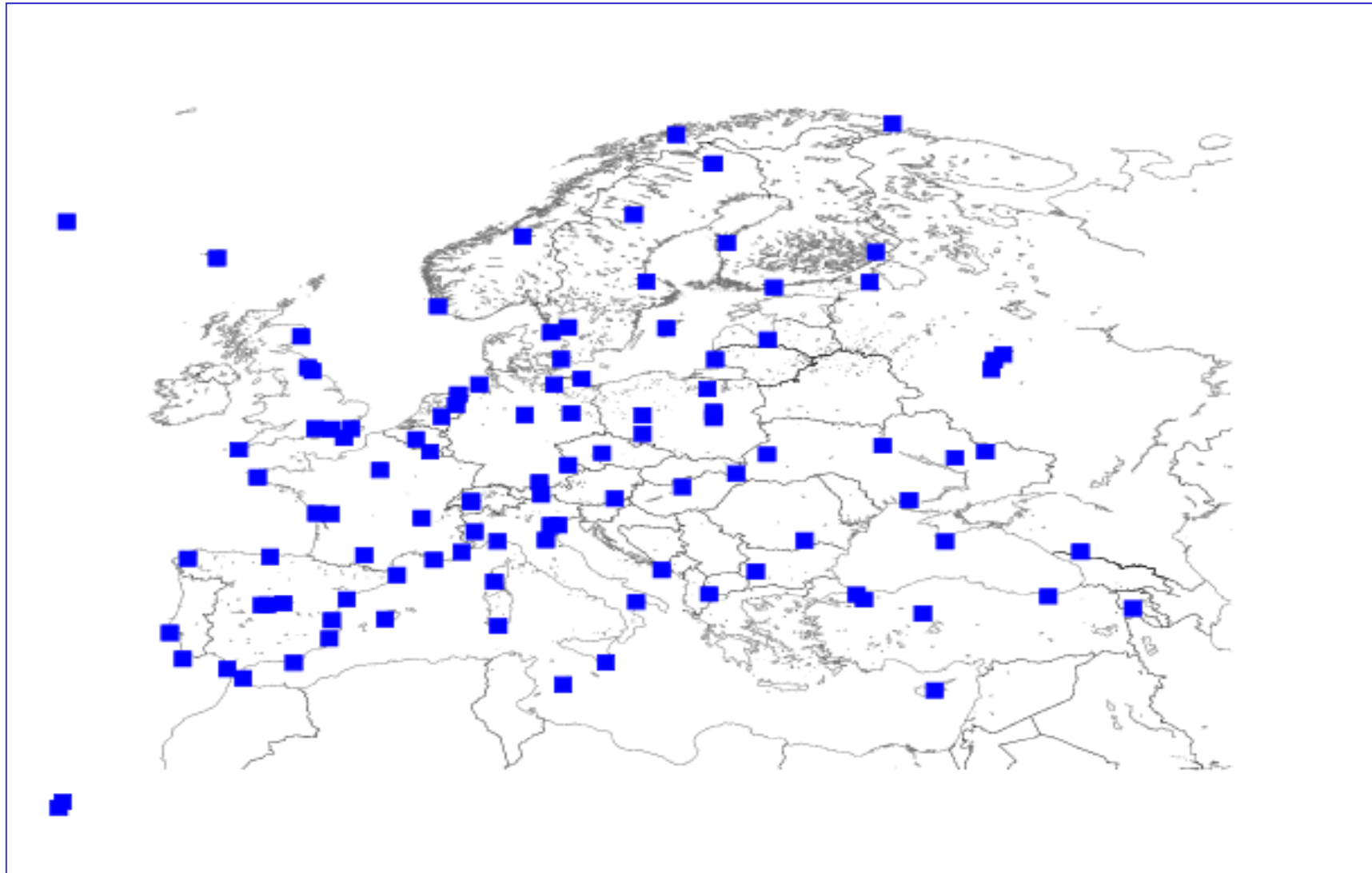
ITRF2008 Network: GPS + DORIS + VLBI



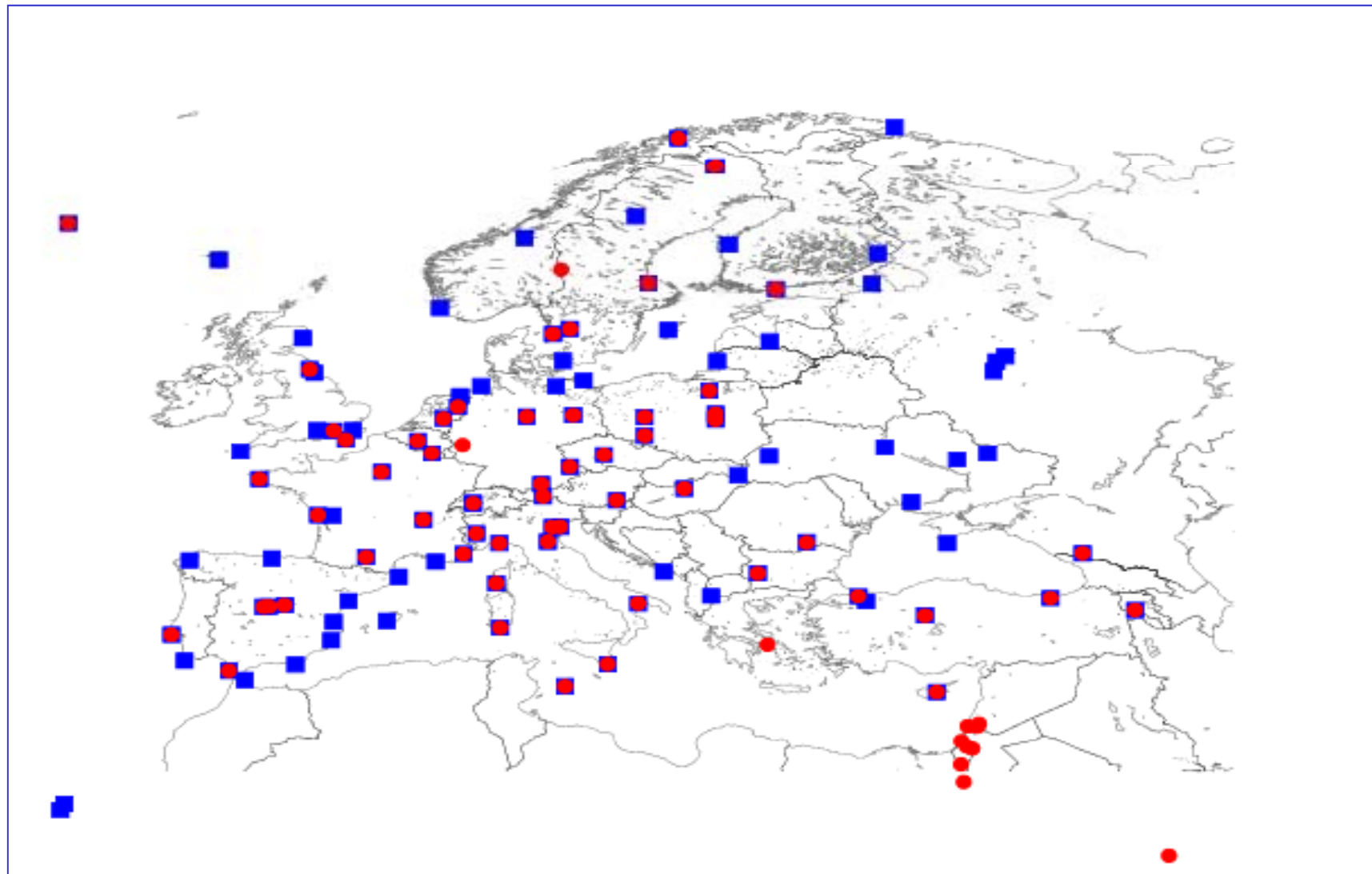
ITRF2008 Network: GPS + DORIS + VLBI + SLR



EPN sites in ITRF2008



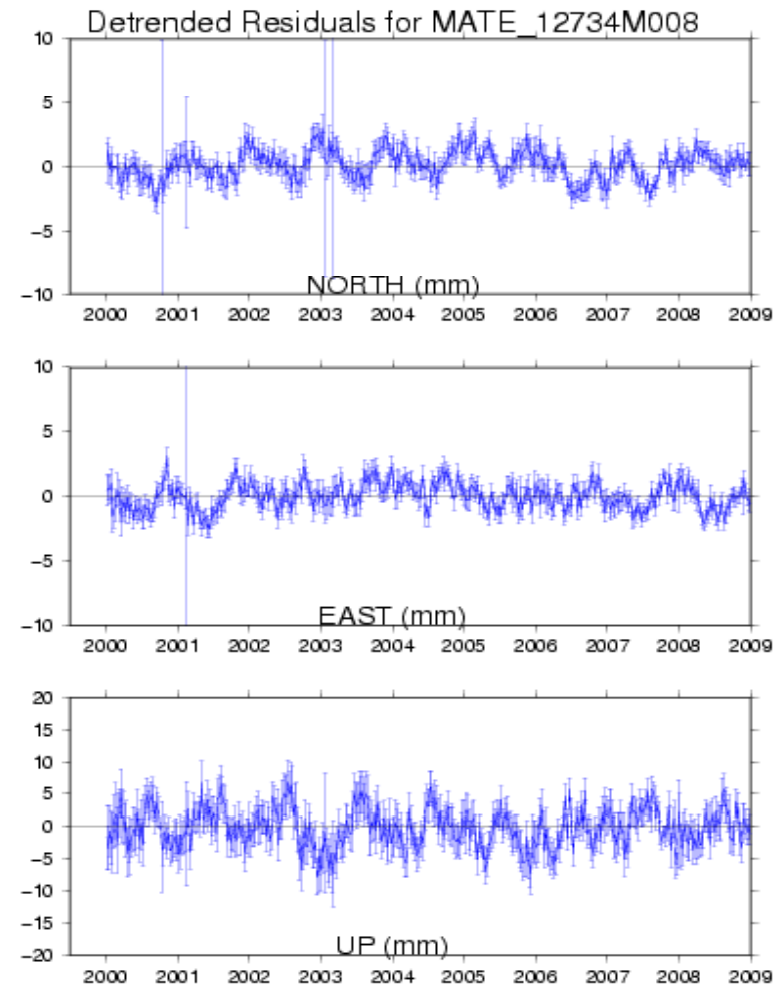
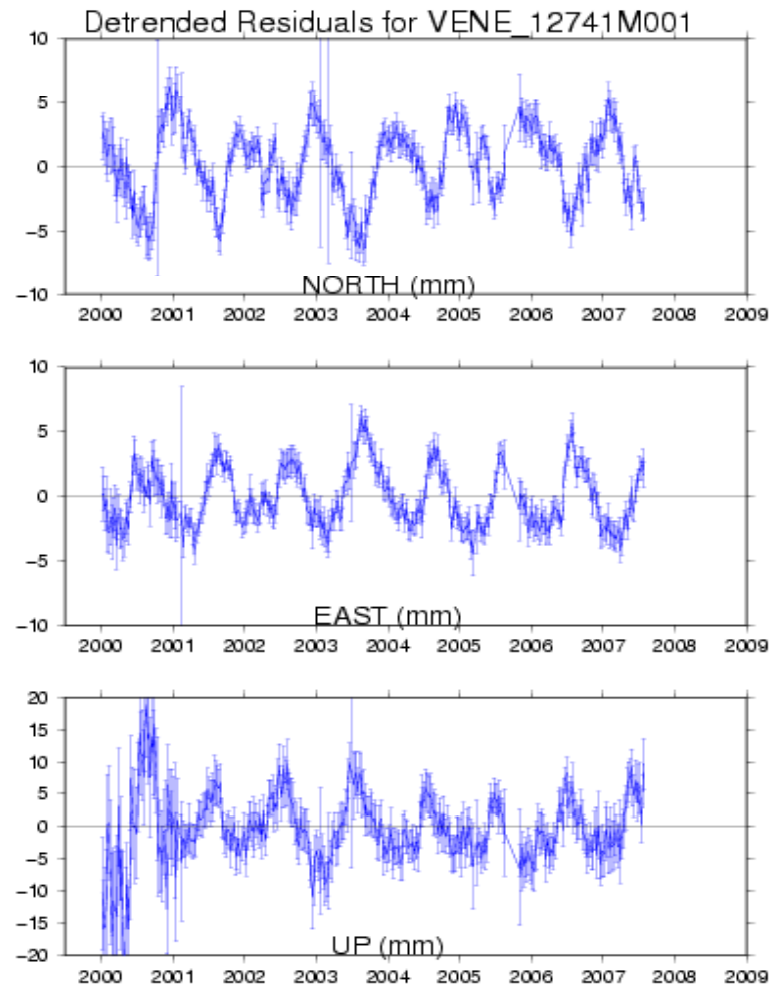
EPN sites in ITRF2008



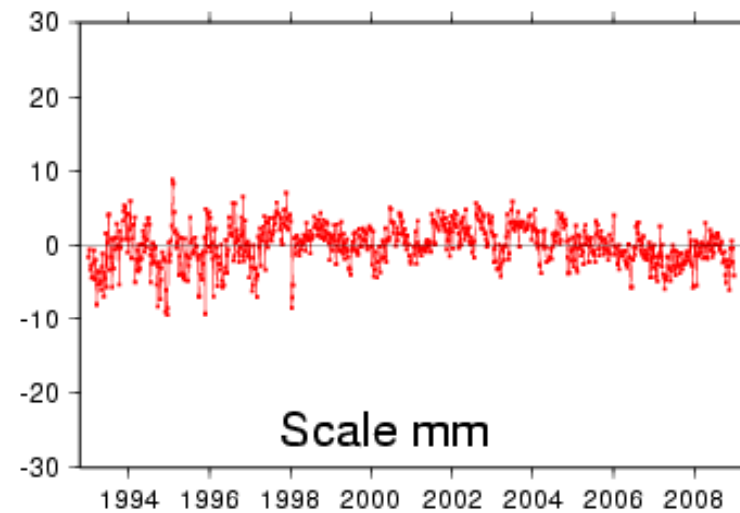
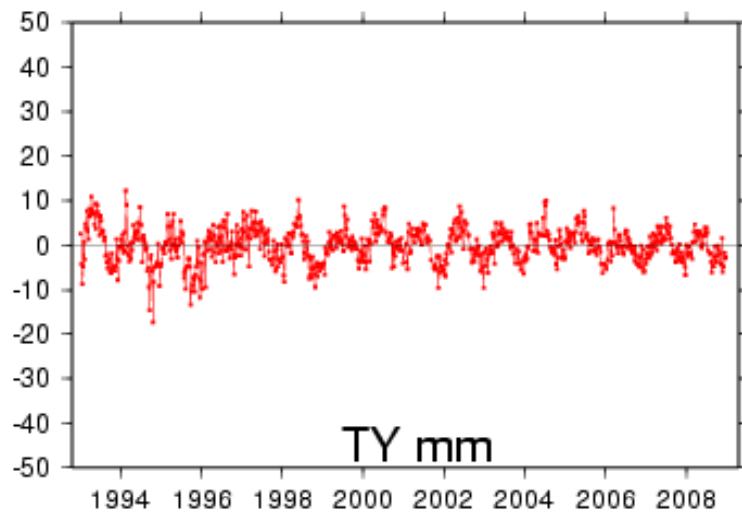
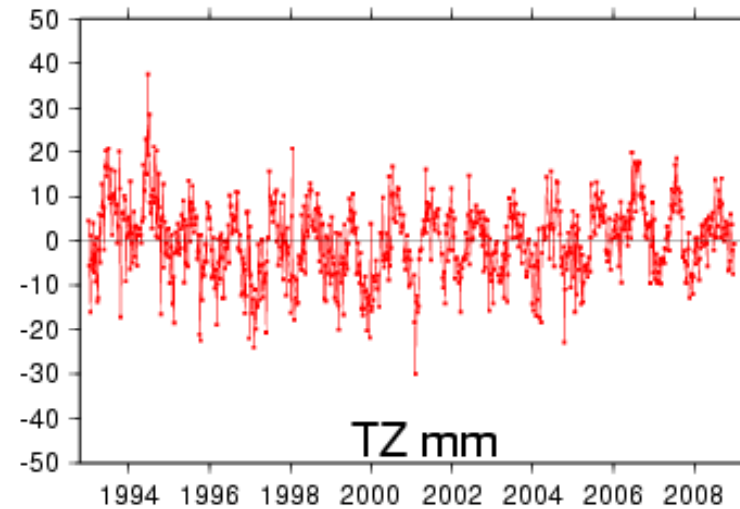
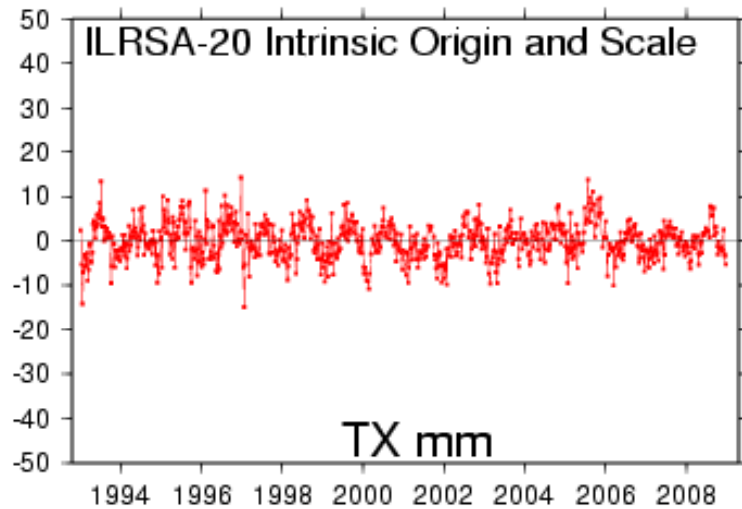
■ ITRF2008

● ITRF2005

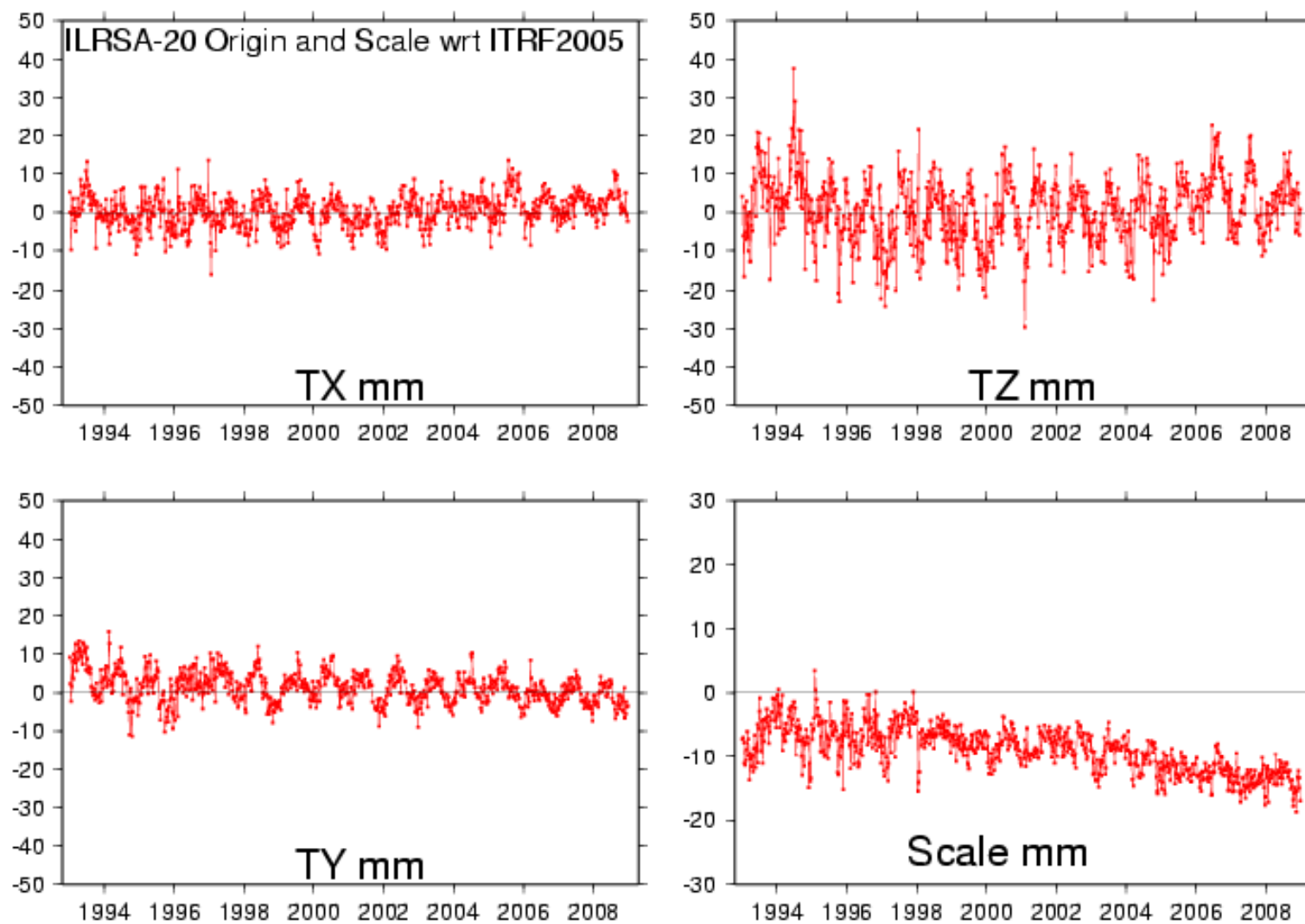
Venice & Matera time series



ILRSA-20 Intrinsic Origin and Scale

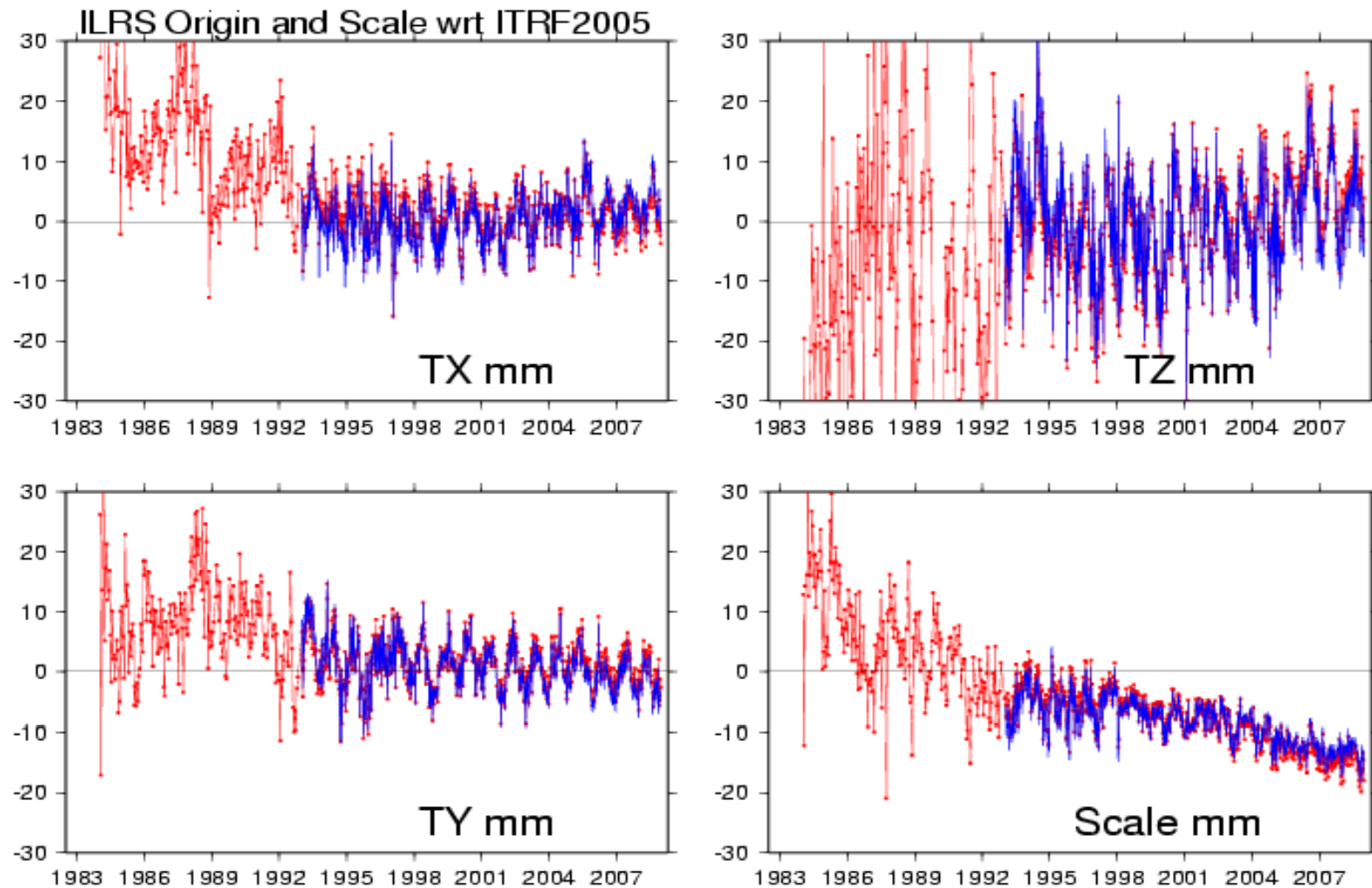


ILRSA-20 Origin and Scale WRT ITRF2005

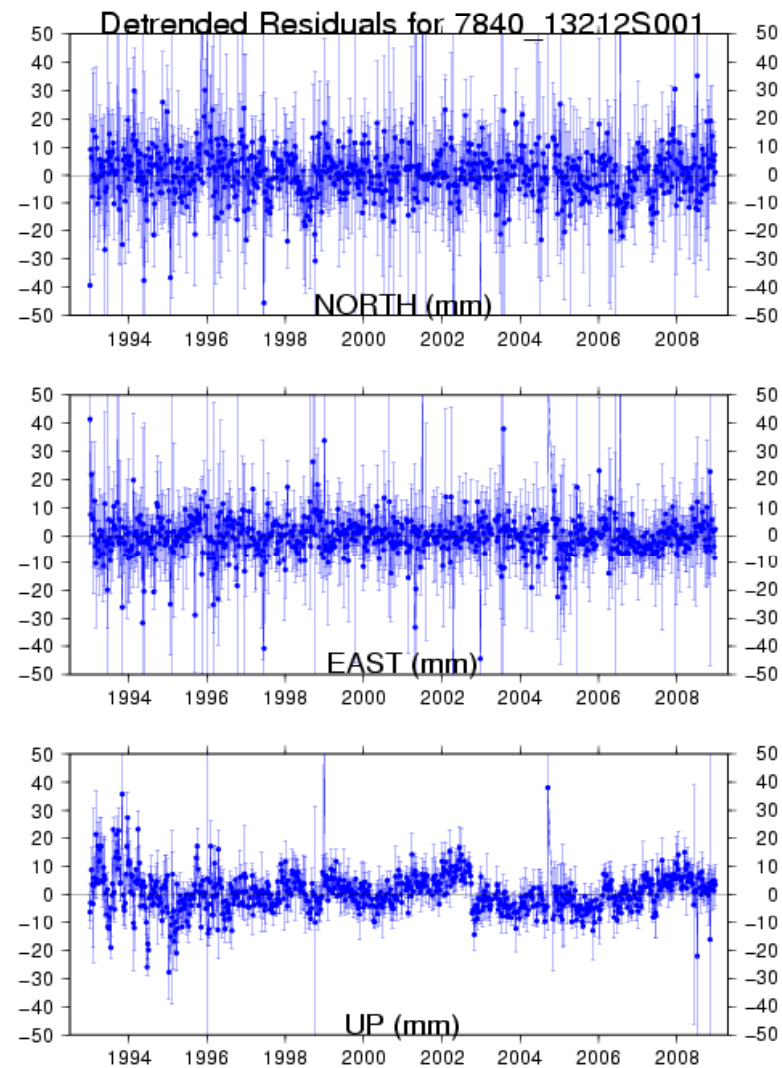


ILRSA-20 Origin & Scale WRT ITRF2005

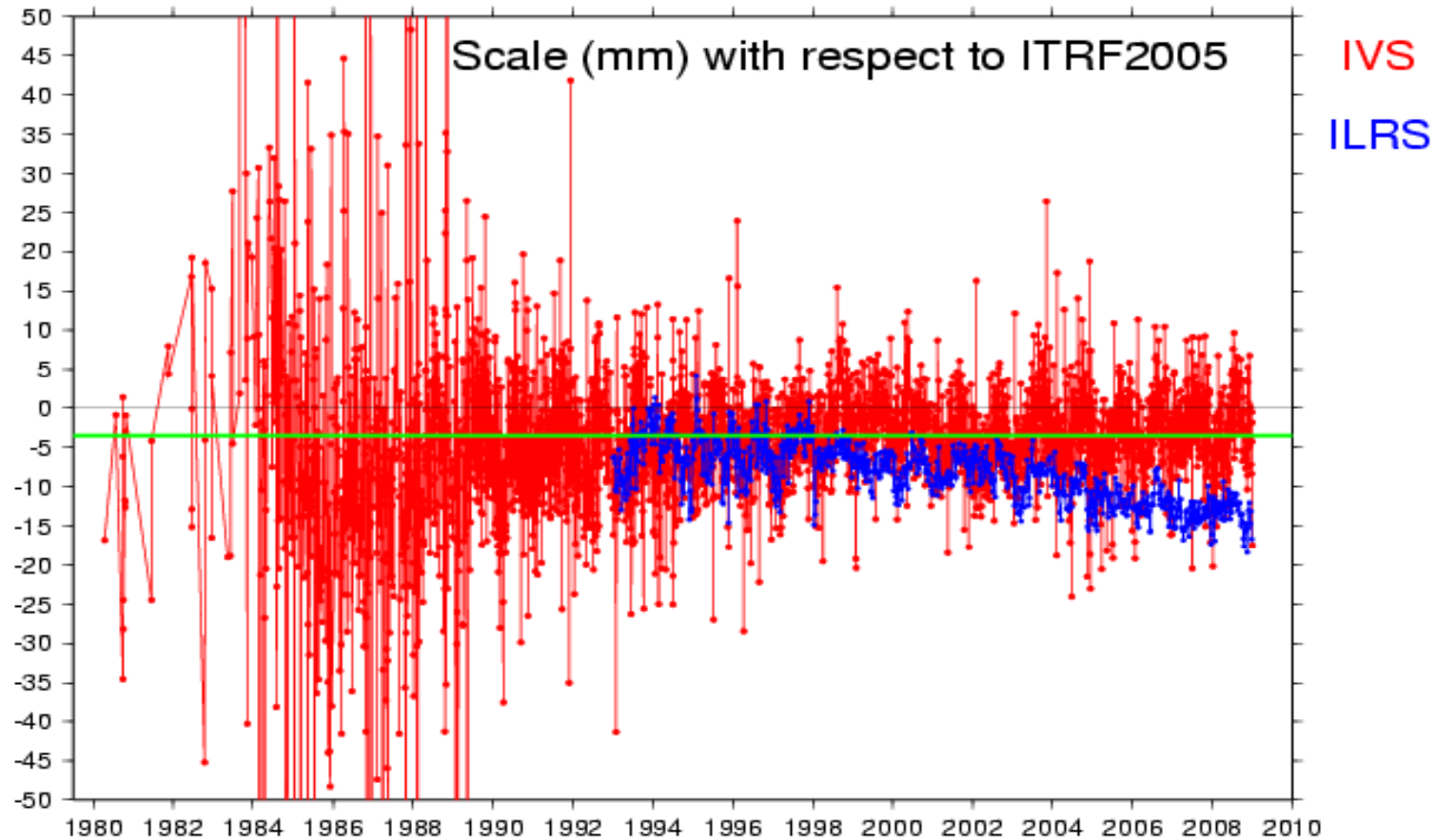
all data & 1993-2008 data only



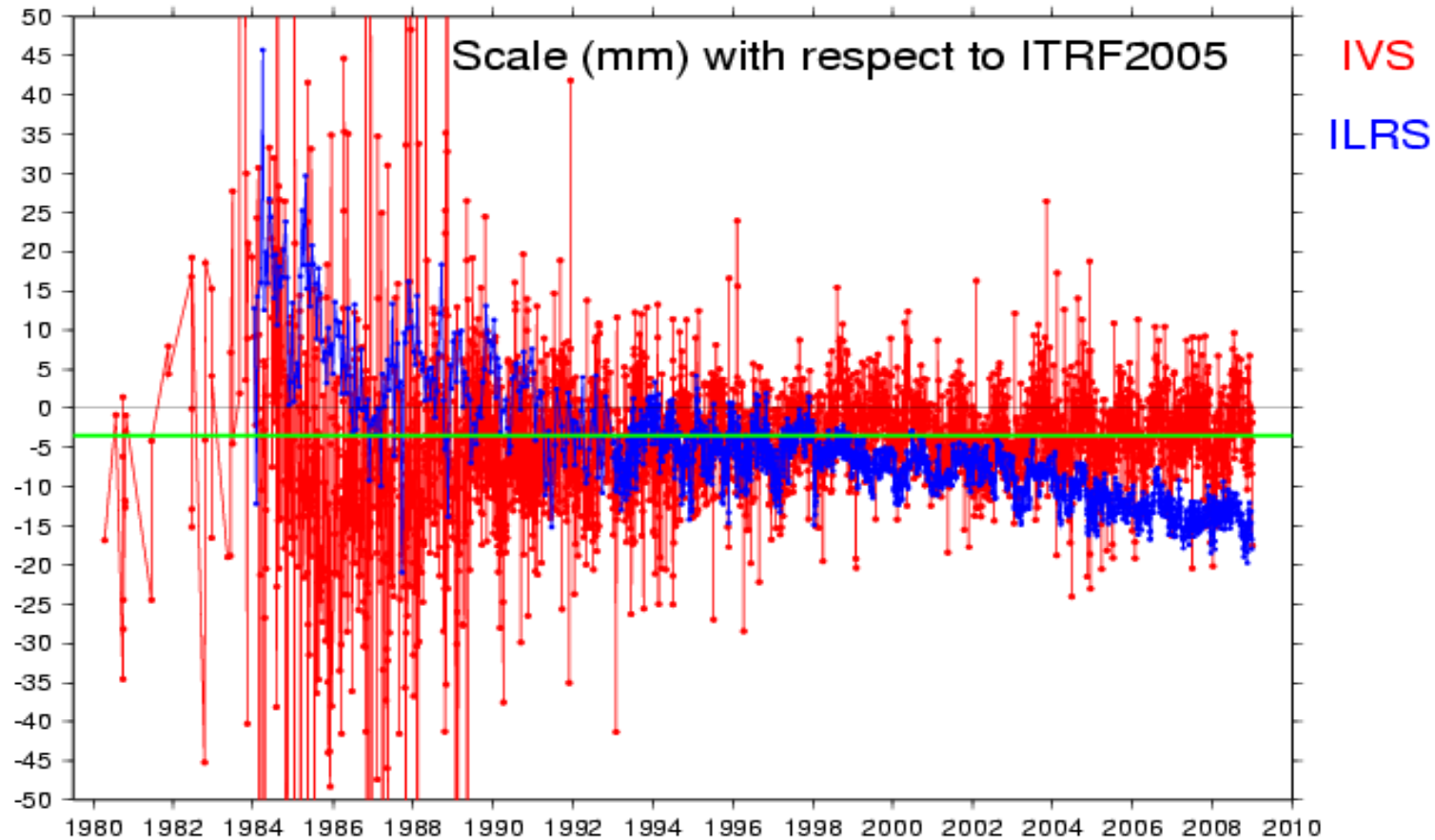
SLR Herstmonceux Residuals



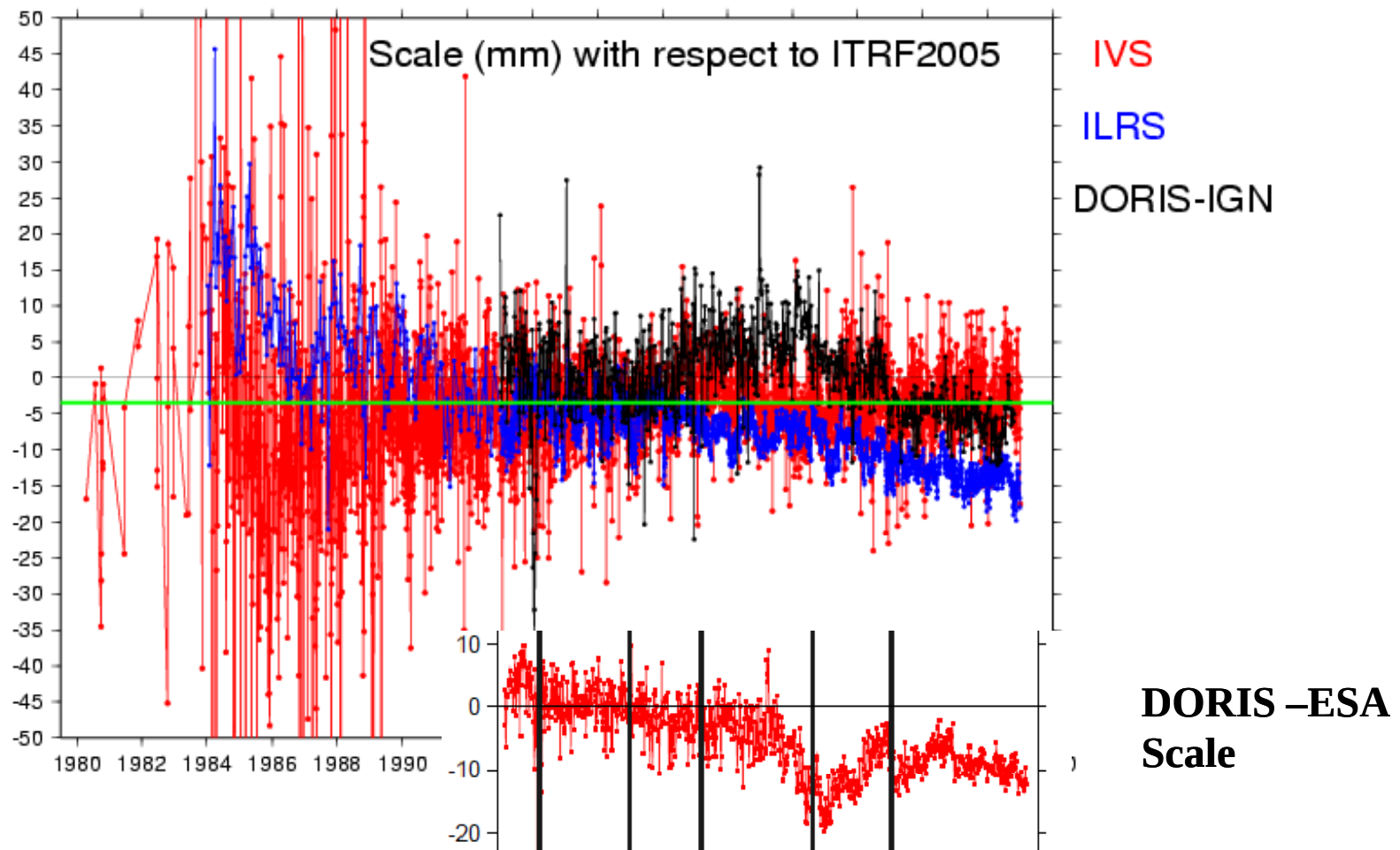
Scale (mm) with respect to ITRF2005



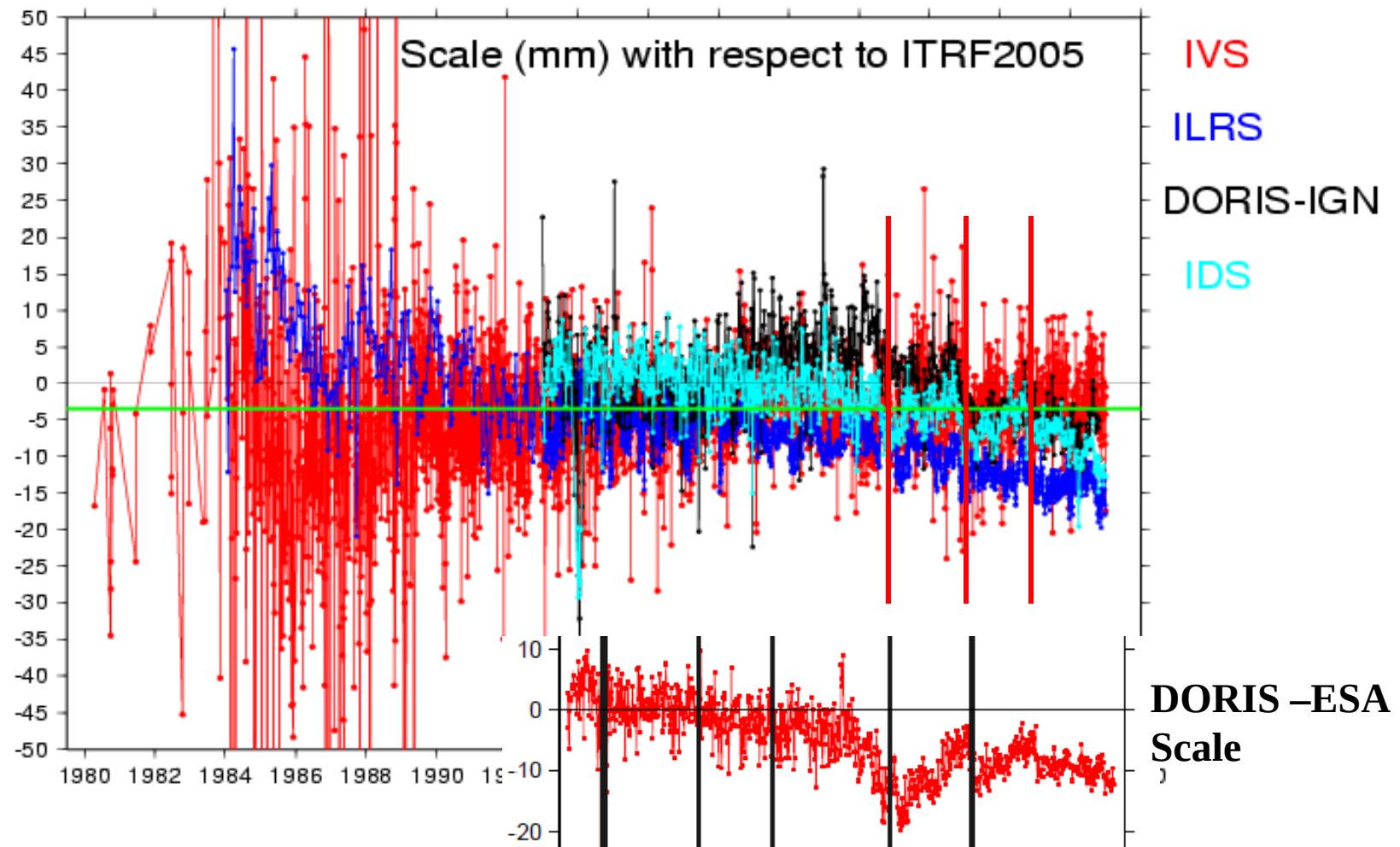
Scale (mm) with respect to ITRF2005



Scale (mm) with respect to ITRF2005



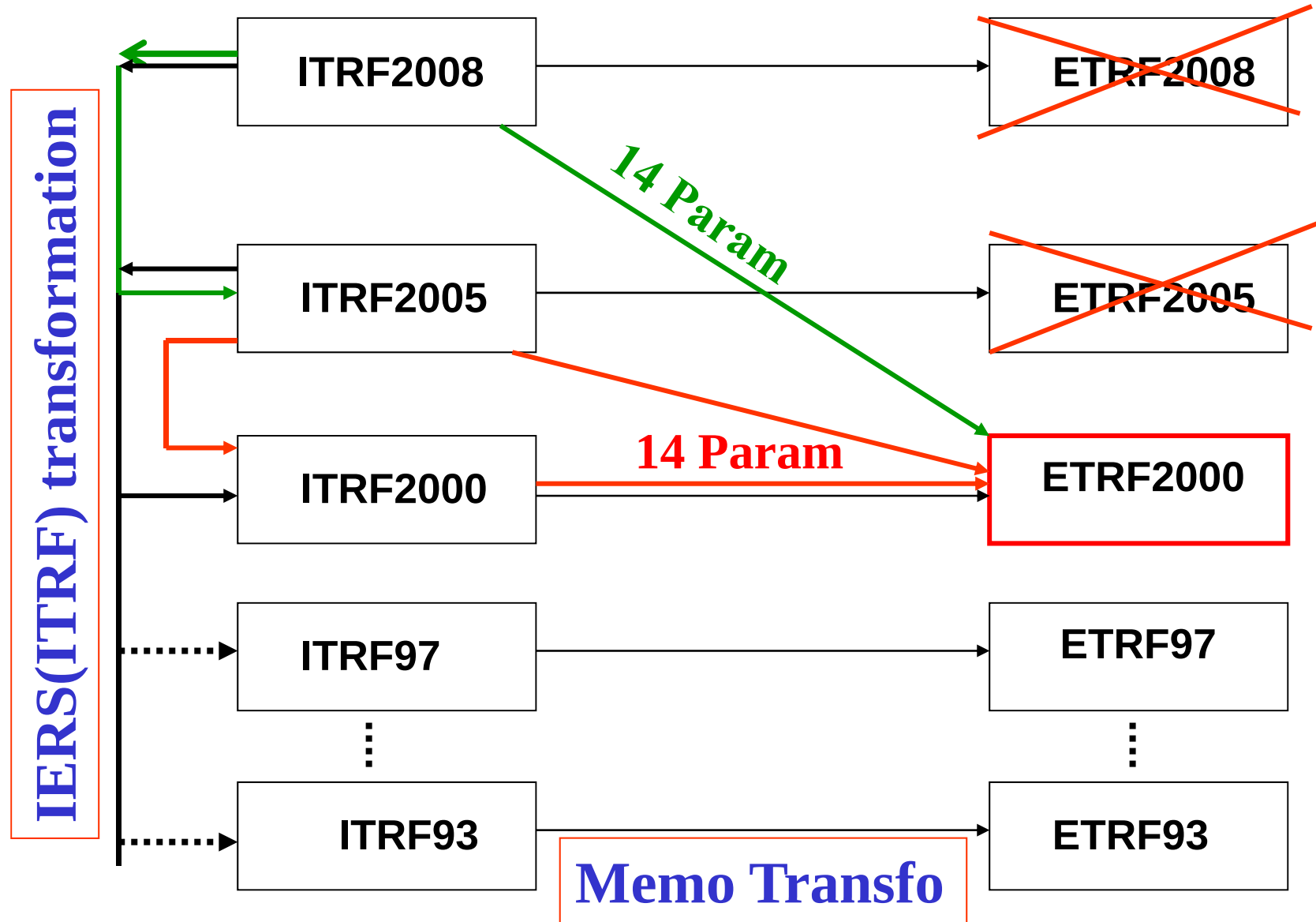
Scale (mm) with respect to ITRF2005



Consequences for ETRS89/ETRF2000

- More EPN sites in ITRF2008
- ITRF2008 datum definition should be very close to ITRF2005
- Transformation from ITRF2008 to ETRF2000 should be very close to ITRF2005 ==> ETRF2000
- 14 parameters from ITRF2008 to ETRF2000 will be provided

ITRFyy to ETRF2000



Concluding remarks

- Preliminary analysis to be repeated with final official Technique solutions
- Significant improvement of all technique reprocessed solutions. However:
 - ILRS: some biases issues to be fixed
 - IDS: scale and Z translation ?
 - IGS: early data (1995 – 2000) ?
- Multi-technique combination still to be done
- ITRF2008 to ETRF2000 transformation close to ITRF2005 to ETRF2000