



EUREF 2019 Symposium
Tallinn, 22 – 24 May



National Report of Spain

Instituto Geográfico Nacional





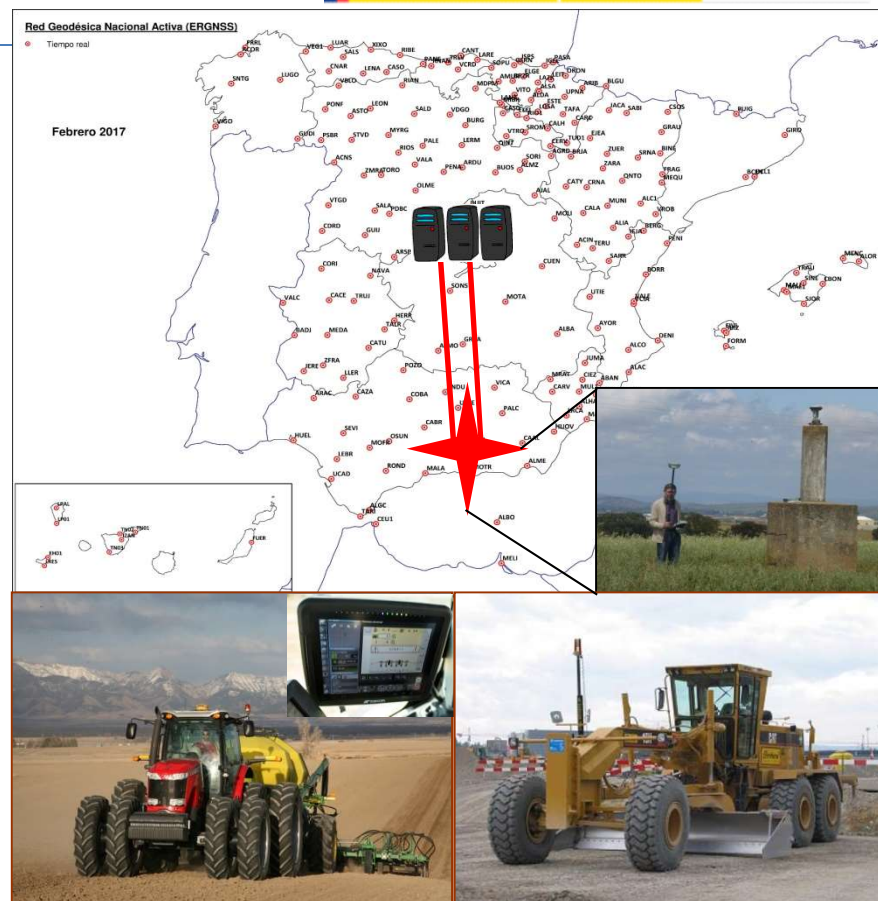


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Real Time positioning GNSS Services

- Network-based RTK service (240 stations):
 - Service in collaboration with Autonomous Regions GNSS networks.
 - Homogeneous & updated ETRF00 frame.
 - Free of charge.
 - Network divided in clusters (10 servers, 20 overlaped subnetworks).
 - Solutions:
 - VRS, MAC, FKP network based.
 - Individual station and NEAREST.
 - ergnss-tr.ign.es:2101 / 2102





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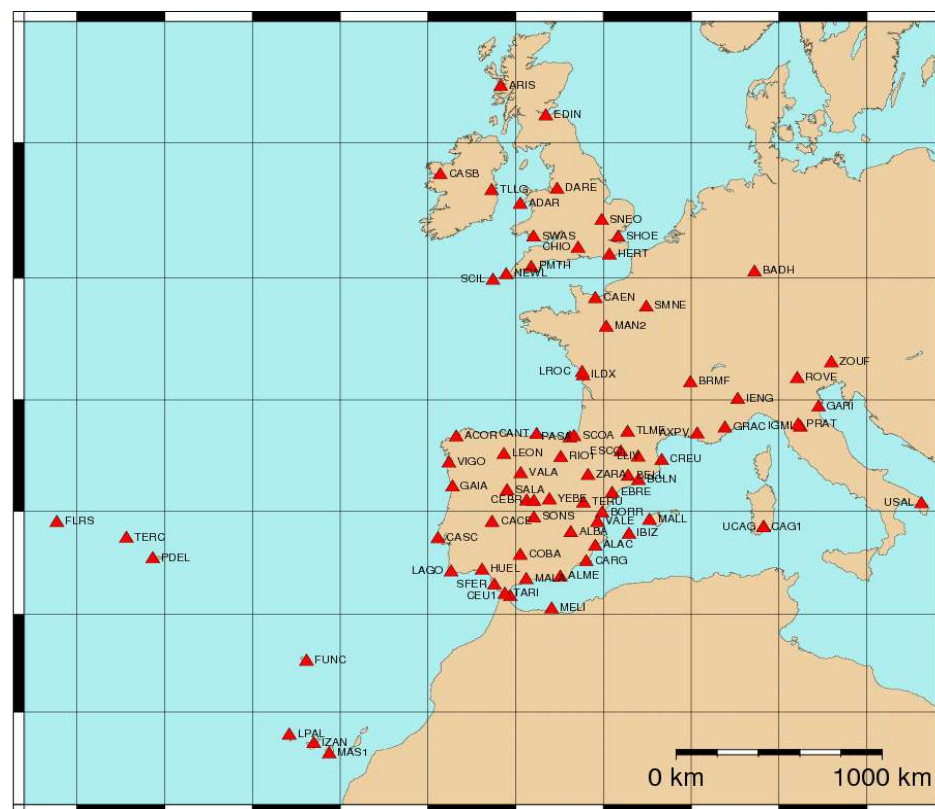
IGE Analysis Centre - Summary

- EUREF Analysis Center
 - LAC: EPN processing (final & rapid products) -> 90 stations.
 - DAC: EPN densification and EUREF Dense Velocity Field projects (~ 380 stations).
- Other GNSS processing projects
 - IBERRED Project (time series & velocities) → 380 stations.
 - E-GVAP Project (EUMETNET, ZTD) → 380 stations.
 - Volcanic Monitoring System (Canary I.) → 40 stations.
 - Experimental projects: GNSS-R, tsunami alert.
- VLBI processing
 - VieVS & WHERE softwares



IGE EUREF LAC

- BSW 5.2.
- 90 EPN stations (29 IGN).
- 32 individual calibration.
- Final & rapid products.
- Recent change: GALILEO observations included operationally since Wk 2044.
- Evaluation of GALILEO impact on IGE solutions (see poster).





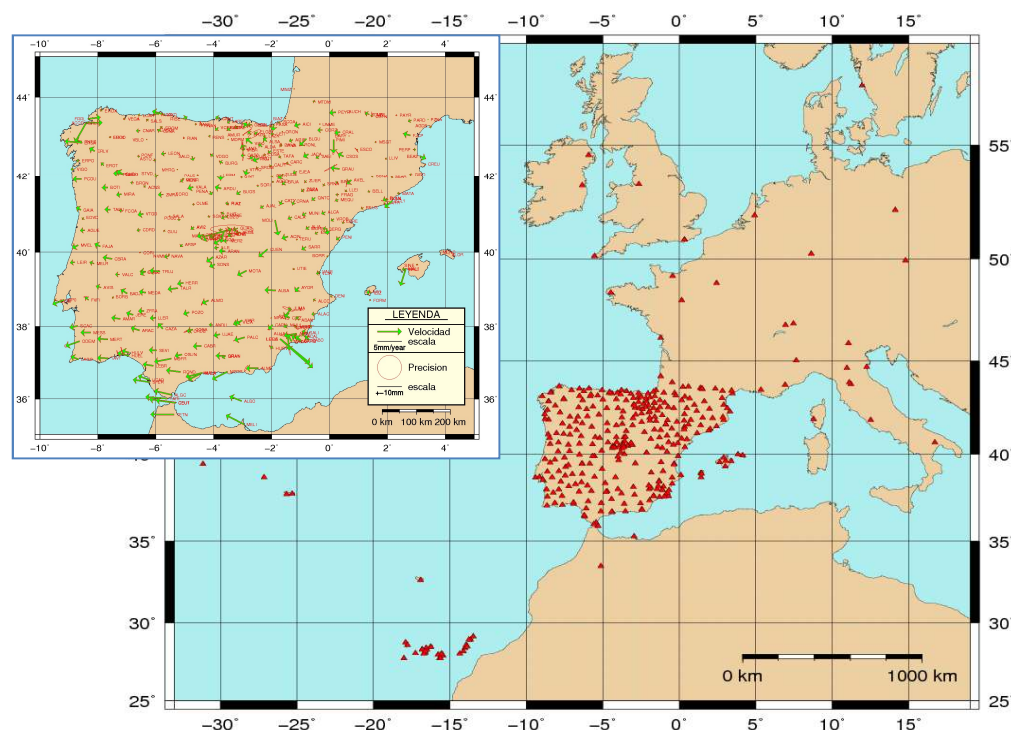
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EPN-D & IBERRED

- Around 400 EPN + non-EPN stations.
- EPN + IGN + 12 regional networks + Portugal (IGP)...
- Iberian velocities and time series estimation.
- Finished a complete reprocessing from 2000-2019.
- Same processing options as EUREF LAC processes.
- Products: coordinates, time series, velocities.





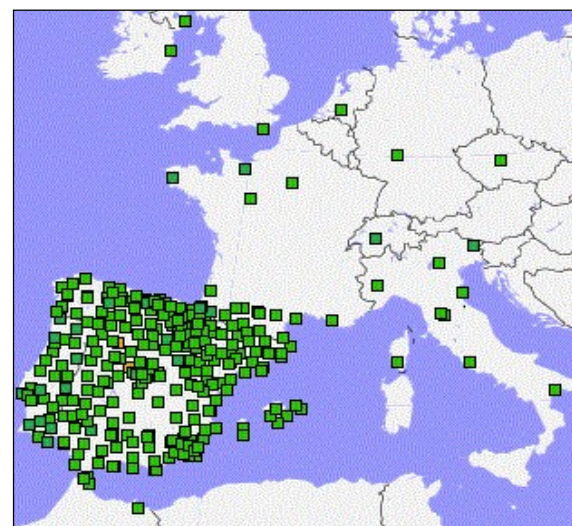
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E-GVAP processing

- EUMETNET project: IVW in «near real time» for meteorological forecast.
- Iberian area and «supersites» for validation.
- Almost same stations EPN-D (400).
- Hourly processing using coordinates from IBERRED process.
- Results: ZTD hourly files 15 min sampling in COST2.2 format.

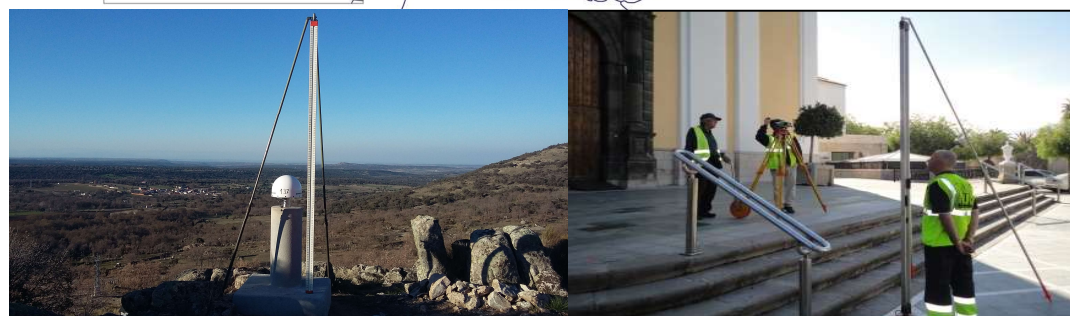


From: E-GVAP web (egvap.dmi.dk)



Other activities

- Precise levelling
 - REDNAP: high precision levelling network, 20.000 km, 25.000 benchmarks.
 - Current works: link all GNSS permanent stations with REDNAP (ortom. height).
 - 70% of the GNSS stations are linked with REDNAP.
 - It is expected all the GNSS stations will be linked to REDNAP in 2020.



Thank you for your attention

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