Title: **Status of NRT & Regional Service at TUG**

Presenter: AK

Affiliation: TUG

EGSIEM Meeting Bern,
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Status of NRT – Time Table and Milestones

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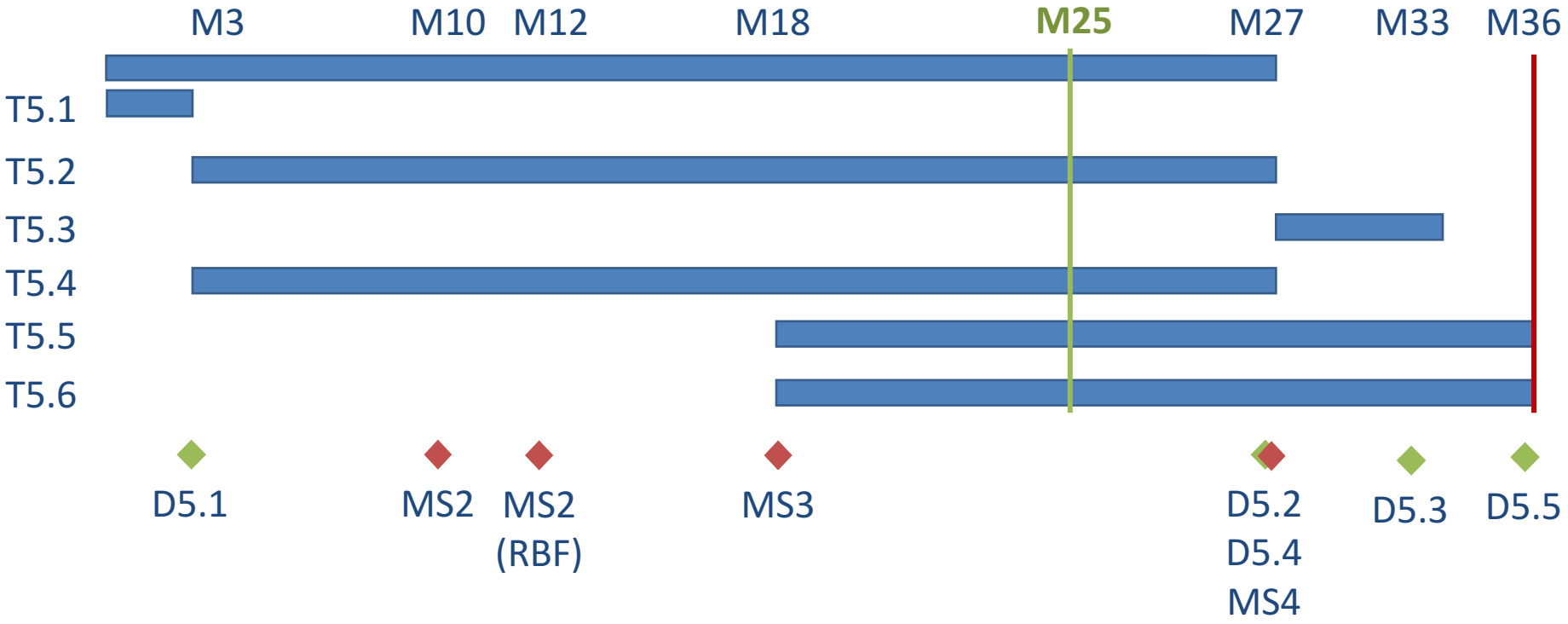
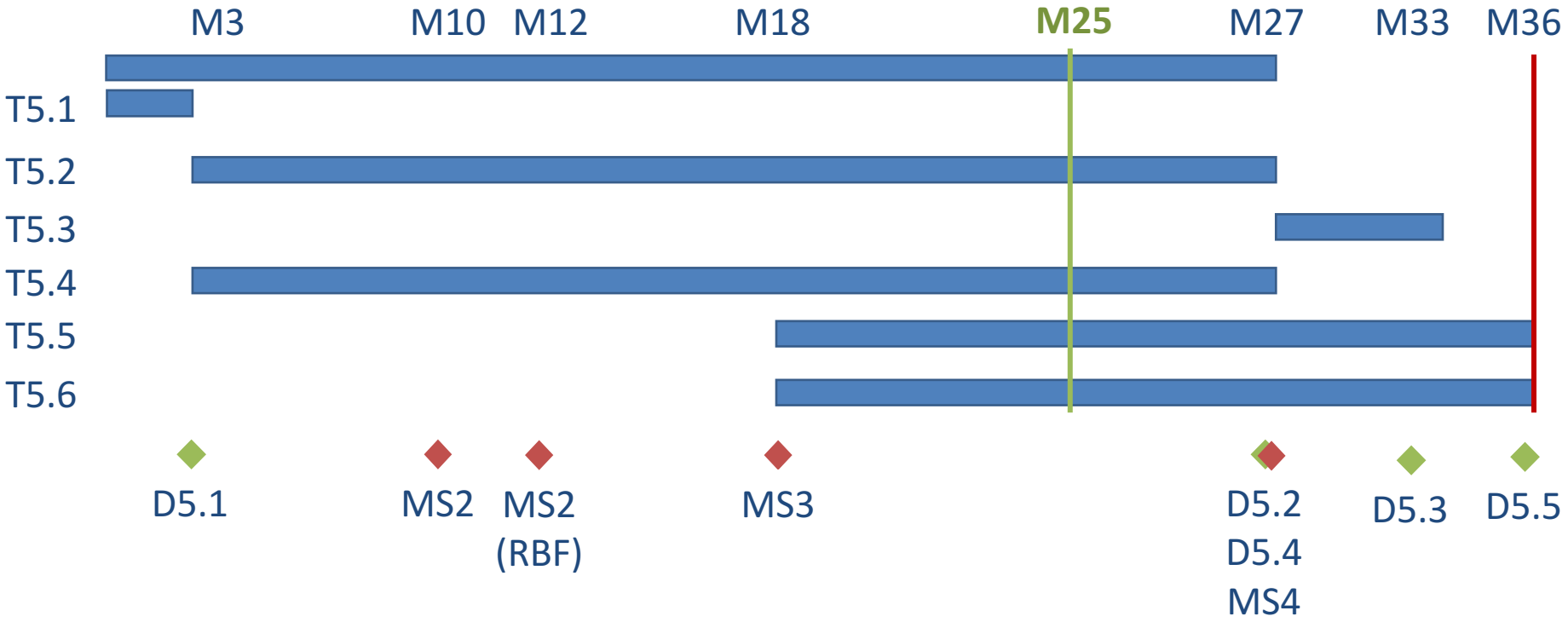


- Upcoming Milestone: Operational Service Readiness, M27
  - Marks the begin of T5.3: Operational NRT Solutions

Status of NRT – Time Table and Milestones



- Next deliverables:
  - D5.2: NRT Service Product Report (M27)
  - D5.4: Regional Solution Product Report (M27)
  - D5.3: NRT Service product report (M33)

Updates since last Meeting

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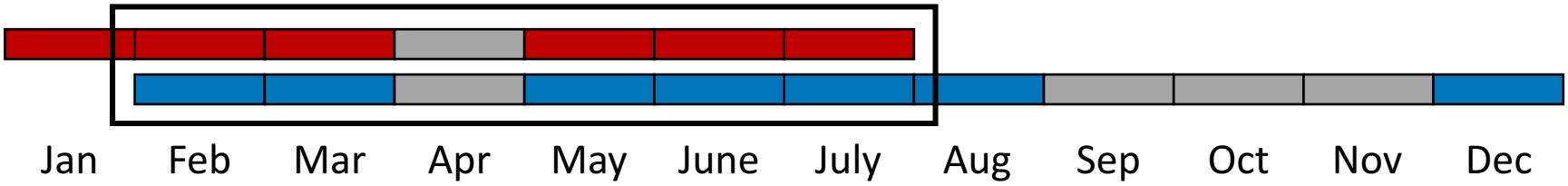
- GRACE L1B Quick-Look data available for TUG since November 2016

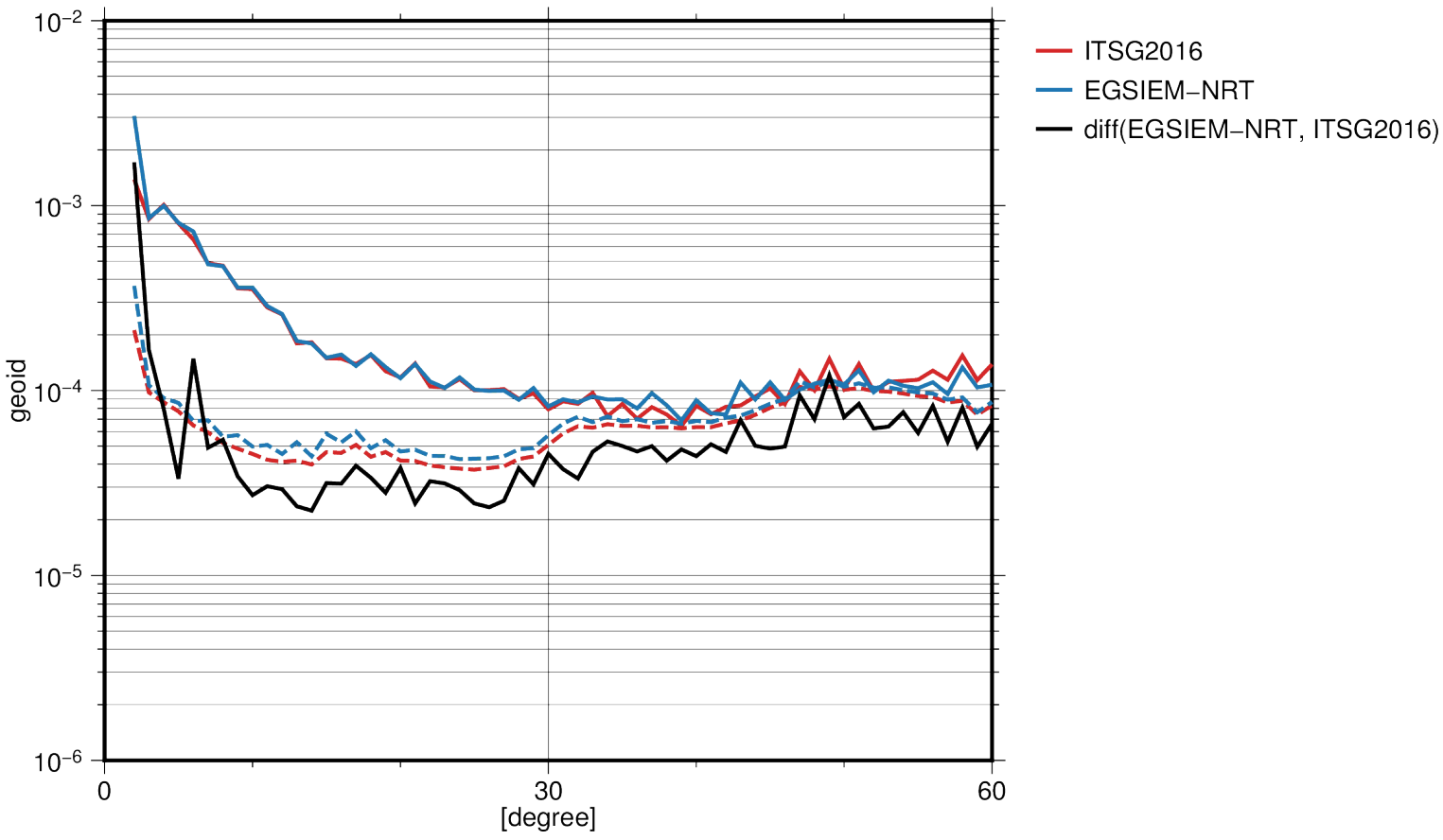
- NRT solutions computed in fast-forward mode from February to December
  - Five month overlap with ITSG-Grace2016 post-processing solution



- Comparisons between the two time series on observation and solution level
  - Biweekly estimate of instrument noise trough moving monthly solution
  - Difference between ITSG-Grace2016 (forward-only) and EGSIEM-NRT daily solutions

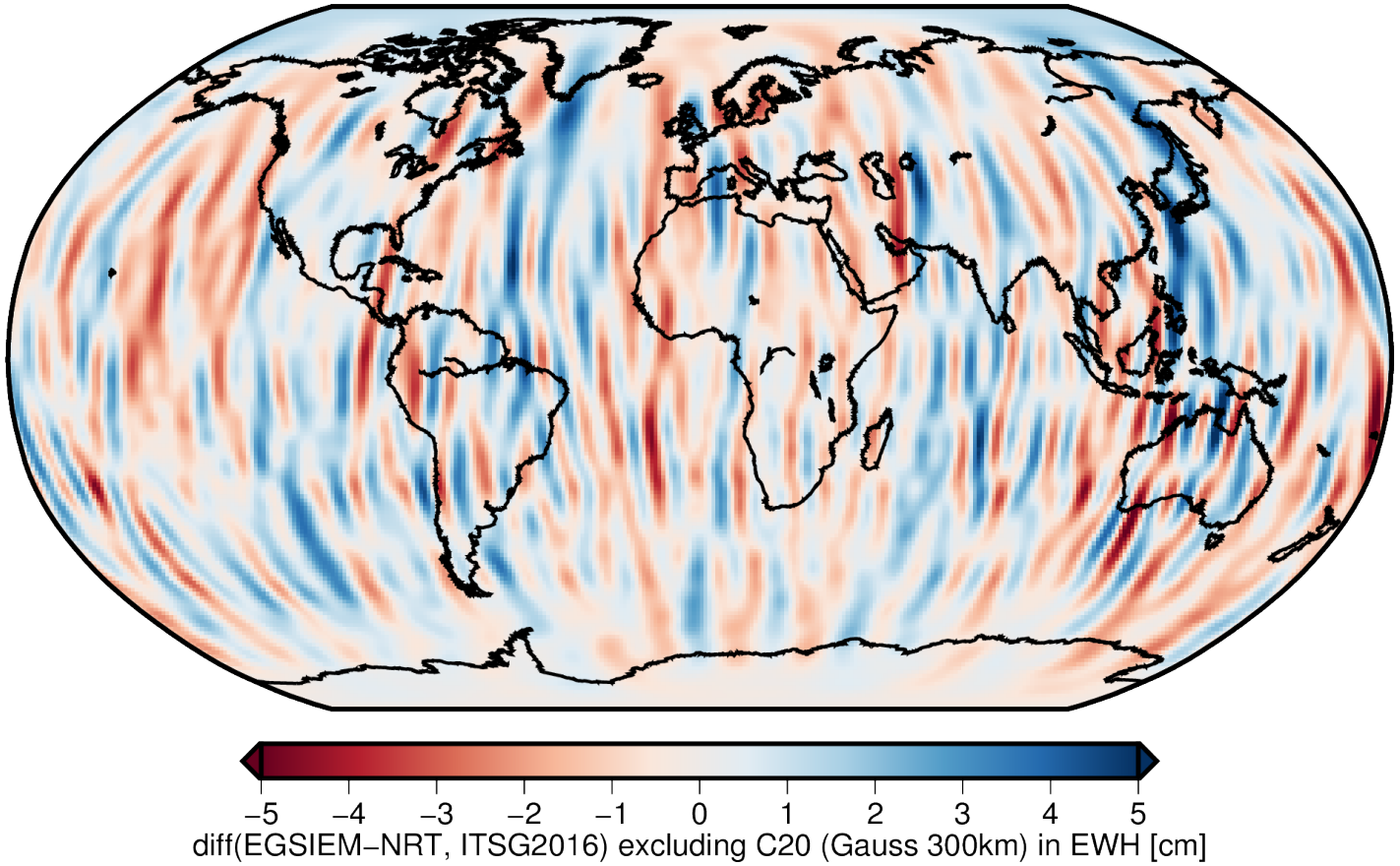
Status of NRT at TUG – Current Operations

- Comparison of NRT and post-processing monthly solution (unconstrained)



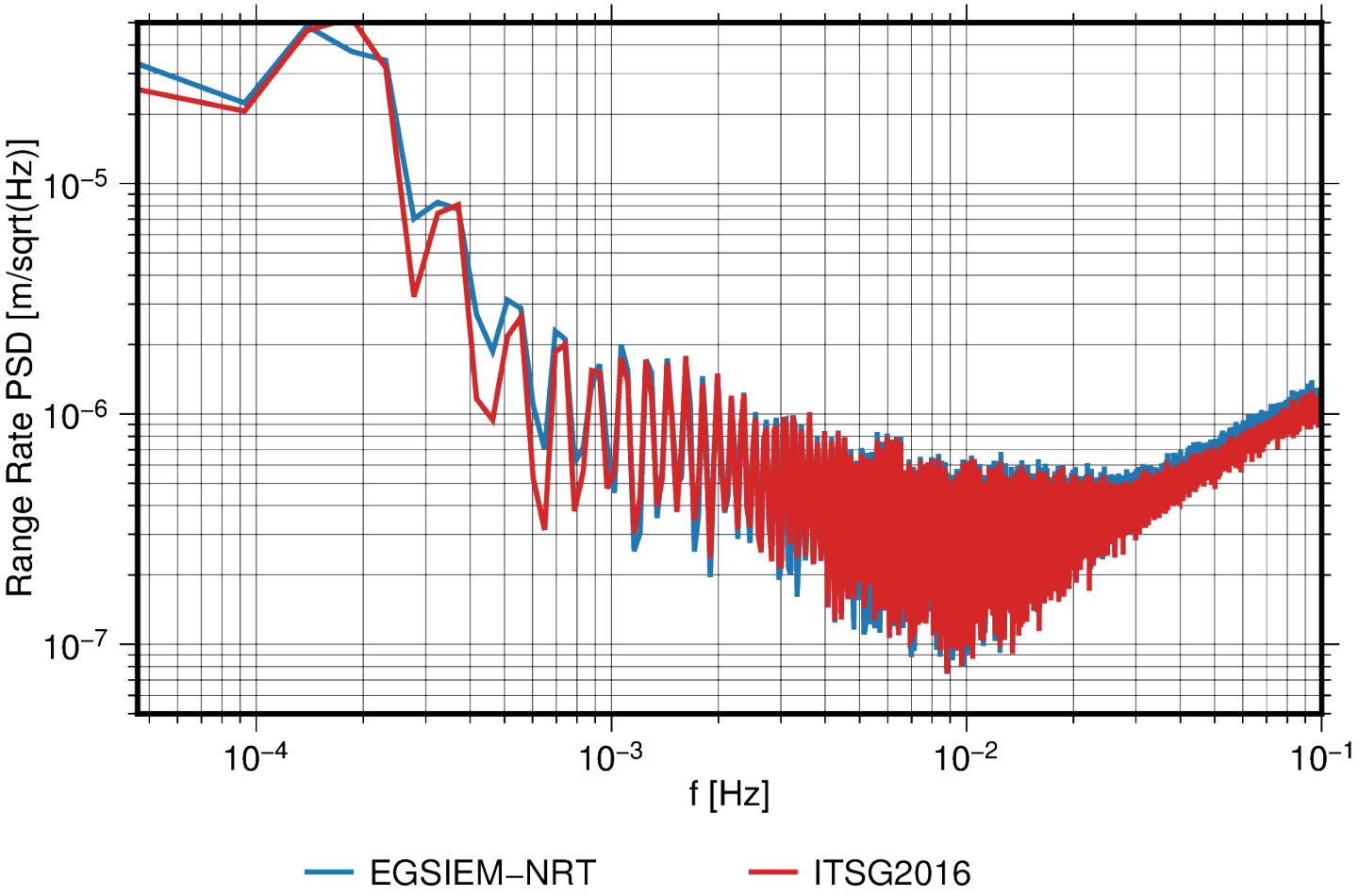
Status of NRT at TUG – Current Operations

- Comparison of NRT and post-processing monthly solution 2016-02 (unconstrained)



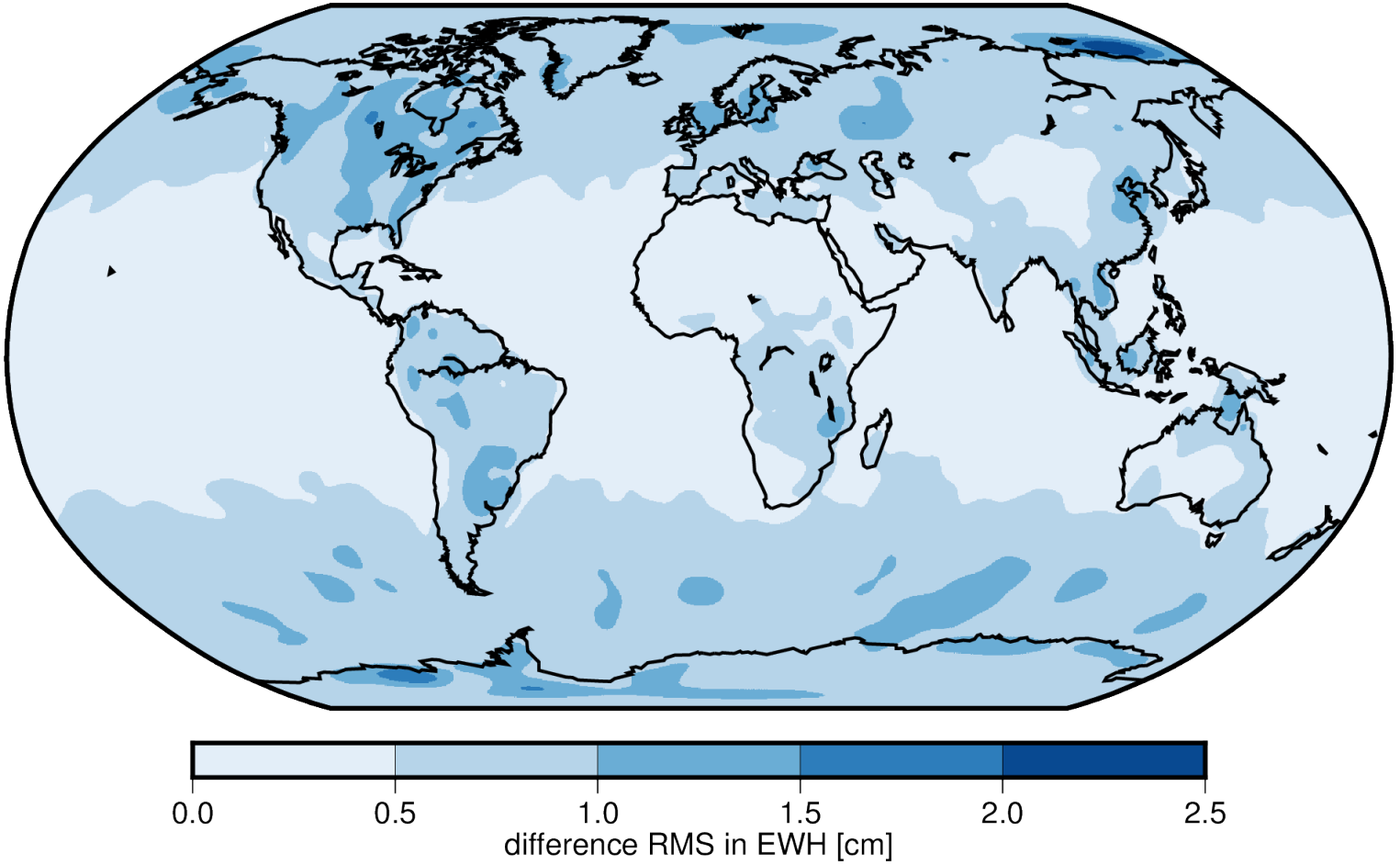
Status of NRT at TUG – Current Operations

- Range rate PSD for 2016-02



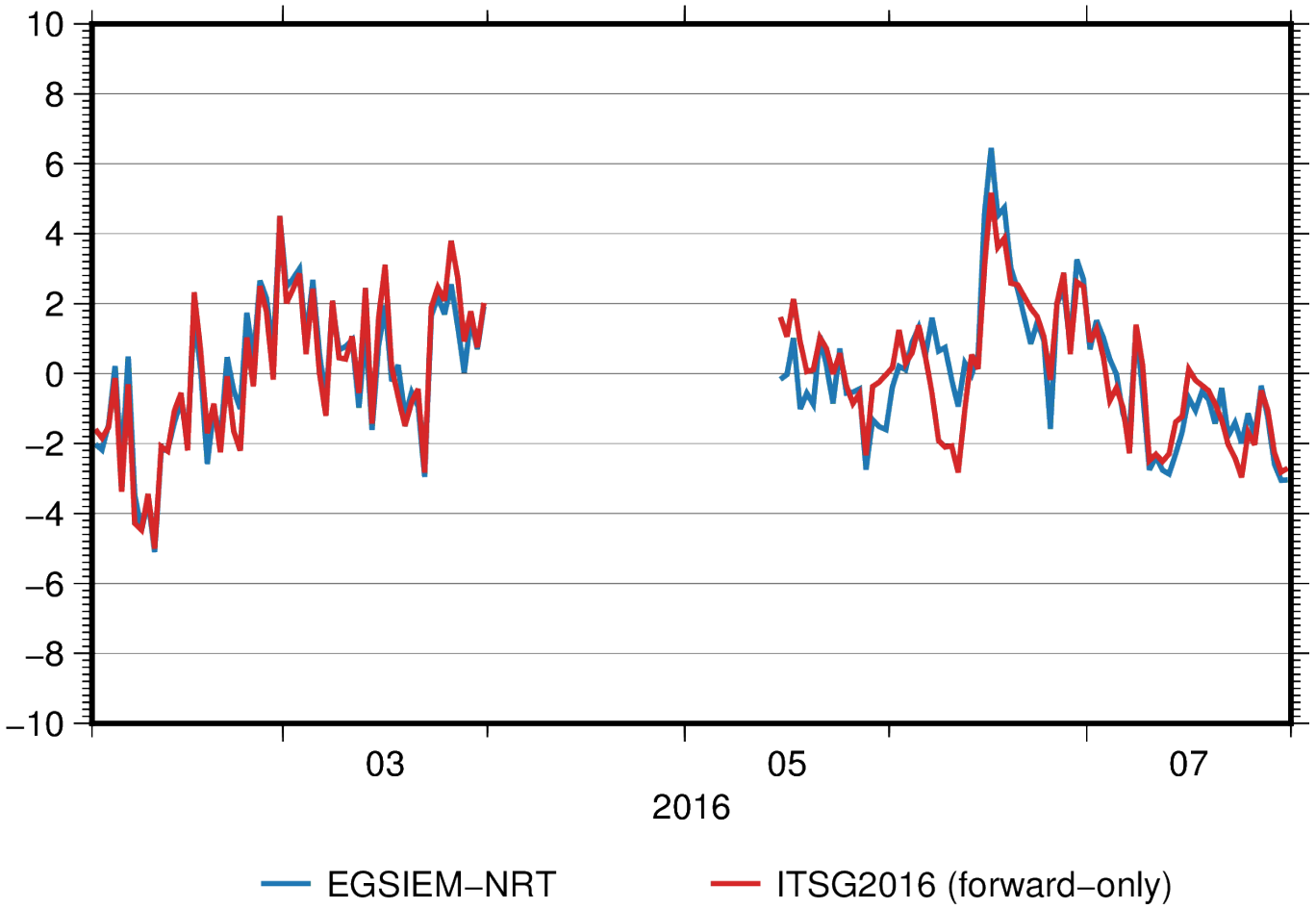
Status of NRT at TUG – Current Operations

- Difference RMS between daily NRT and post-processing solutions



Status of NRT at TUG – Current Operations

- Danube basin average (annual/trend removed)



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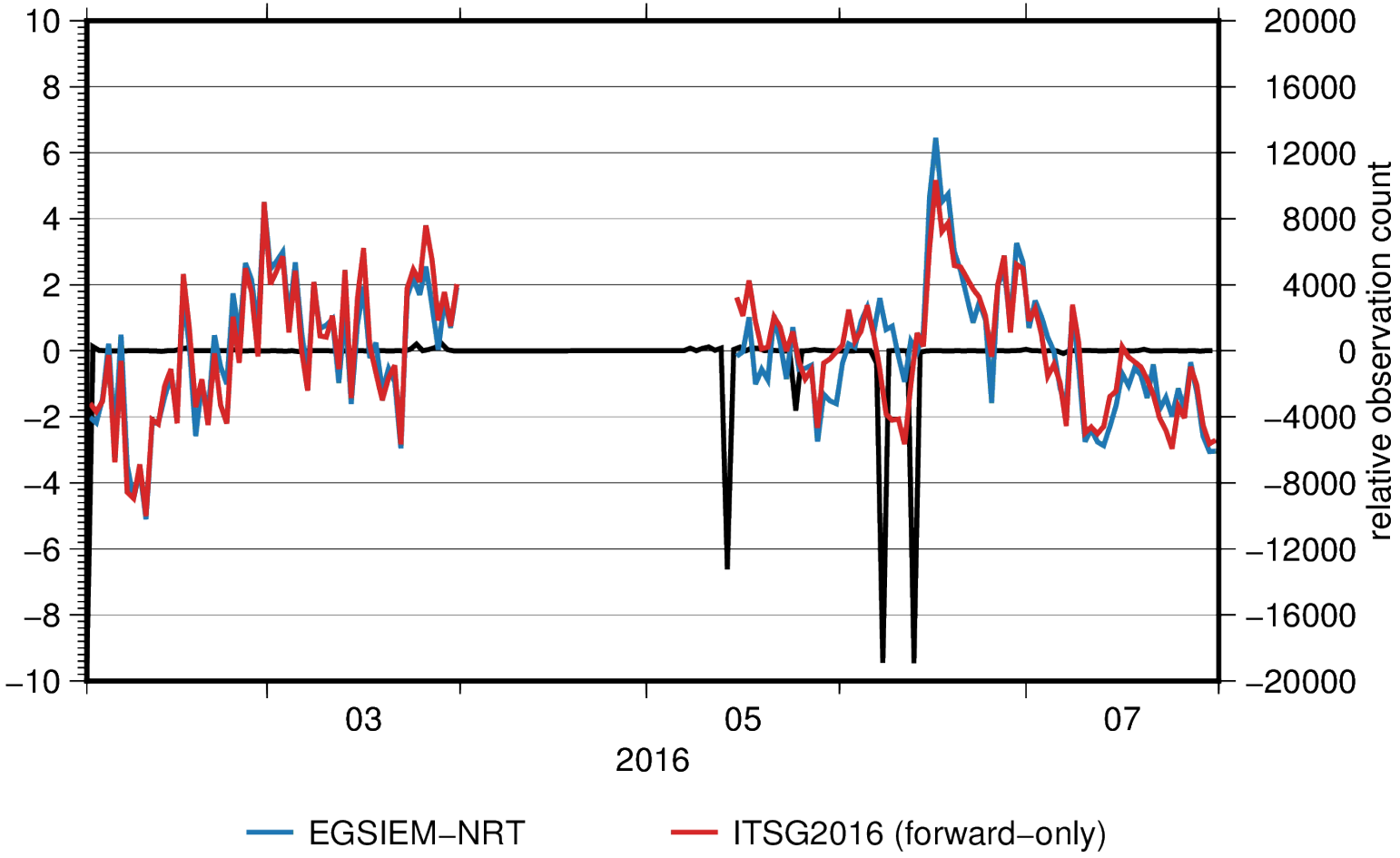


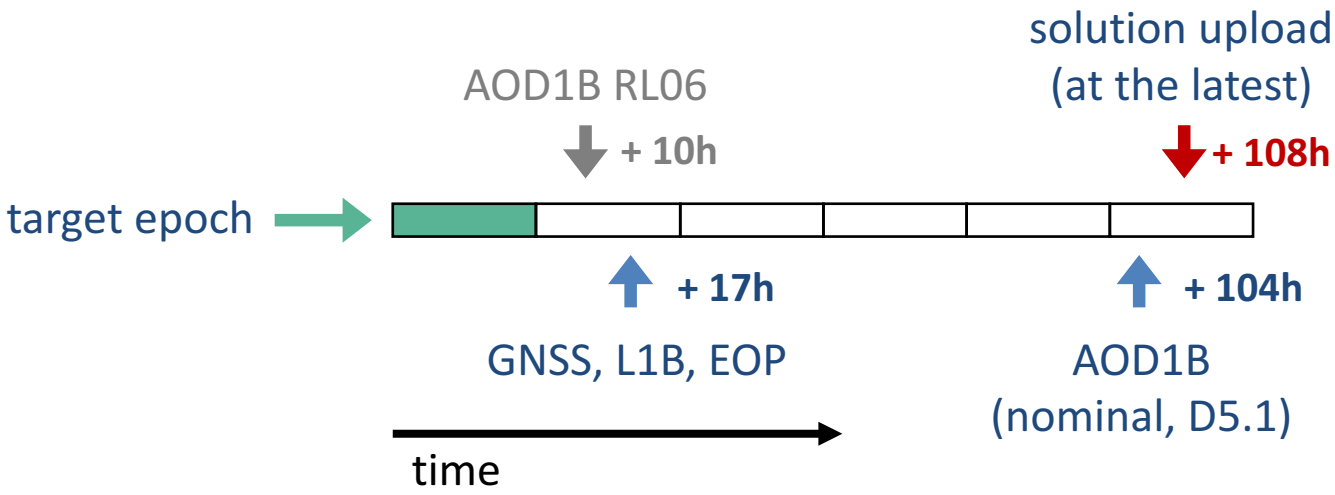
Updates since last Meeting

- NRT processing scheme with Quick-Look input data yields comparable results to post-processing solution

Current Operations

Current Operations – Projected Latency

- Data acquisition is detached from gravity field processing
  - Fetch everything as soon as it is available



- Maximum computation time: 1h per day (full cluster load)

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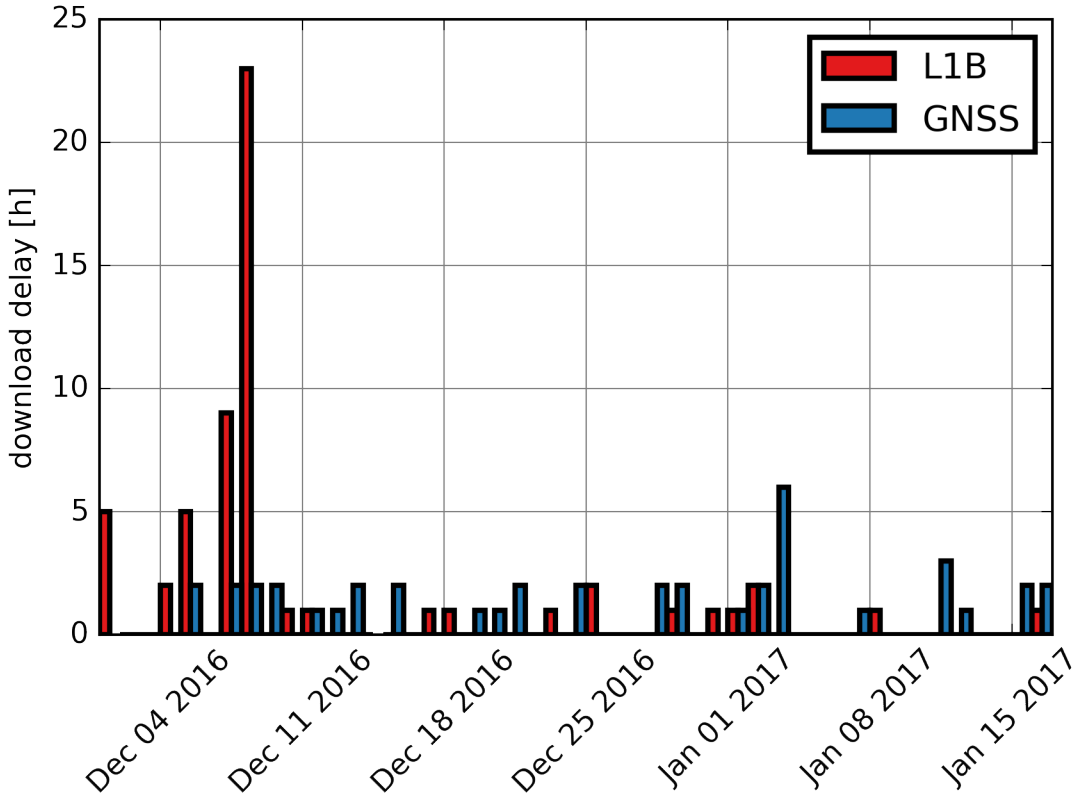


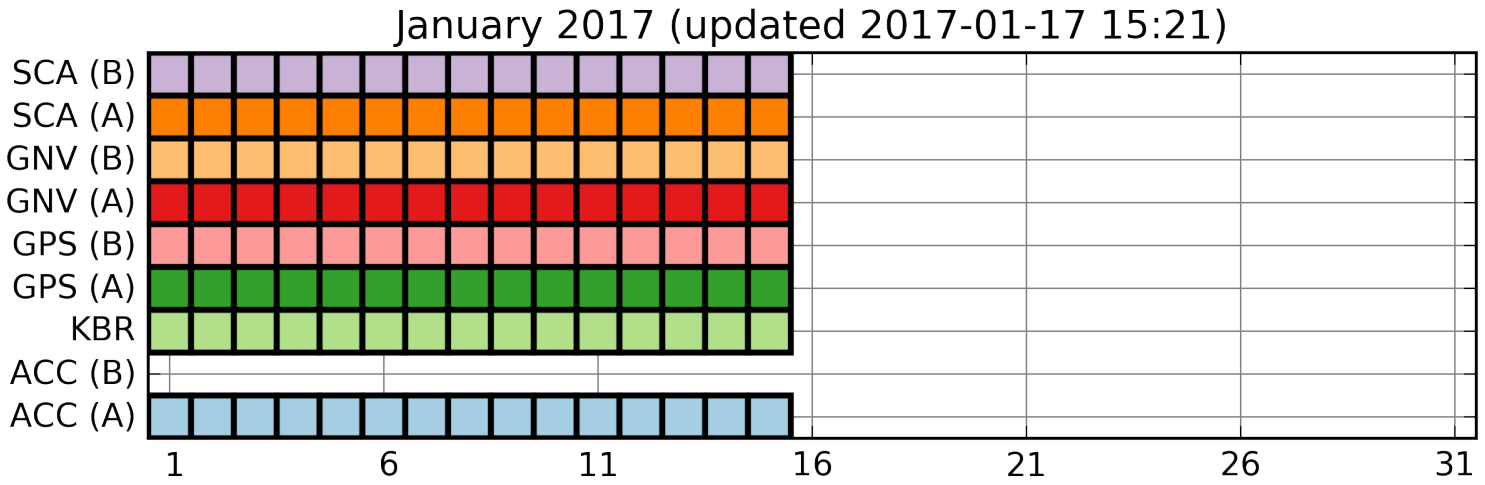
Average L1B, GNSS delay: 17+1h

AOD1B: tbd

Status of NRT at TUG – Current Operations

- Accelerometer on GRACE B is offline since early September 2016
  - No definitive answer on how to tackle this issue (yet)

- All other instruments provide nominal data flow since December 2016



- NRT software currently running with simulated accelerometer/AOD input
  - **Solutions only suitable for software/interface tests**

Summary

- Software packages for NRT operations are implemented
- NRT processing chain is up and running
- Daily output:
  - GRACE solution, background models in potential coefficients
  - Observation count
  - Gridded water storage
  - Kinematic orbits for both satellites
- Start of T5.3 in M27 → **interfaces need to be defined**

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