

TWG Chisinau

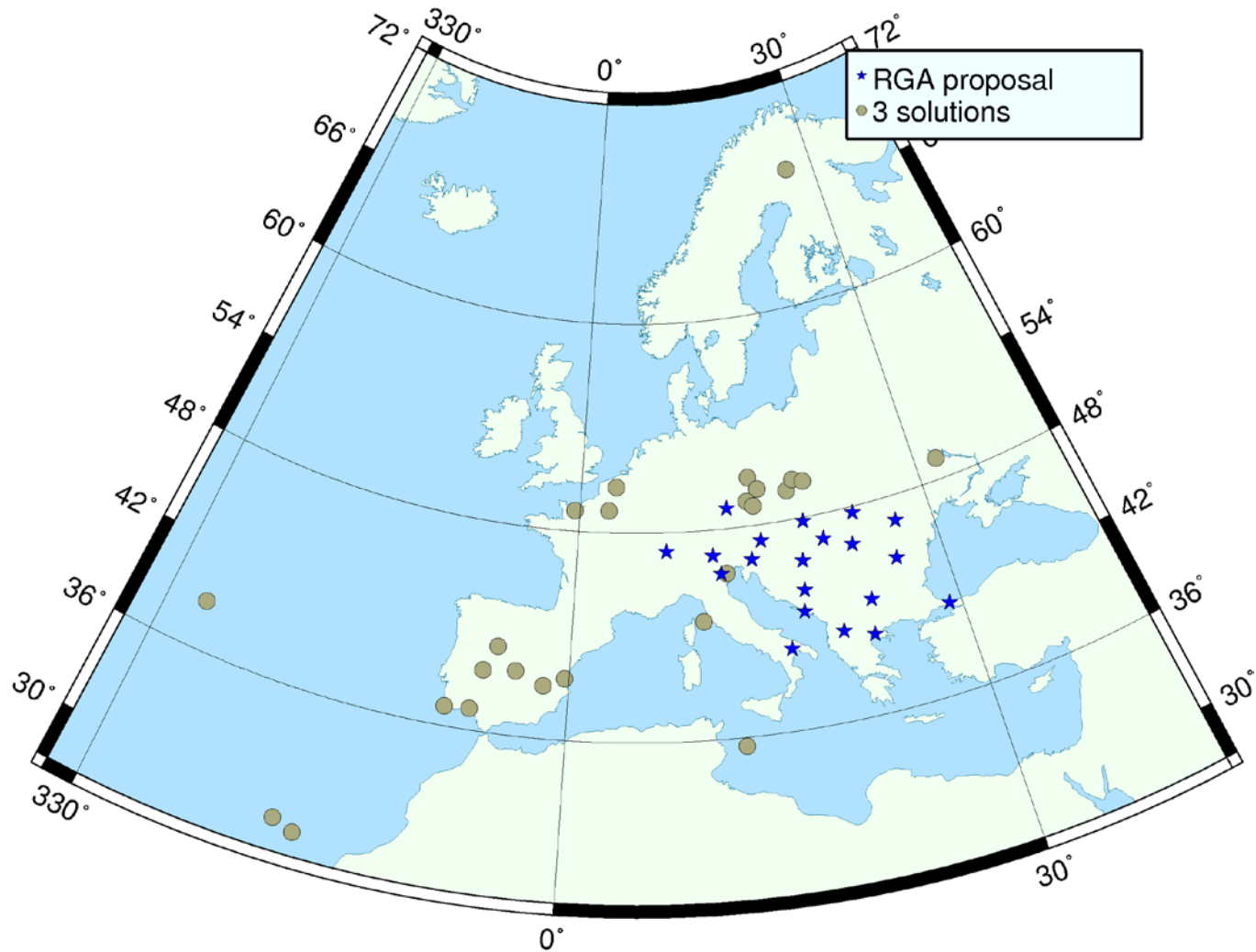
- [RGA](#)
- [IGS08](#)
- [TIGA](#)
- [Repro1](#)




Republic Geodetic Authority (RGA), Serbia, - Proposal for EPN Local Analysis Center -

- EPN-CB contacted in April 2011 by Serbian colleague Zoran Veljkovic
- Following “Guidelines for EPN Analysis Centers” RAG submitted a proposal of 20 stations to be analyzed and a LAC description form
- EPN Coordination Group added 25 EPN stations that are analyzed by 3 LACs only → RGA provides “added-value”
- Weekly test solution RGA16167.SNX successfully combined with other LACs
- New LAC accepted by TWG and submission of solution will start with week 1632
- **Also:** Implementation of 4 new EPN stations in Serbia

RGA Sub-Network (44 Stations)




ITRF2008 versus IGS08




ITRF2008 station

- Not included in IGS08
- Consistency with IGS08.atx unclear



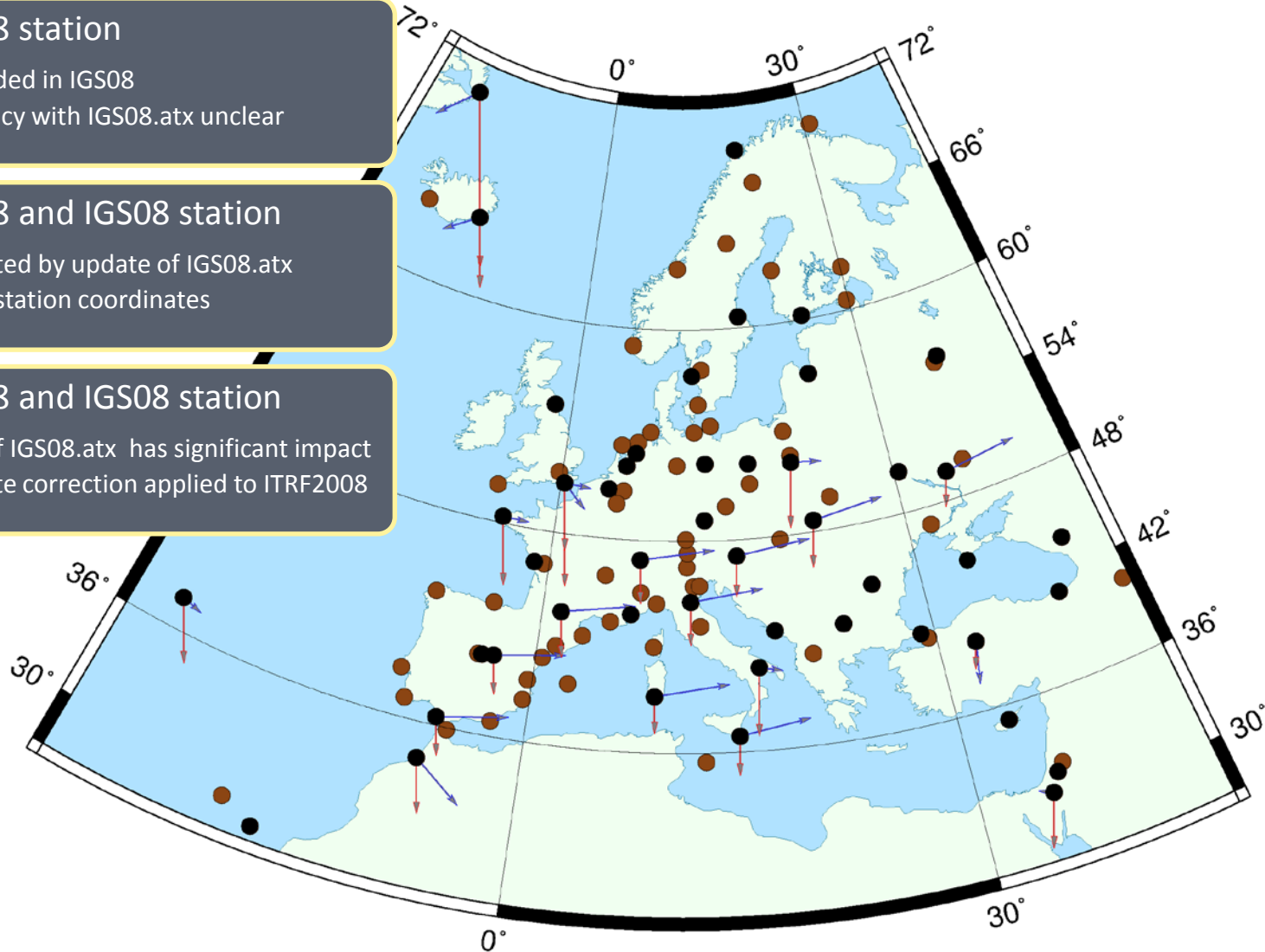
ITRF2008 and IGS08 station

- Not affected by update of IGS08.atx
- Identical station coordinates



ITRF2008 and IGS08 station

- Update of IGS08.atx has significant impact
- Coordinate correction applied to ITRF2008



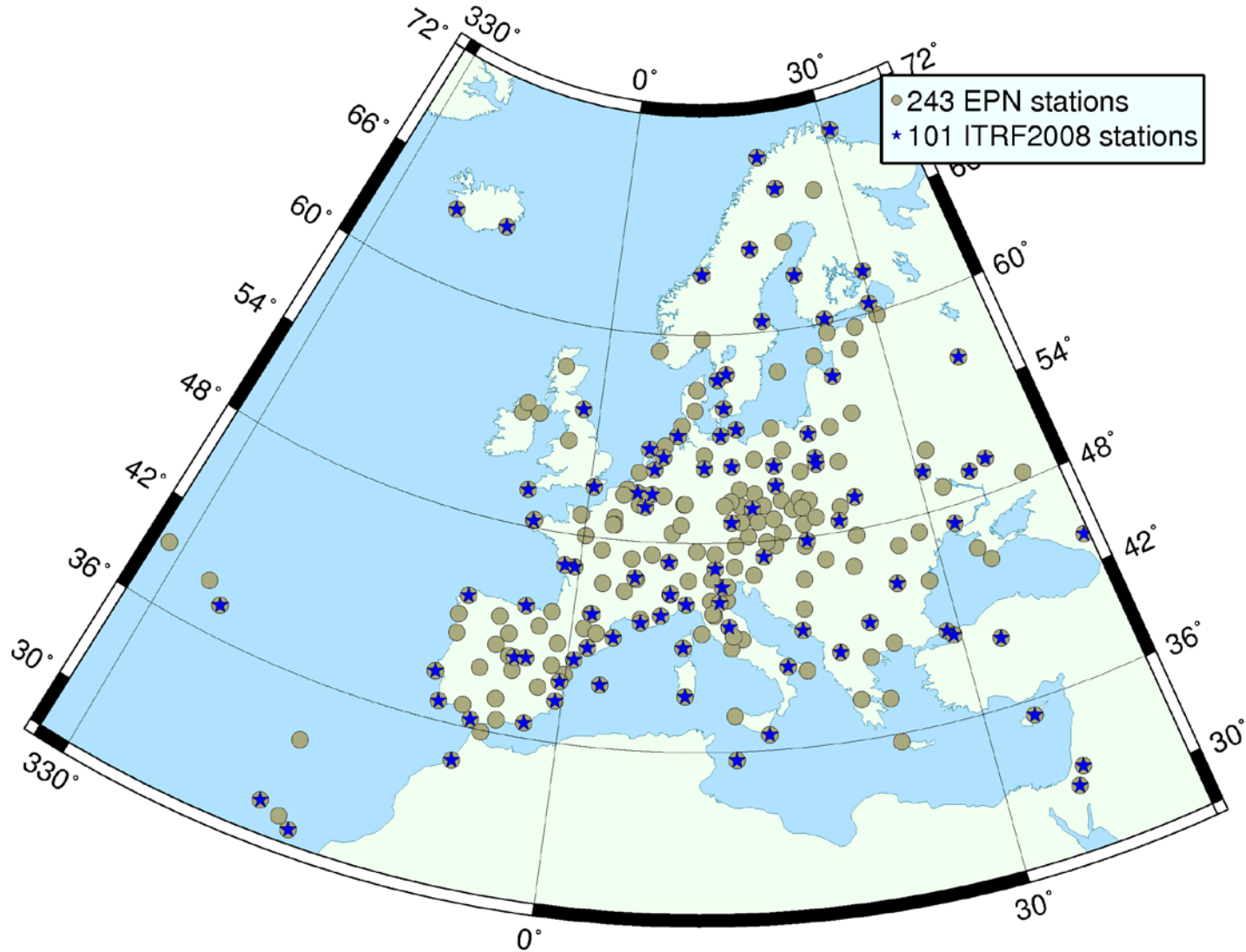


Preparation for Switch to IGS08 in EPN Analysis

- Select a proper option:
 - Option 1: Use IGS08 stations only
 - Option 2: Use IGS08 and unaffected ITRF2008 stations
 - Option 3: Use IGS08, unaffected and corrected ITRF2008 stations
- Investigation of ITRF2008 stations not included in IGS08 needed for option 3:
 - select EPN stations of recent weekly EPN solution, here week 1622
 - verify IGS latitude-dependent model correction for known IGS08 stations of EPN
 - compute and apply model corrections to ITRF2008 coordinates

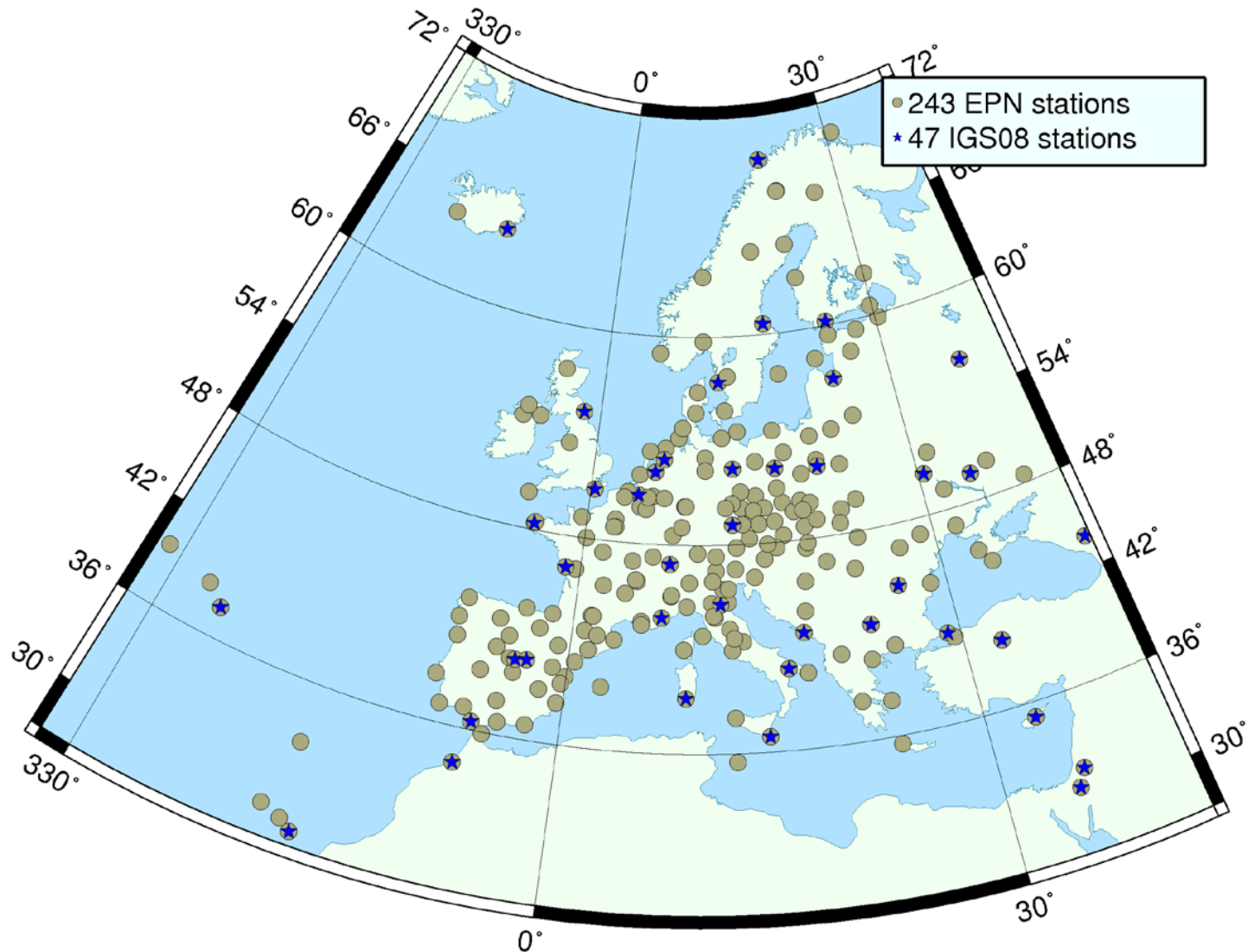


EPN and ITRF2008



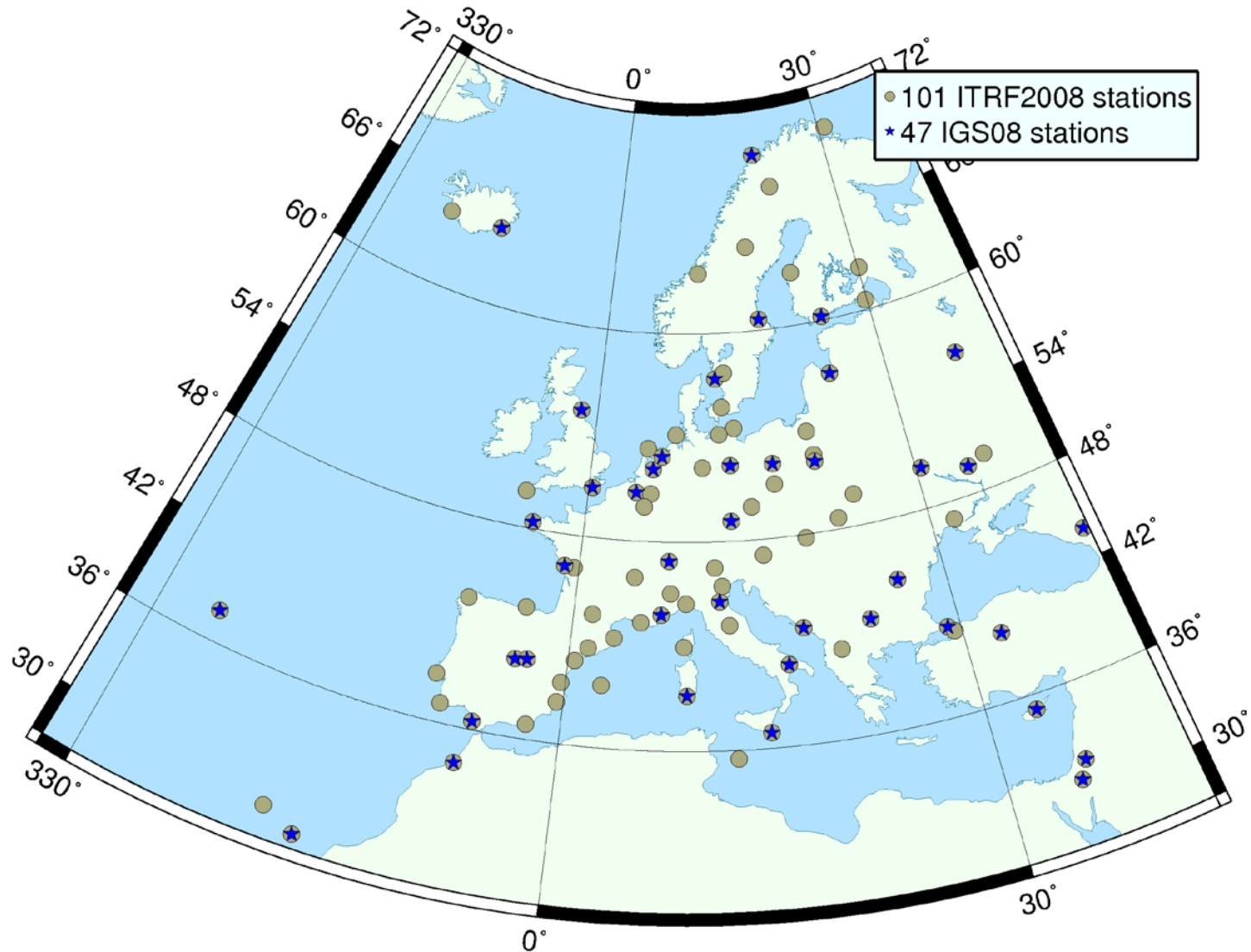


EPN and IGS08



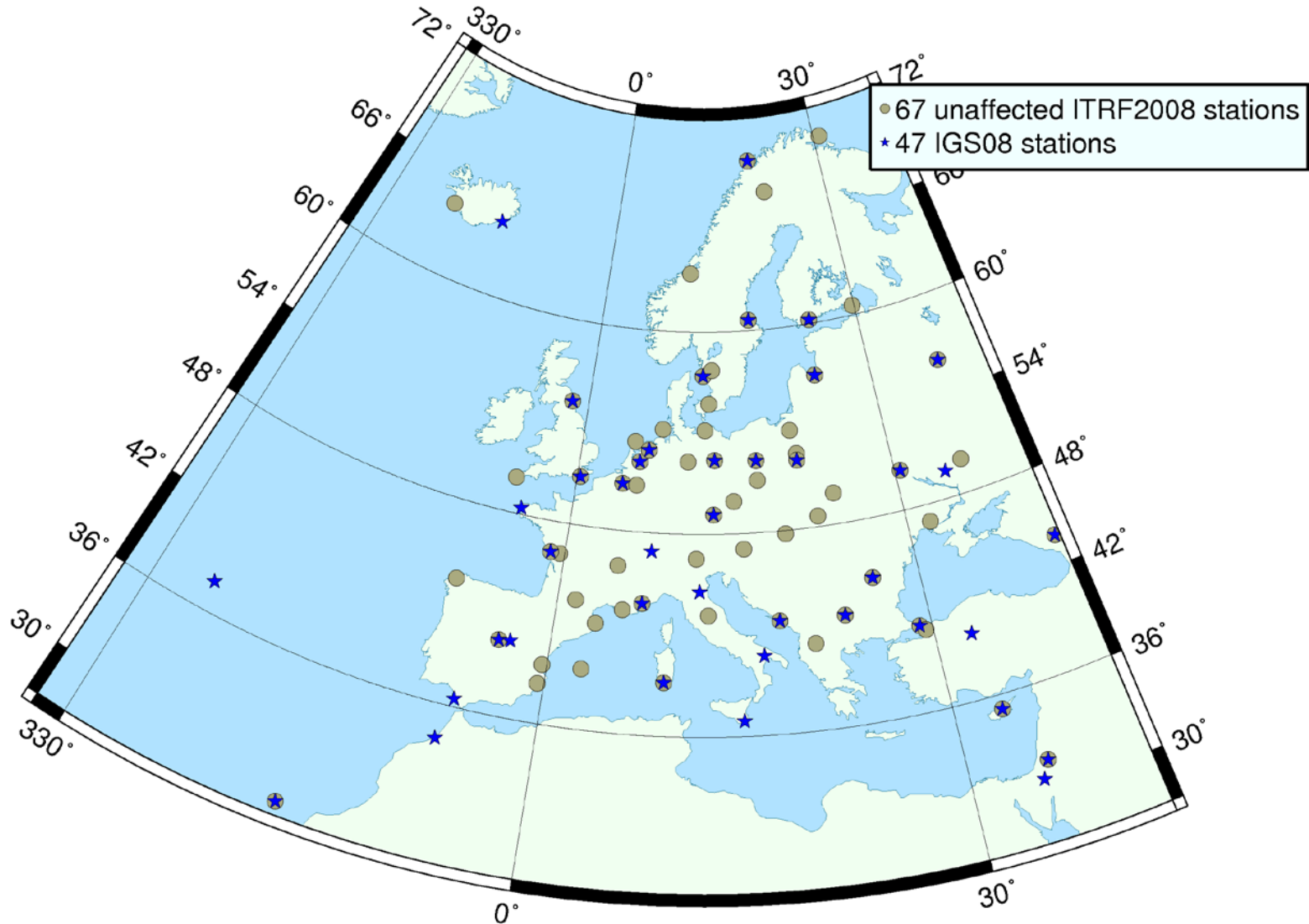


ITRF2008 and IGS08



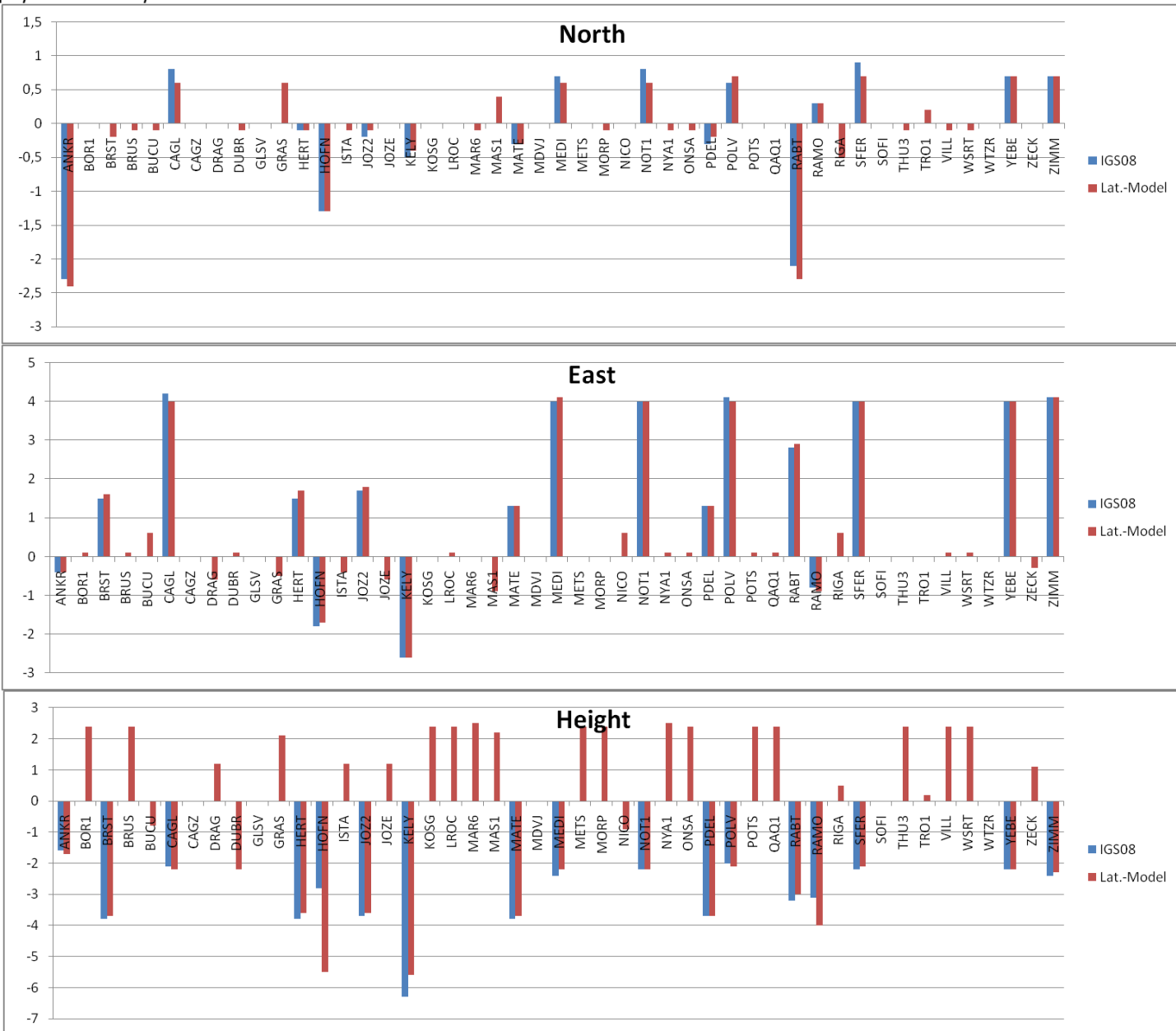


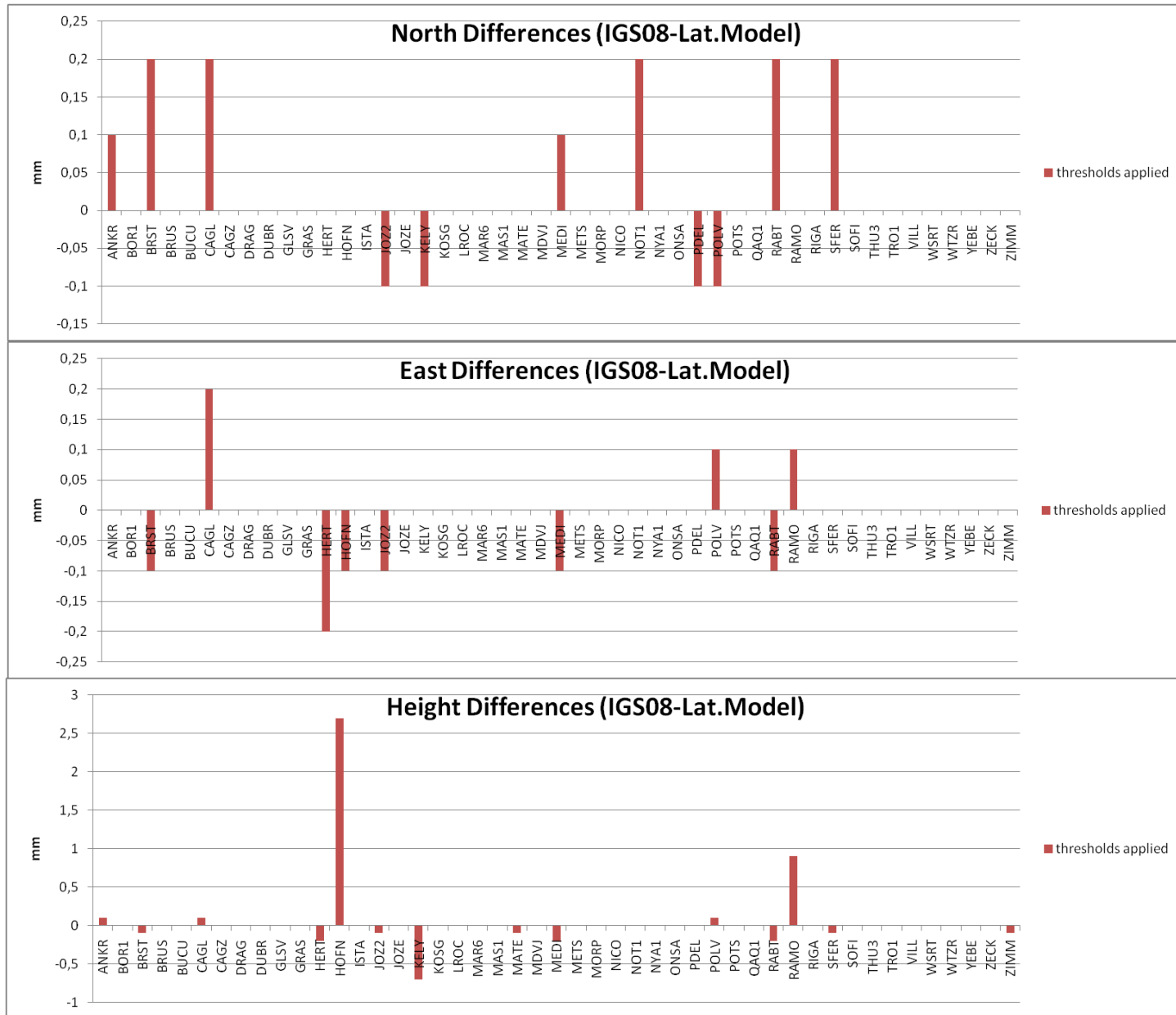
84 Potential EPN Reference Stations





ITRF2008 to IGS08 Corrections





- In total 97 reference stations proposed:
 - **4 of 101 ITRF2008** reference stations rejected, because of discontinuity involved by equipment change after release of IGS08 (GRAZ, HERS, TLSE, and UZHL)
 - for **47 stations use IGS08** coordinates as provided by IGS
 - for remaining **50 stations corrections** of latitude-dependent model computed, where the correction is **zero for 33 stations** (station not affected by igs08.atx update or computed correction below threshold), for **17 station correction applied** to ITRF2008 coordinates
 - active for “daily rapid” and “hourly” EPN combination
- Relevant information:
 - IGS-Mail 6354, 6355, 6356 and 6374
 - EUREF-Mail 5732 and 5734
 - BSW-Mail 0297

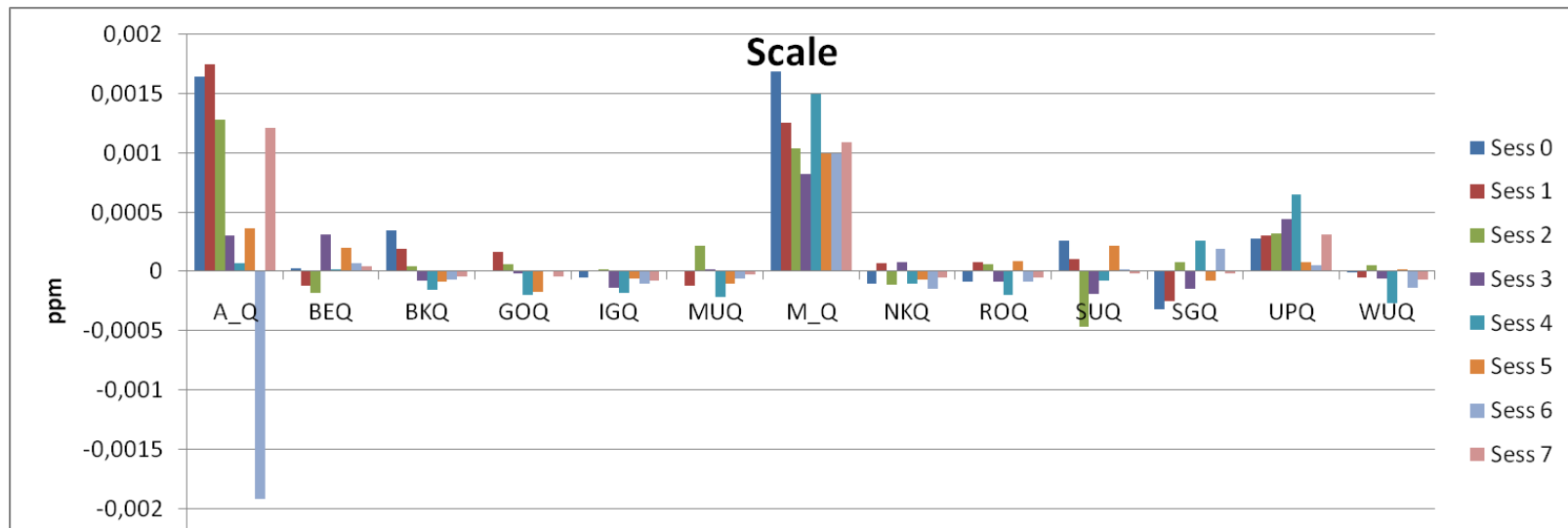
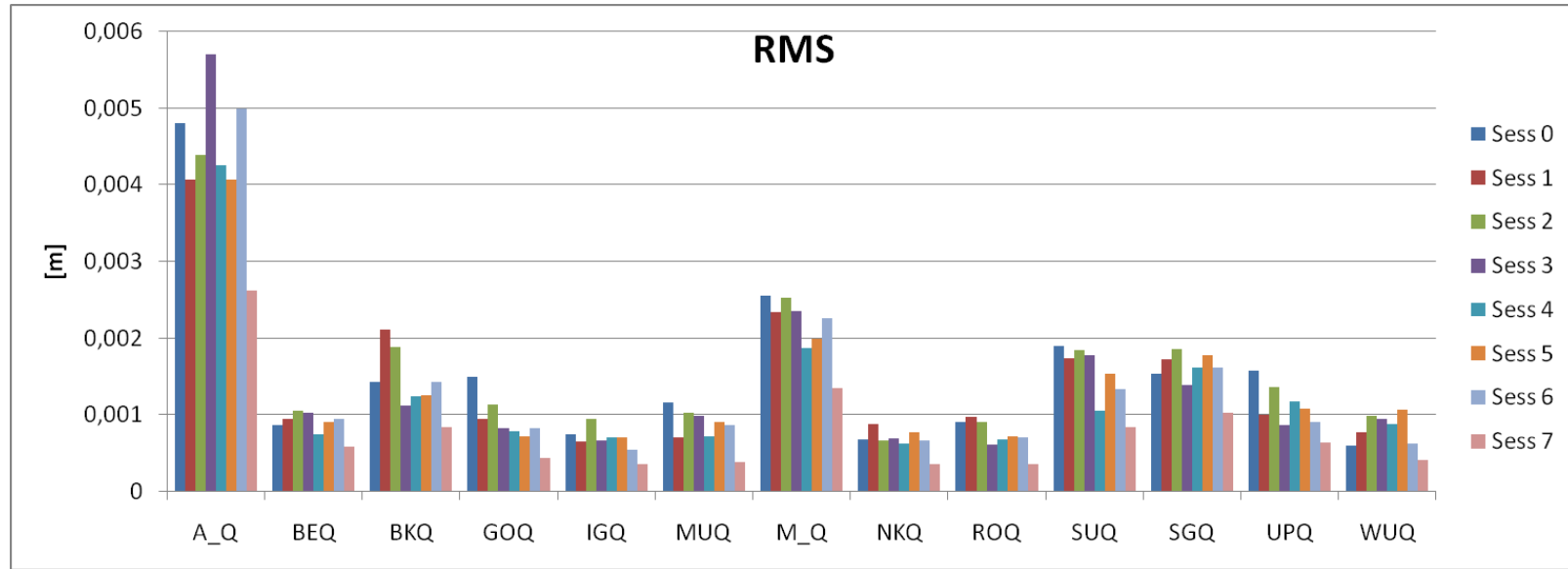
EPN Contribution to Tide Gauge Benchmark Monitoring (TIGA)

- In 2001 IGS Governing Board accepted proposal for “Tide Gauge Benchmark Monitoring Pilot Project (TIGA-PP)”, EPN contributes since that time by providing weekly EPN operational solutions
- In 2011 transition into a an “IGS Working Group” (a permanent service)
 - CfP on February 2, 2011 (IGS-Mail 6341)
 - Submission of EUREF Proposal on March 15, 2011
 - Review by IGS Governing Board going on
- Focus of new EPN proposal on “repeated reprocessing” asked in CfP



LAC vs. Combined Solutions

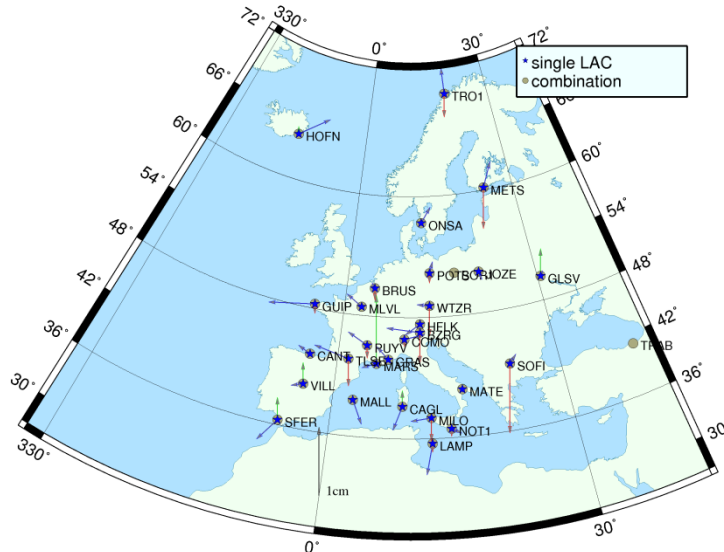
7 Parameter Helmert Transformation



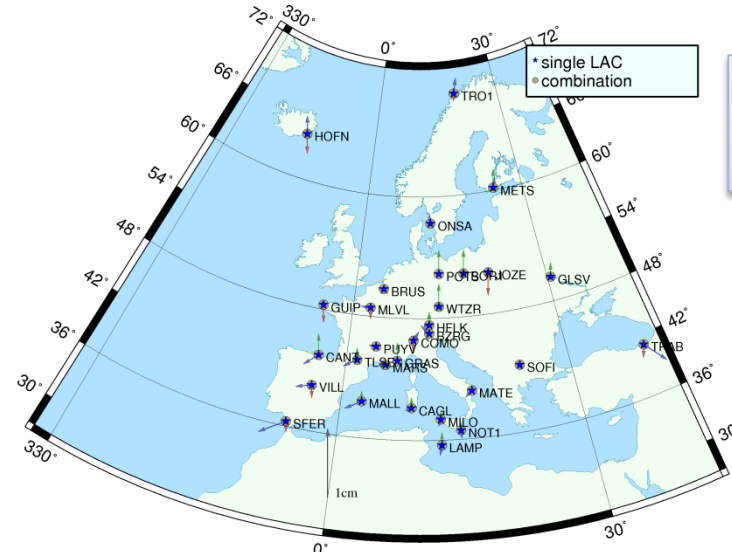
Coordinate Differences - LACs

weekly
benchmark
result

EPN Benchmark – A_Q vs. combined



EPN Benchmark – M_Q vs. combined



EPN Benchmark – NKQ vs. combined

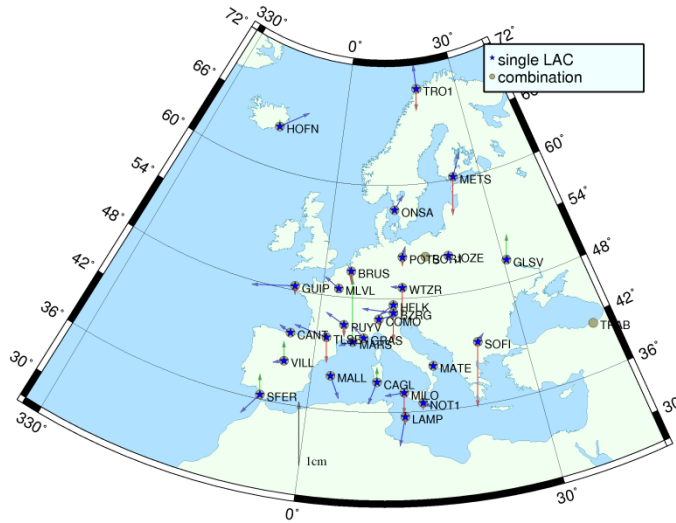


EPN Benchmark – ROQ vs. combined

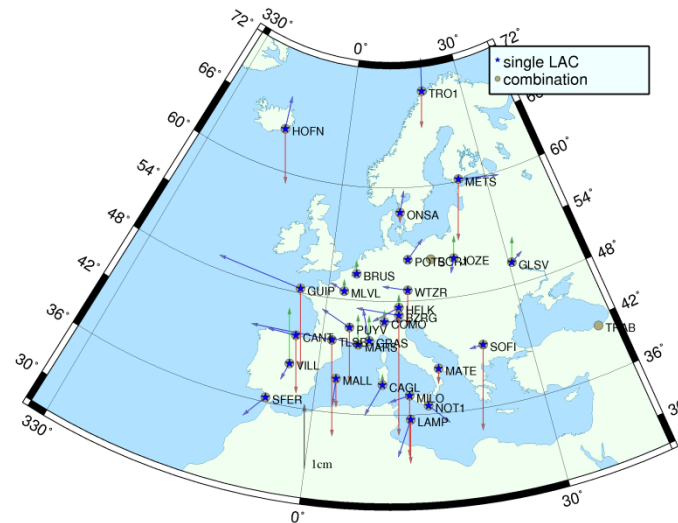


Coordinate Differences - Days

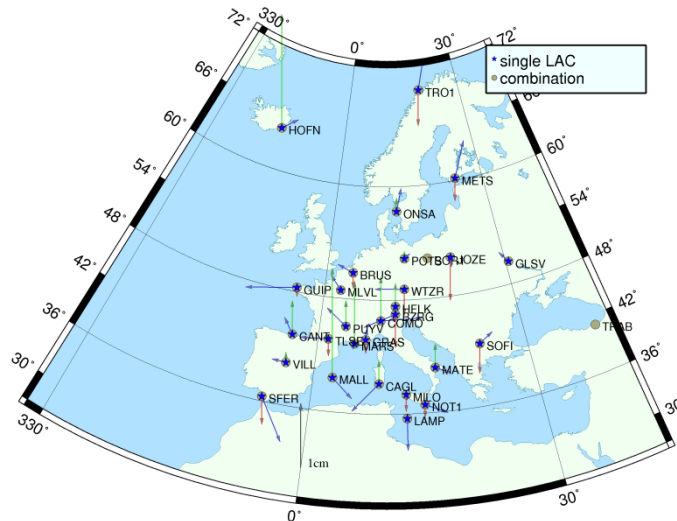
EPN Benchmark – A_Q vs. combined



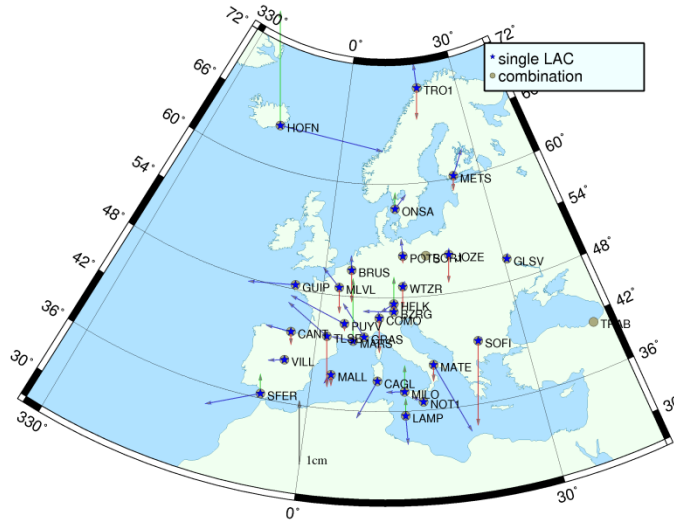
EPN Benchmark – A_Q vs. combined, day 0



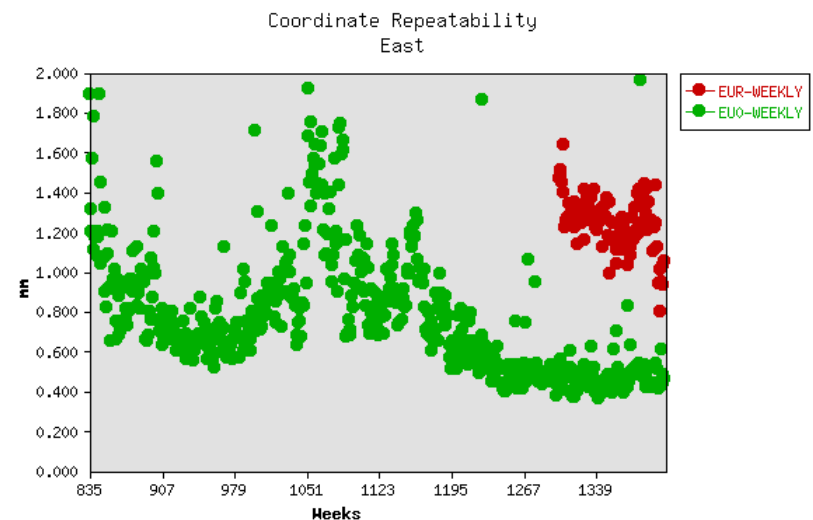
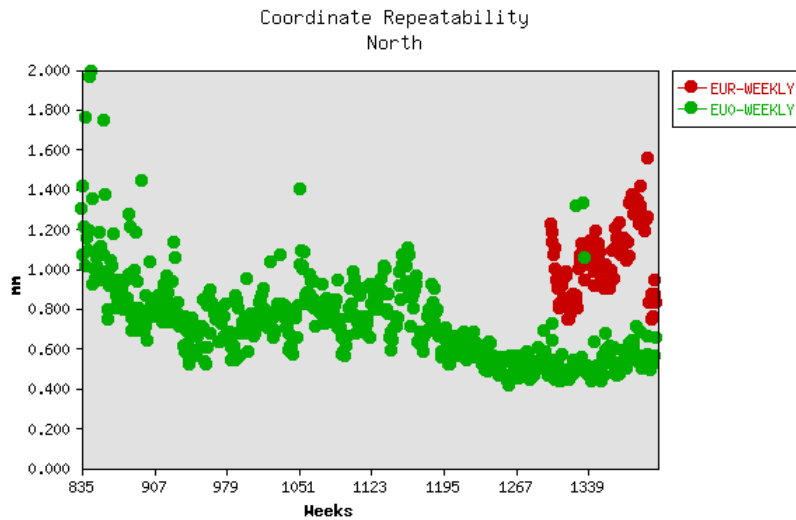
EPN Benchmark – A_Q vs. combined, day 1



EPN Benchmark – A_Q vs. combined, day 2



Coordinate Comparison LAC vs. Combined Solution (RMS)



Solution: EUR

Type: WEEKLY

Inspected solutions: 106

Median North: 1.035 mm

East: 1.25 mm

Height: 3.76 mm

Solution: EU0

Type: WEEKLY

Inspected solutions: 573

Median North: 0.69 mm

East: 0.70 mm

Height: 2.24 mm

