EPN Central Bureau Report

STATUS OF EPN TRACKING NETWORK

187 stations (1 inactive), 13 new, 1 withdrawn

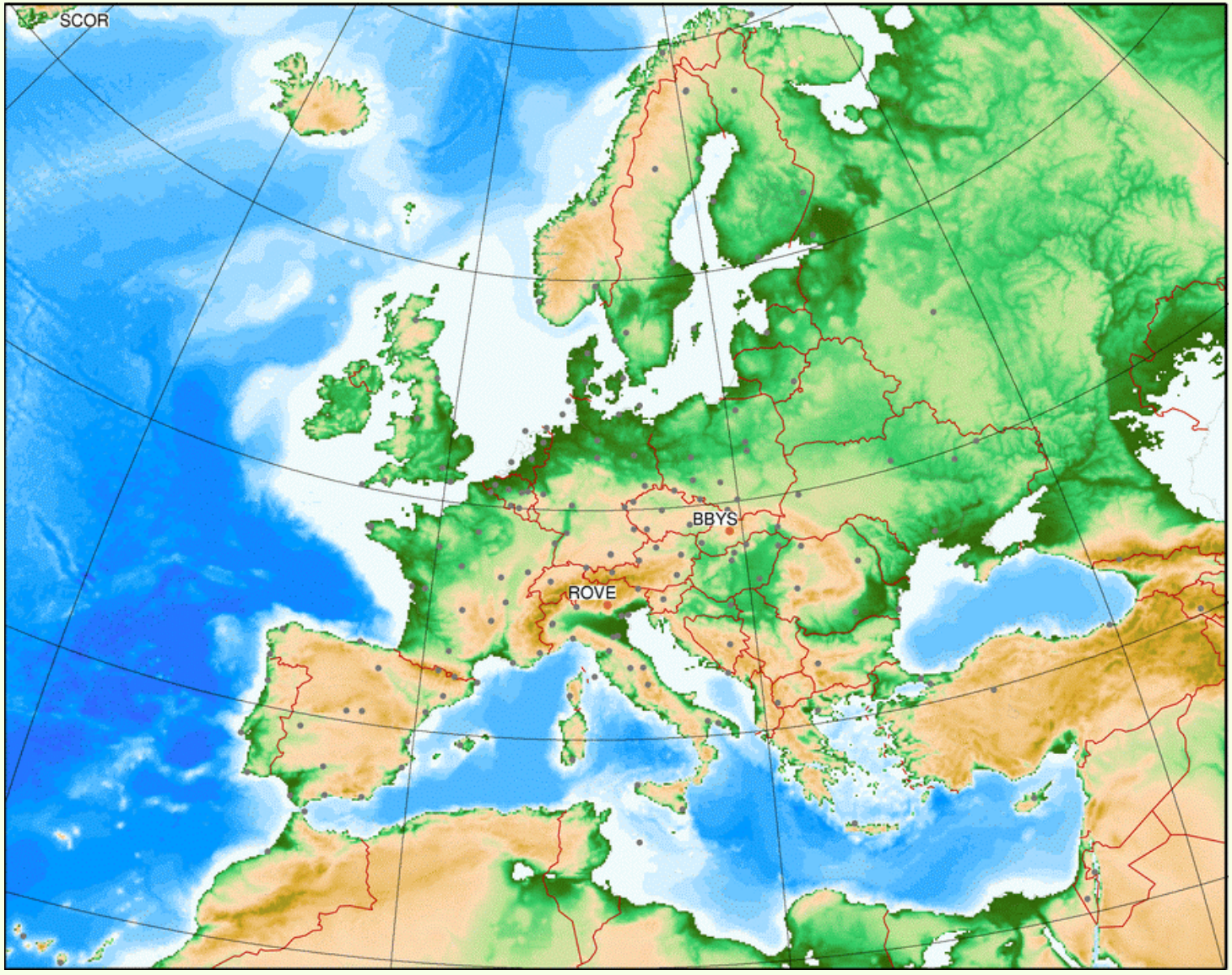
EPN TRACKING NETWORK – New stations

Station	4 char ID	Country	Date inc.	H	ECGN	IP	GLO
Bacau	BACA	Romania	12-02-2006	H			
Baia Mare	BAIA	Romania	12-02-2006	H			
Besançon	BSCN	France	18-12-2005	H			
Constanta	COST	Romania	12-02-2006	H			
Deva	DEVA	Romania	12-02-2006	H			
Evpatoria	EVPA	Ukraine	13-11-2005	H			
Taranto	FATA	Italy	13-11-2005	H			
Villeneuve d'Ascq	LILL	France	18-12-2005	H			
Malaga	MALA	Spain	13-11-2005	H		IP	
Trapani – Milo	MILO	Italy	13-11-2005	H			
Logrono	RIOJ	Spain	13-11-2005	H		IP	
Pernitz	TRFB	Austria	13-11-2005	H	ECGN		
Vigo	VIGO	Spain	13-11-2005	H		IP	

Station withdrawn from EPN:

- IGD1 : permanently discontinued due to company changes.

PROPOSED EPN STATIONS



PROPOSED EPN STATIONS

Station	4 char ID	Country	Status
Banska Bystrica	BBYS	Slovak Republic	Tracking data frequently and abnormally interrupted.
Rovereto	ROVE	Italy	Inconsistency between log file and RINEX observation files.
Scoresby	SCOR	Greenland	Pictures missing.

NEW at http://epncb.oma.be/

- Update “papers section” : 2005 not yet fully available (in progress)
- Coordinates web page
- FAQ - updated

Location: http://www.epncb.oma.be/_dataproducts/products/index.php

EUREF Permanent GPS Network...

EUREF Permanent Network

EUREF HOME

EPN CB HOME

DATA & PRODUCTS > PRODUCTS

Station coordinates

The core product of the EPN is the coordinates of the tracking sites which are available with an accuracy of a cm or better. All official site coordinates and velocities in the different realizations of the ITRS and ETRS89 are available here. In addition, updated coordinates using the latest tracking data as well as coordinates for recent sites not yet included in the ITRS are also given.

Coordinate time series

Four different types of time series are made available for the EPN stations. Each of the time series serves different goals, such as e.g. the assessment of the differences between reference frames or the distinguishing between local site effects and real geodynamical site motion.

Site Zenith Path Delays

Within the routine analysis of a network of ground-based GPS receivers, such as the EPN, the tropospheric parameters are a by-product of the parameter estimation. The EPN makes available the tropospheric zenith path delays at all of its stations based on the estimates of all its Analysis Centres.

TRACKING NETWORK > STATION COORDINATES FOR > BRUS (Brussels, Belgium)

Weekly coordinates computed by the EPN Combination Centre

These coordinates are extracted from the most recent weekly combined EUREF solution which is based on the weekly subnetwork solutions submitted by the EPN Local Analysis Centres.

	Position (m) epoch t_0 = 2005.9 (GPS week No 1354)		
	X_{weekly}	Y_{weekly}	Z_{weekly}
ITRF2000	4027893.7443 ± 0.0008	307045.8412 ± 0.0002	4919475.1222 ± 0.0010
ETRF2000	4027894.0157 ± 0.0008	307045.5982 ± 0.0002	4919474.9145 ± 0.0010

Based on most recent solution: EUR13547.SNX.Z

Coordinates/velocities computed by the "EPN Project for time series monitoring"

These monthly-updated coordinates/velocities are the result of a multi-year adjustment of all the weekly combined EUREF solutions in which outliers have been eliminated. It can be considered as the EPNs realization of the ITRS.
They are available through the web page of the EPN Project for "Time series monitoring".

	Position (m) epoch t_0=1997.0			Velocity (m/y)		
	X_{EPN}	Y_{EPN}	Z_{EPN}	VX_{EPN}	VY_{EPN}	VZ_{EPN}
ITRF2000	4027893.8531 ± 0.0004	307045.6901 ± 0.0002	4919475.0374 ± 0.0005	-0.0127 ± 0.0001	0.0165 ± 0.0001	0.0095 ± 0.0000
ITRF2000 (after 118/00)	4027893.8569 ± 0.0006	307045.6917 ± 0.0002	4919475.0370 ± 0.0007	-0.0127 ± 0.0001	0.0165 ± 0.0001	0.0095 ± 0.0000
ETRF2000	4027894.0100 ± 0.0004	307045.6019 ± 0.0002	4919474.9138 ± 0.0005	0.0001 ± 0.0001	-0.0009 ± 0.0001	0.0001 ± 0.0001
ETRF2000 (after 118/00)	4027894.0138 ± 0.0006	307045.6035 ± 0.0002	4919474.9134 ± 0.0007	0.0001 ± 0.0001	-0.0009 ± 0.0001	0.0001 ± 0.0001

Official coordinates/velocities issued by the IERS

These coordinates/velocities are computed by the IERS as a result of a combination of the multi-year coordinate solutions obtained by several space geodetic techniques (GPS, VLBI,

(after 118/00)	4027893.8569 ± 0.0006	307045.6917 ± 0.0002	4919475.0370 ± 0.0007	-0.0127 ± 0.0001	0.0165 ± 0.0001	0.0095 ± 0.0000
ETRF2000	4027894.0100 ± 0.0004	307045.6019 ± 0.0002	4919474.9138 ± 0.0005	0.0001 ± 0.0001	-0.0009 ± 0.0001	0.0001 ± 0.0001
ETRF2000 (after 118/00)	4027894.0138 ± 0.0006	307045.6035 ± 0.0002	4919474.9134 ± 0.0007	0.0001 ± 0.0001	-0.0009 ± 0.0001	0.0001 ± 0.0001

Official coordinates/velocities issued by the IERS

These coordinates/velocities are computed by the IERS as a result of a combination of the multi-year coordinate solutions obtained by several space geodetic techniques (GPS, VLBI SLR, ...). The EPN is one of the networks contributing to the official IERS coordinates/velocities solution.
These official IERS positions are available through the IERS web site.

	Position (m) epoch t_0=1997.0			Velocity (m/y)		
	X_{IERS}	Y_{IERS}	Z_{IERS}	VX_{IERS}	VY_{IERS}	VZ_{IERS}
ITRF2000	4027893.8520 ± 0.0020	307045.6890 ± 0.0010	4919475.0370 ± 0.0020	-0.0121 ± 0.0005	0.0172 ± 0.0002	0.0095 ± 0.0006
ITRF97	4027893.8650 ± 0.0020	307045.6950 ± 0.0010	4919475.0250 ± 0.0020	-0.0114 ± 0.0011	0.0166 ± 0.0004	0.0091 ± 0.0013
ITRF96	4027893.8660 ± 0.0030	307045.6990 ± 0.0020	4919475.0310 ± 0.0030	-0.0103 ± 0.0004	0.0176 ± 0.0006	0.0120 ± 0.0004

	Position (m) epoch t_0=1989.0			Velocity (m/y)		
	X_{IERS}	Y_{IERS}	Z_{IERS}	VX_{IERS}	VY_{IERS}	VZ_{IERS}
ETRF2000	4027894.0030 ± 0.0040	307045.6020 ± 0.0010	4919474.9120 ± 0.0050	0.0008 ± 0.0005	-0.0002 ± 0.0002	0.0001 ± 0.0006
ETRF97	4027893.9970 ± 0.0090	307045.6030 ± 0.0030	4919474.9030 ± 0.0110	0.0015 ± 0.0011	-0.0009 ± 0.0004	-0.0003 ± 0.0013
ETRF96	4027893.9900 ± 0.0040	307045.6000 ± 0.0040	4919474.8860 ± 0.0040	0.0026 ± 0.0004	0.0001 ± 0.0006	0.0025 ± 0.0004

To obtain the site coordinates at an epoch t different from t_0 apply the site velocities:

$X(t) = X(t_0) + (t-t_0)*V_X$

$Y(t) = Y(t_0) + (t-t_0)*V_Y$

$Z(t) = Z(t_0) + (t-t_0)*V_Z$

TRACKING NETWORK > STATION COORDINATES FOR > PADO (Padova, Italy)

Weekly coordinates computed by the EPN Combination Centre

These coordinates are extracted from the most recent weekly combined EUREF solution which is based on the weekly subnetwork solutions submitted by the EPN Local Analysis Centres.

	Position (m) epoch t_0 = 2005.9 (GPS week No 1354)		
	X_{weekly}	Y_{weekly}	Z_{weekly}
ITRF2000	4388882.0167 ± 0.0018	924567.4789 ± 0.0006	4519588.7344 ± 0.0018
ETRF2000	4388882.3121 ± 0.0018	924567.2151 ± 0.0006	4519588.5163 ± 0.0018

Based on most recent solution: EUR13547.SNX.Z

Coordinates/velocities computed by the "EPN Project for time series monitoring"

These monthly-updated coordinates/velocities are the result of a multi-year adjustment of all the weekly combined EUREF solutions in which outliers have been eliminated. It can be considered as the EPNs realization of the ITRS.
They are available through the web page of the EPN Project for "Time series monitoring".

	Position (m) epoch t_0=1997.0			Velocity (m/y)		
	X_{EPN}	Y_{EPN}	Z_{EPN}	VX_{EPN}	VY_{EPN}	VZ_{EPN}
ITRF2000	4388882.1537 ± 0.0026	924567.3139 ± 0.0008	4519588.6459 ± 0.0026	-0.0153 ± 0.0001	0.0186 ± 0.0003	0.0092 ± 0.0000
ETRF2000	4388882.3220 ± 0.0026	924567.2159 ± 0.0008	4519588.5174 ± 0.0026	-0.0010 ± 0.0003	0.0001 ± 0.0001	-0.0009 ± 0.0003

Official coordinates/velocities issued by the IERS

These coordinates/velocities are computed by the IERS as a result of a combination of the multi-year coordinate solutions obtained by several space geodetic techniques (GPS, VLBI, SLR, ...). The EPN is one of the networks contributing to the official IERS coordinates/velocities solution.
These official IERS positions are available through the IERS web site.

No coordinates available :
PADO (Padova, Italy) is not included in any of the ITRS/ETRS89 files issued by the IERS.

1. General questions

2. EPN Data and Products

3. Stations

4. Equipment

SIZE OF THE AC SUBNETWORKS