

The Austrian radom family

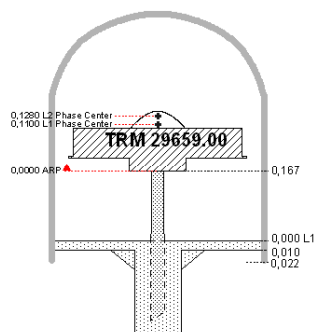
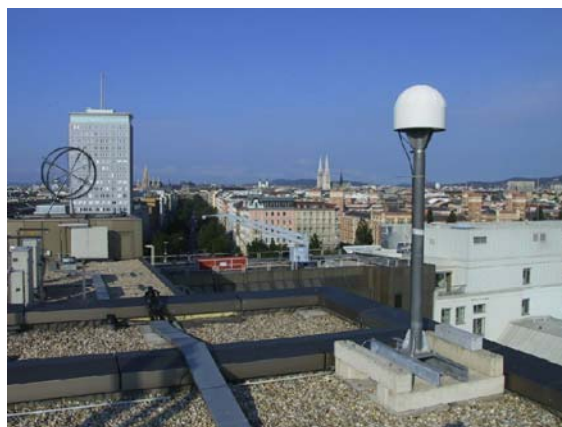
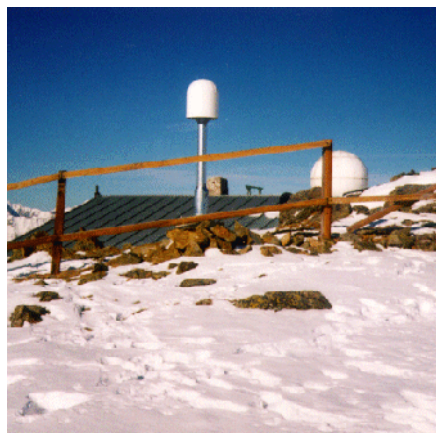
expected differences for the EPN and IGS reprocessing

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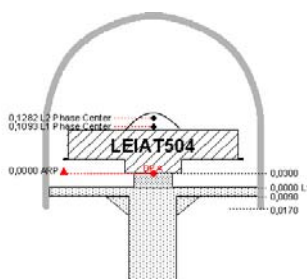
Radoms in Austria

- Manufactured at the Observatory Lustbuehel since 1994
- Cylindrical + hemispherical shape
- Three types, but one name (GRAZ) in the beginning
- Now BEVA, OLGA, PFAN, discerned by size
- Combined with several antenna types (Ashtech, Javad, Leica, Topcon, Trimble)
- Calibration done in the last years for a dozen of combinations (individual + type) at Geo++
- Since 2008 available for EPN and IGS (5 sites)
- Also used in national network since 2007/8
- Individual calibrations accepted by EPN, type calibrations not (confusion during reprocessing)
- Estimation of expected differences wanted

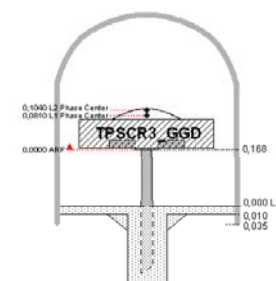
Radom Pictures



Type OLGA

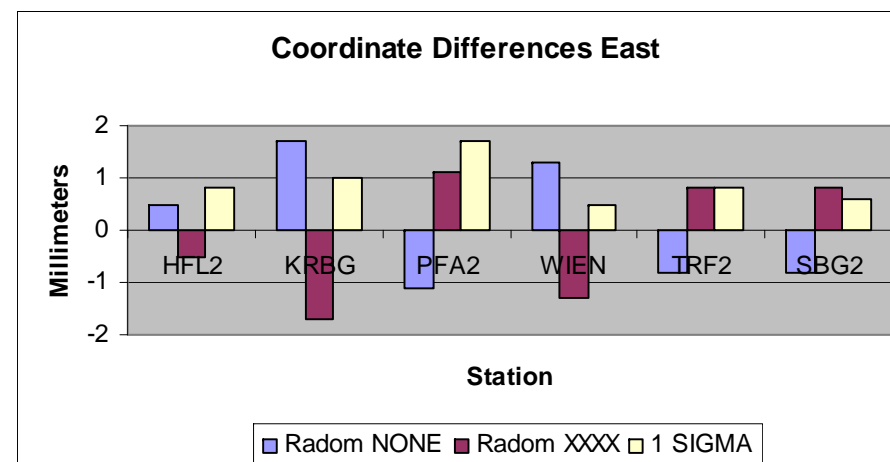
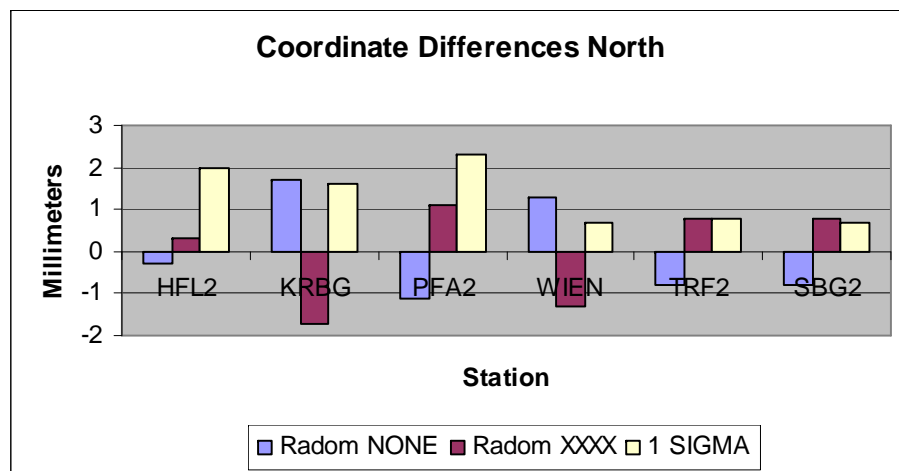


Type BEVA

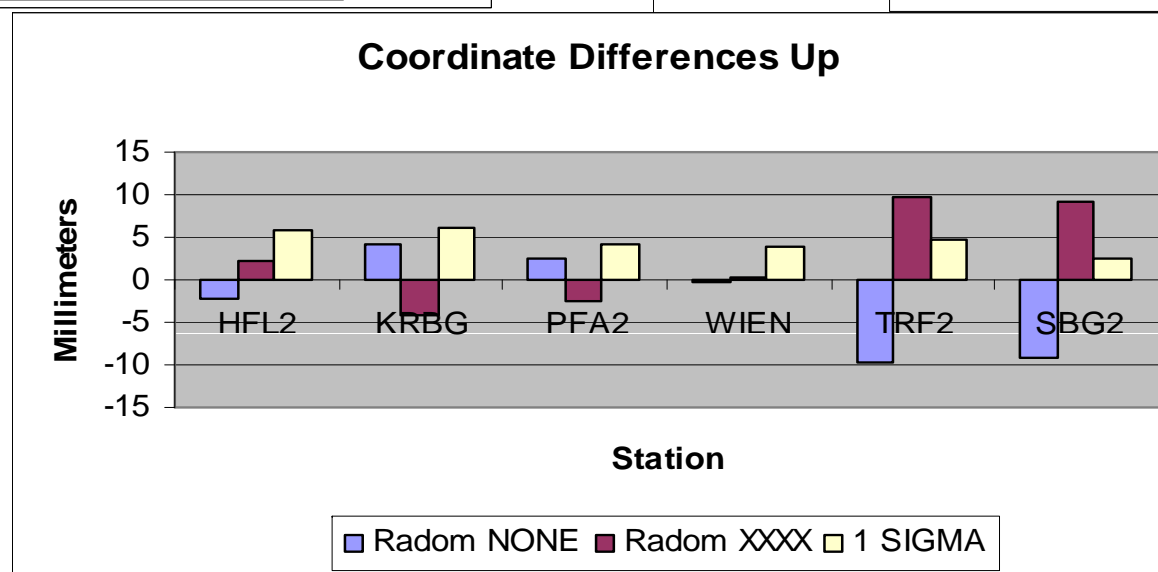


Type PFAN

Comparison Results (Weekly Differences)



**1 SIGMA taken
from daily
differences
(Summary file)**



Discussion of Differences

- As expected lateral differences are very small (0.5 – 2.5 mm)
- Height differences vary between almost zero (Leica) to large (Topcon)
- Generally TPSCR3_GGD NONE (transformed from relative calibration) seems to be wrong
- High differences within the Topcons (PFA2 against SBG2 and TRF2) cannot be explained yet
- From the existing time series the Ashtech combinations do not show up with high differences
- Problem of putting TRM41249.00 correctly into the radoms was already pointed out at EUREF 2005

Conclusions

- For reprocessing of EPN and IGS sites the differences in the Up component are well below 10 mm, if one uses the newly calibrated radoms or not
- For the differences in the Topcon combinations (all established 2007/8) more investigations are needed
- A total reprocessing for the national Austrian network is not yet foreseen (financial), but would be possible

Thank you !