

IGE Analysis Centre Report in E-GVAP

Instituto Geográfico Nacional

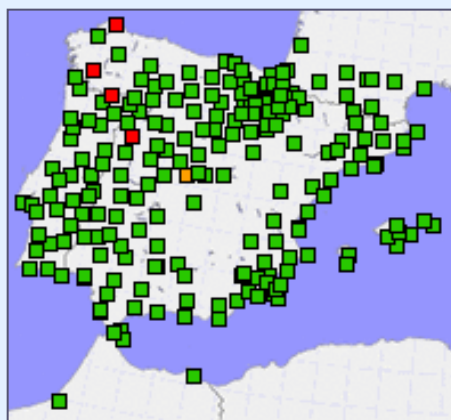
Jose A. Sánchez Sobrino

Esther Azcue

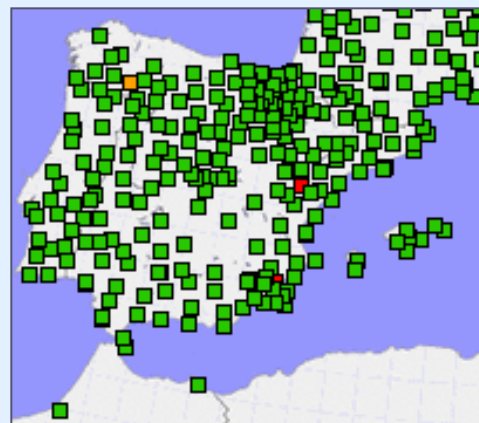
Víctor Puente

EGVAP analysis

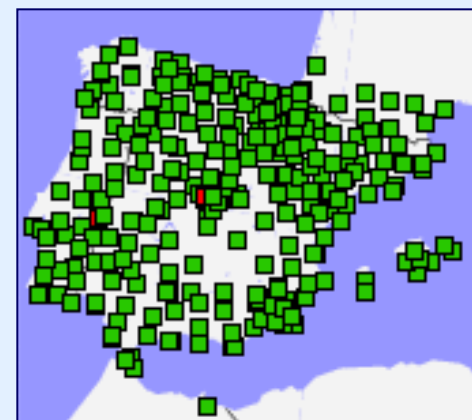
- No relevant changes since the last meeting in IGE solution:
 - Number of stations has grown up slightly (from 340 to ~ **350 stations**).
 - IGE2: **BSW5.2, COST 2.2** format, from April 2014.
 - Hardware: 16 core machine; hourly process takes **4-5 min.**
 - No new GNSS networks have been installed in the area in the last years. Only few stations for densification.



Nov. 2012



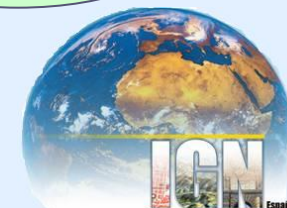
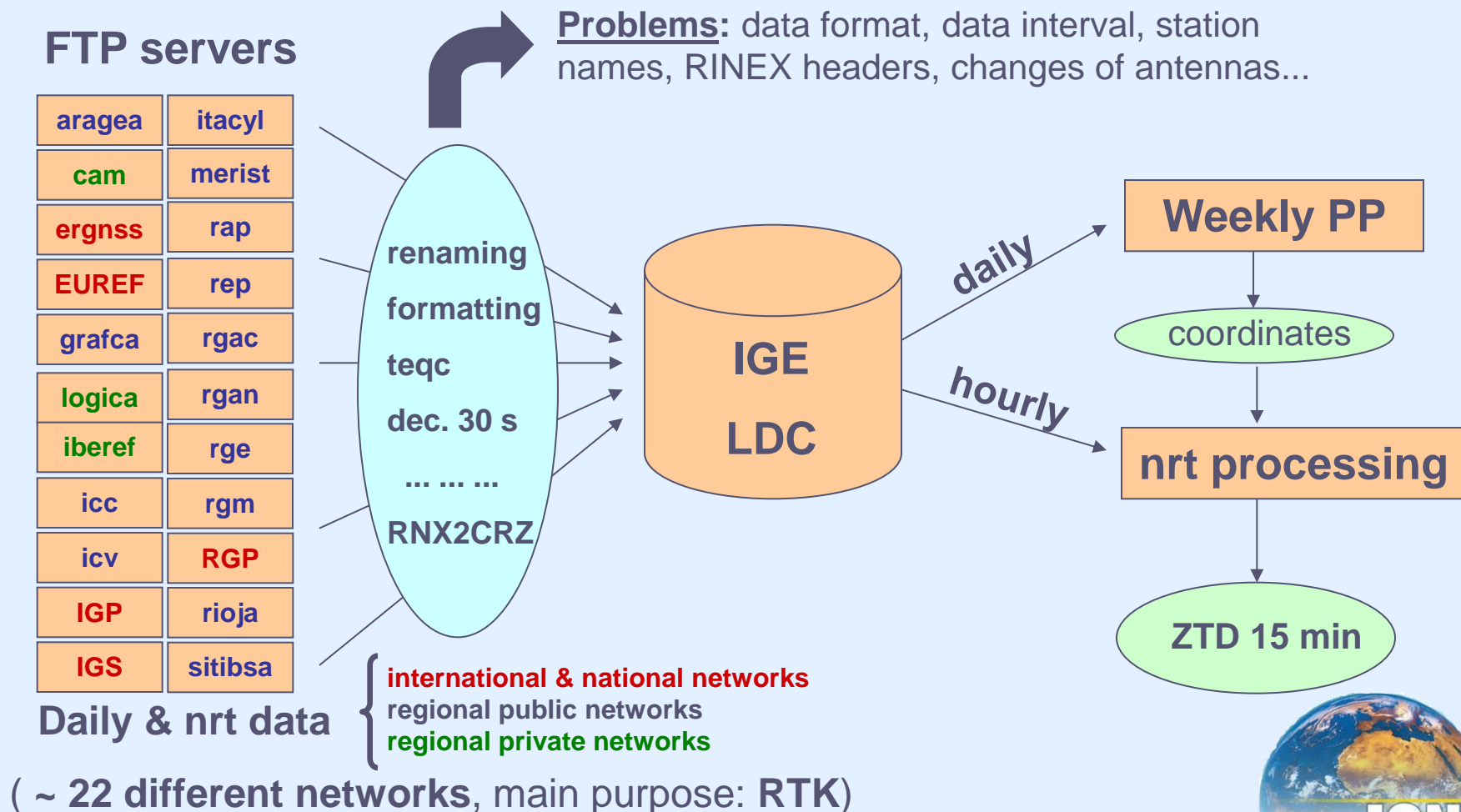
Nov. 2013



Oct. 2014 ~ Nov 2017

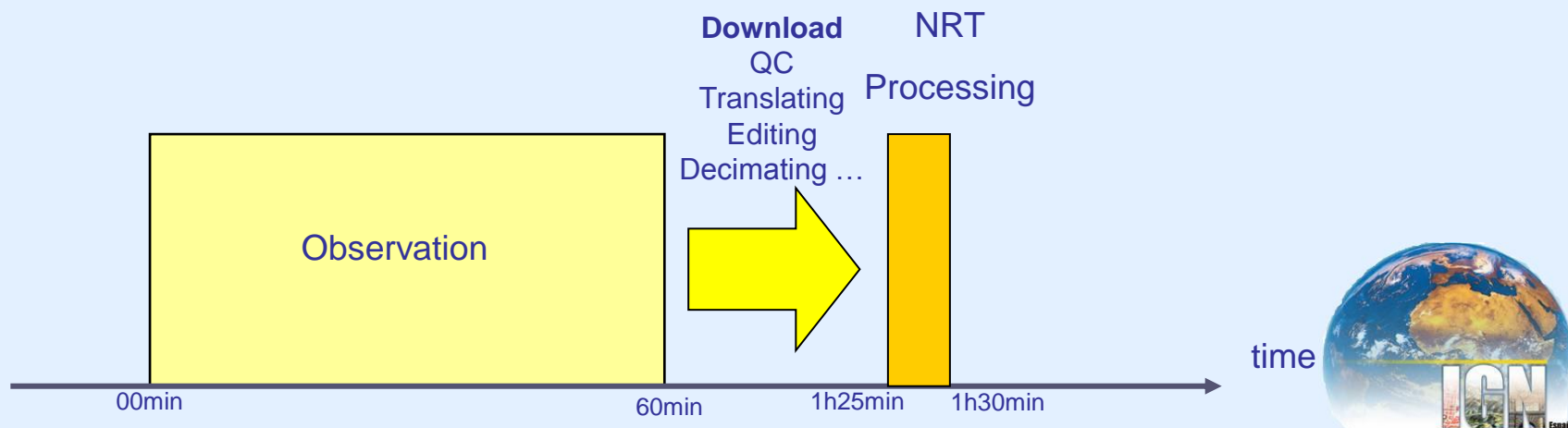


Data flow



Schedule

- NRT starts each hh:25.
- NRT finishes 4-5 minutes later, hh:30.
- Last hour + 5 NEQ stacking for the troposphere final solution.
- Coordinates from the weekly process from previous 2 weeks.
- ZTD submitting time limited by availability of data from regional networks (sometimes ~ 20 min).
- Processing can be advanced in time on demand of Met agencies, but in this case not all possible stations can be processed.

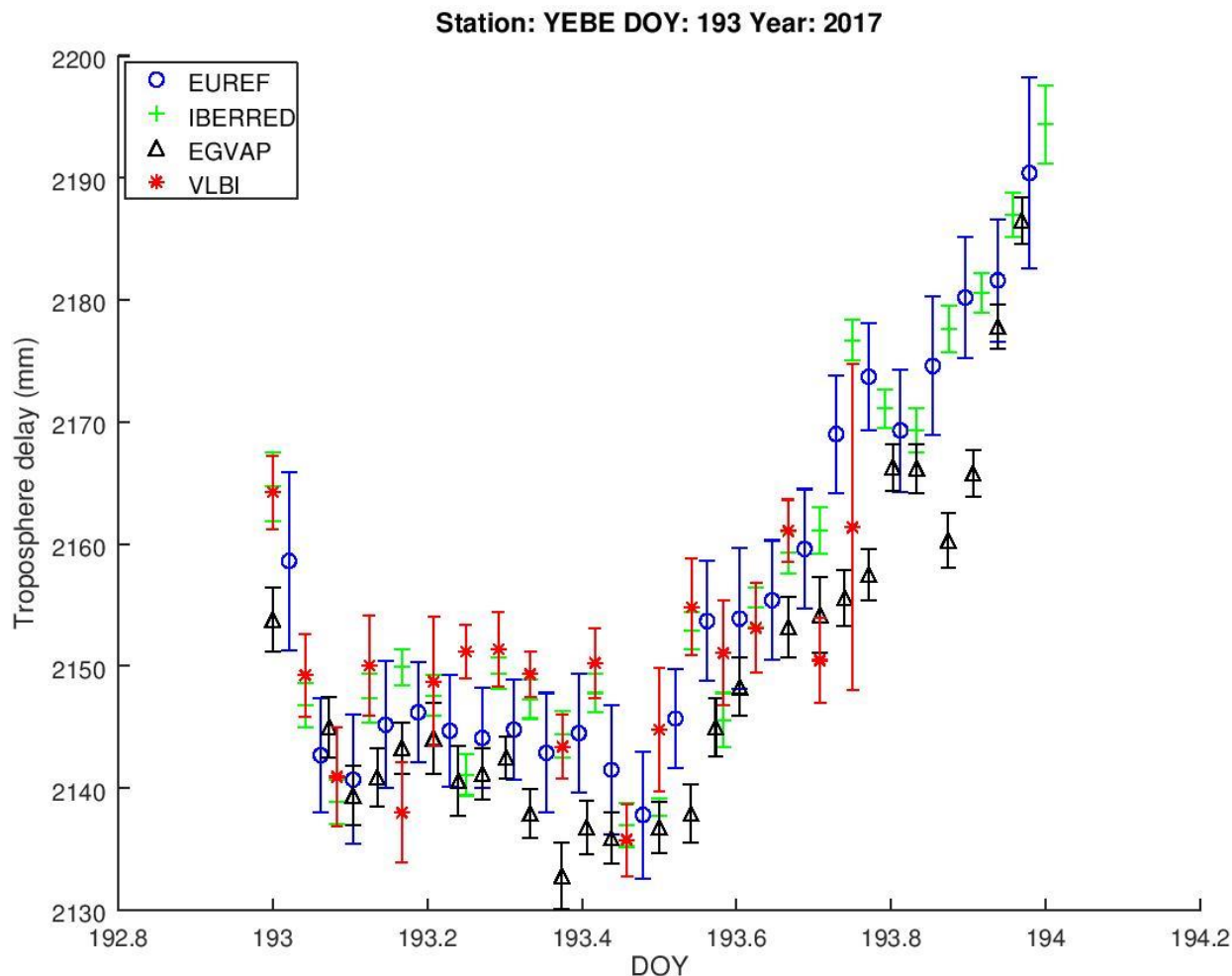


ZTD comparison with VLBI

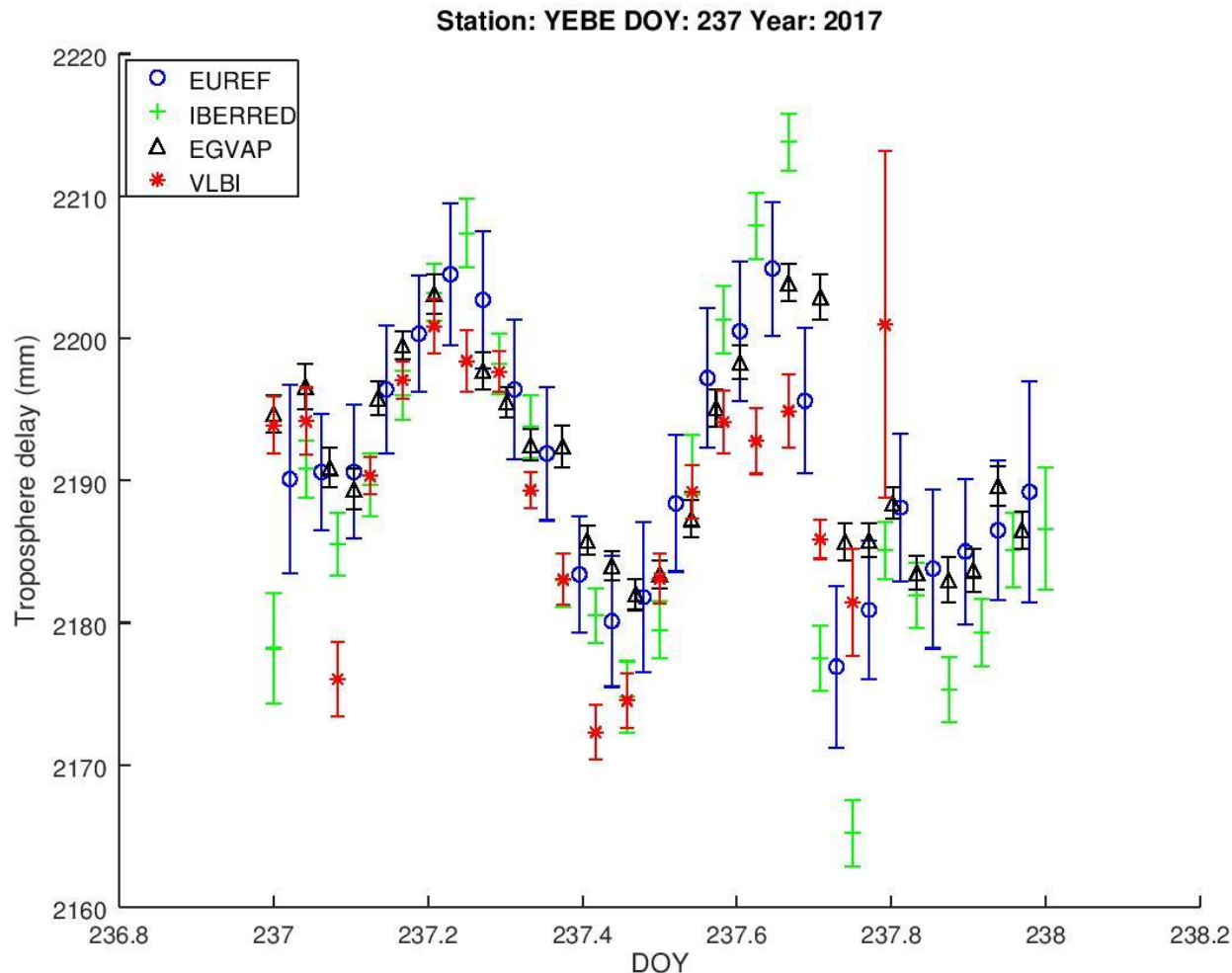
- IGE is taking the first steps to become VLBI Analysis Centre.
- ZTD comparisons have been carried out with the different GNSS projects in which IGE contributes in order to validate VLBI troposphere estimation.
- VLBI Software: VieVS 3.0 (University of Vienna)
- Results obtained for YEBE station (GNSS and VLBI antennas ~150 m apart)



Comparison of ZTD with VLBI



Comparison of ZTD with VLBI

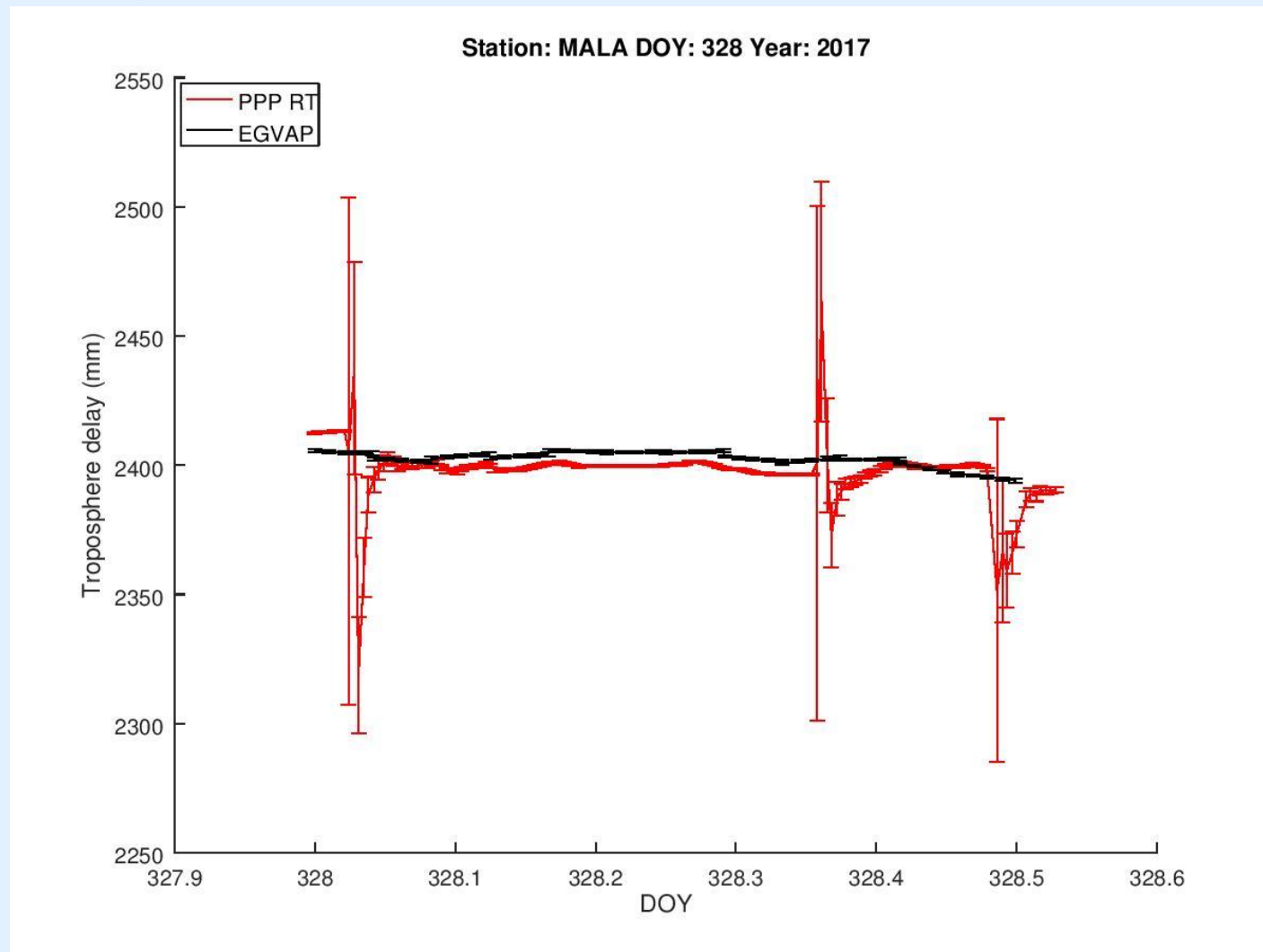


Tests on real time ZTD

- Tests on real time ZTD estimation have been performed using PPP in real time.
- Software BNC 2.12.3 (BKG) is fed with real time stream from stations used for RTK network solution.
- IGS01 stream of SSR is used for the correction of broadcast orbits and clocks.
- TRO SINEX files at 5 min sampling are obtained.
- Loss of convergence in the PPP algorithm appear occasionally.
- Future tests are planned with Geo++ software.



Comparison of ZTD in real time



Thank you for your attention

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