

National Report of Italy

EUREF 2010 - Gavle

ISTITUTO GEOGRAFICO MILITARE ITALIANO Geodetic Service



GPS DYNAMIC PERMANENT NETWORK



RDN was submitted to Firenze 2009 Symposium for the official endorsement (resolution 1)

The network consists of 99 stations, including 13 EUREF stations (realization ETRF2000 at epoch 2008.0)

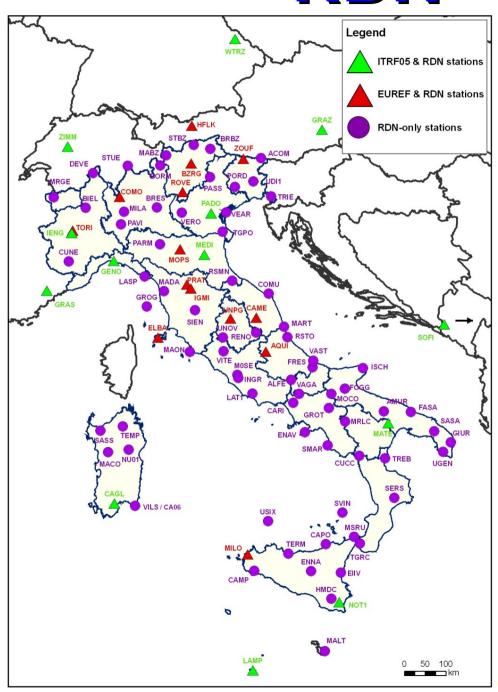
4 monitoring computations have been performed starting from 2008:

June 2008 - Jan 2009 - June 2009 - Jan 2009

Comparisons among the original and the monitoring computations show good consistency with the expected crustal movements (see presentation "Monitoring and analysis of RDN")

On 6th April 2009 the earthquake in Abruzzo caused a change in the position of AQUI station (situated in the town of L'Aquila):

Nord	-51.6 mm
Est	+5.4 mm
Up	-86.0 mm





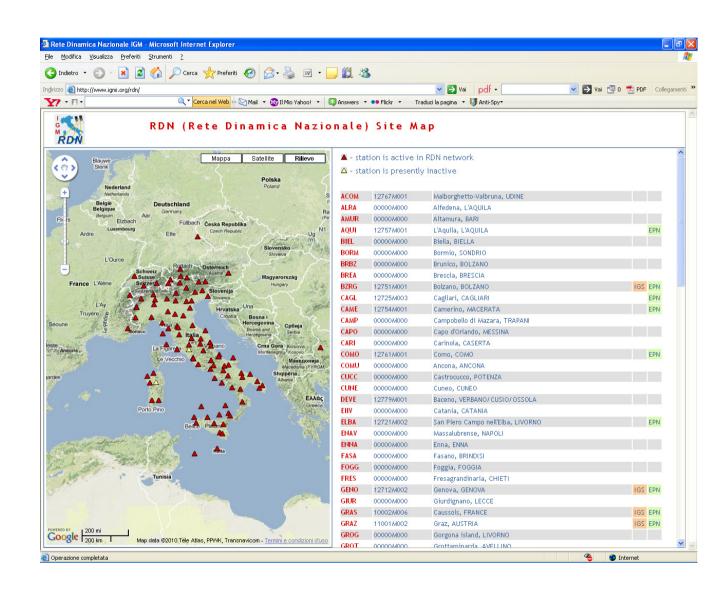
GPS DYNAMIC PERMANENT NETWORK

RDN

In the official IGM website: www.igmi.org

you can find a RDN section with the dynamic graph and the site descriptions of all stations

In a short time a connection will be activated with the DB where all the observations are stored, in order to download daily RINEX (30 seconds)





GPS STATIC NETWORK IGM95

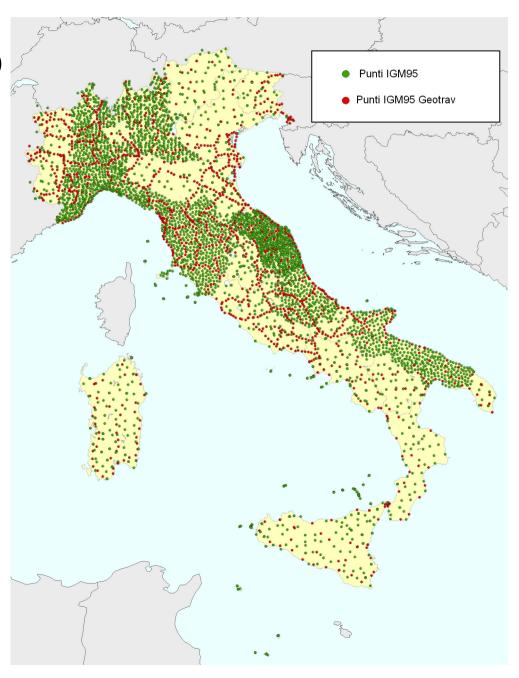
Original network realized from 1990 to 1995: ~1230 points (~450 points, called GEOTRAV, coincident with levelling benchmarks)

Subsequently densificated:

- •800 GEOTRAV
- •2500 points from regional densification (mean distance 7 km)

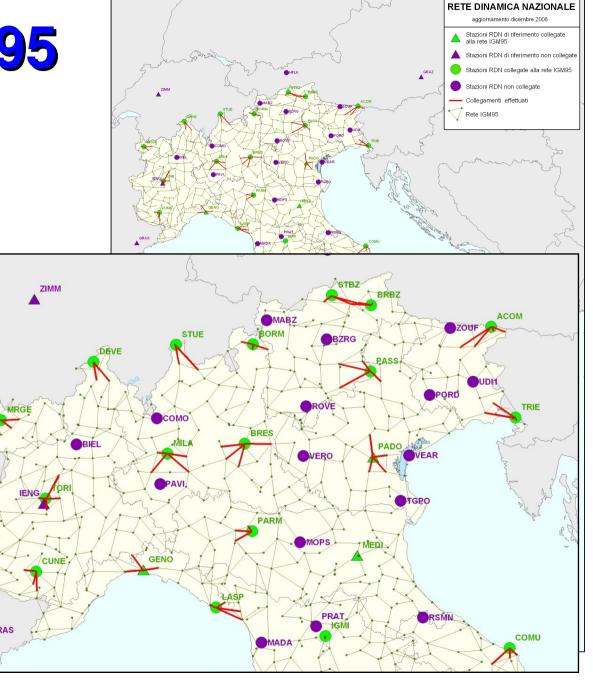
At present: ~ 4500 points

Realization of ETRF89



GPS STATIC NETWORK IGM95

After the realization of RDN all the IGM95 network was recomputed from ETRF89 to ETRF2000 through GPS connections (red lines) among RDN stations (green circles) and IGM95 original points



ISTITUTO GEOGRAFICO MILITAR SERVIZIO GEODETICO



HIGH PRECISION LEVELING NET

Ancient network (1878-1900)

Modern network (1950-1971) 13.000 km

3 tide gauges: Continental Italy: Genova 1942

Sardinia: Cagliari 1956

Sicily: Catania 1965

On-going densification (1996-2010):
 up to 20.000 km

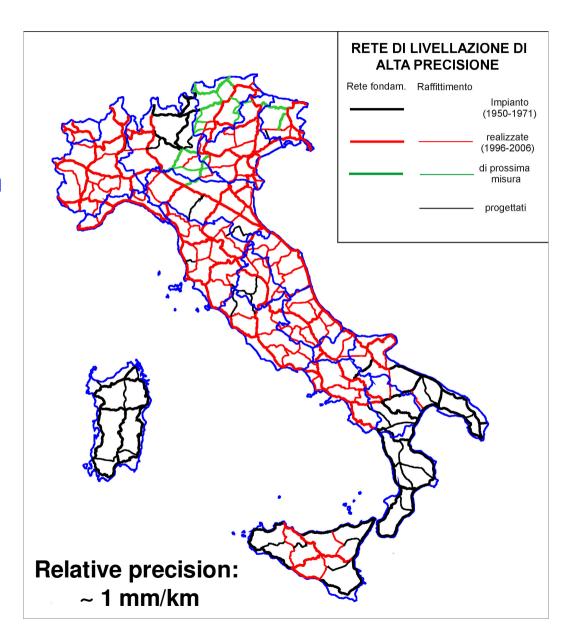
Fundam. Densifications

Set up 1950-71

Measured 1996-08

Ongoing 2009

Planned





Thank you for your attention!

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