EUREF 2007 Symposium

National Report of Austria

by

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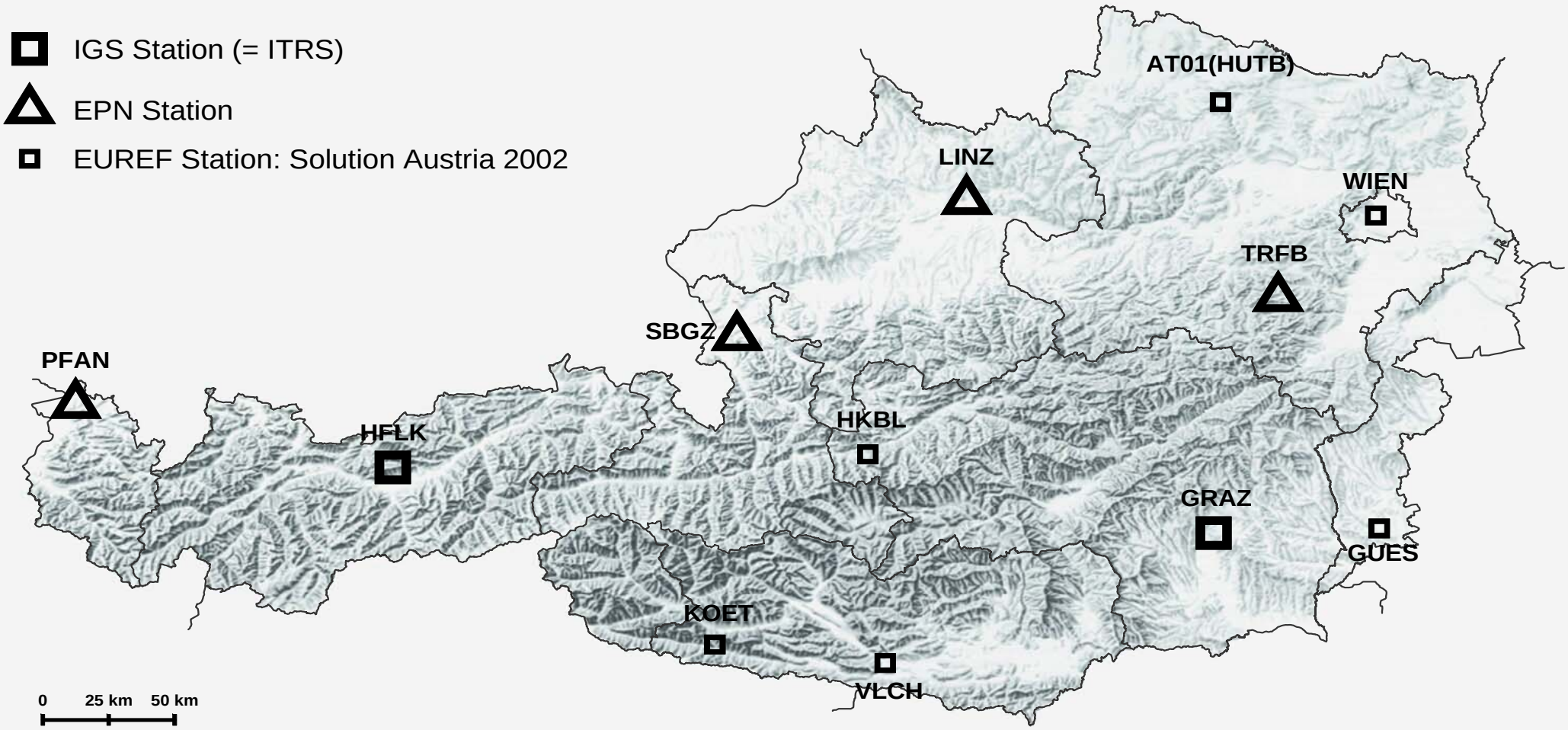
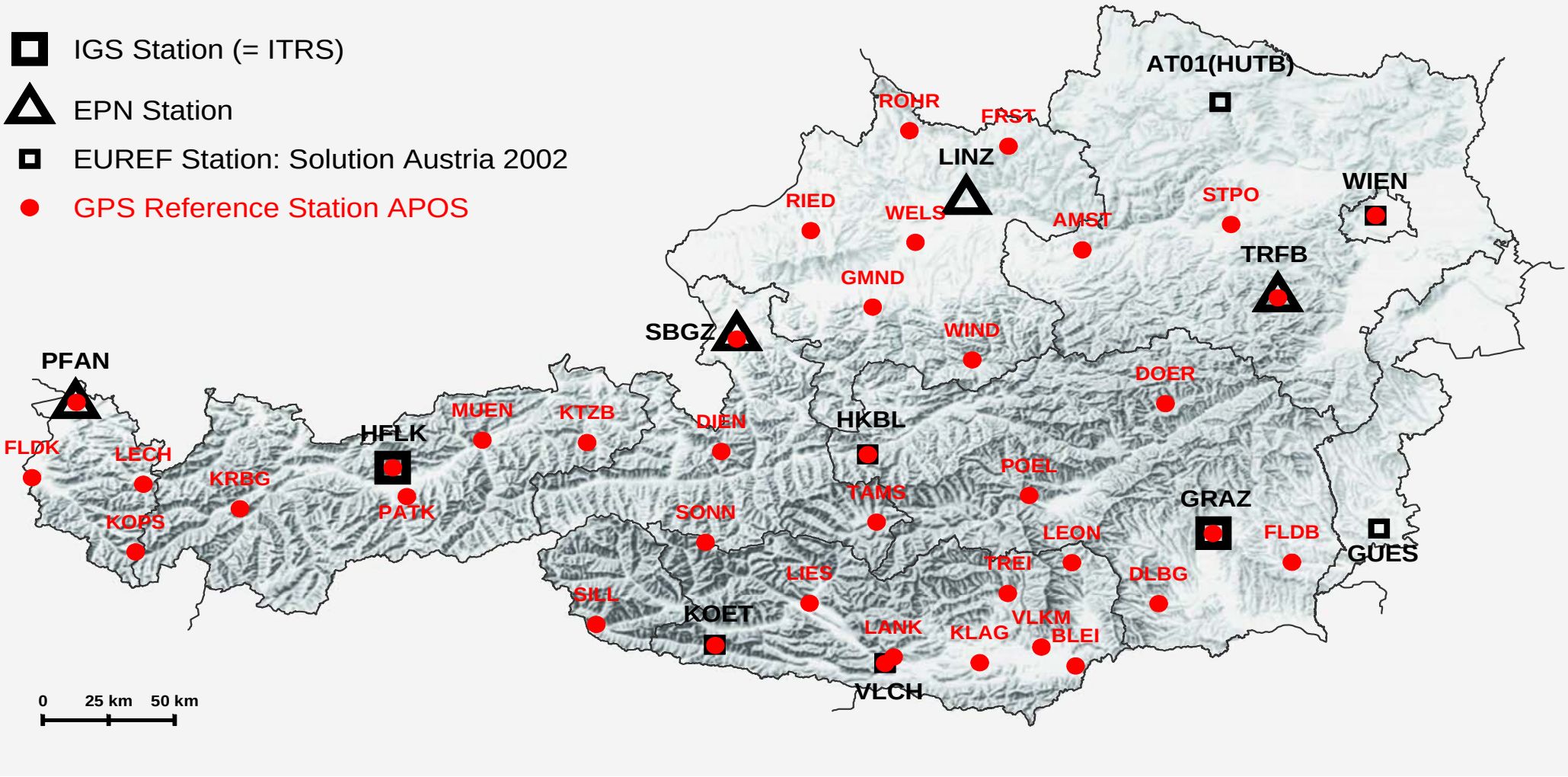
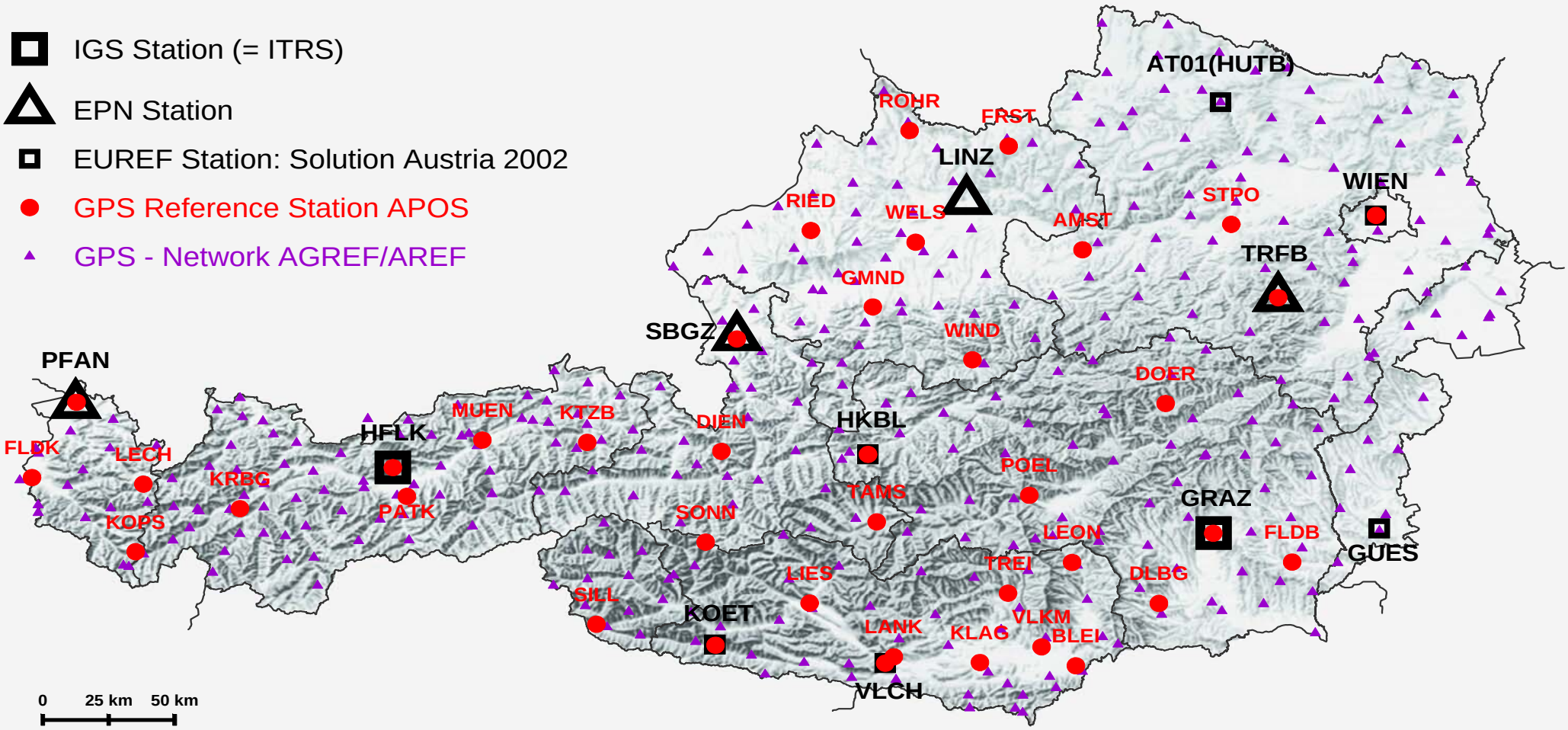
Realization of ETRS89 in Austria (1)



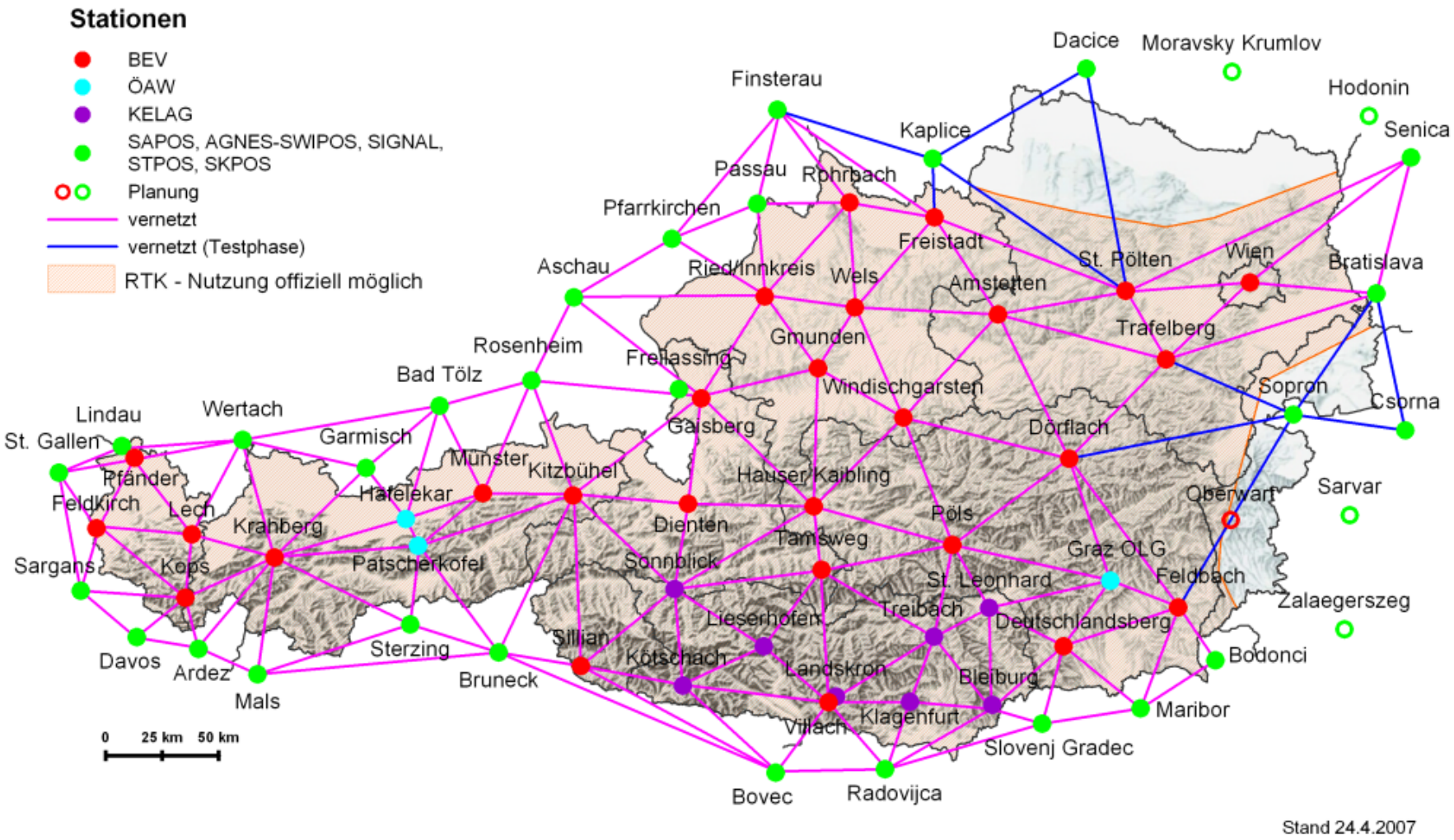
Realization of ETRS89 in Austria (2)



Realization of ETRS89 in Austria (3)

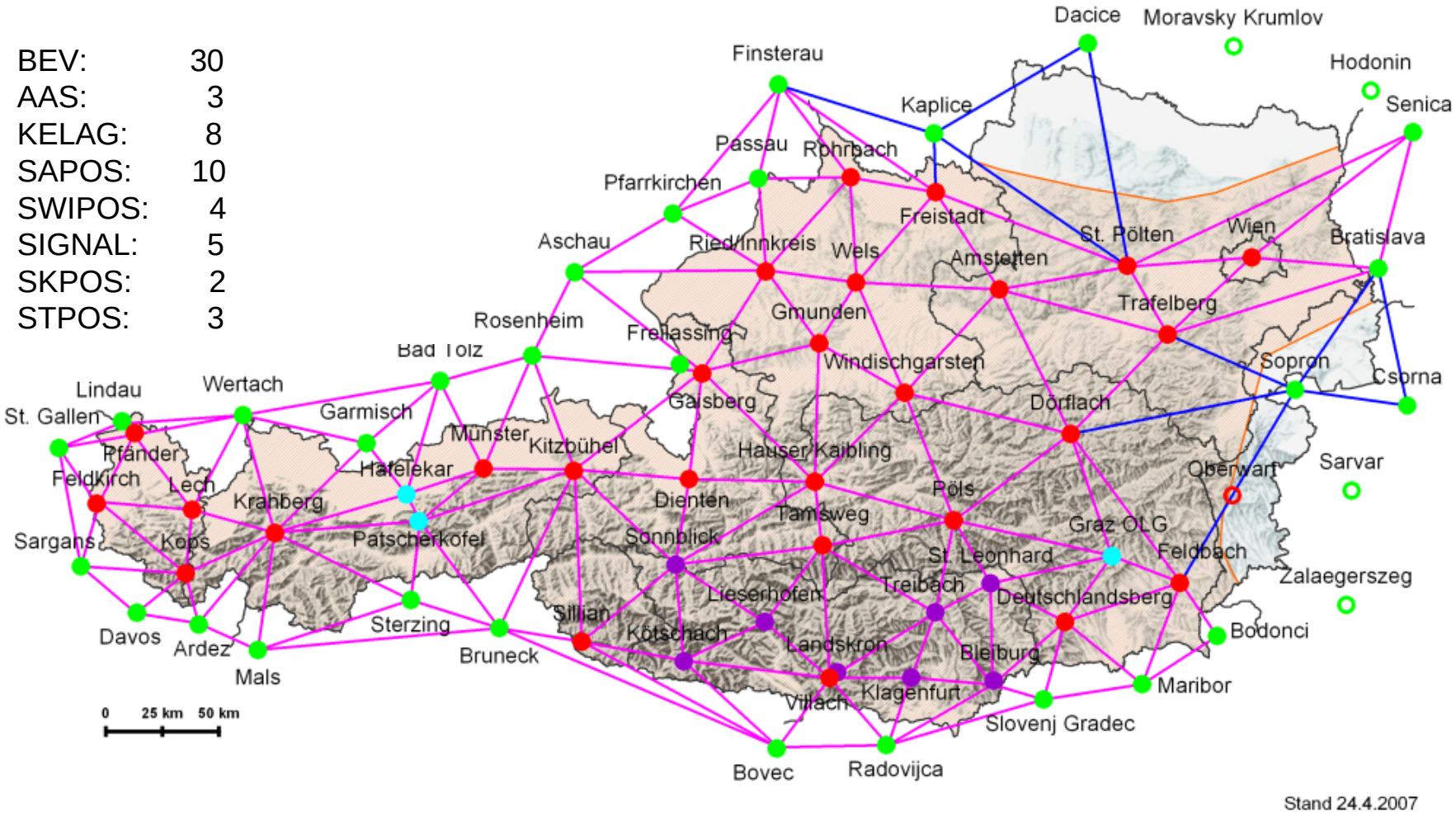


APOS – Austrian Positioning Service

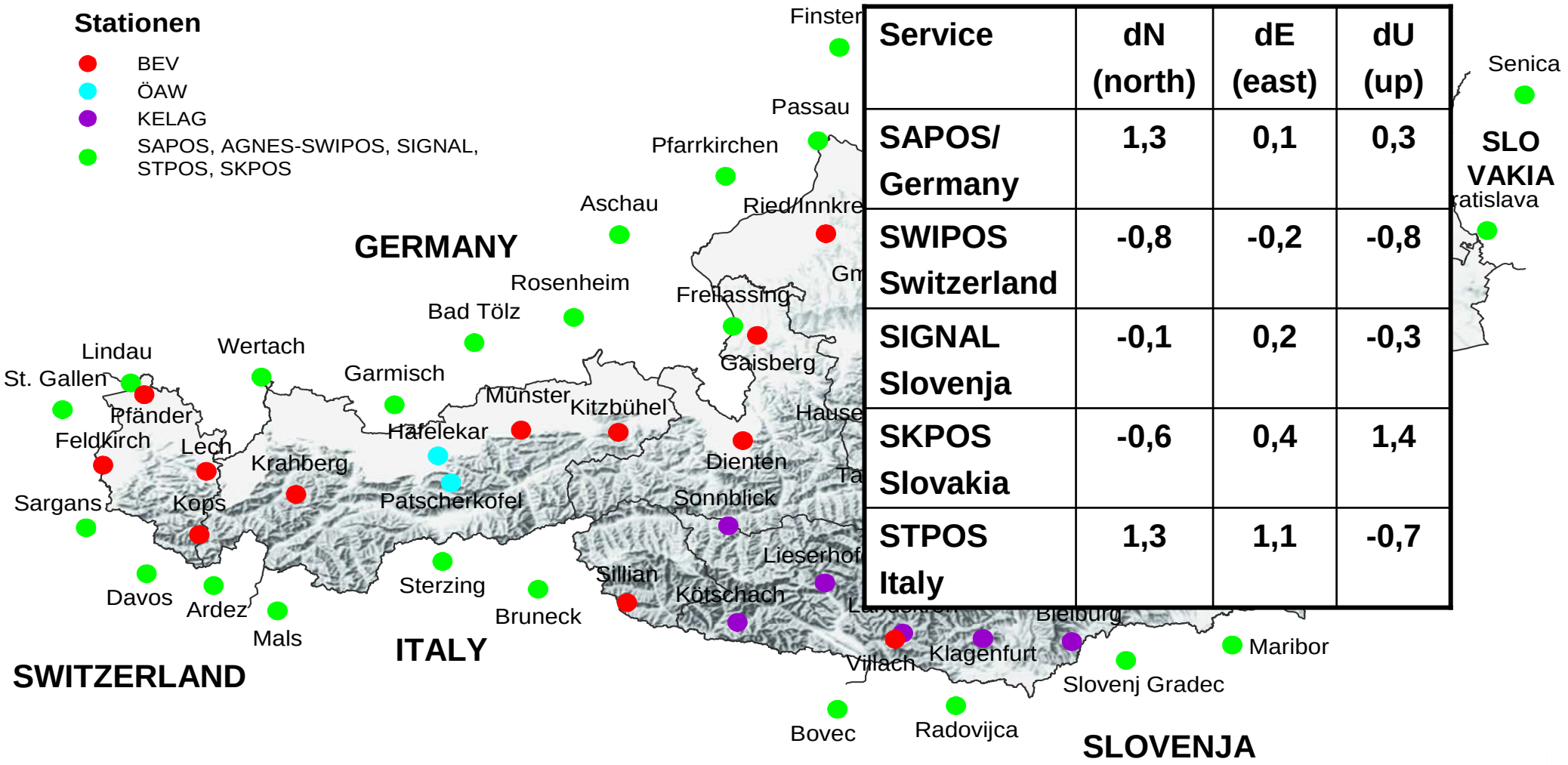


APOS – Austrian Positioning Service

Institute	No.Sta
BEV:	30
AAS:	3
KELAG:	8
SAPOS:	10
SWIPOS:	4
SIGNAL:	5
SKPOS:	2
STPOS:	3

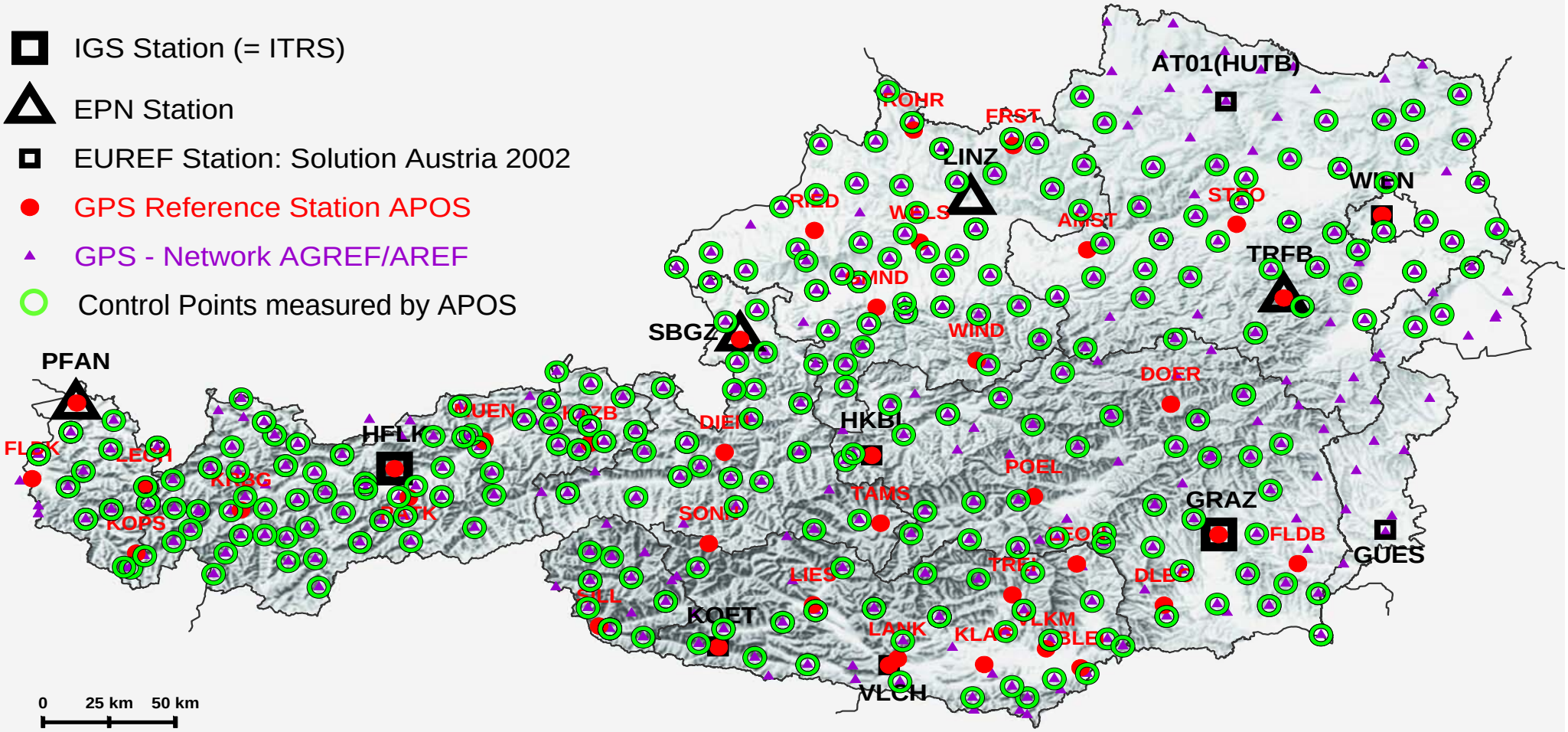


APOS: Differences of Co-ordinates (cm) for mutual Reference Stations near the border derived from the national ETRS89 solution



Service	dN (north)	dE (east)	dU (up)
SAPOS/ Germany	1,3	0,1	0,3
SWIPOS Switzerland	-0,8	-0,2	-0,8
SIGNAL Slovenja	-0,1	0,2	-0,3
SKPOS Slovakia	-0,6	0,4	1,4
STPOS Italy	1,3	1,1	-0,7

Realization of ETRS89 in Austria (4)



Co-ordinate Differences between GPS-Base Network and APOS-RTK Measurements

GPS-Base Network:

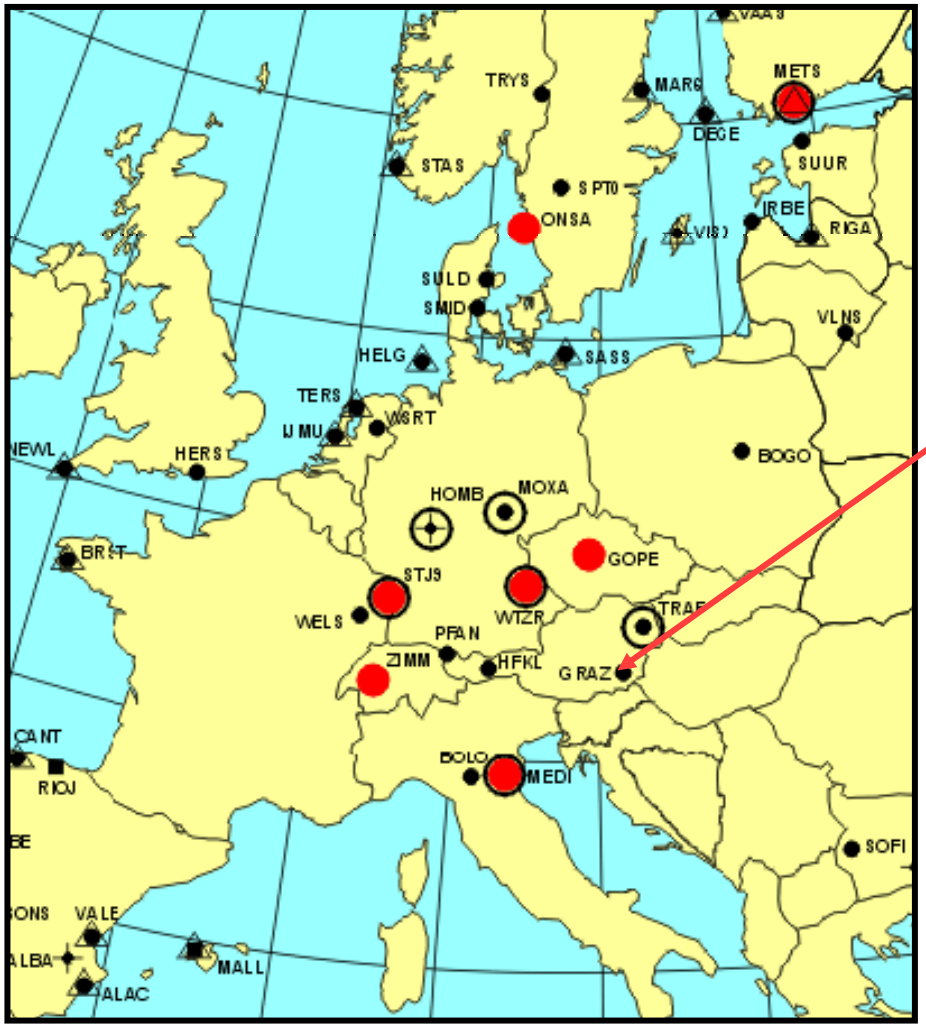
1) AGREF – Austrian Geodynamic Reference Frame
   about 100 points
   2-3 times measured (48-72 h)
   Quality: EUREF Class B

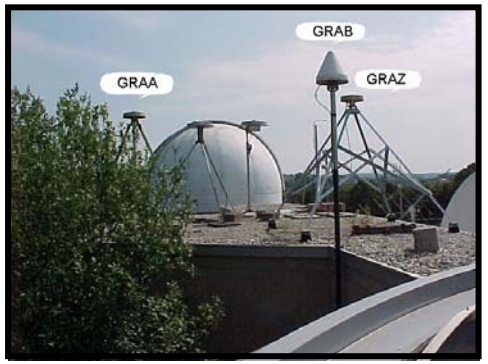
2) AREF – Austrian Reference Frame
   about 300 points
   1 time measured (24 h)
   Quality: +/- (1,5) cm for position

3) Standard deviation of the Differences
   (n = 295)

$m_{dx} = \pm 1{,}1$ cm
$m_{dy} = \pm 1{,}4$ cm
$m_{dH} = \pm 3{,}7$ cm

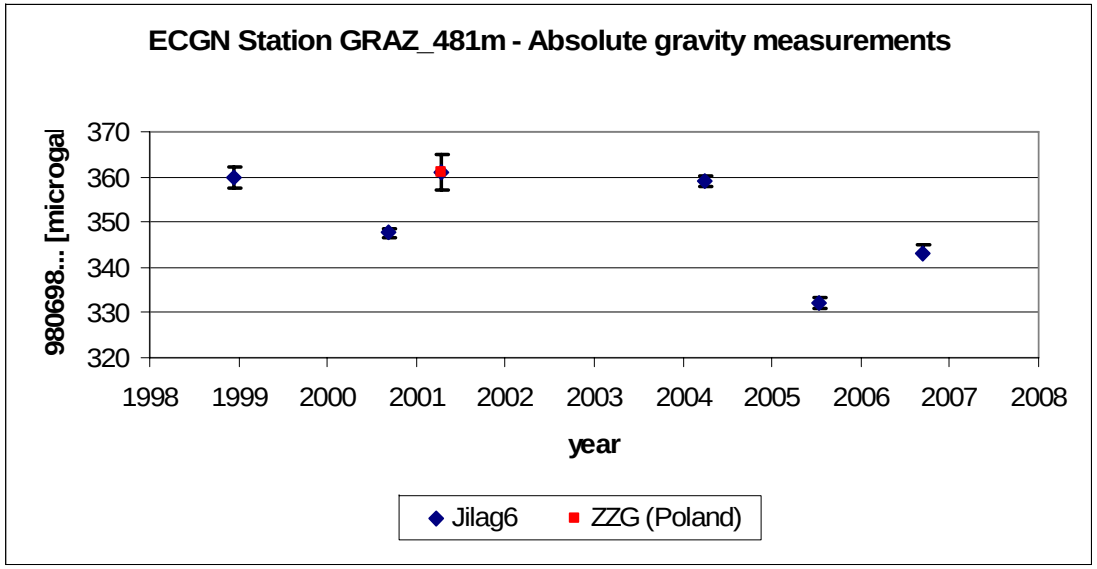
ECGN Stations in Austria: Graz

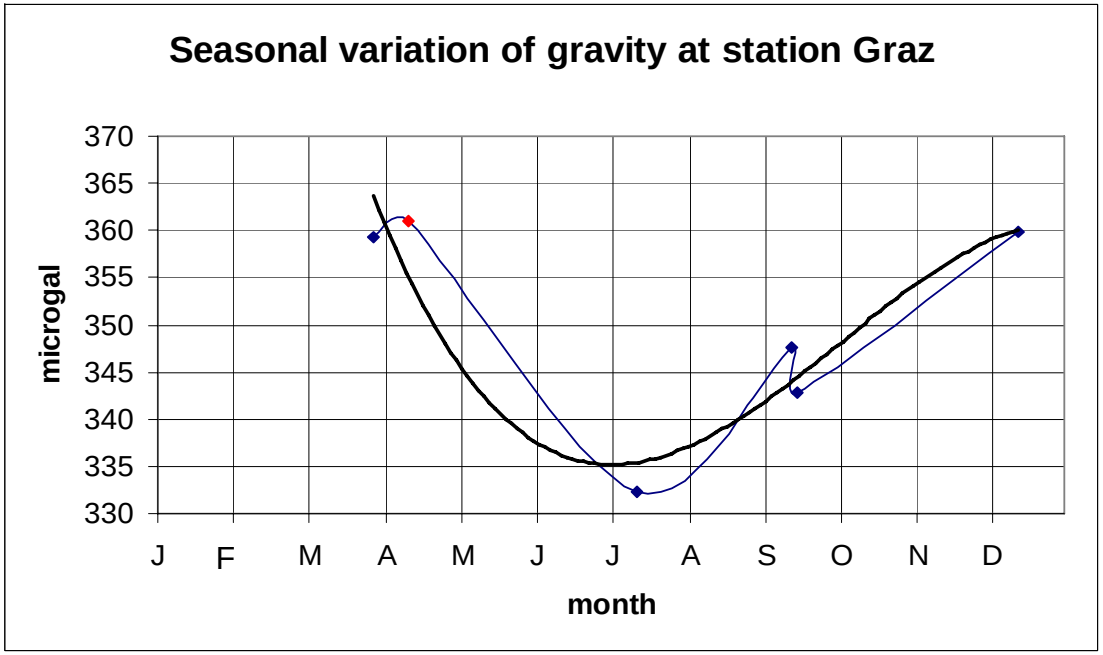




IGS:
Laser since 1982
GPS since 1992
Levelling/C-values: 1987
Absolute gravity: 2000/04

New: 2005, 2006 absolute gravity measurements





ECGN Station Graz: Repeated Absolute Gravity Measurements

6 Measurements:
1999 to 2006
JILAG6: 5 times
ZZG: 1 time

Variation of 30 µgal
Seasonal variation
Reason why?