

CODE contributions to the WG COL

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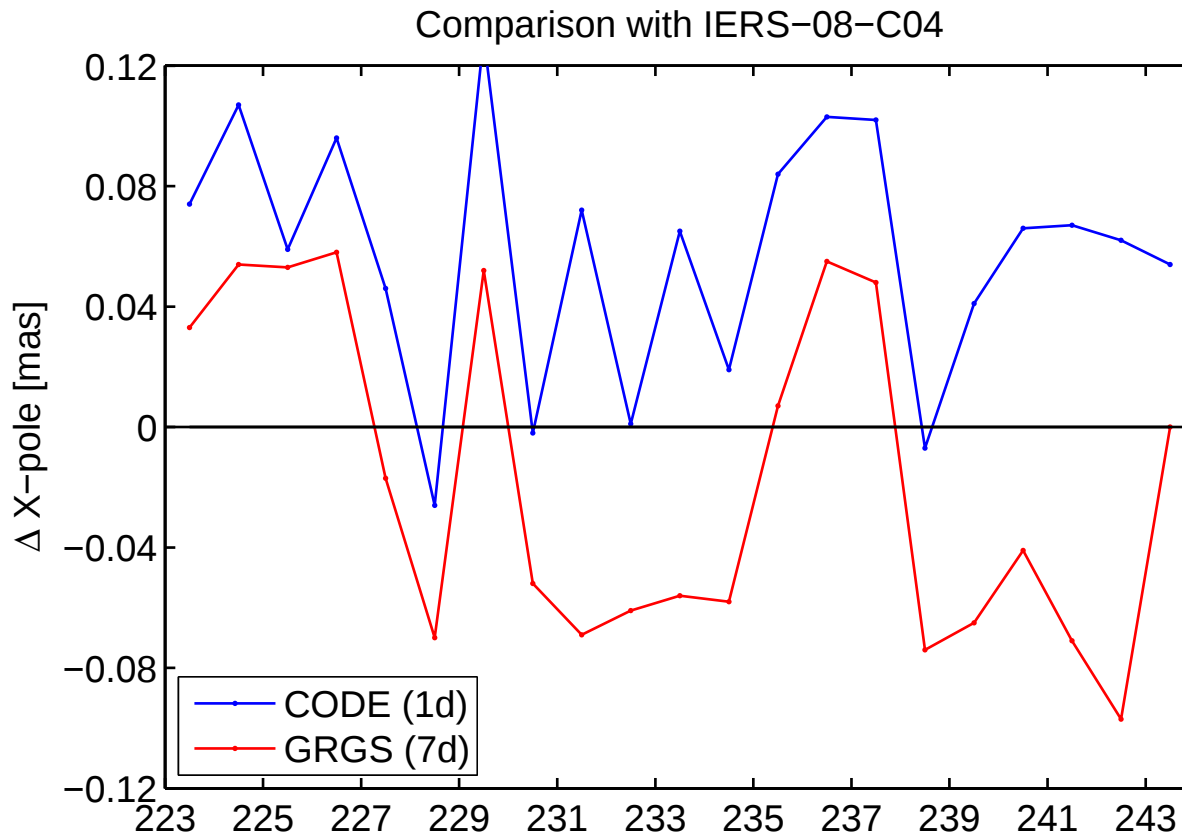
Contributed SINEX files: GNSS

- Combined GPS+GLONASS
- For CONT08
- Using models of WG COL
- Daily SINEX files
- Parameters:
 - Station coordinates
 - Troposphere ZD (2 h)
 - Troposphere gradients (24 h)
 - Polar motion (piece-wise-linear)
 - UT1 / LOD (piece-wise-linear)
 - Nutation (piece-wise-linear)
 - Satellite antenna offsets

Contributed SINEX files: SLR

- LAGEOS-1 and -2
- For CONT08 and CONT11
- Using models of WG COL
- Weekly SINEX files
- Parameters:
 - Station coordinates
 - Range biases (combined)
 - Polar motion (piece-wise-linear)
 - UT1 / LOD (piece-wise-linear)
 - Geocenter

Comparison of ERPs



Mean Bias [μas]:

61.5

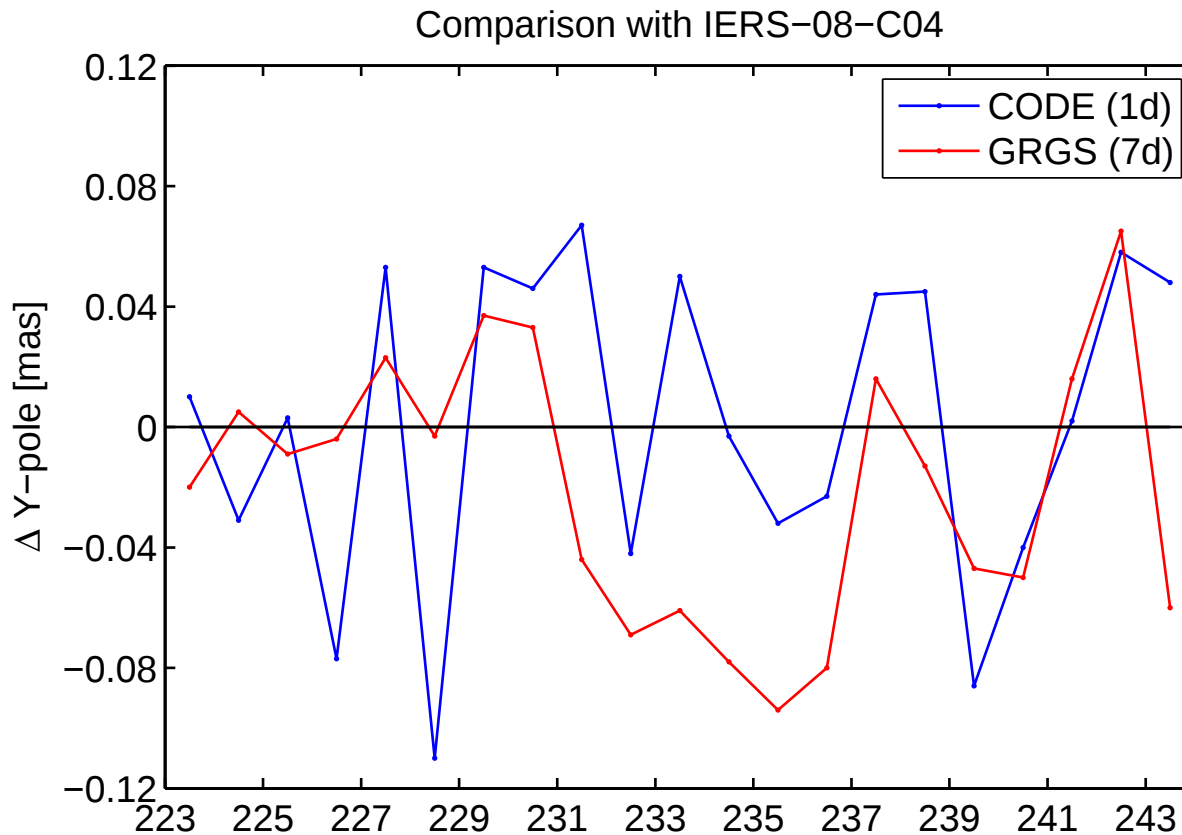
23.3

RMS [μas]:

41.5

55.0

Comparison of ERPs



Mean Bias [μas]:

1.5

4.1

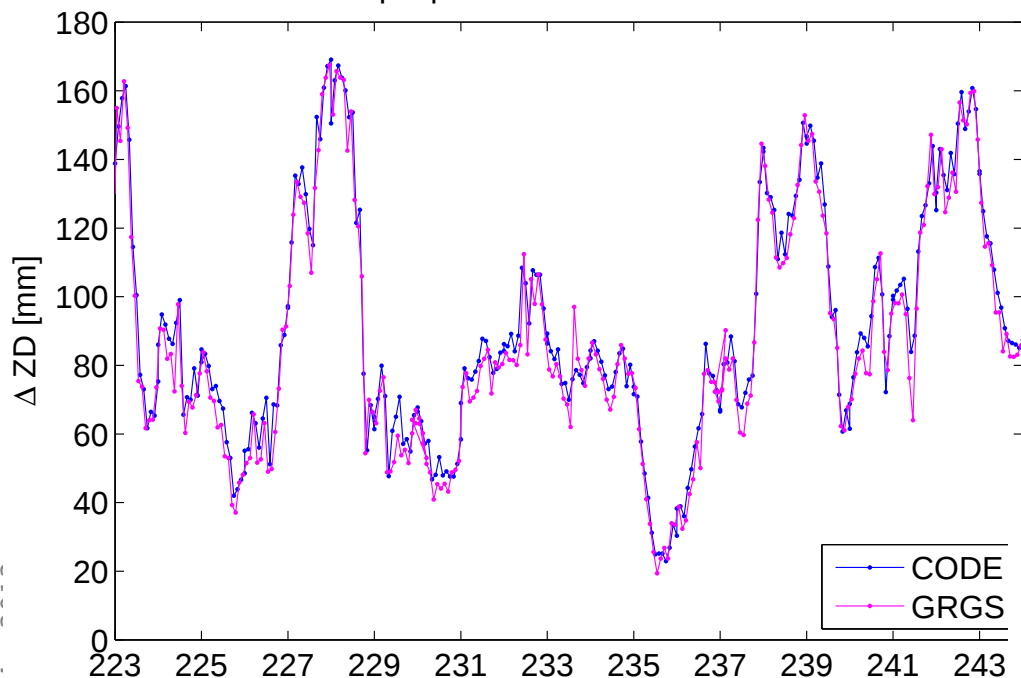
RMS [μas]:

52.8

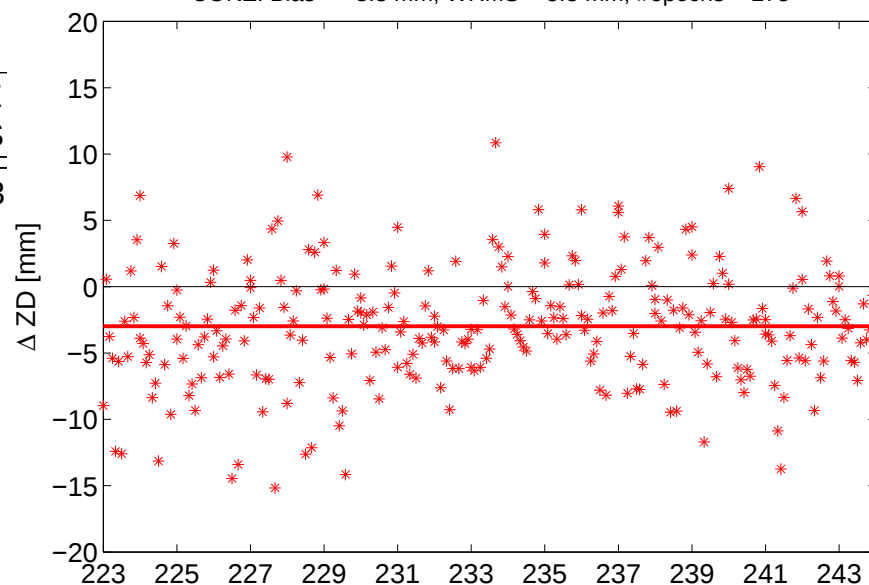
44.4

Comparison of troposphere parameters

Troposphere ZD for station CONZ

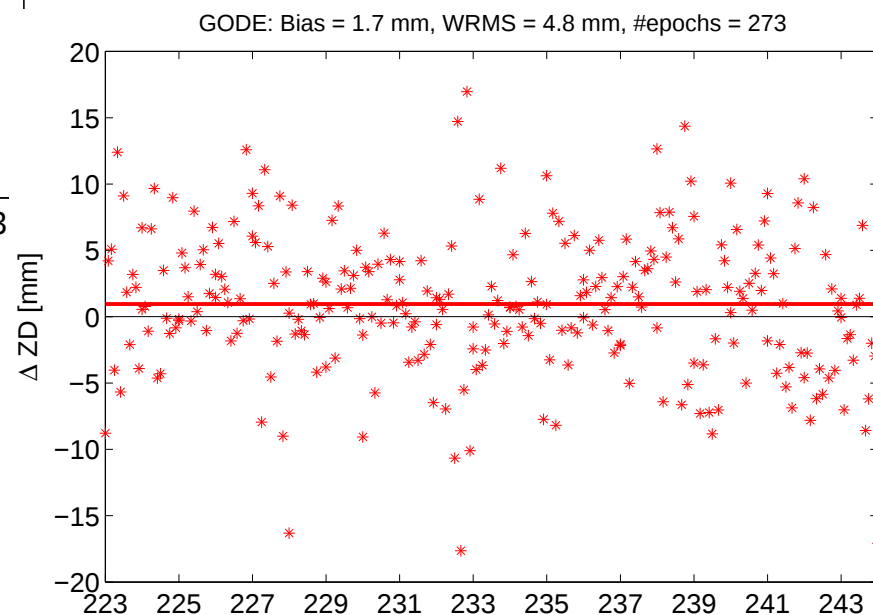
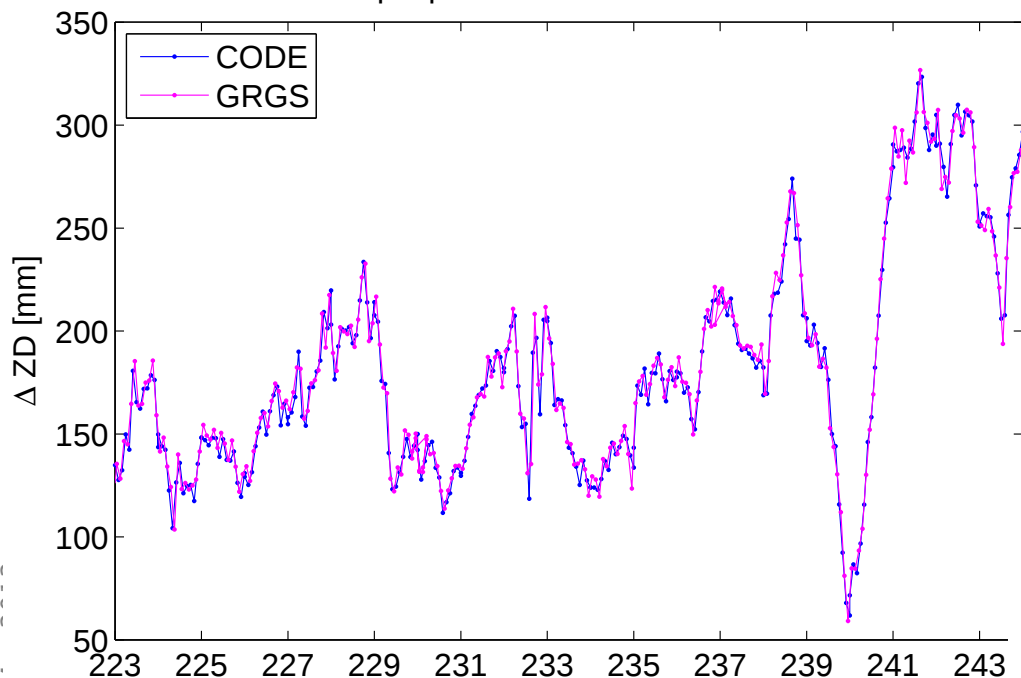


CONZ: Bias = -3.8 mm, WRMS = 5.3 mm, #epochs = 273



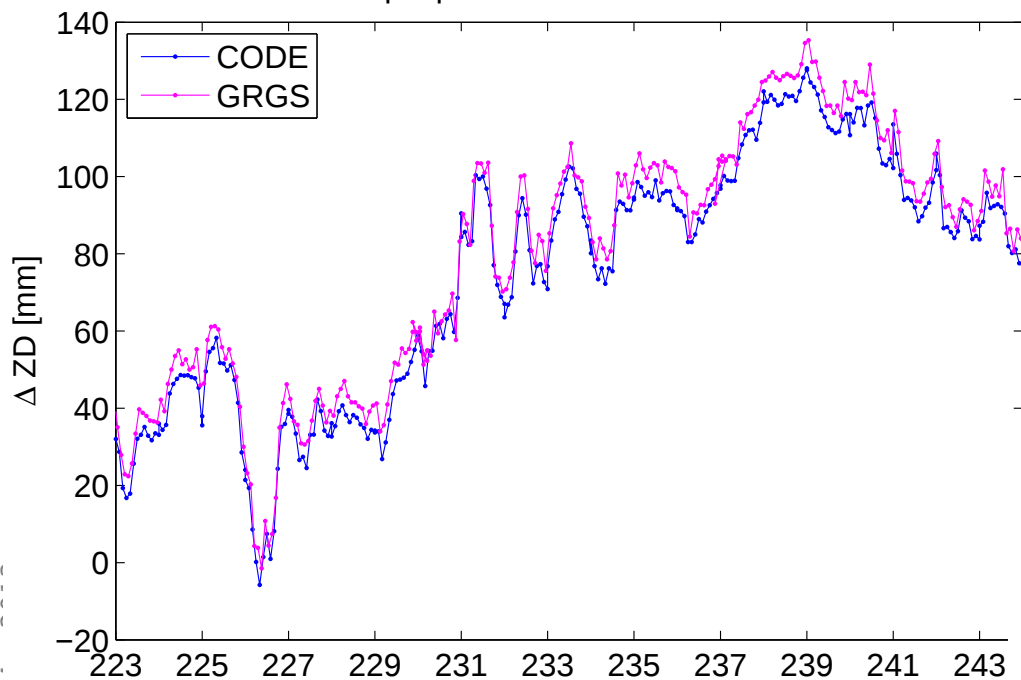
Comparison of troposphere parameters

Troposphere ZD for station GODE

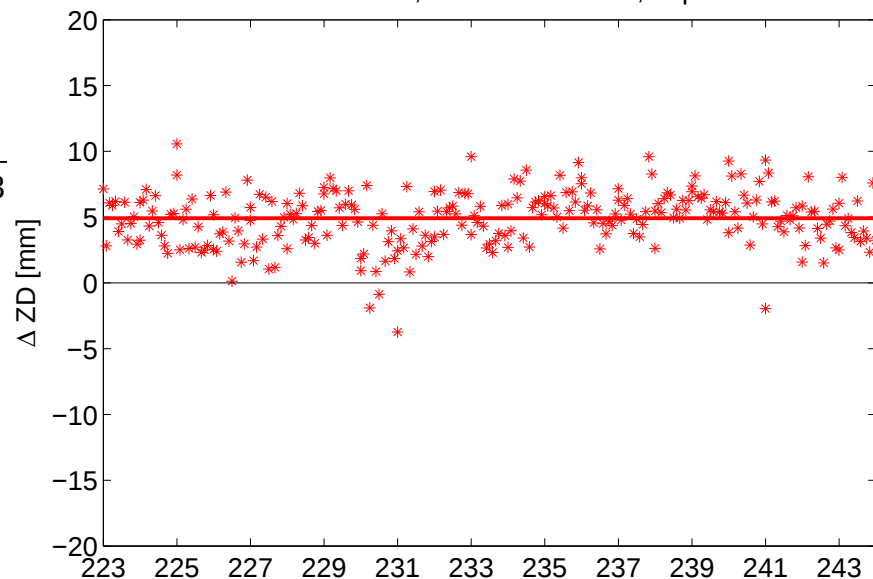


Comparison of troposphere parameters

Troposphere ZD for station NYA1

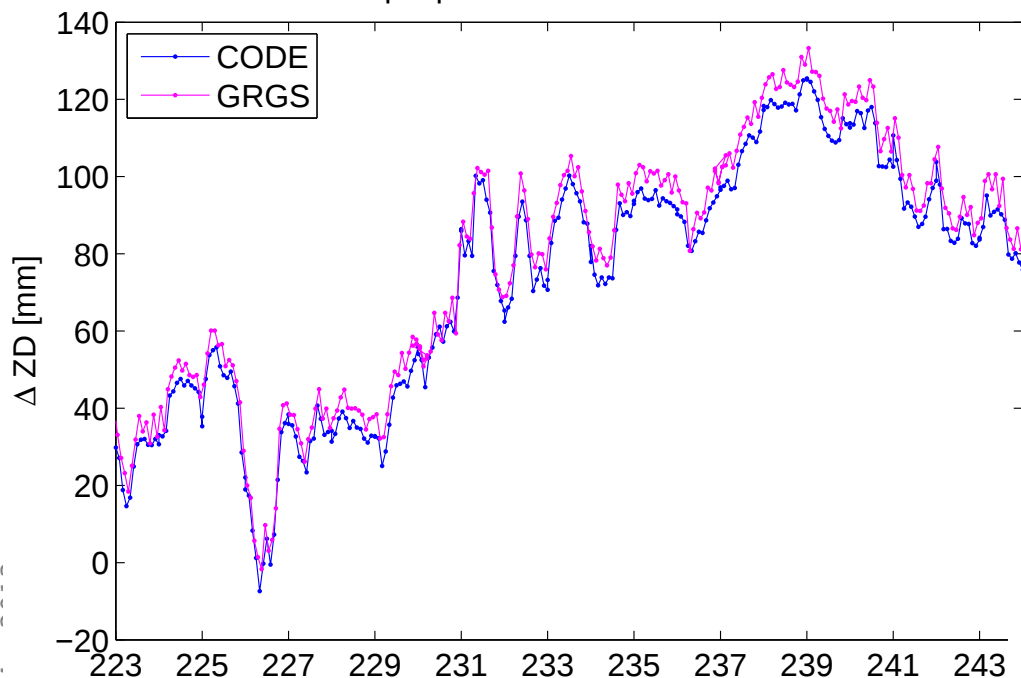


NYA1: Bias = 4.6 mm, WRMS = 1.5 mm, #epochs = 273

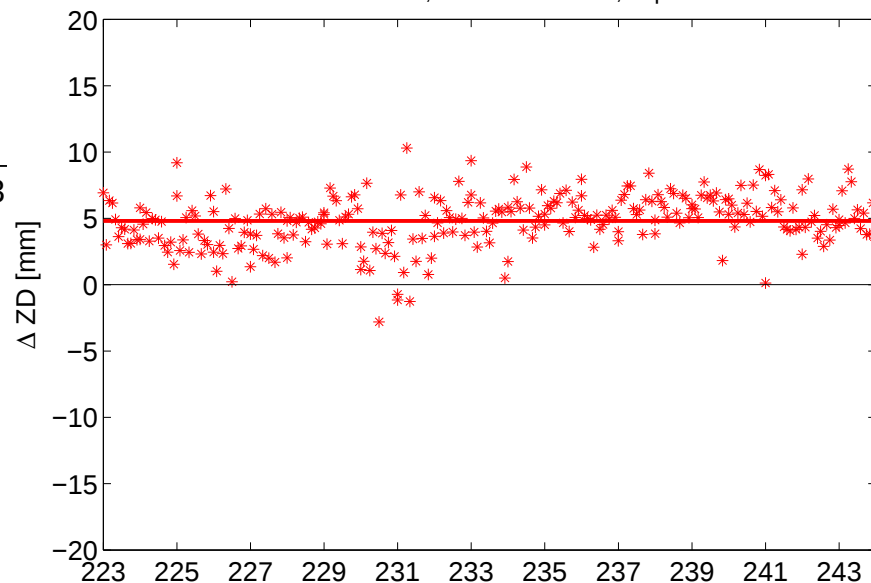


Comparison of troposphere parameters

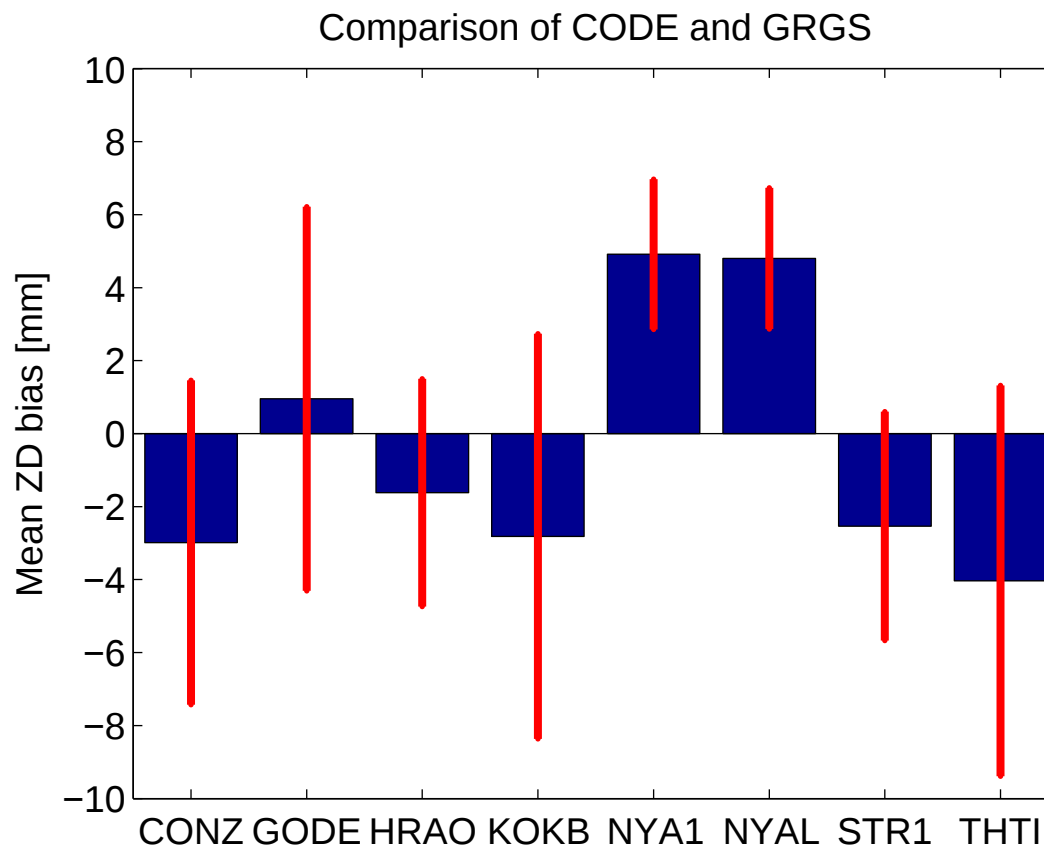
Troposphere ZD for station NYAL



NYAL: Bias = 4.1 mm, WRMS = 1.5 mm, #epochs = 273



Comparison of troposphere parameters



- All stations agree within ± 5 mm
- Co-located sites NYA1 / NYAL show same differences

Comparison of troposphere parameters

Topics to be clarified:

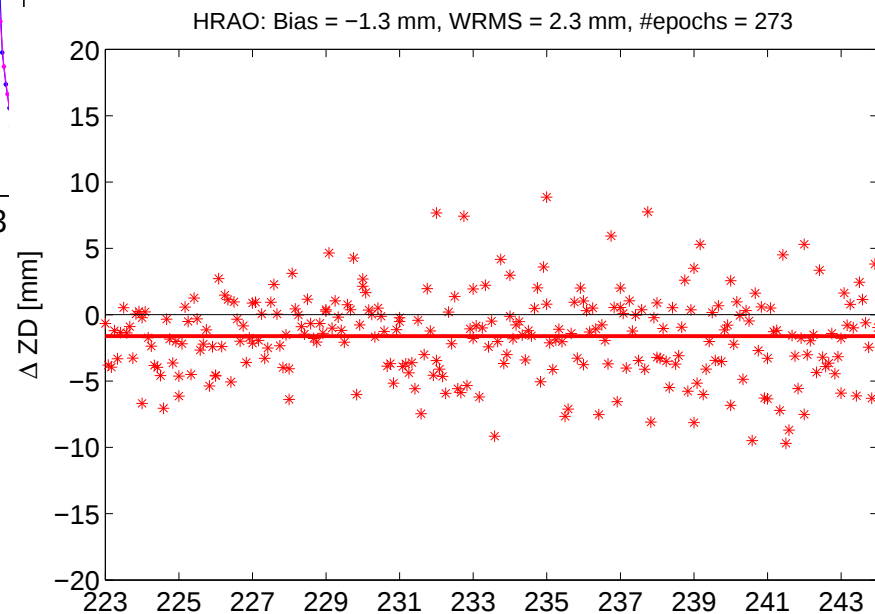
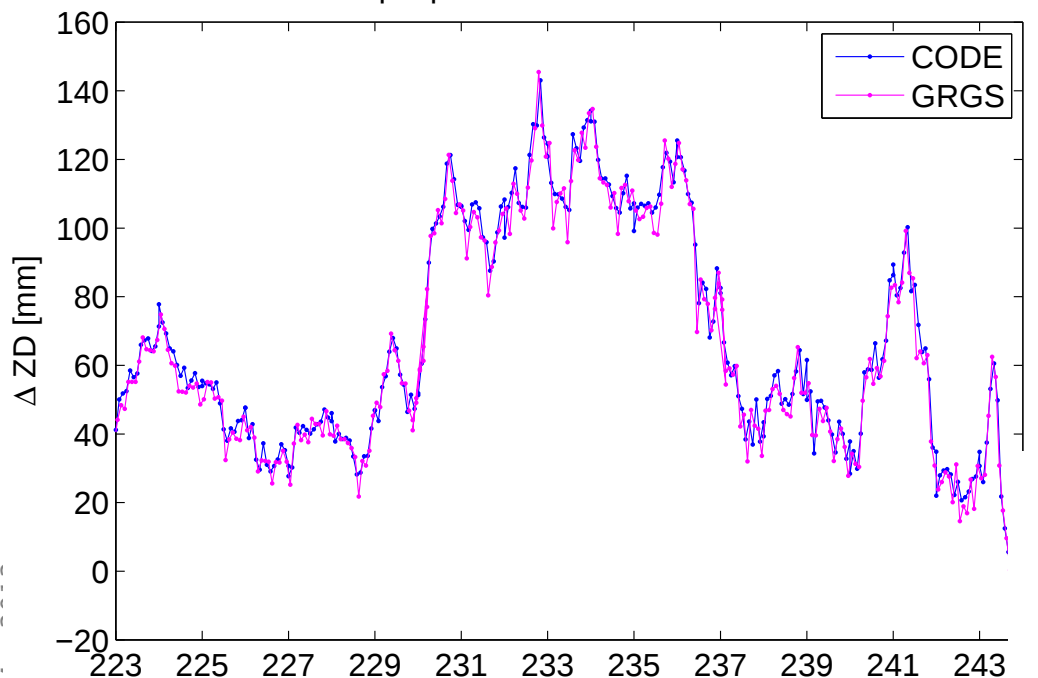
- TROTOT (TROWET, TRODRY) or ZBIAS to be used
- What is provided as ZBIAS in GRGS solutions?
 - I assumed corrections to apriori model
 - but apriori values $\neq 0.0$
- Epochs and Parameterization?
 - CODE: 00:00, 02:00, 04:00, ... piece-wise-linear
 - GRGS: 01:00, 03:00, 05:00, ... constant (?)

Outlook for CODE contributions

- GNSS solutions for CONT'11
- GNSS–SLR combined solutions (satellite co–location):
 - GPS+GLONASS microwave observations
 - GPS+GLONASS SLR observations
 - LAGEOS SLR observations
- Comparisons with further GNSS contributions (as soon as available with COL models)
- All contributions after finalizing the new release of the *Bernese GNSS Software* !

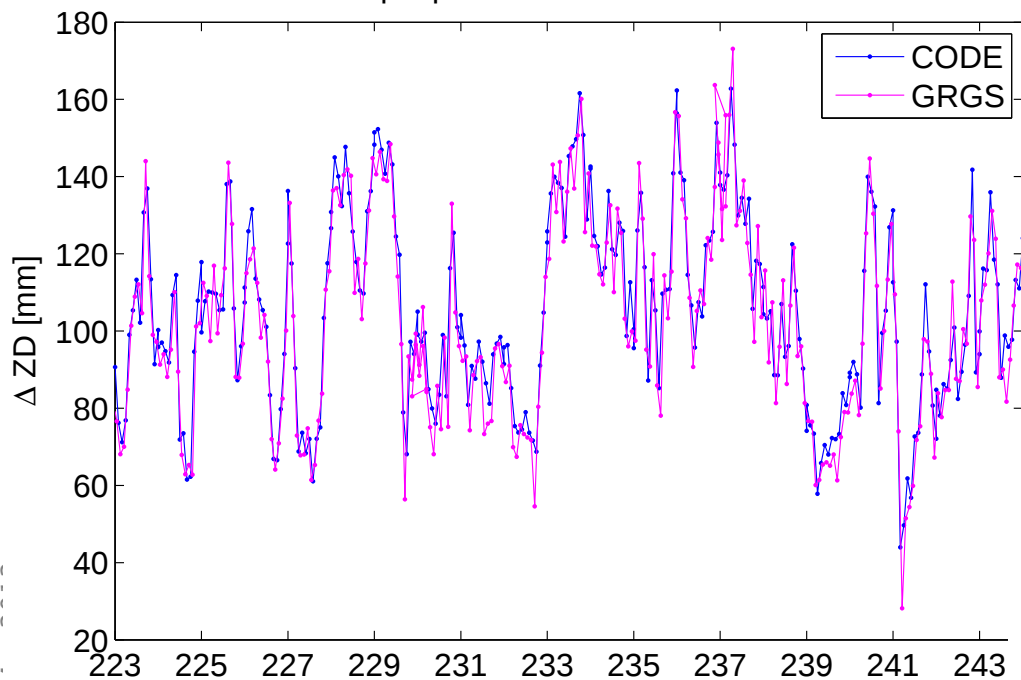
Comparison of troposphere parameters

Troposphere ZD for station HRAO

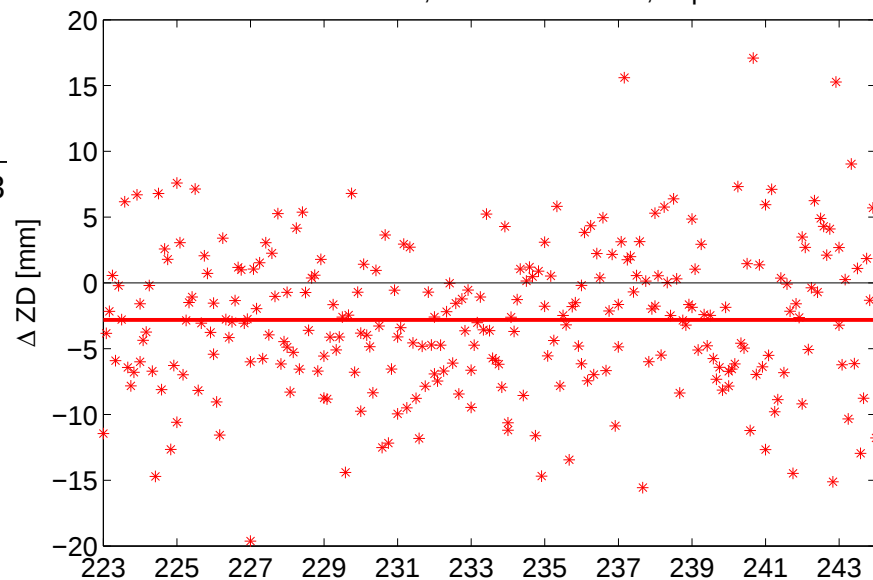


Comparison of troposphere parameters

Troposphere ZD for station KOKB

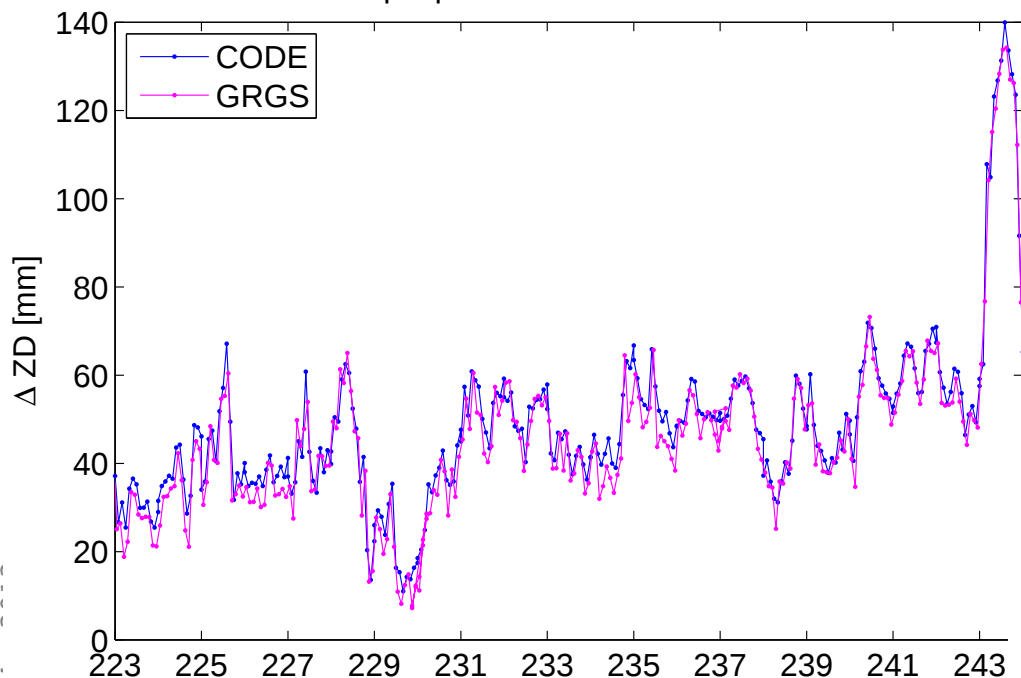


KOKB: Bias = -3.0 mm, WRMS = 5.0 mm, #epochs = 273

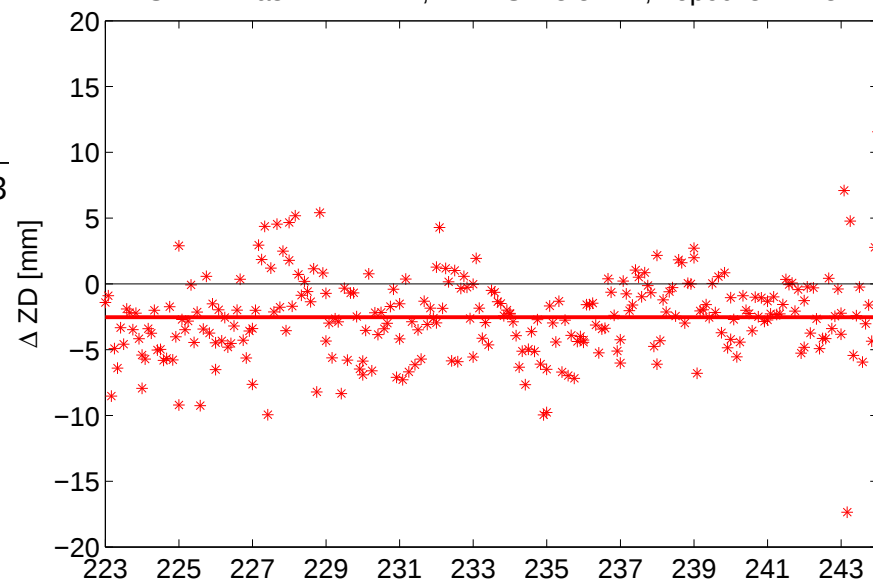


Comparison of troposphere parameters

Troposphere ZD for station STR1

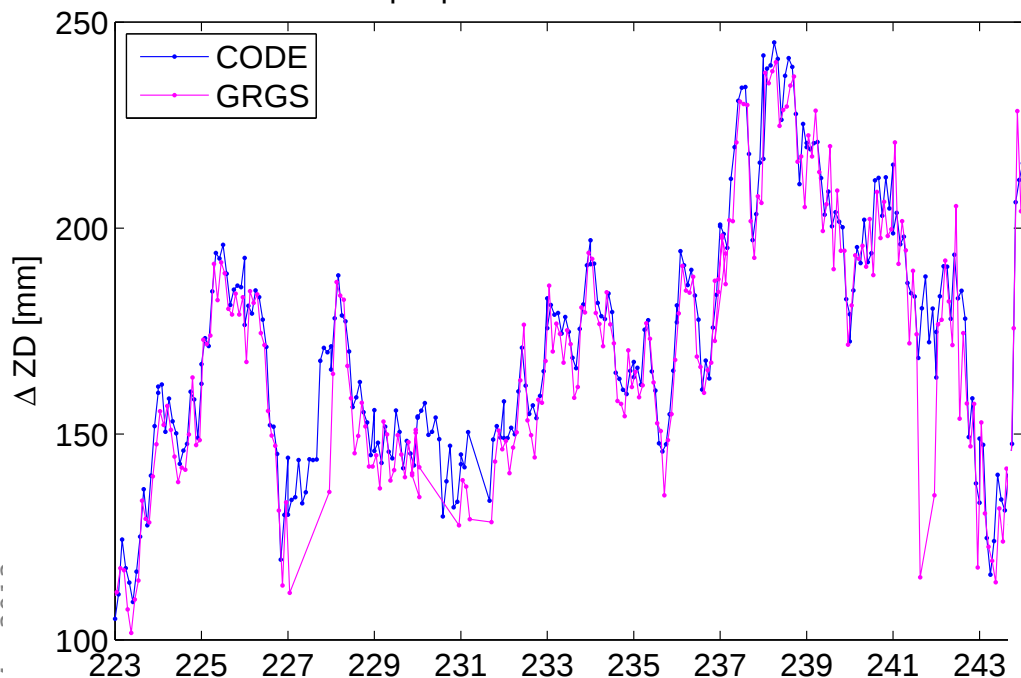


STR1: Bias = -2.7 mm, WRMS = 3.3 mm, #epochs = 273



Comparison of troposphere parameters

Troposphere ZD for station THTI



THTI: Bias = -3.8 mm, WRMS = 4.2 mm, #epochs = 241

