

The CEGRN Network: towards 25 years of High Quality GNSS data for Geokinematical Analysis in Central Europe.

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The CEGRN Network starts in 1994 being a very ambitious International Consortium that involved originally Institutions of 10 Central European countries. The major goal was to provide a dense GPS Network in Central Europe and use the derived velocity field for Geokinematical Analysis. An additional implicit product is the ETRS89 densification in the study area.

The commitment was to provide a full week of GPS (now GNSS) data in either permanent and non-permanent GPS stations each 2 years in mid June to diminish the seasonal effects as much as possible and to analyse the GPS, now GNSS, observations using the latest models and recommendations available.

The first 1994 campaign consisted of 30 GPS non-permanent stations distributed over 10 European countries. In 2013 all the former data, starting from 1996, were recomputed using repro2 products: therefore, the solution is fully IGB08 compliant: antennas, clocks, orbits,..., GLONASS was included in the analysis, if available. The campaigns considered were 1996 and 1997 to 2011 in steps of 2 years. The first campaigns (1994 and 1995) had to be rejected due to the errors in the measurements of the eccentricities of many of the non-permanent GPS antennas.

The last available CEGRN campaign (year 2017) consists of more than 1.000 stations distributed over 23 countries and is still growing as more GNSS stations are becoming available.

In 2019 the CEGRN campaign has been scheduled for mid-June (10th to 16th) and, such is the growth of the CEGRN network, that we expect to have more than 1.200 stations involved in the 2019 campaign. Most of them will have more than 6 years of time span, and will help to improve our knowledge on the dense velocity field in Central Europe and, therefore, the underlying Geokinematics, which is the goal of the CERGN.