

***EUREF 2013 - Budapest***

***National Report of Italy***

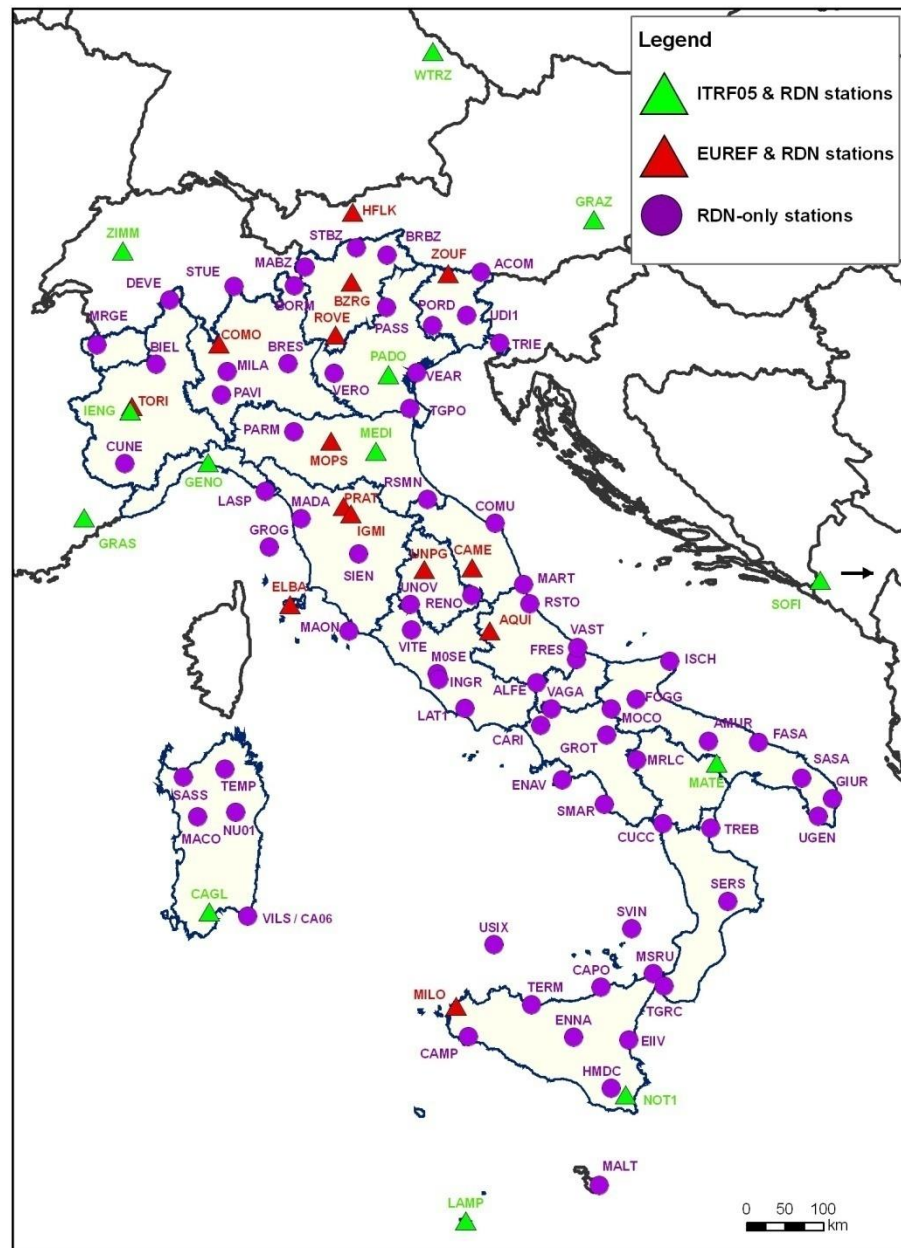


# GPS DYNAMIC PERMANENT NETWORK:

## RDN monitoring

- It consists of 99 stations covering Italian territory
- It works since 01/01/2008, from 2009 it is the realization of ETRF2000 (2008.0) in Italy
- GNSS data are collected and monitored by IGM. IGM and other agencies/universities are involved in computation of the network
- Data and results are published in

[www.igmi.org/rdn](http://www.igmi.org/rdn)





# GPS DYNAMIC PERMANENT NETWORK:

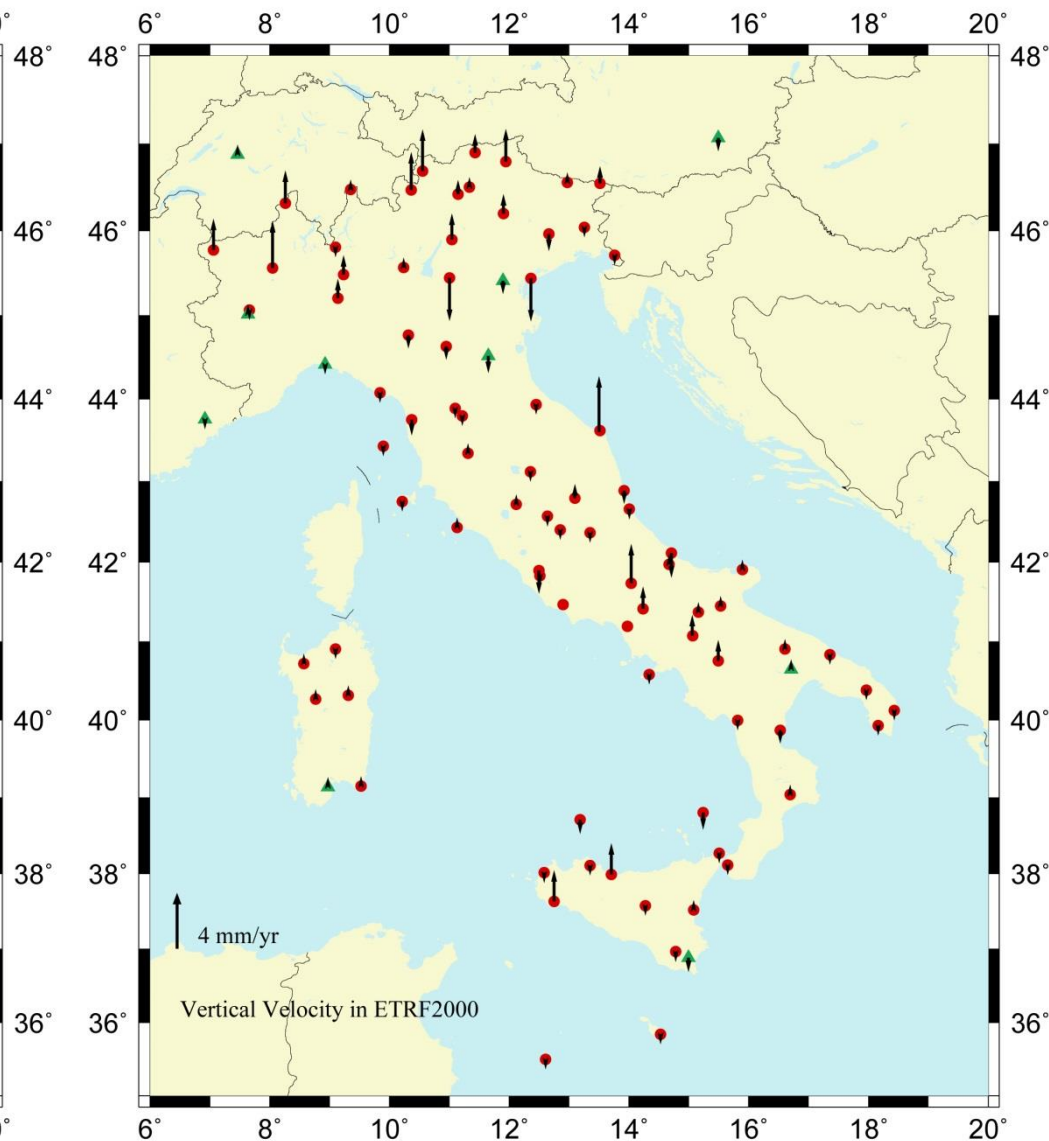
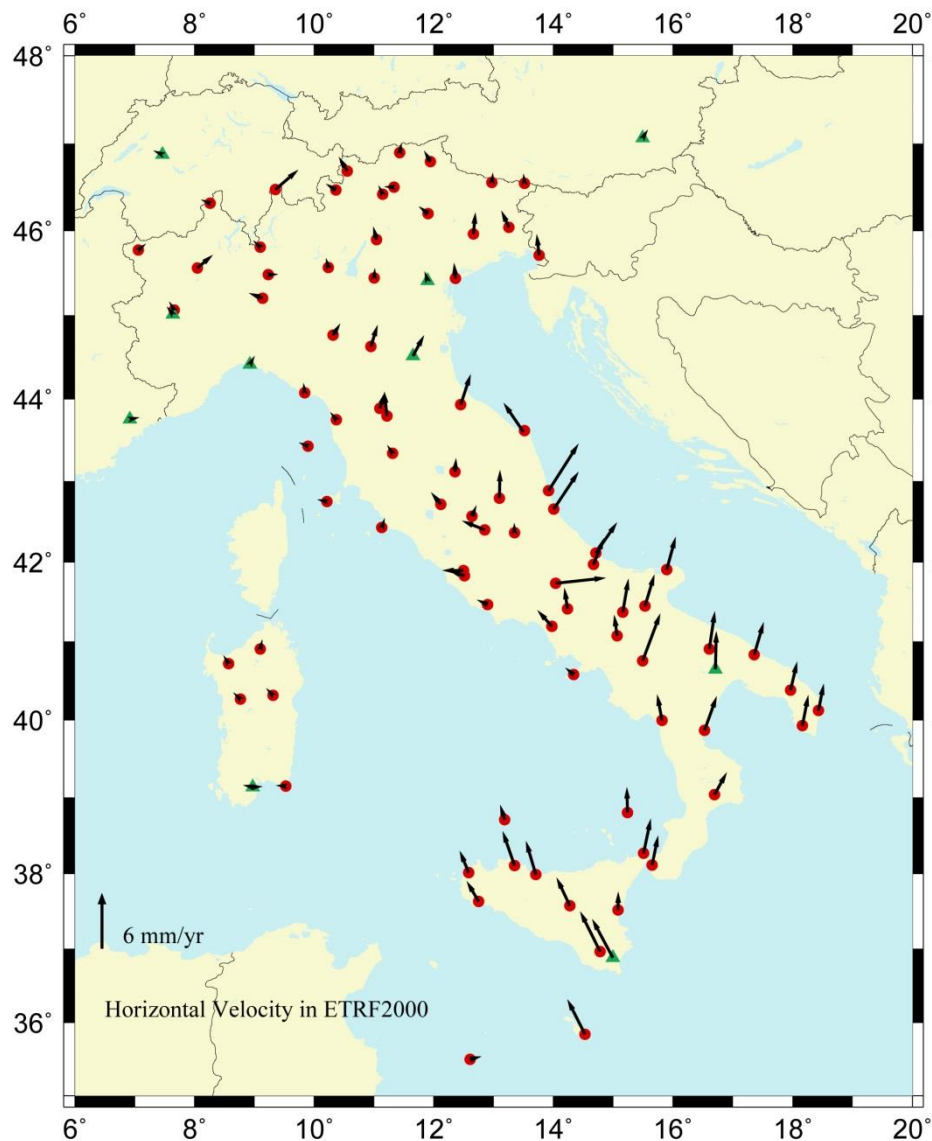
## RDN reprocessing

- During 2012, IGM has started a reprocessing of RDN network in IGb08/IGS08.atx framework
- RDN repro provides an homogeneous analysis, without gap due to RS changes (see week 1632) characterized by long term observation period : from week 1458 to 1722 = 5 years
- According to IGS Mail 6475 by J. Ray, a long term reprocessing, in differential mode, is meaningful using IGb08/IGS08.atx framework with IGS05 satellites orbits for computation preceding week 1632



# GPS DYNAMIC PERMANENT NETWORK

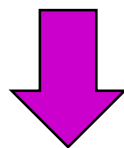
## ● Preliminary results for RDN sites velocity in ETRF2000





# GPS DYNAMIC PERMANENT NETWORK

- Preliminary results in velocity field show horizontal deformations up to  $\approx 6$  mm/year for south regions of Italy
- Preliminary results show vertical deformations for north alpine zones
- It is necessary to update ETRF2000 (epoch 2008.0) coordinates!



**RDN2 network**









# GPS STATIC NETWORK: IGM95

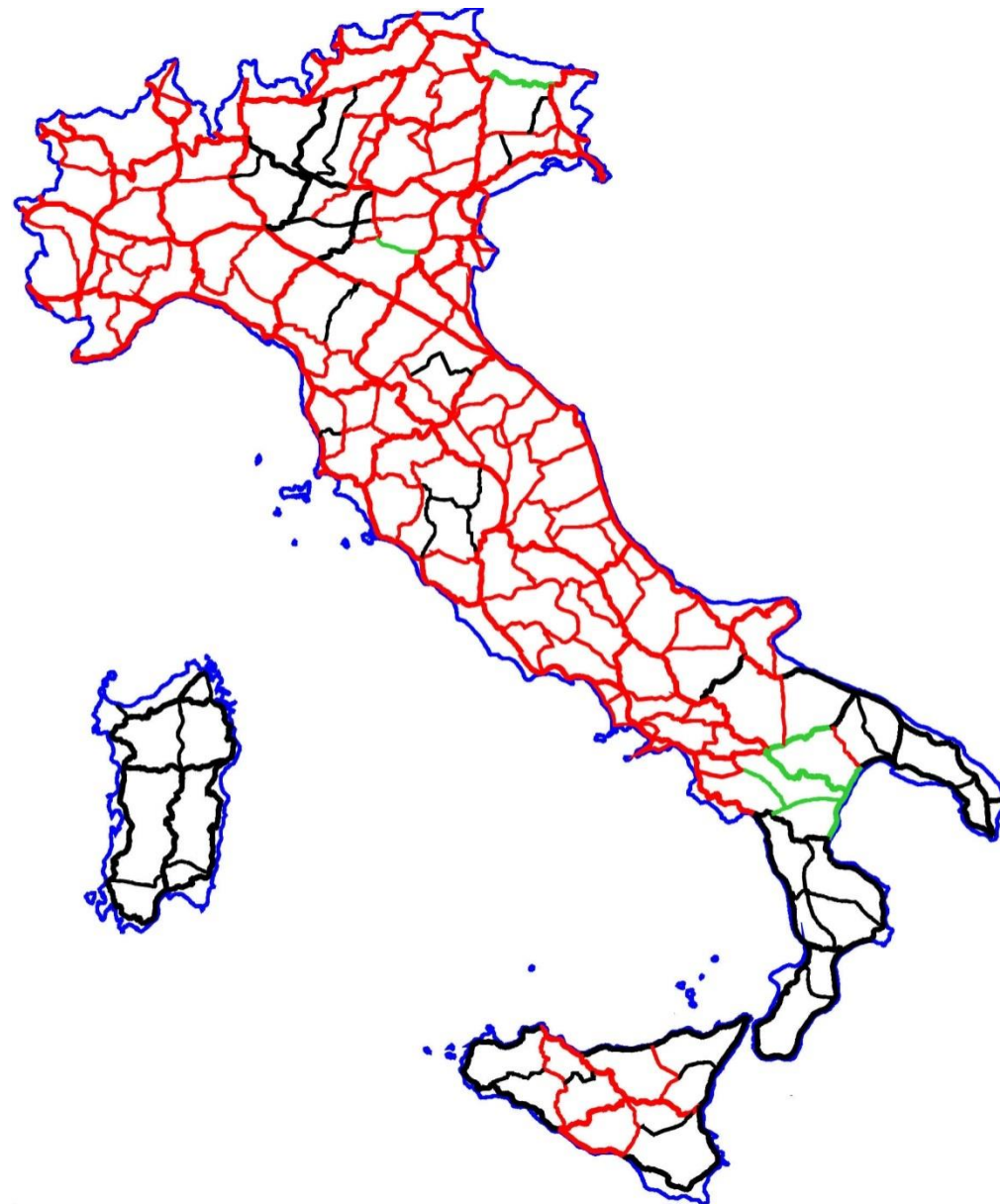
- The static network IGM95 is now perfectly aligned to ETRF2000
- Precision: ~ 5 cm in 3D
- Though the importance of the static network is decreasing, yet it is being used by a number of users and its integration with the densification subnetworks produced by the Regions is still going on
- At present, the Region Basilicata, Umbria is being included





# HIGH PRECISION LEVELING NET

Fundam. net	Densifi- cations	
		Set up 1950-1971
		Measured 1996-2012
		Ongoing 2013
		Planned



- The re-measure and densification of the high precision leveling net is going on
- Computation of dynamic heights using gravity values from ITALGEO2005 geoidic model

# GNSS Activities at ASI/CGS



<http://geodaf.mt.asi.it>

**GeoDAF**



ASI/CGS: GGOS Fundamental Station

SLR-VLBI-GNSS and Absolute Gravimeter Collocated

Management of the ASI Italian GPS Fiducial Network

EUREF Regional Data Center

MATG multi GNSS receiver (M-GEX contribution)

EPN LAC since 1996 (final/rapid/ultra rapid products)

EPN Regional Broadcaster

Participation to EPN Repro2

Participation to the Activities of the TWG

Tropospheric Monitoring

-E-GVAP Analysis Center and Combination Center

-Participation to the MC and WG Activities of the COST  
Action ES1206 GNSS4SWEC

**Thank you for your attention!**