

EGSIEM

European Gravity Service for Improved Emergency Management

Title: **Test of the preliminary AOD1B RL6**

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Affiliation: TUG

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02.06.2016 - 03.06.2016

ITSG-Grace2016 processing scheme

3 years of monthly solutions (2006 – 2008)

- Estimation of monthly $n=2..60$
- Co-estimation of constrained daily $n=2..40$

ITSG-Grace2016

- AOD1B RL5 (degree 100)
- Ocean tide EOT11a w/o S1
- Atmospheric S1/S2 tide removed from AOD1B

Test version

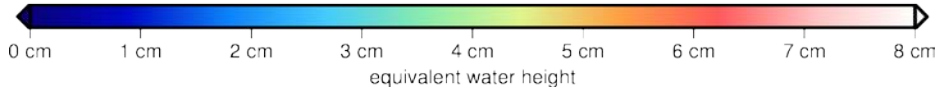
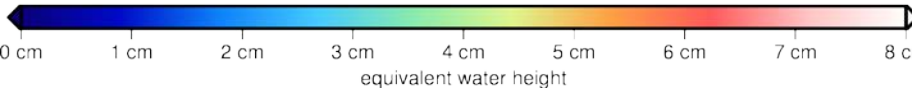
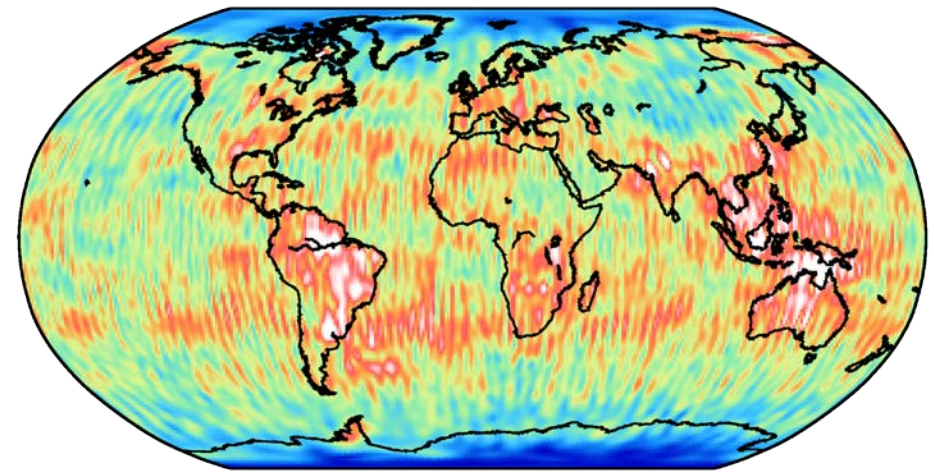
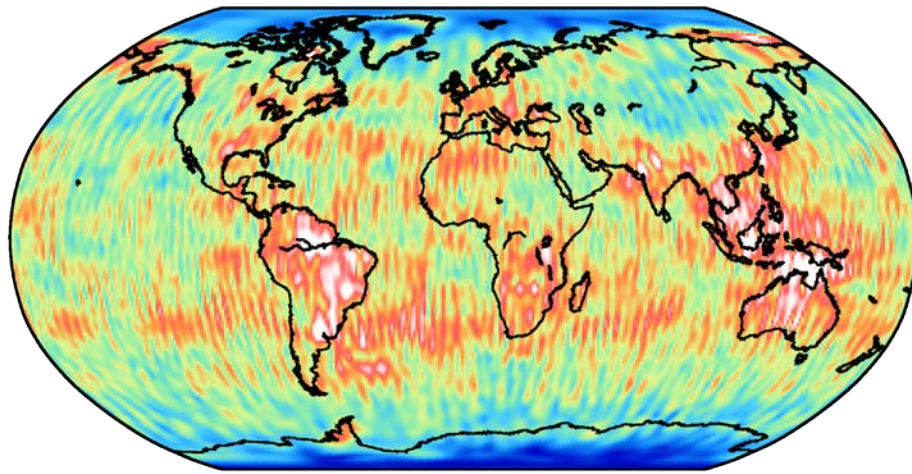
- AOD1B RL5.9 (degree 180)
- Ocean tide EOT11a with S1
- (not to apply)

Comparison of monthly solutions

Monthly: Temporal RMS, annual/semiannual/trend reduced, Gaussian 200km

Old: AOD1B RL5

New: AOD1B RL5.9



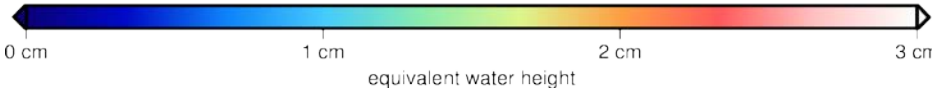
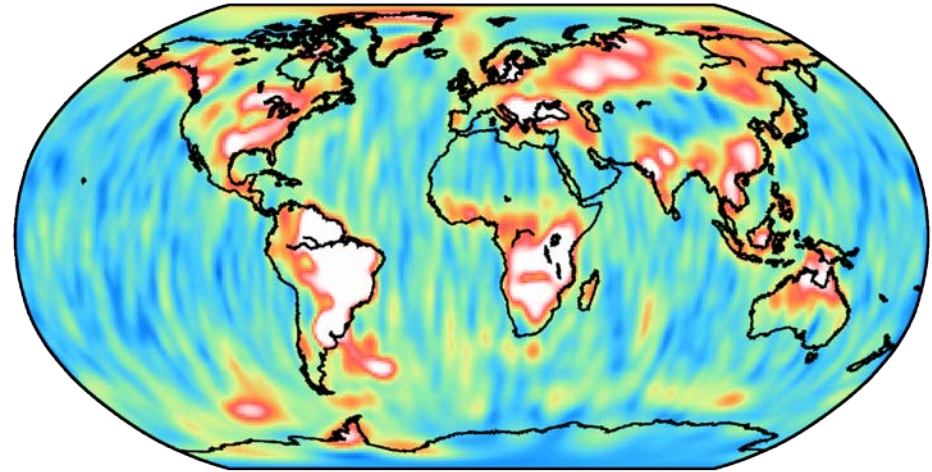
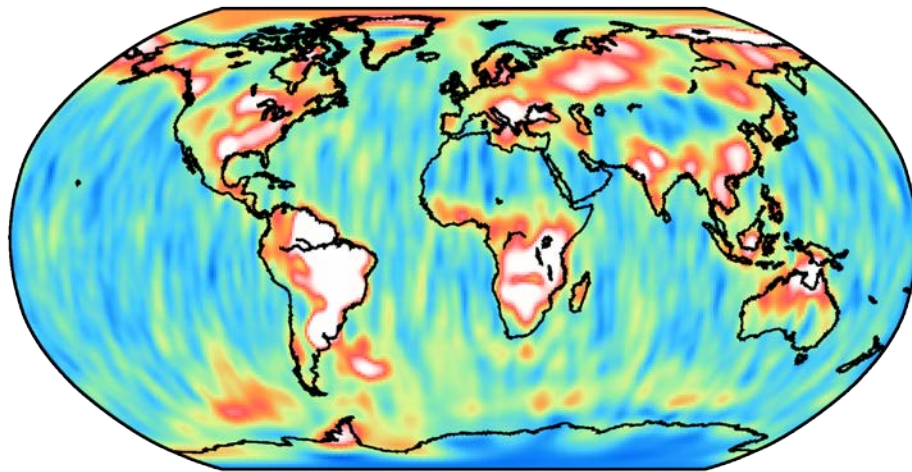
=> No significant difference

Comparison of monthly solutions

Monthly: Temporal RMS, annual/semiannual/trend reduced, Gaussian 400km

Old: AOD1B RL5

New: AOD1B RL5.9



=> No significant difference

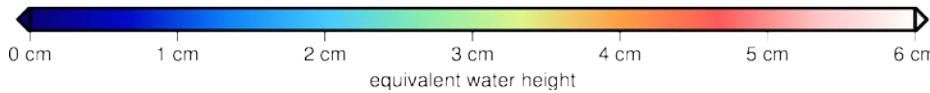
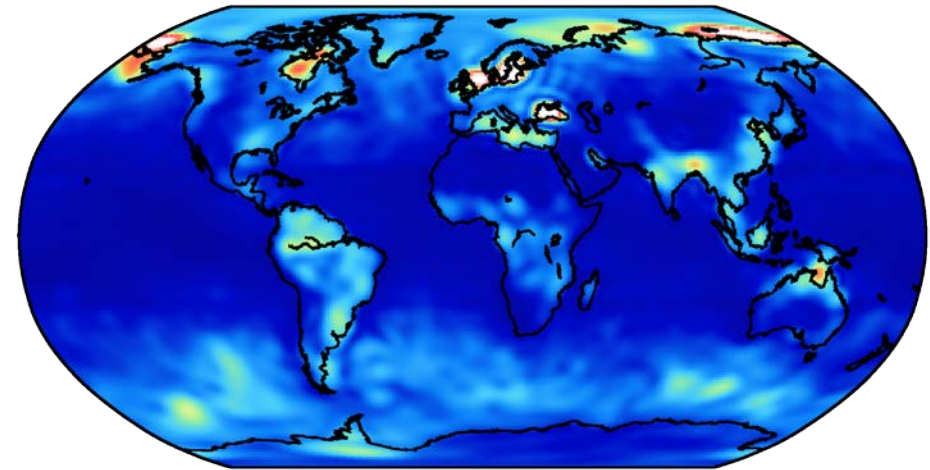
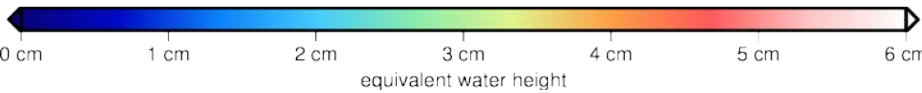
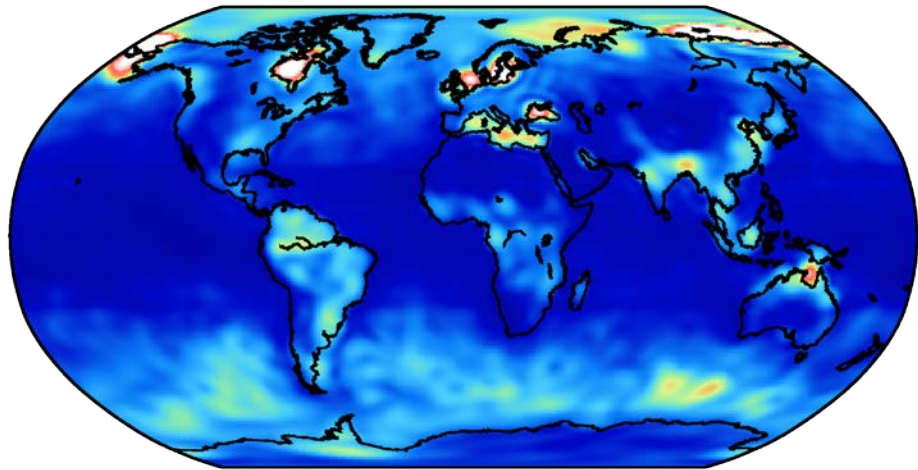
Co-estimation of daily gravity fields (signals between 1 .. 30 days)

Comparison of daily solutions

Constrained daily: Temporal RMS

Old: AOD1B RL5

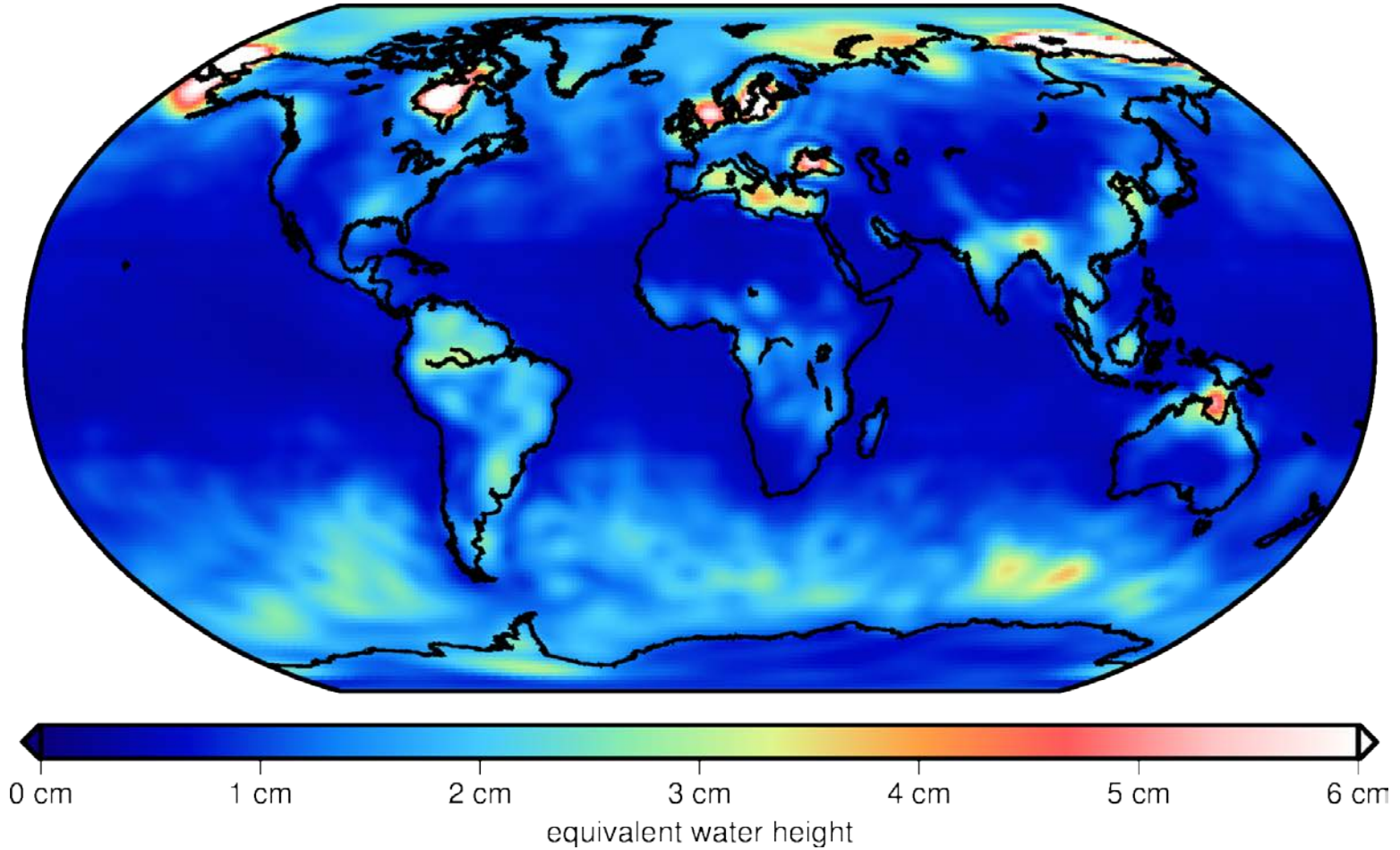
New: AOD1B RL5.9



=> Reduced RMS ~10%

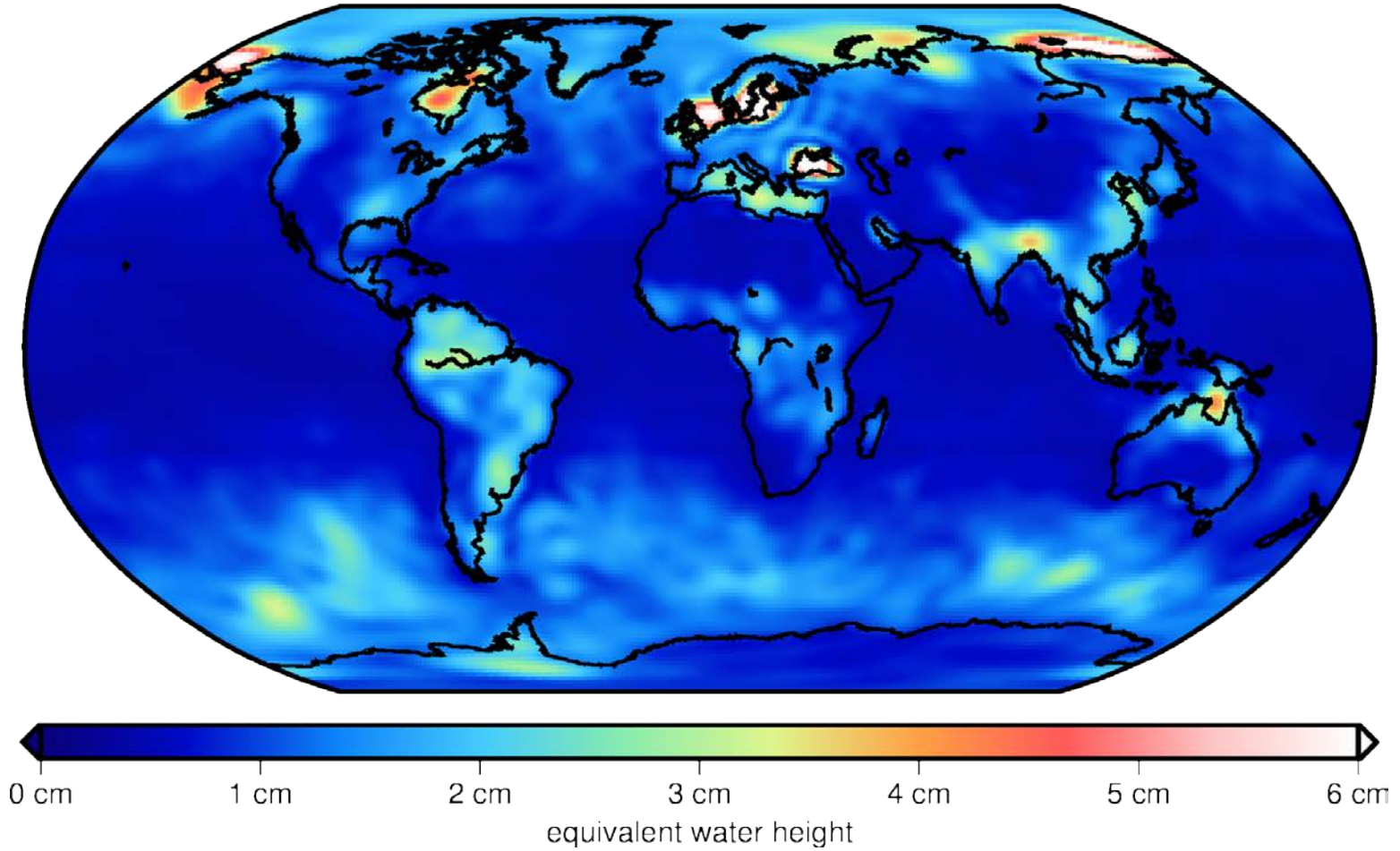
Comparison of daily solutions

Old: AOD1B RL5



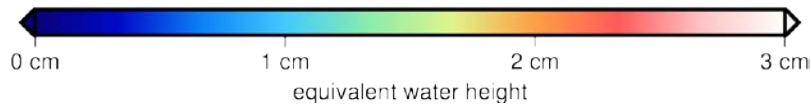
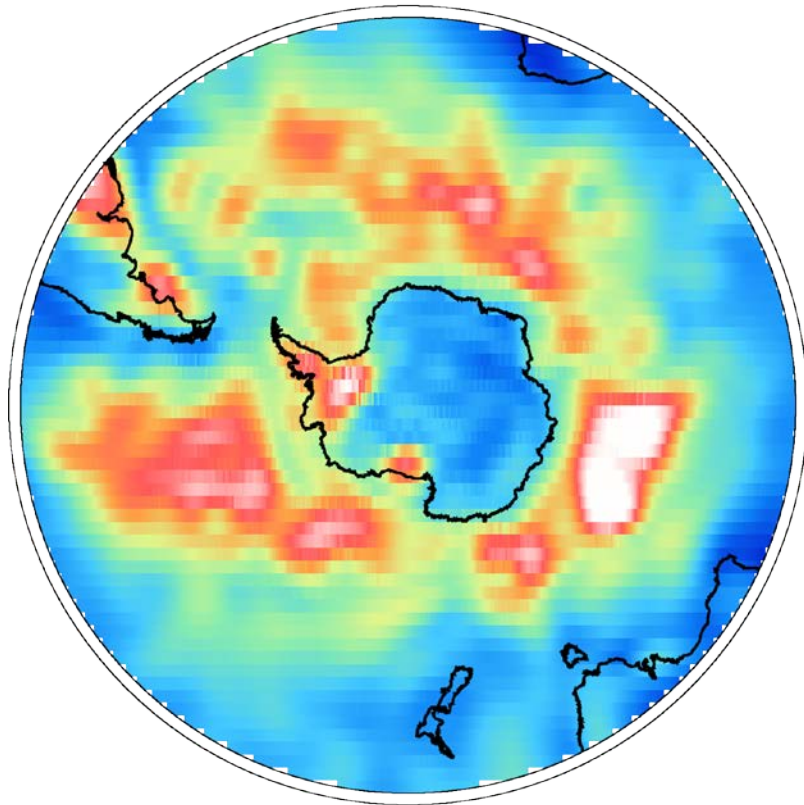
Comparison of daily solutions

New: AOD1B RL5.9

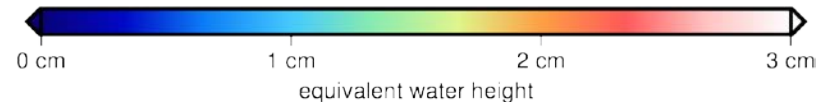
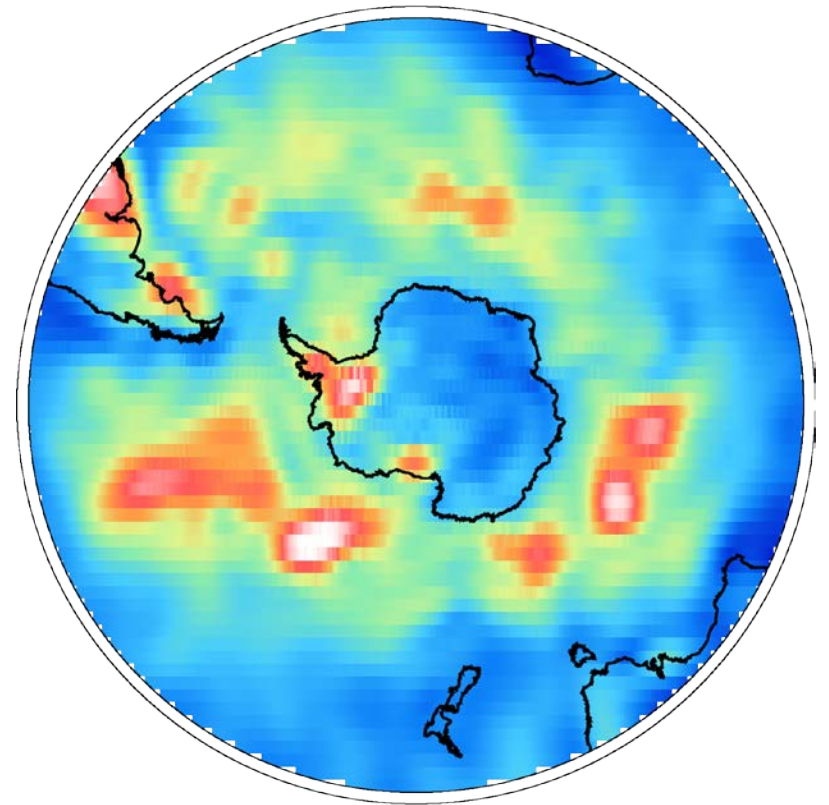


Comparison of daily solutions

Old: AOD1B RL5

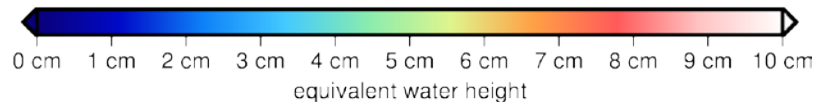
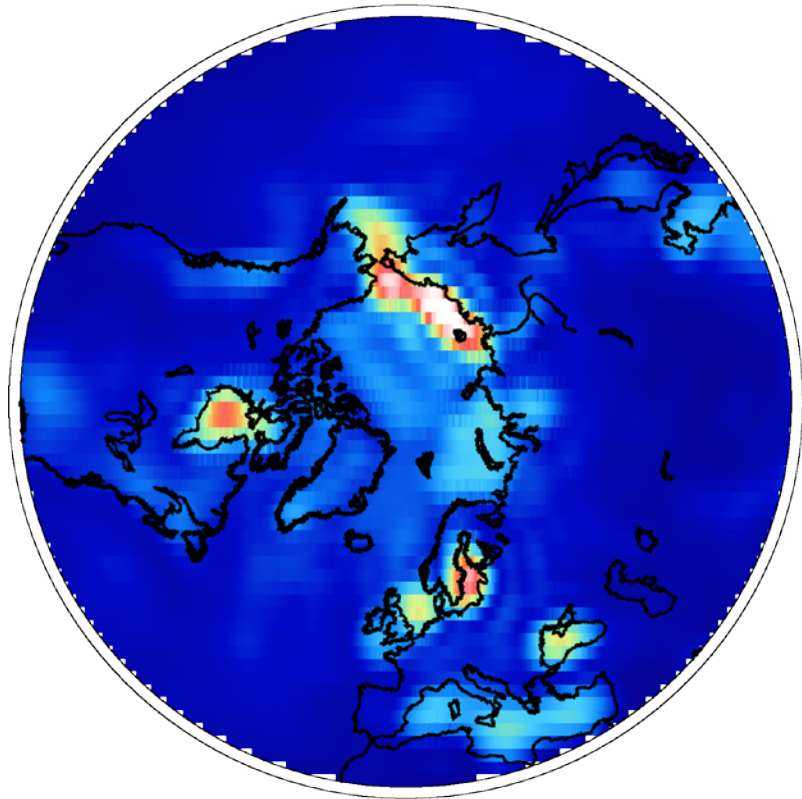


New: AOD1B RL5.9

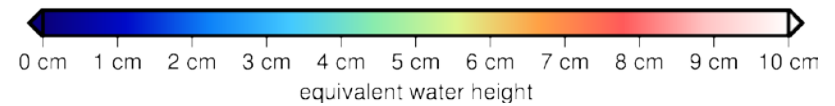
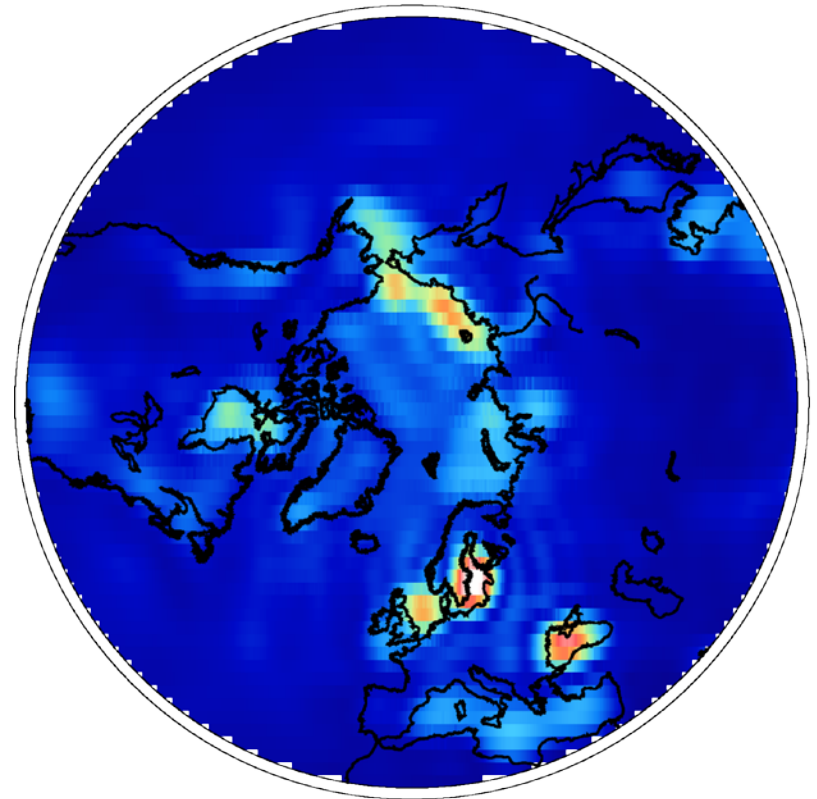


Comparison of daily solutions

Old: AOD1B RL5



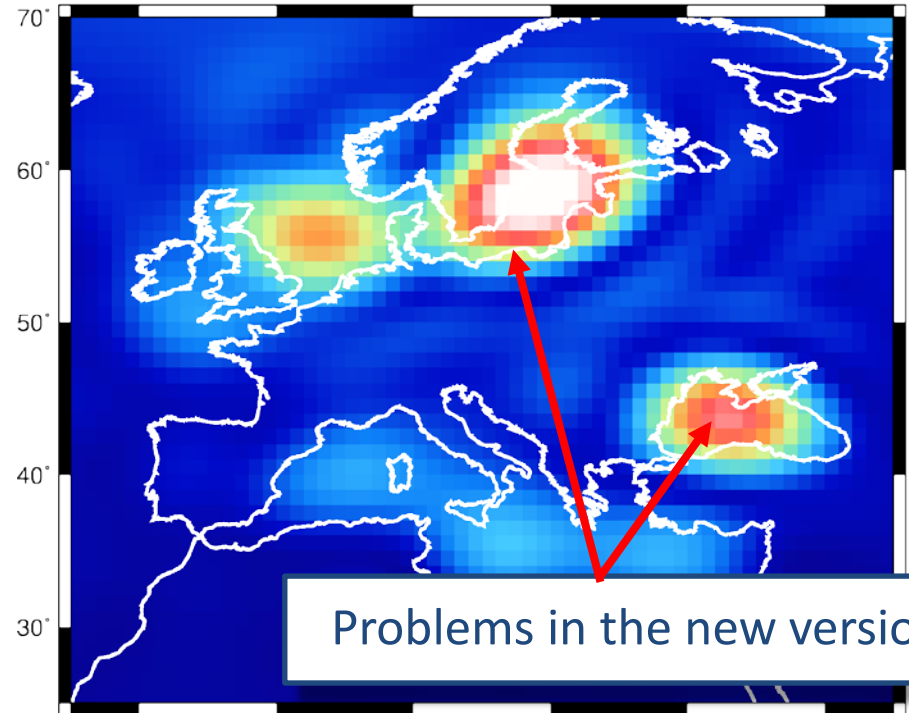
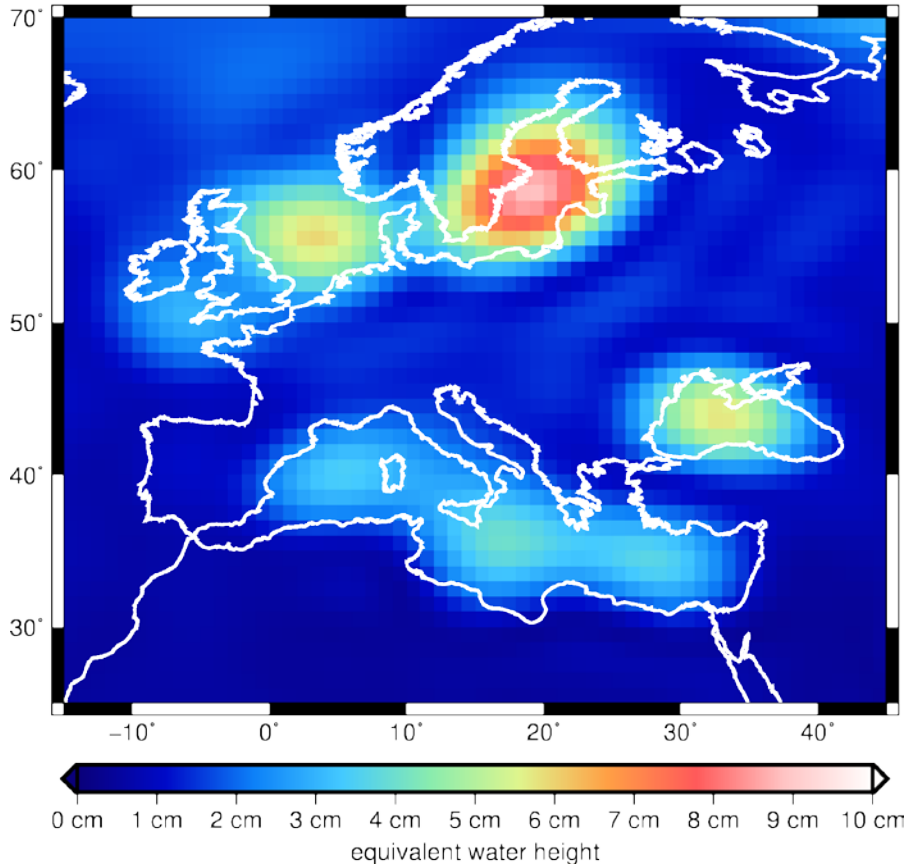
New: AOD1B RL5.9



Comparison of daily solutions

Old: AOD1B RL5

New: AOD1B RL5.9



Problems in the new version

Dobslaw:
bug in black sea, will be fixed
in the final release

Summary & Conclusions