



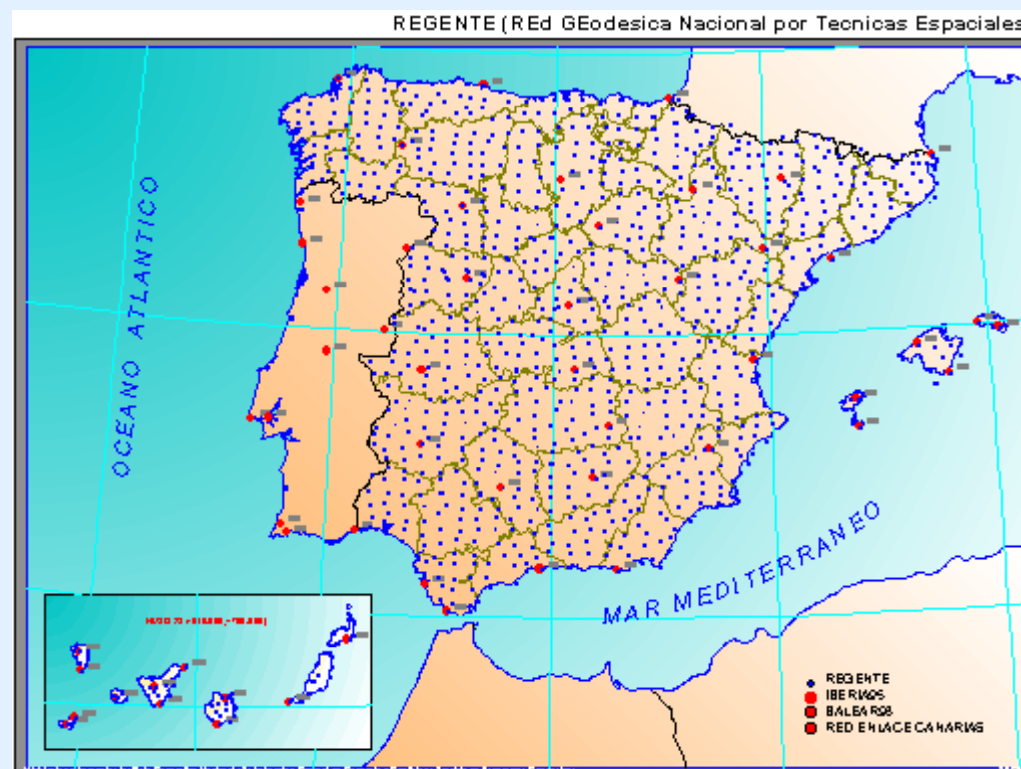
National Report of Spain

Marcelino Valdés

Centro de Observaciones Geodésicas – Instituto Geográfico Nacional

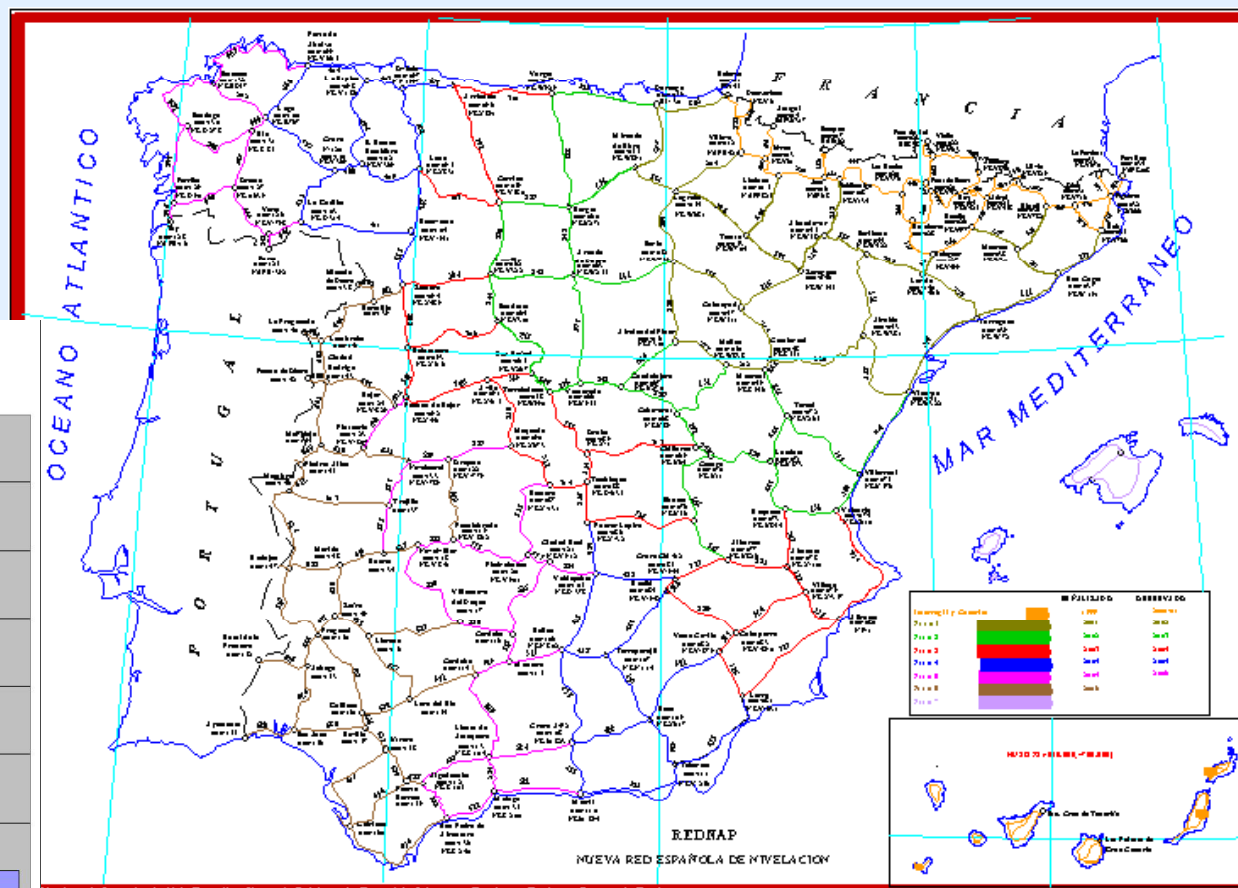
New Spanish National Geodetic Reference System ETRS89 (REGENTE Frame)

- Law
 - 1071/2007 Royal Decree.
 - BOE 207 29/08/2007
- Affect to all the
 - official cartography.
 - geographical information.
- Frame → REGENTE Network
- REGENTE Network was supported in
 - IBERIA95 → R1-Bad Neuenahr–Ahrweiler 1998.
 - BALEAR98 → R1-Tromsø 2000.
- Canary Islands
 - REGCAN95

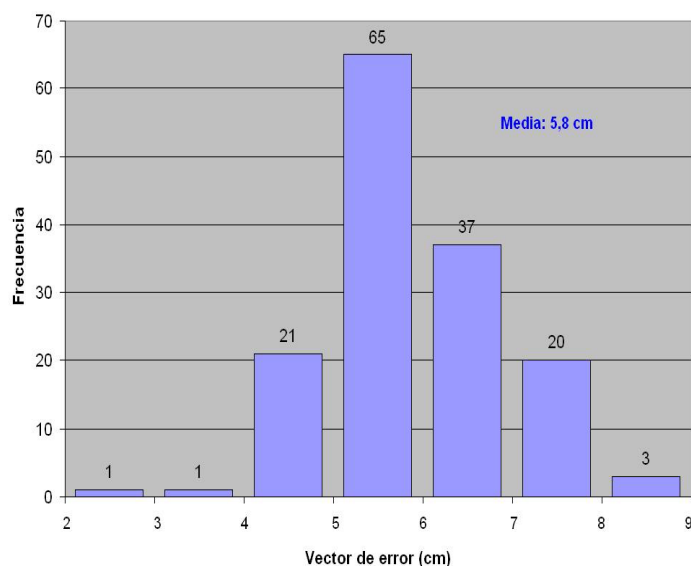


New Spanish Vertical Reference System. (REDNAP Frame)

- Since 2001
 - 25175 bench-marks
 - along 20000 kilometers
- Now:
 - Adjusting stage
 - Densification



Histograma de vectores de error (95% confianza)



Spanish National GNSS Reference Stations Network (ERGNSS)



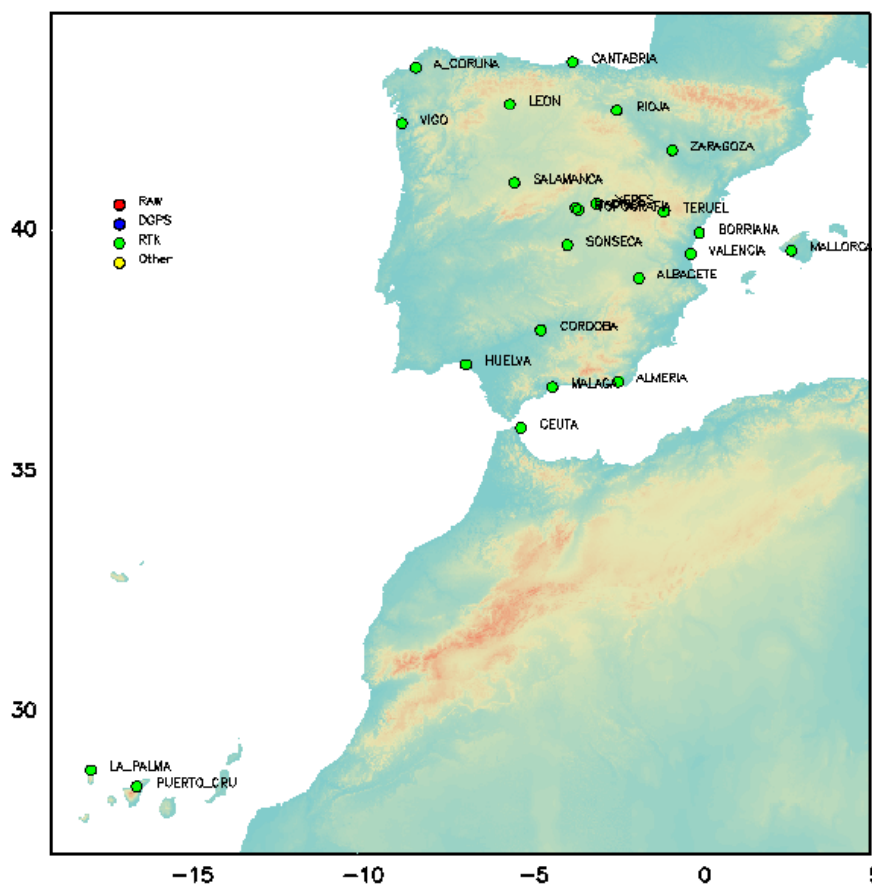
- 25 stations.
 - 1 IGS station
 - 19 EPN stations
- 2 new stations.
 - TERU
 - CEU1
- FTP server.

<ftp://ftp.geodesia.ign.es>



EUREF-IP Project in ERGNSS Network

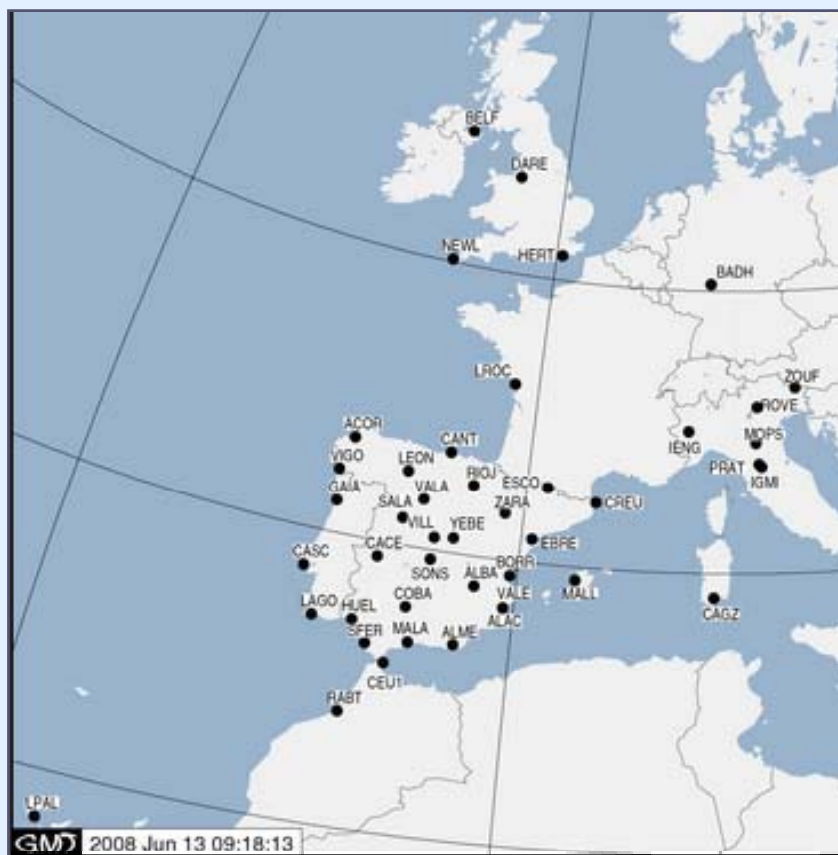
Real-Time GNSS NtripCaster IGNE, Status 080616



- Started on February 2004.
- Data availability is the next:
 - Total of 28 Real -Time Streams.
 - 28 stations broadcasting RTK.
 - 21 belonging to EPN/IGS Network.
 - 20 belonging to IGN
 - 1 belonging to Valencian Cartographic Institute (ICV)



IGE Analysis Centre.



IGE as a Local Analysis Centre of EUREF

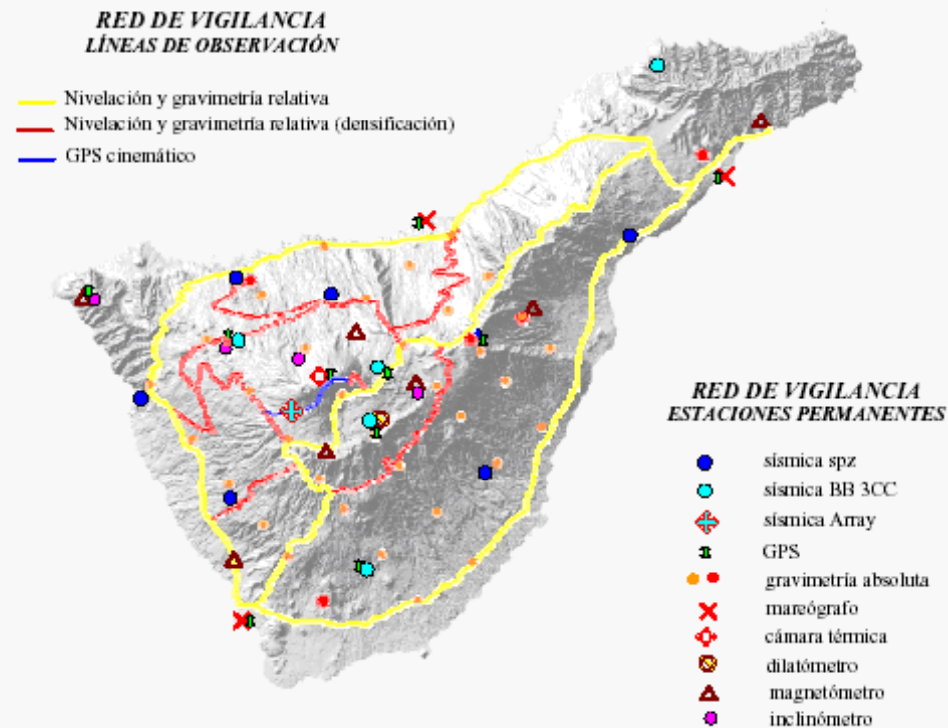
- IGN is an EUREF Local Analysis Center (IGE). From 1130 week
- 46 stations with Bernese 5.0.
- EPN Rapid Analysis project (1418 week)

IGE as Analysis Centre

- Iberian Network.
- E-GVAP Project (Iberian Region)



Tenerife Volcanic Monitoring System Project



Planned.

- 3 Tide gauges
- 10 GPS Permanent stations.
- 307 Km of High Precision levelling Network.
- Absolute and relative Gravity Network.
- 6 Tiltmeters.
- New GPS campaigns.
 - About 28 points.

Installed.

- 3 Tide gauges
- 4 GPS Permanent stations.
- 307 Km of High Precision levelling Network.
- Gravity Network Monumentated.

