

TWG Meeting, 13-14 March 2014, Gävle, Sweden



EPN ACC news



K. Szafranek, A. Araszkievicz, M. Figurski, T. Liwosz

Switch from BKG to MUT/WUT

- Submission of MUT/WUT combined solutions - **January 2014** (1768 GPS week)
 - FINAL WEEKLY, RAPID DAILY.
- Short summary sent via LAC MAIL. →
- Stations processed by less than 3 LAC are excluded from final solutions . →
- The same reference stations as used by BKG, but ... →

Short version of ACC REPORTs

TABLE 1: NOTIFICATION OF DETECTED OUTLIERS - EXCLUDED STATIONS

Station	LAC	Remark
BELL 13431M001	IGN	-16.91 Too large residual in comparison between LACs.
CANT 13438M001	IGN	-17.57 Too large residual in comparison between LACs.
CEBR 13408M001	ASI	27.65 Too large residual in comparison between LACs.
LAMP 12706M002	ASI	18.38 Too large residual in comparison between LACs.
MELI 19379M001	ASI	-16.01 Too large residual in comparison between LACs.
MOPI 11507M001	WUT	22.86 Too large residual in comparison between LACs.
VILL 13406M001	ASI	19.17 Too large residual in comparison between LACs.

TABLE 2: FINAL COMPARISON OF SOLUTIONS

a) Helmert Transformation Parameters With Respect to Combined Solution

LAC	Rms (m)	Translation (m)			Rotation (")			Scale (ppm)
		X	Y	Z	X	Y	Z	
ASI	0.00268	-0.0138	0.0283	0.0125	-0.0006	-0.0006	0.0007	-0.00022
BEK	0.00094	0.0081	0.0065	-0.0018	-0.0002	0.0002	0.0001	-0.00108
BKG	0.00105	-0.0003	-0.0012	-0.0007	0.0000	0.0000	0.0000	0.00041
COE	0.00160	-0.0017	-0.0004	-0.0011	0.0000	-0.0000	-0.0000	0.00037
IGE	0.00101	0.0030	0.0089	-0.0062	-0.0002	0.0003	0.0002	0.00045
...								

- Full version of reports are available on ftp servers: EPN CB and EPN ACC (soon!)

Verification of Metadata

- For the latest solution (1777) models of antennas and receivers matched with euref.snx
- Differences in phase centers up to:

(0.0020 0.0002 0.0004 0.0018 0.0005 0.0004)

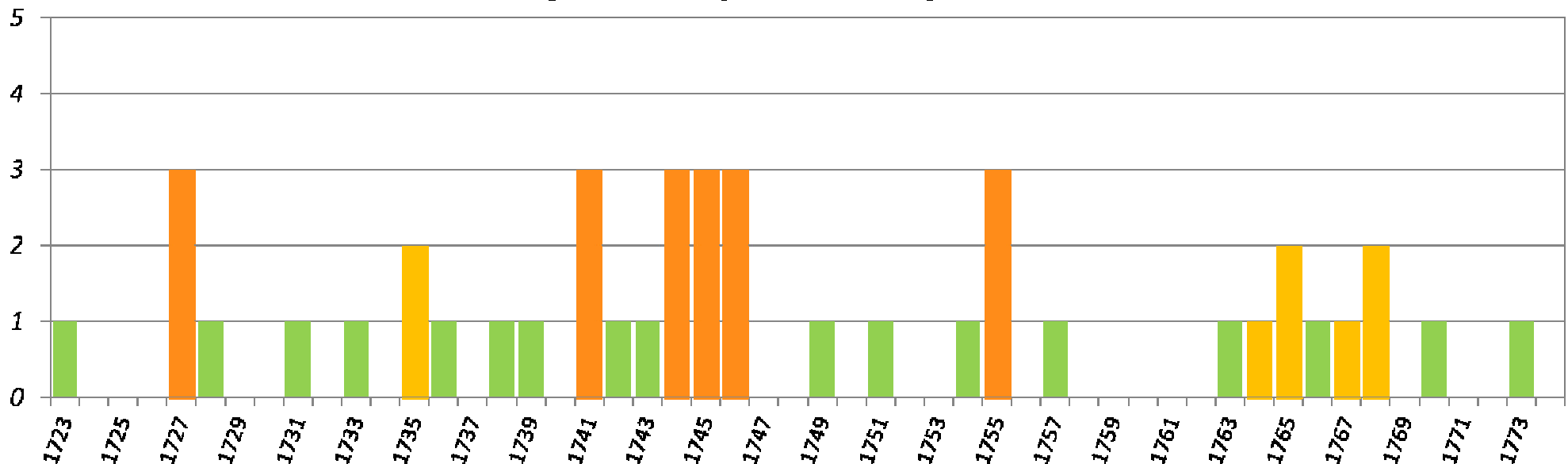
for **17 stations** (ALAC, BORJ, BPDL, BUTE, DRES, GWWL, KARL, LODZ, REDZ, REYK, RIO1, SWKI, USDL, WTZR, ZIM2, ZYWI)

- LACs don't put antennas' SN in the SINEXes when they use type calibration.
- Verification must be done on both euref.snx and ANTEX file.

Stations exclusion (<3 LAC)

- It is not critical, but sometimes it causes problems with outliers notification and affect the solutions' credibility.
- Exclusion from 1774 GPS week.

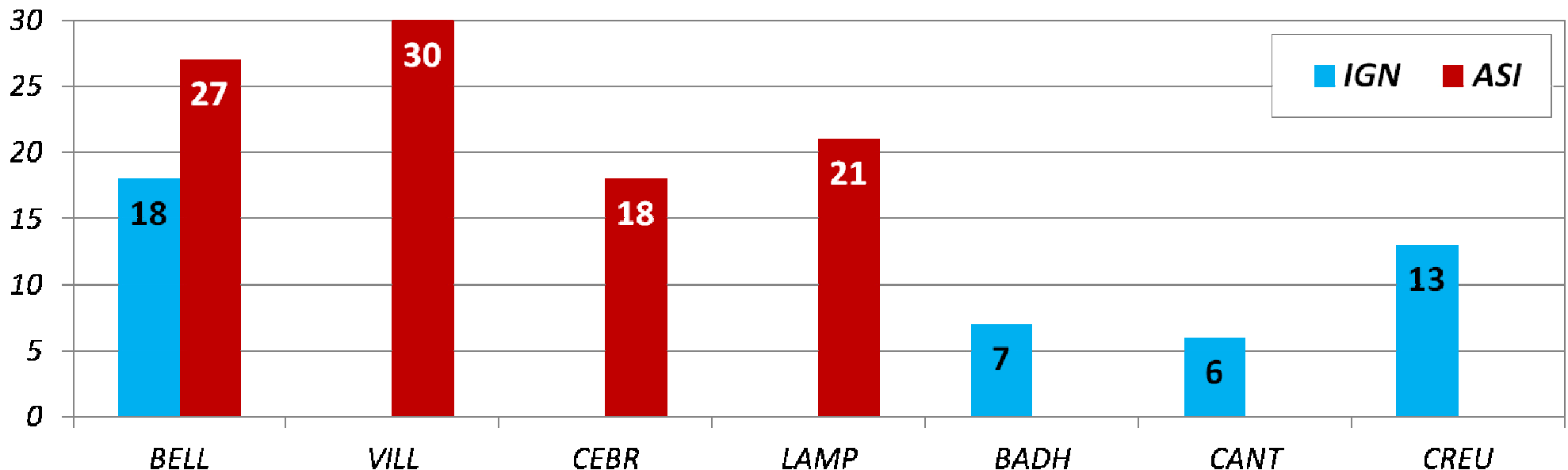
Number of stations processed by less than 3 LAC



Repeated exclusions

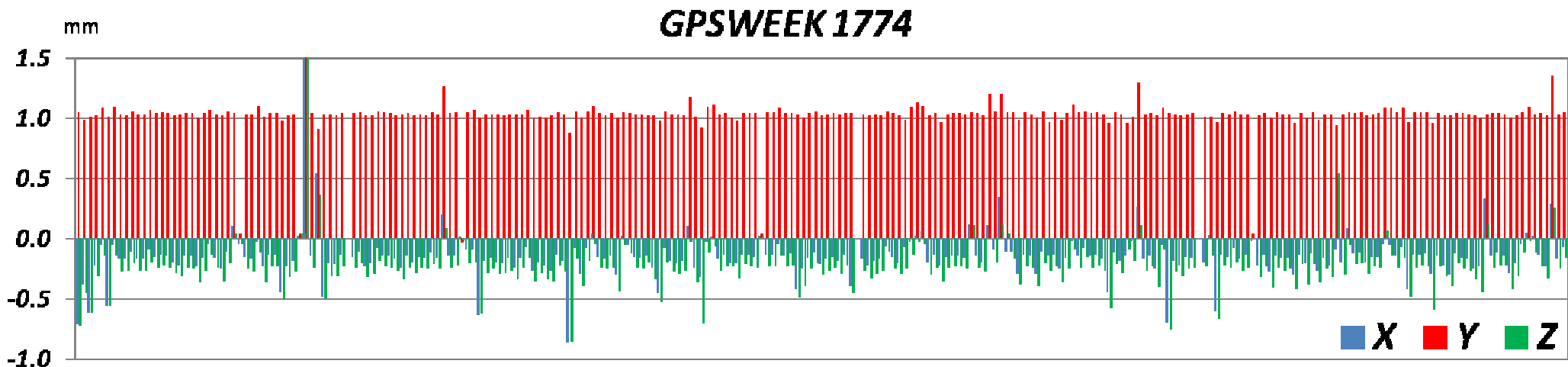
- Problem that need to be solved.
- The possible solution: add more non-Bernese LAC (?) – we will see what brings „repro2”.

Number of exclusion based on the last 30 weekly solutions

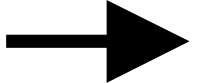


New DATUM

- Current: list of 97 (82 real used) EPN stations
- New: 44 EPN stations (only IGS IGb08)
- **Significant differences** in the coordinates
- More analysis is needed before switching to IGb08



UPDATE OF GUIDELINES (November 2013):

- Final daily coordinate solutions **became mandatory**. 
- Use of orbits and clocks consistent with the analysis options and software used by each LAC (or combined IGS products).
- Exclusion of defective satellites.
- Encouragement for LACs to perform specific tasks.
- Update of processing options (e.g. mapping functions).
- Changes to keep Guidelines up-to-date (e.g. IGS instead of ITRF).
- Distribution of stations among LACs (3-5 except twin stations).

Daily solutions

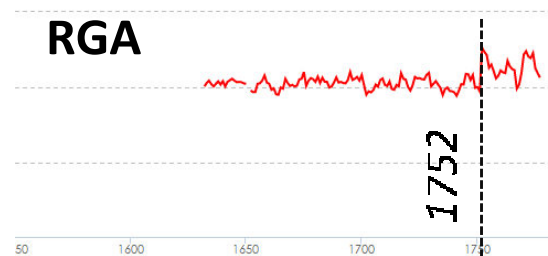
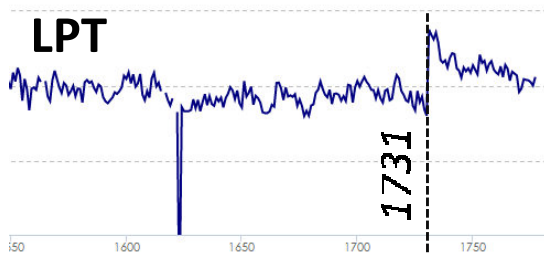
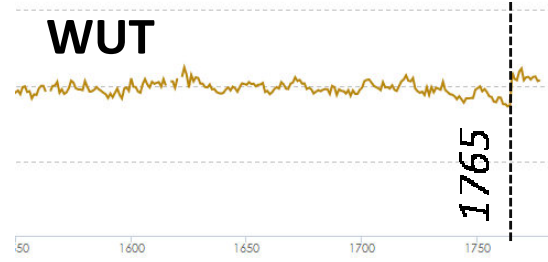
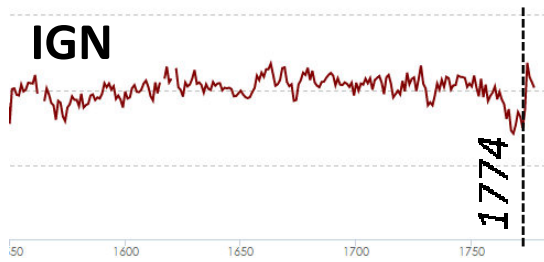
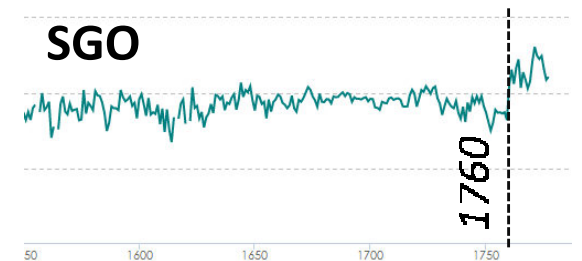
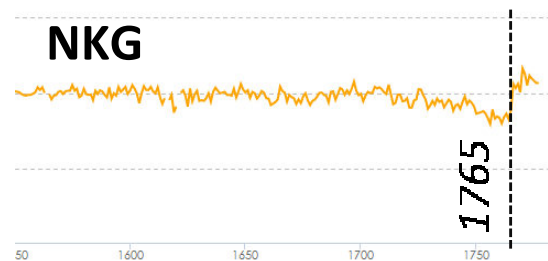
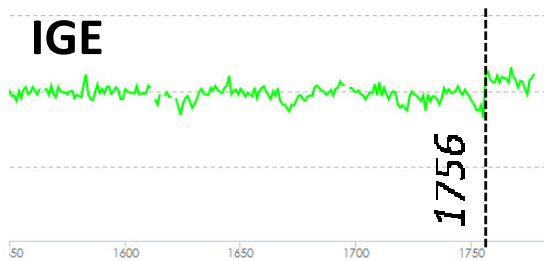
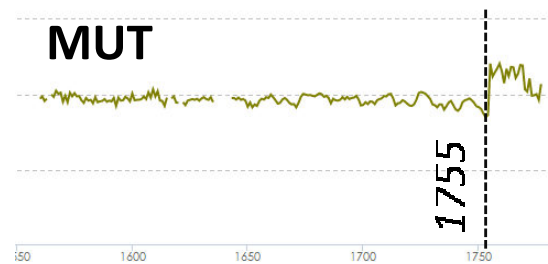
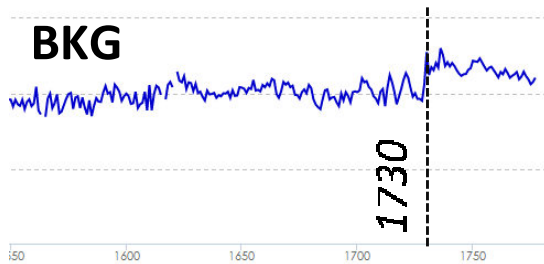
- Not all LACs provide daily final solutions – see table below.
- There were some problems with daily SINEXes from two LACs, but one has been solved, the other one is going to be solved soon.
- The combined daily final solution will be provided as soon as all LAC will participate.

	ASI	BEK	BKG	COE	IGE	IGN	LPT	MUT	NKG	OLG	RGA	ROB	SGO	SUT	UPA	WUT
WF	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DF	+	+	+	N	+	N	N	+	+	+	+	+	+	+	+	+
DR	+	+	+	N	+	+	N	N	N	N	N	+	+	N	+	+

GLONASS analysis and use of BSW 5.2

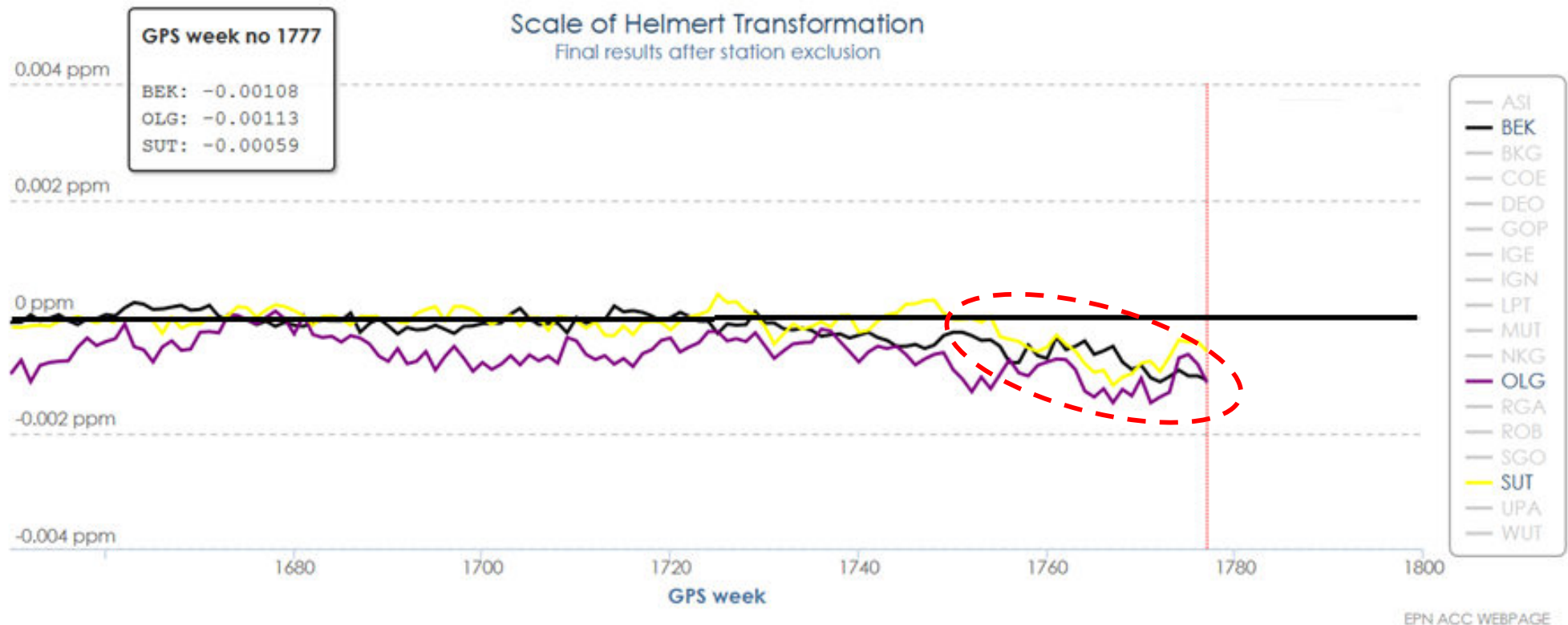
	GLONASS	BSW 5.2
BEK	1501	<i>in progress</i>
BKG	1610	1730
COE	YES	1730
IGE	1756	1756
IGN	1774	1774
LPT	1400	1731
MUT	1755	1755
NKG	1765	1765
OLG	<i>in progress</i>	<i>in progress</i>
RGA	1752	1752
ROB	1400	1765
SGO	1760	1760
SUT	<i>in progress</i>	<i>in progress</i>
UPA	1764	1764
WUT	1609	1765

GLONASS analysis and use of BSW 5.2



GLONASS analysis and use of BSW 5.2

- Gradual decrease scale in comparison with combine solution in period when others LAC were switching to BSW5.2 – it should be back to around zero when they pass the „in progress” phase.



Introduction of different types of AC

Currently on EPN CB webpage:

- EPN Local Analysis Centres (EPN LAC) routinely submitting solutions;
- EPN Local Analysis Centres (EPN LAC) not routinely submitting solutions;
- Former EPN Local Analysis Centres (EPN LAC).

GOP – reprocessing activity

Instead of „former” (it suggests that such centres are not active anymore):

- EPN Analysis Centres (AC)
- EPN Task-specific Analysis Centres (TAC)
- Other EPN Analysis Centres (OAC)

Any other suggestions?

News about **POLISH ETRS89 DENSIFICATION**

According to the Head Office of Geodesy and Cartography:

- There has been a change of the main idea of the adjustment - longer observations will be taken into account (analogically to Jan Dousa's solution for Czech network).
- In the meantime several antennas were replaced and some new stations were set up.
- In the last solution presented in Budapest observations from 2008 were used, while now it is recommended to express the coordinates in igb08.