

MAIN ACTIVITIES AND NEW INITIATIVES OF THE EUREF TECHNICAL WORKING GROUP

EUREF 2011 Symposium
Chisinau, Moldova
25-28 May, 2011

C. Bruyninx for EUREF TWG

EUREF TECHNICAL WORKING GROUP (TWG)

- ✖ Technical Working Group = EUREF steering committee
- ✖ The EUREF TWG was created at the EUREF symposium in Berne, 1992
- ✖ Meets two to three times a year to manage current activities
- ✖ Minutes of the meetings are published together with the symposia proceedings : <http://www.euref.eu/>
- ✖ Members elected by the plenary (4 year term, renewable once), ex-officio members, members in charge of special tasks

CURRENT MEMBER LIST

- ✕ Zuheir Altamimi, France
- ✕ Elmar Brockmann, Switzerland
- ✕ Carine Bruyninx, Belgium (TWG chair)
- ✕ Alessandro Caporali, Italy
- ✕ Jan Dousa, Czech Republic
- ✕ Rui Fernandes, Portugal
- ✕ Heinz Habrich, Germany
- ✕ Helmut Hornik, Germany (EUREF secretary)
- ✕ Johannes Ihde, Germany (EUREF chair)
- ✕ Ambrus Kenyeres, Hungary
- ✕ Martin Lidberg, Sweden
- ✕ Jaakko Mäkinen, Finland
- ✕ Markku Poutanen, Finland
- ✕ Wolfgang Söhne, Germany
- ✕ Günter Stangl, Austria
- ✕ João Torres, Portugal

Honorary members:

- ✕ Claude Boucher, France
- ✕ Erich Gubler, Switzerland
- ✕ Herman Seeger, Germany
- ✕ Werner Gurtner[†], Switzerland
- ✕ Herman Seeger, Germany
- ✕ Knud Poder, Denmark

EUREF GOALS

Define, realise, maintain, provide access and promote the adoption of

- ✖ ETRS89

European Terrestrial Reference System

- ✖ EVRS

European Vertical Reference System

ETRS89 – DEFINITION & REALISATION

- ✖ Linked to the stable part of the Eurasian plate
- ✖ « Stable coordinates »
 - + Coordinate jumps
 - ✖ Reference frame changes → adopt ETRF2000 as the conventional frame for the ETRS89 (no new ETRF frame association with ITRF2008, **Altamimi, Session 1**)
 - + Local geodynamics → TWG studied the « Lifetime of ETRS89 Coordinates”, **Caporali et al., Session 1**

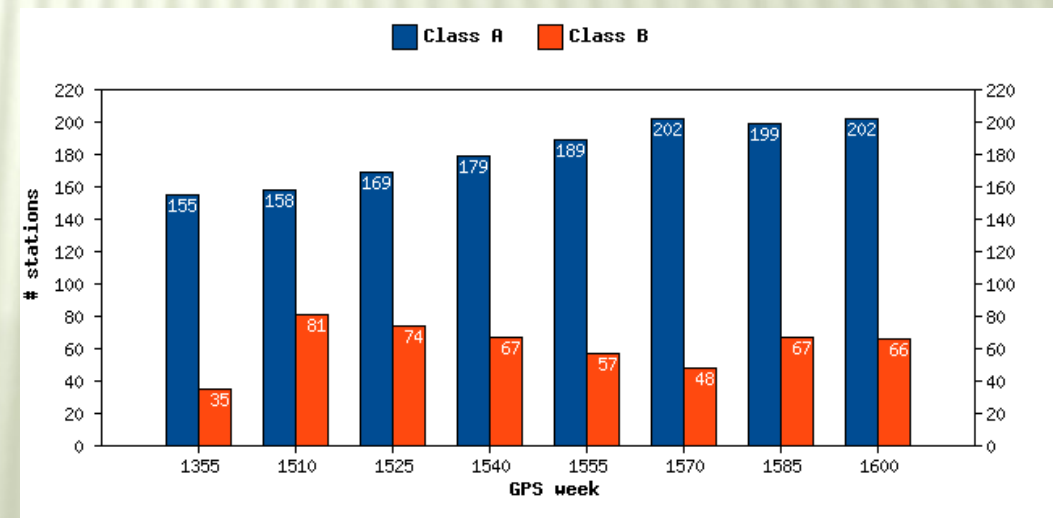
ETRS89 – PROVIDE ACCESS

✖ EUREF Permanent Network (EPN), (Bruyninx, Habrich, Session 1)

EPN coordinates and velocities updated each 15 weeks



- + Class A → to be used for densifications of ETRS89
(*Guidelines for EUREF densifications, Bruyninx et al 2009*)
- + Class B (mostly young sites)
- + Last update: GPS week 1600 (Oct. 2010). No new updates done at present (next: fall 2011)



ETRS89 – PROVIDE ACCESS

- ✖ EPN re-processing : first results available (**Völksen, Habrich, Kenyeres, Session1**)
- ✖ EPN Local Analysis Centers Workshop, Warsaw, 17-18.11.2010
- ✖ Real-time analysis pilot project:(**Söhne, session 2**)
 - + 49% of EPN : real-time data streams
 - + ETRS89 orbits/clock correction → provide direct access to ETRS89 in the field at few dm-level

ETRS89 – PROMOTE ADOPTION

- ✖ Guidelines for ETRS89 densifications
 - + ITRF2008/IGS08: Update necessary (ITRF2005)
 - + Contact TWG !

- ✖ Validation of EUREF campaigns (Serbia, Faroe Islands, FYROM, **session 6**)

- ✖ ITRS ↔ ETRS89 on-line transformation programs
on-line: http://www.epncb.oma.be/_dataproduts/coord_trans/
 - + Update to include transformations to and from ITRF2008

ETRS89 – PROMOTE ADOPTION

- ✖ Overview of first answers to new questionnaire about adoption of ETRS89 and usage of EUREF products (Ihde, **session1**)
- ✖ Monitoring of the official ETRS89 coordinates used by the NMCA continued (E. Brockmann)

Number of EPN sites with official national ETRF coordinates

- No information (EPN sites)
- Ok: (xx CRD delivered / EPN sites)
- No EPN sites used: (xx CRD delivered / EPN sites)
- Coordinates delivered, but no publication on EPN (xx CRD delivered / EPN sites)
- Out of geographical scope of ETRS89 (EPN sites)

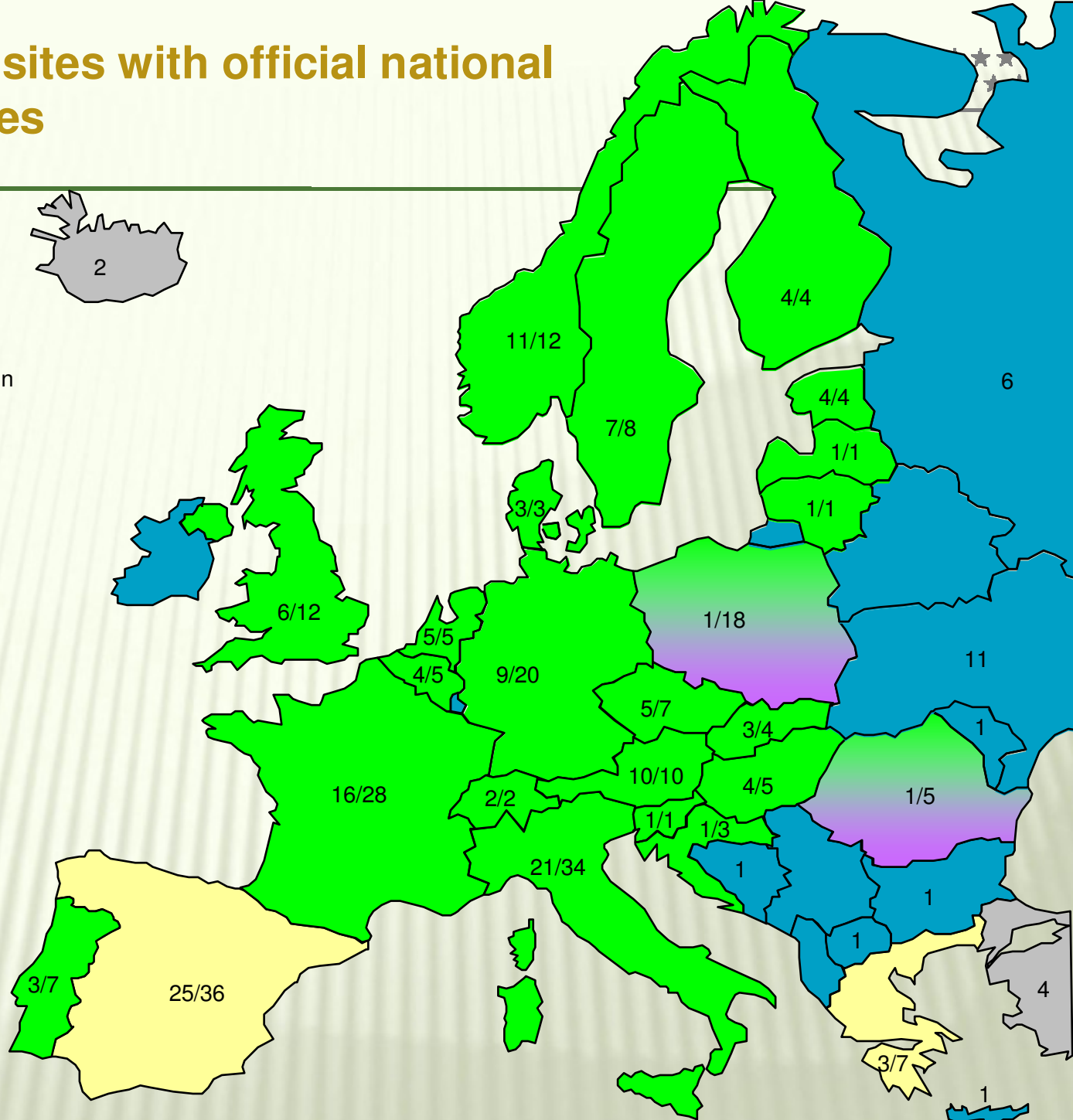
Greenland: 4
Israel: 2
Jordan: 1
Morocco: 2
Armenia: 1

Official ETRF coordinates:
26 countries
157 sites

EPN: **40** countries
287 active sites

Status National: 17.5.2011

EPN: 17.5.2011



COORDINATE WEB PAGE



EUREF HOME

EUREF Permanent Network



EPN CB HOME

ORGANISATION

Creation, Management, Structure,
Relation to IGS, Projects, Guidelines,
FAQ

TRACKING NETWORK

Maps, Stations, Equipment &
calibration, Station coordinates, Site
log validation & submission

DATA & PRODUCTS

Data access, Analysis centres,
Products, Time series, ETRS89/ITRS
transformation, Formats

NEWS & MAILS

News, Mails, Calendar, Papers,
Workshops, Web site history

FTP & WEB ACCESS

Anonymous FTP, Web site index,
Related links

[TRACKING NETWORK](#) > [STATIONS](#) > [SITE INFORMATION](#) > [MAR6_10405M002](#)

MAR6_10405M002

Site Description

LOCATION

Maartsbo, Sweden



LOG FILE

mar6_20080508.log (current) [View](#)

PICTURES



OPERATIONAL CENTRE **LMV**

OTHER NETWORKS **IGS, TOS, ECGN**

EPN INCLUSION Since 308/1996 (GPSweek No 0878).

INACTIVITY PERIODS **None**

COORDINATES **Published positions/velocities in ITRS and ETRS89**

COORDINATES

Published positions/velocities in ITRS and ETRS89

http://www.epncb.oma.be/_trackingnetwork/coordinates/stationcoordinates4onestation.php?station=XXXX

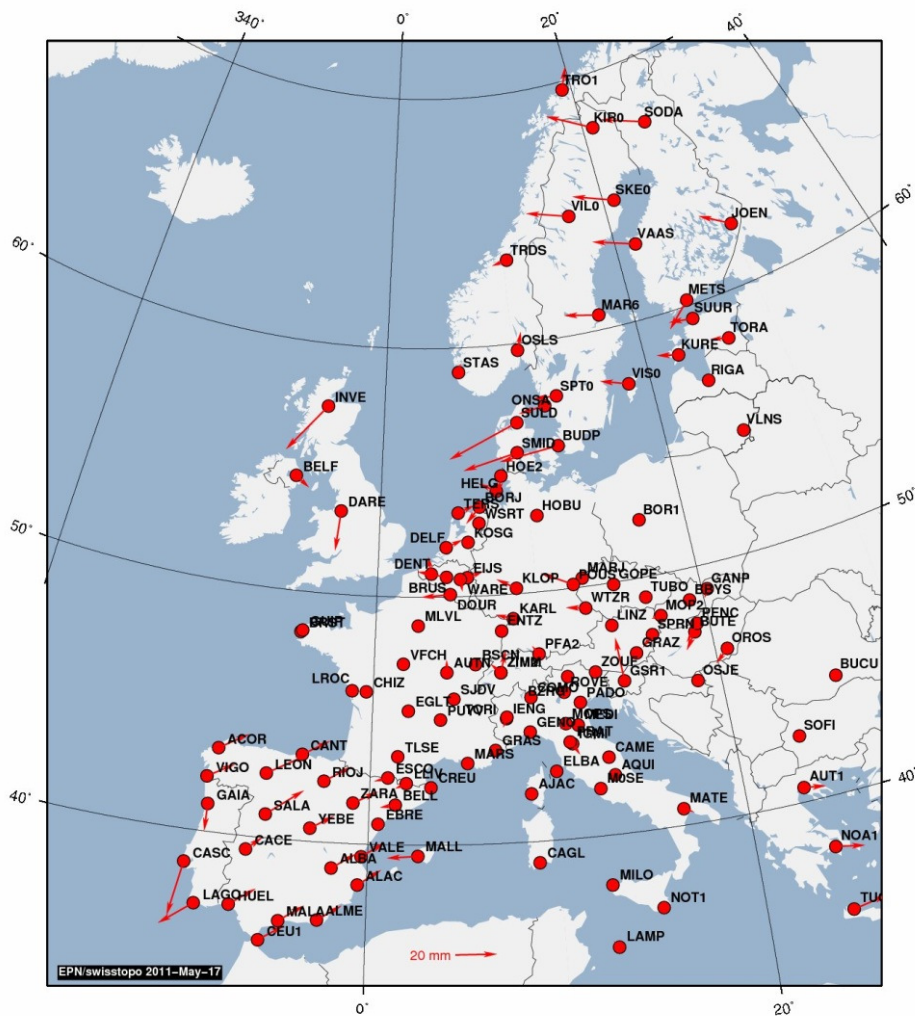
REMARKS

- ✖ Updates 2010 – today:
 - + New: Bulgaria, Romania, Lithuania
 - + Updates: Netherlands, Sweden
- ✖ Last EPN densification solution for week 1600 published Oct. 23, 2010
- ✖ All national ETRF coordinates are consistent with an actual, scientific European reference frame on a level of 1-3 cm!

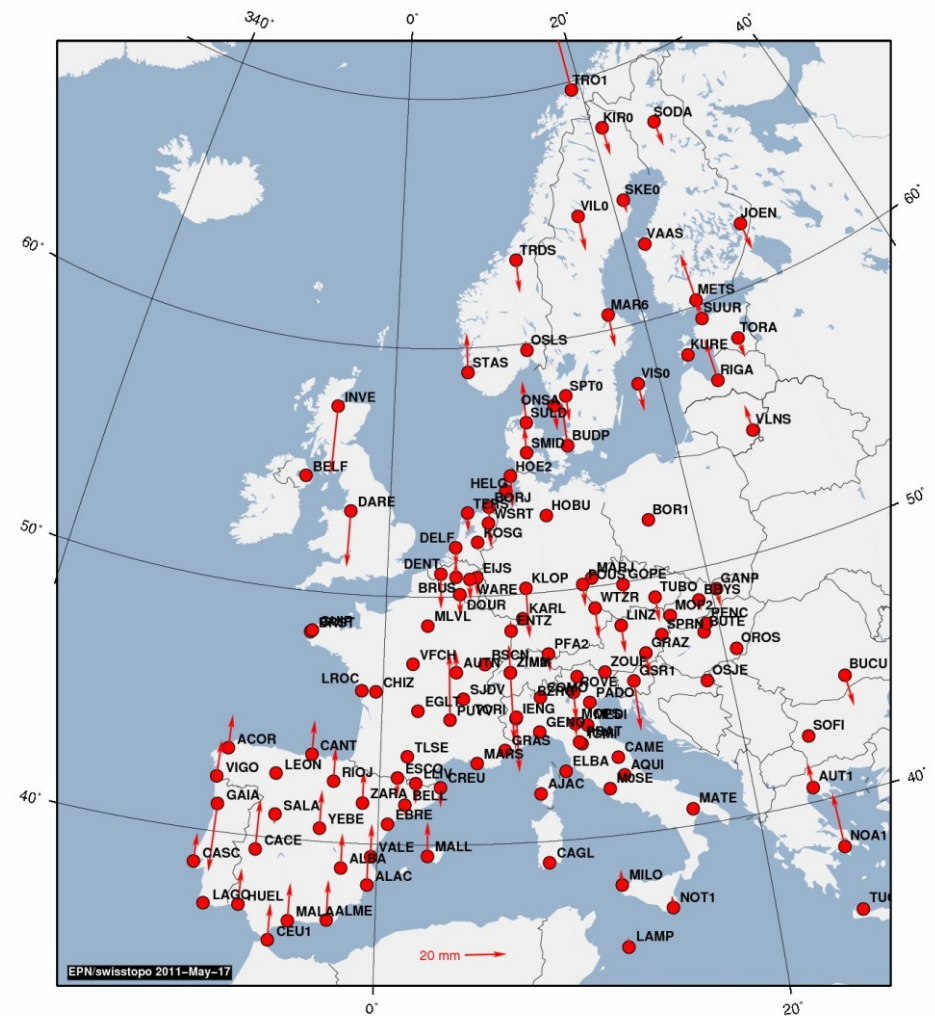
COMPARISON WITH EPN REFERENCE SOLUTION

157 stations, 26 countries
at country specified epoch

horizontally

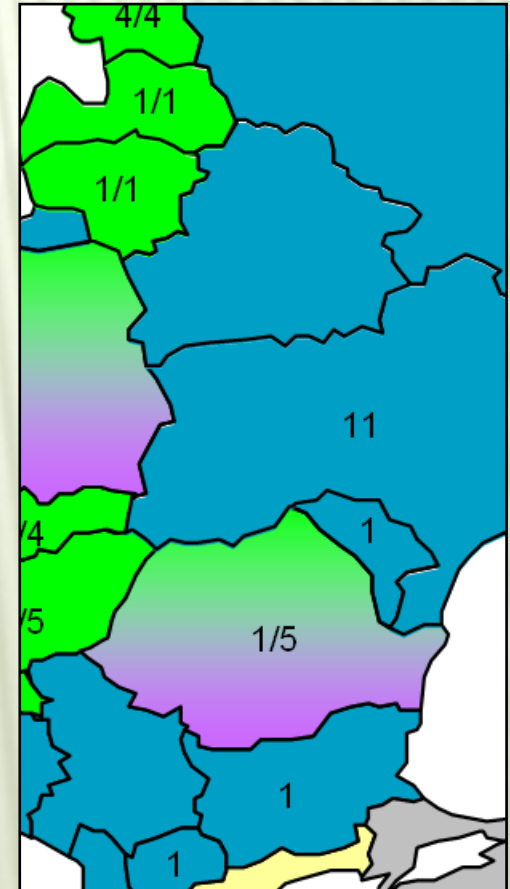


vertically



REMARKS (2)

- ✖ Countries responsible for correctness of information!
 - + Please send information, if you change national ETRF coordinates!
 - + Please send information, if you do not yet contribute!



EVRS

- ✖ UELN continuous development
 - + inclusion of new countries, update of existing input,
(**Session 5, Ihde & Sacher**)
- ✖ EVRF2007 released and distributed to the countries
 - + EUREF computed transformations from EVRF2007 to national height systems
 - + Countries have been asked to check transformation and inform EUREF if transformation can be put on-line

PARTNERS



EuroGeographics

- MOU signed August 2007
- Mutual projects, e.g. INSPIRE



EUMETNET

- MOU signed June 2007
- Mutual exchange of data



CERGOP, Central European GPS Geodynamic Network Consortium

facilitate the densification of the European GNSS network
for reference frame definition and geokinematical
applications

MoU signed May 2011



NEW EUREF WEB SITE <http://www.euref.eu/>




[Home](#) [Site Map](#) [Data Protection](#) [Legal & Privacy](#) [Contacts](#)

Reference Frame Sub Commission for Europe

About EUREF

Technical Working Group

European Geodetic Reference Systems

EUREF Permanent Network

Products & Services

Symposia

Documentation & Guidelines

Links

News

Welcome to EUREF !

Our work is focused on:

- Definition, realization and maintenance of the European Geodetic Reference Systems;
- Promotion and assistance of the adoption and use of European Terrestrial Reference System (ETRS89) and European Vertical Reference System (EVRS) in our partner countries;
- Development and maintenance of the EUREF GNSS Permanent Network (EPN) which is the ground based GNSS infrastructure for scientific and practical applications in positioning and navigation (GGOS, IGS-RT);
- Development of strategies and technologies for the realization of geodetic reference systems.

EUREF provides all its products on the "best effort" basis and free of charge to the public.

Updated 2011.02.04



This page is hosted by Instituto Geográfico Português

EurefMaster@igeo.pt

MORE INFORMATION

- × EUREF
 - × <http://www.euref.eu/>
- × EUREF Permanent Network
 - × <http://epncb.oma.be/>
- × ETRS89
 - × <http://etrs89.ensg.ign.fr/>
- × EVRS
 - × <http://www.bkg.bund.de/geodIS/EVRS/>
- × CRS (Information system for European Coordinate Reference Systems)
 - + <http://www.crs-geo.eu/>