



## New challenges for the CEGRN

Matthias Becker (2), Alessandro Caporali (1), and the The CEGRN Team

(1) University of Padova, Department of Geosciences, Padova Italy (alessandro.caporali@unipd.it), (2) Technische Universitaet Darmstadt, Institut fuer Physikalische Geodäsie, Darmstadt, Germany (becker@ipg.tu-darmstadt.de)

The Central European Geodynamic Research Network is active since the early 1990's with a consistent and systematic activity of measurement, processing and scientific interpretation of the data. The CERGOP projects fundend by the EU under FP 4 and 5 have contributed to build the necessary cohesion and awareness of the different fields of expertise which are necessary to manage a geodetic network spanning Central Europe, and with important connections to other networks, and in particular the EPN. In this second decade there are a number of new challenges which will need a strong effort. The ambitious EPOS and TopoEurope projects are looking for a homogeneous and consistent dense velocity field for application to geodynamics and seismic hazard mitigation. The dense velocity field theme is present also within the IAG, in the working group 'Regional Dense Velocity Fields'. Finally, the way in which the ETRF2000 coordinates of stations in national networks evolve relatively to the stable part of Europe is related to the details of the 3d velocities. This is relevant to the EU directive on Spatial Information (INSPIRE) whose purpose is to establish interoperable spatial and environmental data and services. High resolution and precision velocity fields are an essential part of the provision of ERTS89 coordinates in this respect.

CEGRN has the potential to effectively play an active role in these scientific issues, because the CEGRN campaigns, data and infrastructure are of high quality, fulfill state-of-the-art standards and extend over a very long lapse of time. Planned initiatives linked to the scientific projects mentioned above include 1) a participation in a proposed COST Action called TEGO 'Towards a European GNSS Observatory' which aims at the Europe-wide standardization and integration of GNSS observation and analysis; 2) conceptual work on the combination of the CEGRN Campaign solutions with the EPN network solution and time series projects.