

National Report of Italy

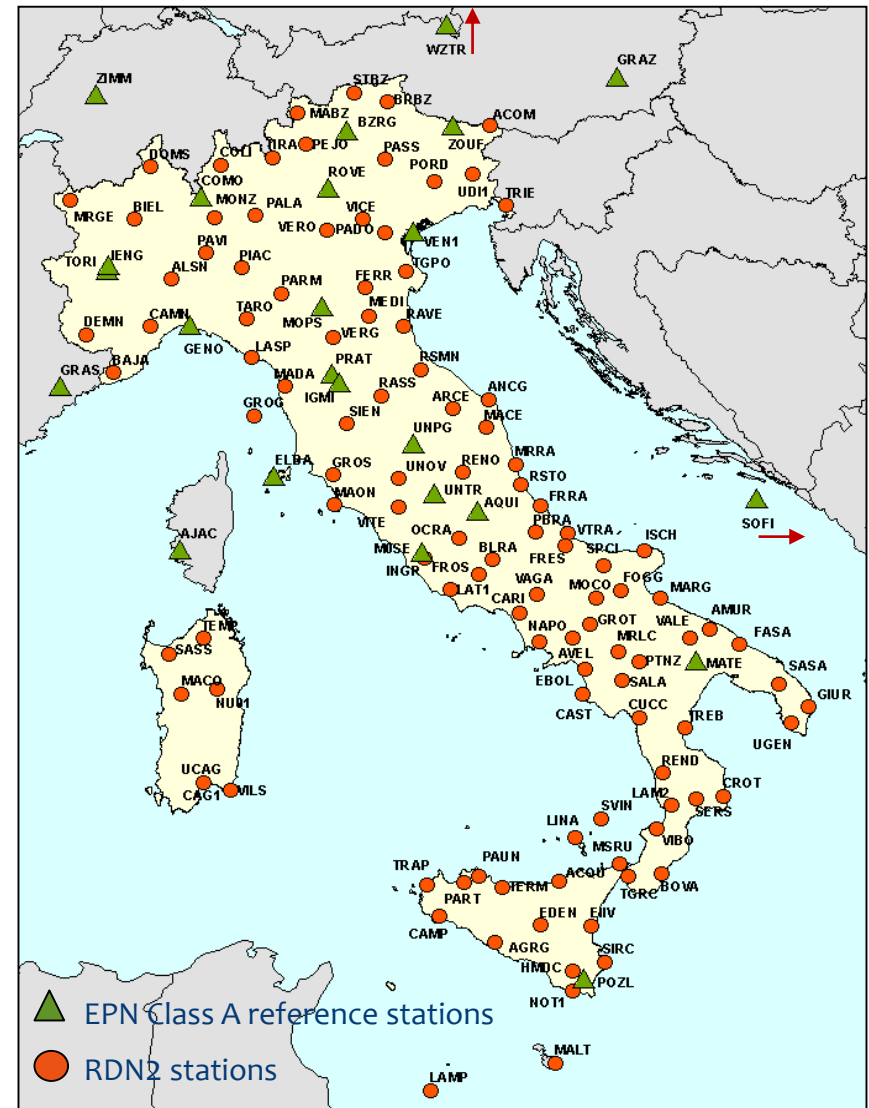
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During 2014 IGM has implemented an update of RDN, the national GNSS network:

RDN2 network

It consists of

- 135 stations among which 80 belonged to former RDN network
- 26 EPN class A reference stations



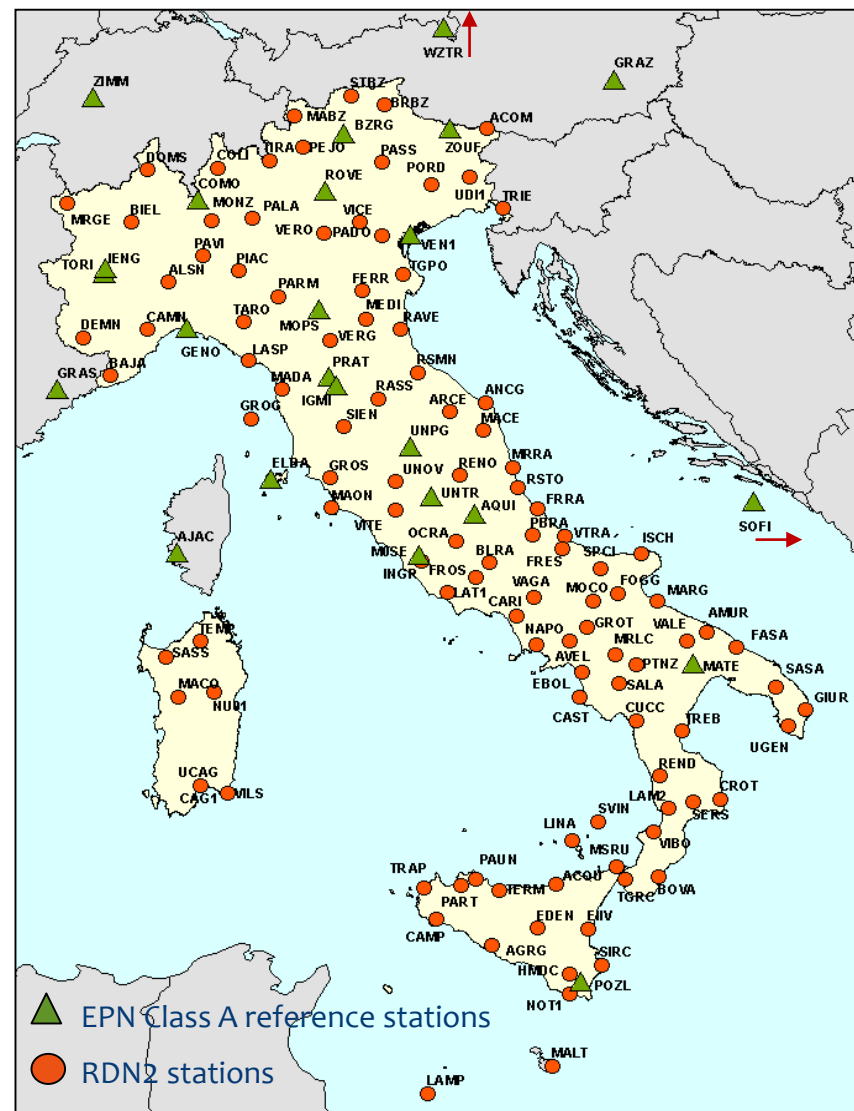
RDN2 network has worked since 01/01/2008, it is the materialization of the official reference system in Italy:

ETRF2000 epoch 2008.0

IGM has the task of monitoring RDN2 network (upgrade to Bernese software V5.2)

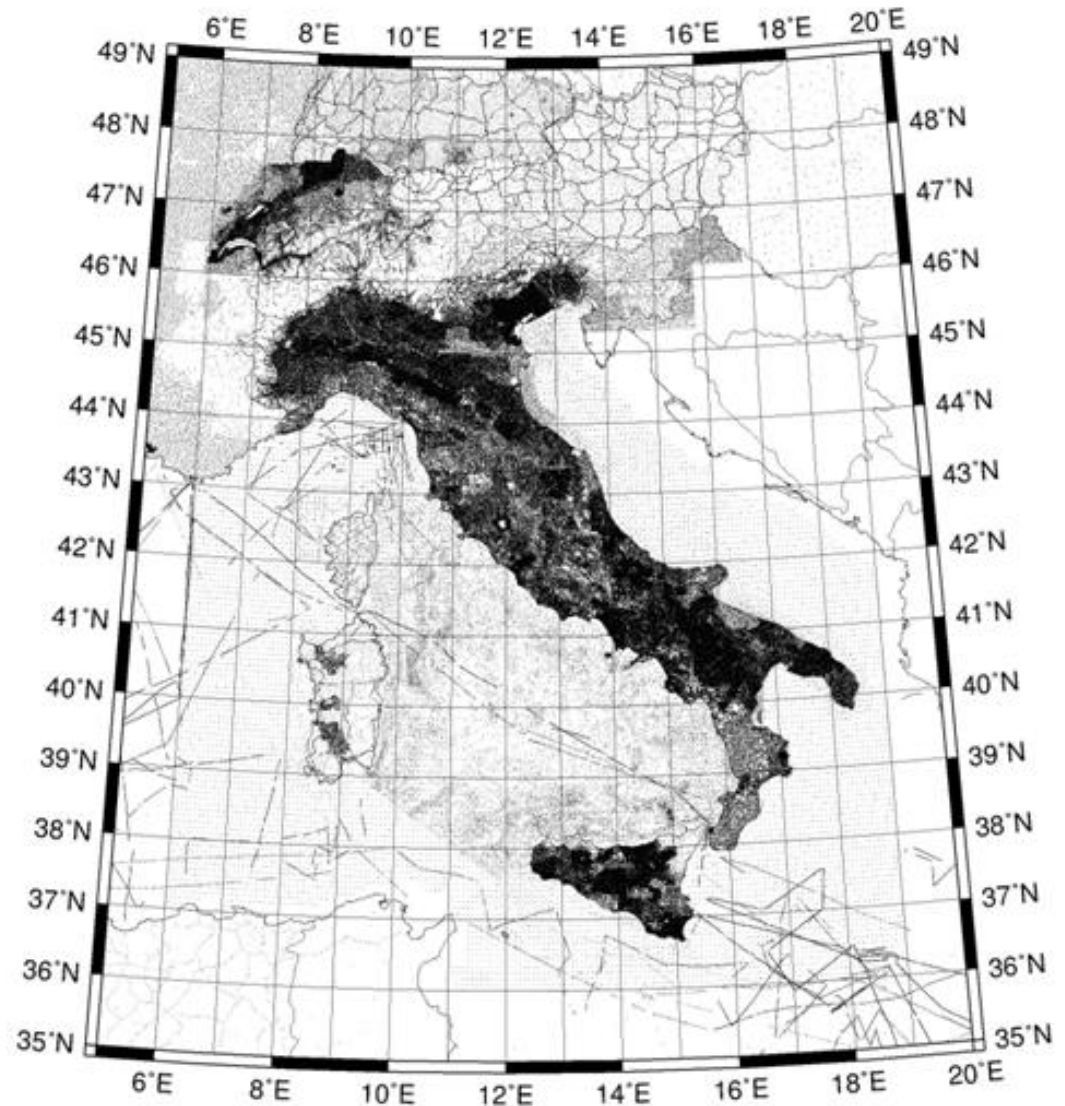
Data, information and weekly solutions are collected and published in

www.igmi.org/rdn



In cooperation with Politecnico of Milano, IGM is computing gravity corrections along the closed polygons of the leveling network

Gravity values are estimated by interpolation from national gravity database



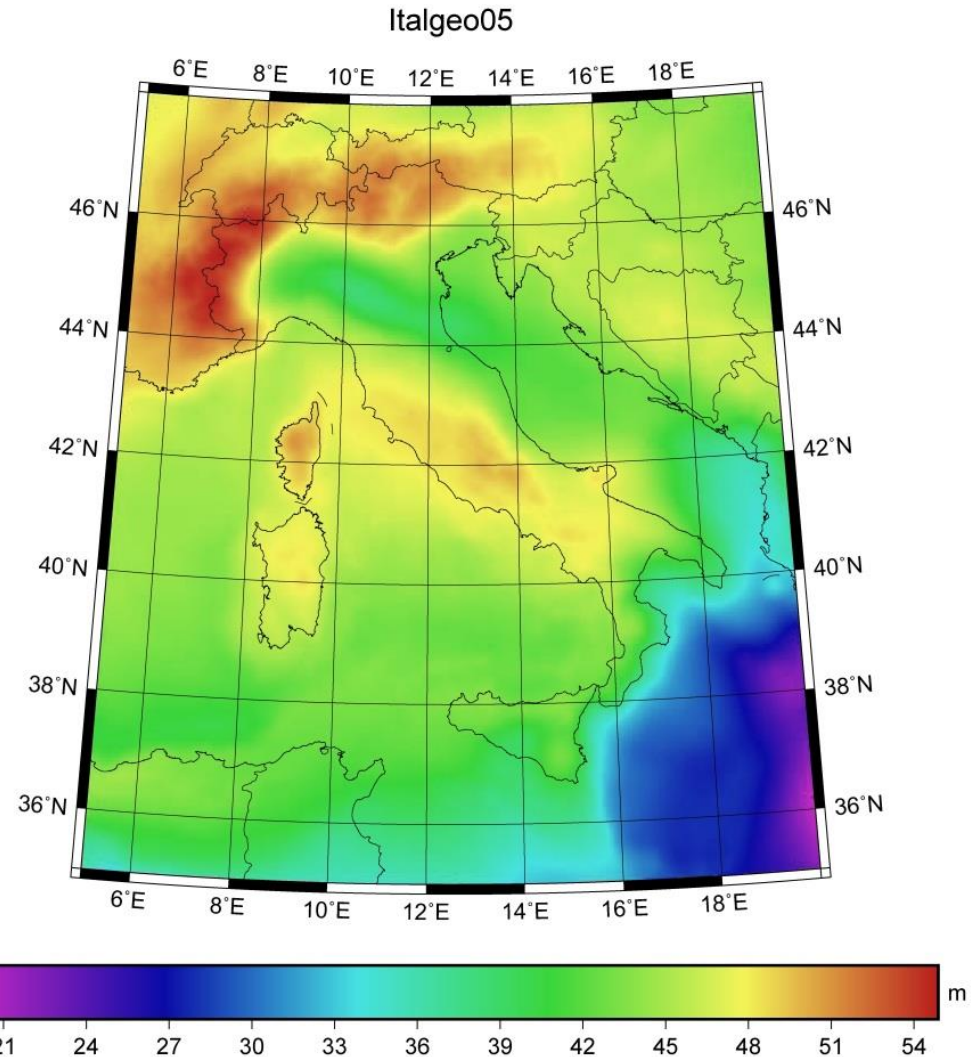
Computations performed on 11 polygons show that in 50% of cases the gravimetric corrections produce significant improvements on polygon closure

Polygon	Closure			
	no correction	normal correction	orthometric correction	dynamic correction
7	-0,070	-0,007	0,014	-0,039
8	0,009	0,020	0,018	0,021
9	-0,003	0,007	0,007	0,008
13	0,026	0,000	0,000	-0,001
14	0,004	-0,007	-0,009	-0,006
15	-0,027	-0,008	-0,008	-0,011
18	0,063	0,057	0,058	0,057
19	-0,056	-0,049	-0,050	-0,048
20	-0,015	-0,001	0,001	-0,002
21	0,011	-0,012	-0,013	-0,011
23	0,030	-0,016	-0,016	-0,024



Politecnico of Milano is developing a new geoid model based on new gravity measurements

New geoid will replace the current Italgeo05 improving the current precision of 3.5 cm



Shortly a new free service for datum transformation will be available on web; it will deal with the main reference systems adopted in Italy:

- ROMA 40
- ED 50 (Italy)
- ETRF89 (epoch 1995)
- ETRF2000 (epoch 2008.0)

Conversione di Coordinate IGM

Sistema Rif. in Ingresso⁽¹⁾:

Sistema Rif. in Uscita:

File: Nessun file selezionato

Formati accettati

Vettoriali:

- Shapefile di ESRI[®] 3 (.shp)
- Comma Separated Value⁽²⁾ (.csv)
- DXF di AutoCAD[®] (.dxf)
- DGN di Microstation[®] (.dgn)
- KML - Keyhole Markup Language (.kml)
- GML - Geography Markup Language (.gml)
- GeoJSON (.geojson)
- GPS Exchange Format (.gpx)
- GPS TrackMaker (.gtm)
- Generic Mapping Tools (.gmt)

Raster:

- TIFF+tfw/GeoTIFF³ (.tif)
- Netpbm (.pgm)
- Netpbm (.ppm)
- ESRI BIL .hdr Labelled³ (.bil)
- Intergraph Raster Format (.crl)

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A new **WPS service** (INSPIRE compliant) for coordinate transformation is under implementation

Thanks for your attention