

GNSS Data and Products



Overview

Presently, thousands of public and privately owned permanent GNSS stations are operating in Europe. The EPOS Preparatory Phase has demonstrated that national networks want to provide and distribute GNSS data through common European services which, when implemented, will be used by European researchers in solid Earth science as well as in other environmental sciences.

The GNSS Thematic Services are technically very mature in terms of data standards and distribution tools.

One European level organisation, [EUREF](#), presently maintains the [EUREF Permanent GNSS Network \(EPN\)](#), which relies on 260+ GNSS stations, based on a partnership with site operators from about 30 countries. The EPN is running in a well-organized environment and distributing GNSS data and products. EUREF is also providing products for 2000+ EPN densification stations. In addition, there are also several GNSS networks dedicated to solid earth studies at national level. The main challenges of the GNSS community at the present time is therefore to build a joint European GNSS data and product distribution system into which both national networks and EUREF contributes with the aim of increasing the number of available data at European level and build products based on this larger number of stations. For the data distribution service, this EPOS focuses on data that are available some time after data acquisition. The products are based on these data.

Objectives

- Construct the future governance of GNSS Data & Products in EPOS;
- Interact with the geodetic community in Europe, at national and Pan-European (EUREF) levels;
- Ensure interoperability between EPOS GNSS services (data and products) and EPOS Intergrated Core Services;
- Promote multidisciplinary interoperability with other disciplines within EPOS;
- Implement distributed dissemination of file-based GNSS data for about 2000 stations in the first 2 years with the goal of reaching 3000 by the end of the EPOS-IP;
- Implement computation and distributed dissemination of GNSS long-term products (position time-series, velocities, strain rate maps) based on the EPOS associated stations;
- Develop plans for the future preservation of GNSS data, dissemination of real-time GNSS data, and generation and dissemination of other Geodetic products.

Our services ready for 2019

Virtual Access to data/products/services

Relying on existing organization (EUREF) Global Navigation Satellite System (geodetic) observations (RINEX) and derived products (site coordinate time-series and velocities, strain rate maps) and metadata (Level 0, 1, 2).

Virtual Access to computational platform/s

Software tools facilitating the cross-disciplinary use of geodetic data and the interoperability with adjacent disciplines.