

February 18th 2008, A. Pany

Comparison of analysis strategies

Specifications:

schedule: st16uni_60_12_230 (st16uni_60_12_230X_0_0)
software: PPP KF
zwd: Vienna turbulence (standard)
clk: random walk + integrated random walk, ASD 1e-14 @ 50 min
wn: 4/sqrt(2) ps per station

zwd: random walk, 0.7 ps²/s
grd: random walk, 0.5 ps²/s (base solution)
SH: best results using SH11 – random walk, 0.01 ps²/s
clk: deterministic rate + random walk offset, var. rate for offset: 1 ps²/s

elevation dependent downweighting (edw) as proposed by J. Gipson:

$$\text{sig}^2 = \text{obs_sig}^2 + (10\text{ps}/\sin(\text{el}))^2$$

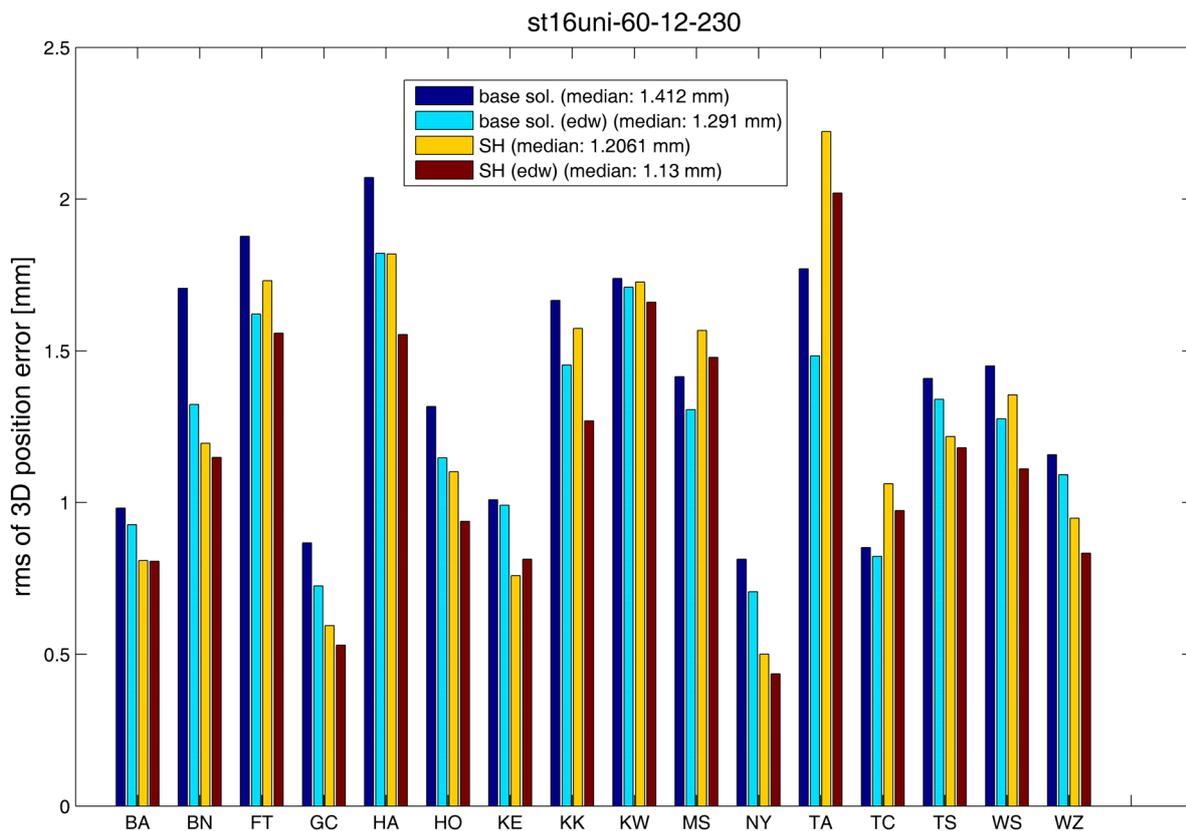


Figure 1 rms of 3D position error in mm; dark blue: base solution (rw zwd + rw grd), light blue: base solution with elevation dependent weighting, yellow: rw zwd + rw SH11, red: rw zwd + rw SH11 with elevation dependent weighting; variance rates as given in the specs