

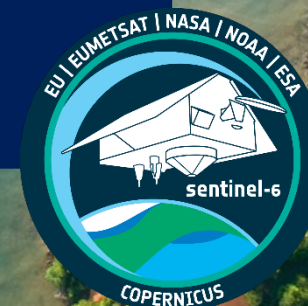
Presentation

Summary of the 7th S6VT Meeting

Wiesbaden — 23 June 2026

Remko Scharroo (EUMETSAT, Germany)

Pascal Bonnefond (Observatoire de Paris - LTE, France) ; Alejandro Egido (ESA/ESTEC, Netherland); Severine Fournier (NASA/JPL, USA); Eric Leuliette (NOAA, United States) ; Heather Roman-Stork (NOAA, USA) ; Josh Willis (JPL, United States)



IN PARTNERSHIP WITH



JPL



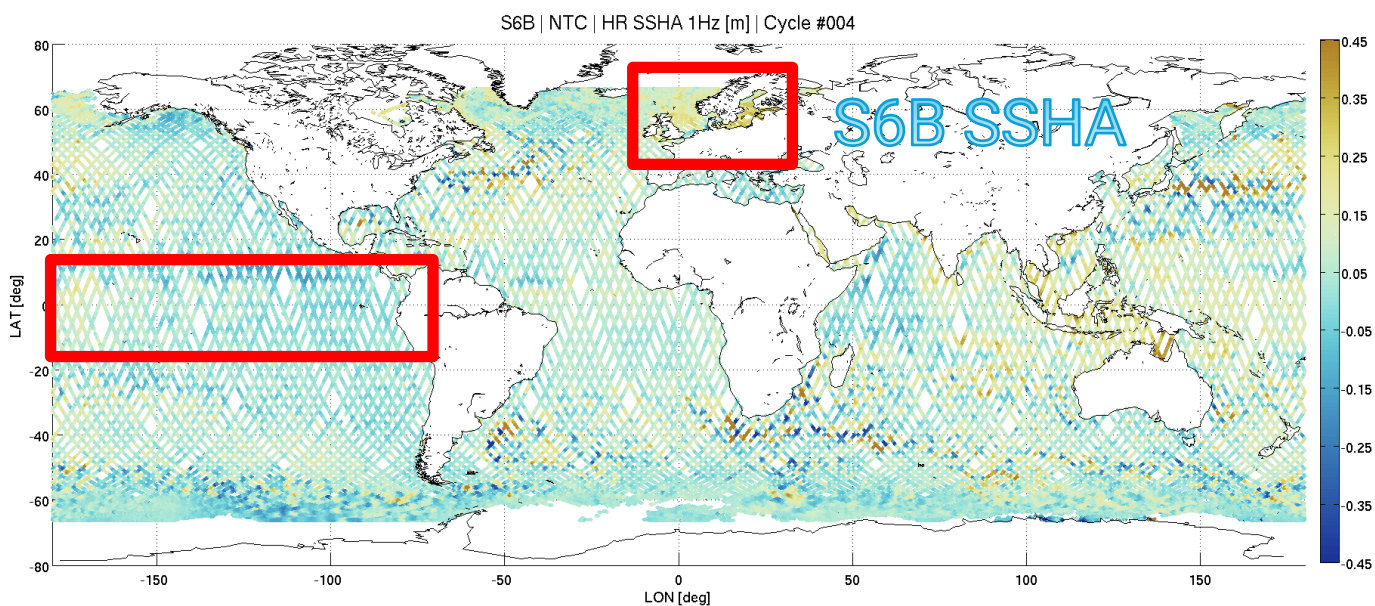
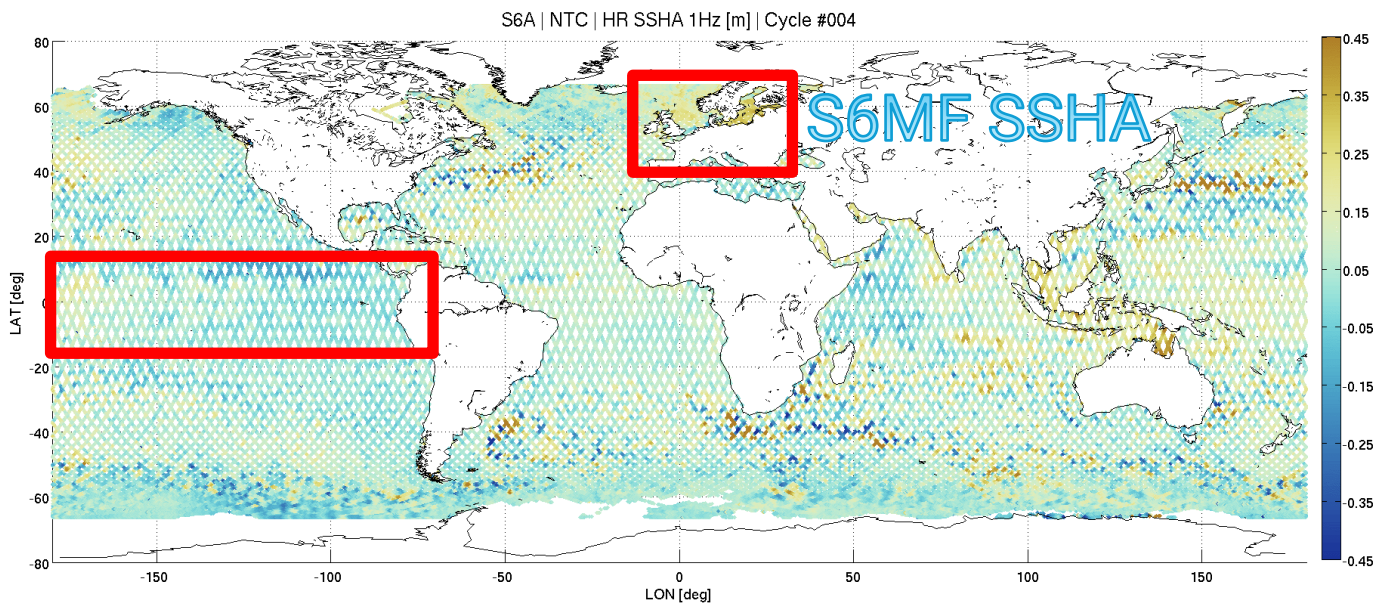
Sentinel-6B performance

OSTST 2026

- S6 PDAP production has been working well **out of the box**.

Sentinel-6B data production

OSTST 2026



Important events in sea level like the historic low in Baltic Sea Level and the onset of El Niño are immediately visible in Sentinel-6B data.

Source: MPWG

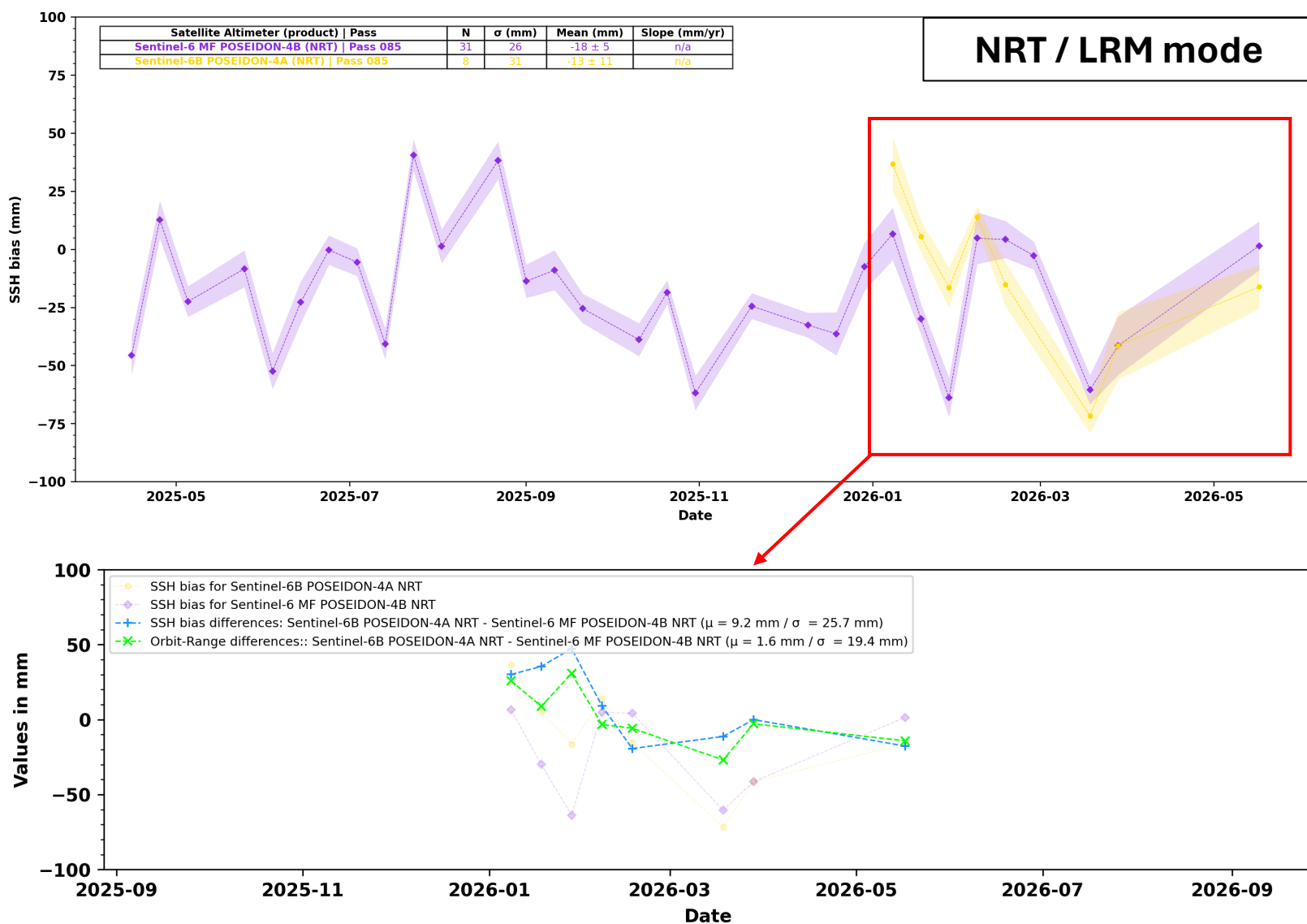
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- The differences between S6MF and S6B in range and sea level are at the millimeter level, with slightly different numbers depending on the various techniques applied (global mean, transponder, in-situ against tide gauges, corner reflectors). In general, the bias is insignificantly different from zero, meaning that it is within the uncertainty level of most methods applied.

From Corsica Facilities

S6VT 2026

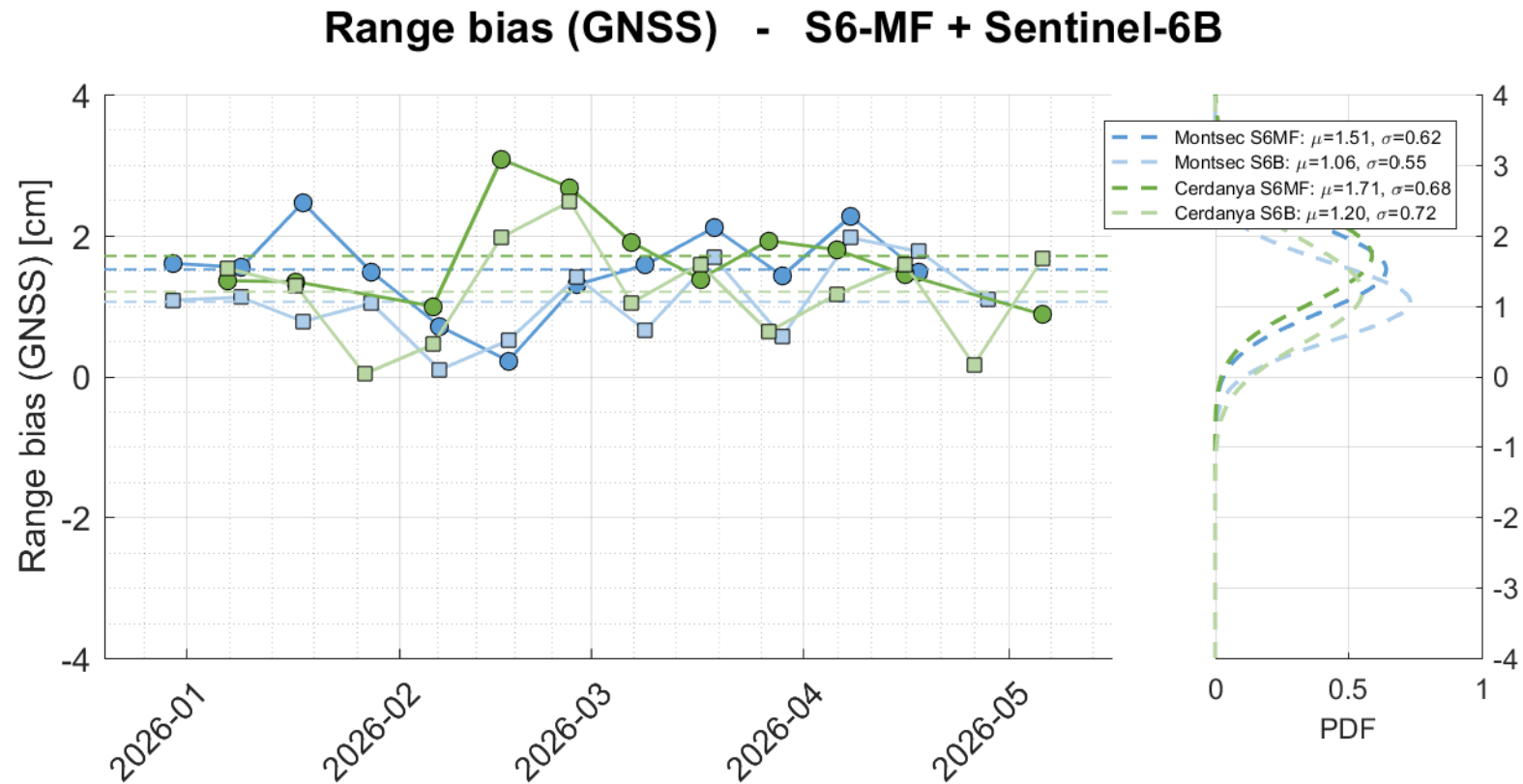


	Sentinel-6B – Sentinel-6 MF (mm)	
Product/Mode	SSH bias Mean / σ	Orbit-Range Mean / σ
NRT/LRM	+9.2 / 25.7	+1.6 / 19.4
STC/LRM	+8.1 / 28.8	+1.0 / 22.8
NRT/SAR	+6.5 / 18.6	+1.8 / 14.2
STC/SAR	+5.4 / 19.2	+1.5 / 13.0

Main results:

- **Negligible Orbit-Range differences**
- **Increased SSH bias differences due to small correction differences (mean/ σ), example for NRT/LRM:**
 - Wet. rad.: +8.5 / 8.9 mm
 - Iono. dual: -4.2 / 5.3 mm
 - SSB: +3.1 / 7.4 mm
- **SAR shows a clear σ reduction** while providing **close value in terms of mean**
- Surprisingly STC shows a slightly increase of σ compared to NRT (but small sample size)

Range bias — tandem cross-validation



$\Delta R = 5 \text{ mm}$
(S6MF - S6B)

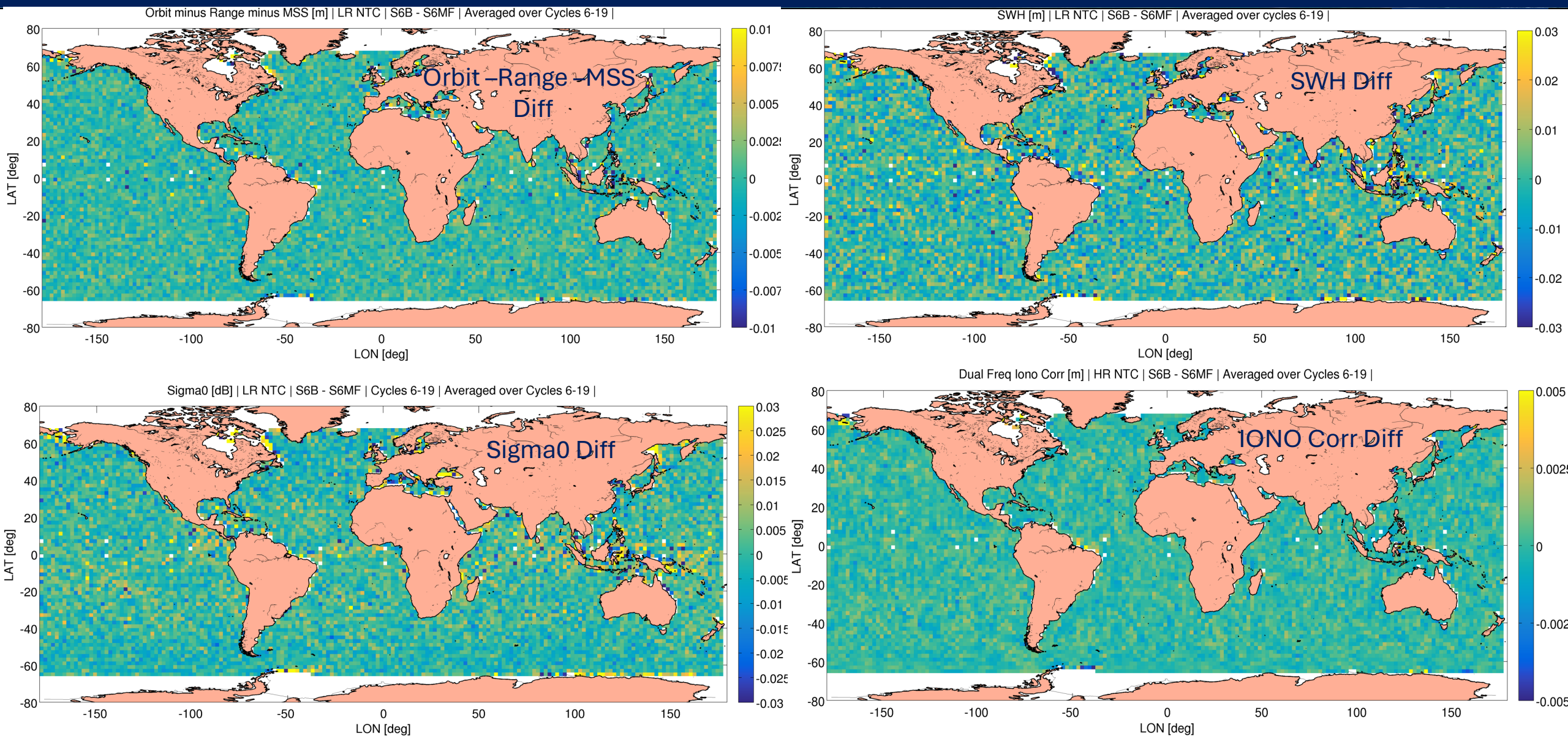
Range-bias agreement S6-MF–S6B: Montsec $|\Delta| = 0.46 \text{ cm}$, Cerdanya $|\Delta| = 0.51 \text{ cm}$ — both $\lesssim 0.5 \text{ cm}$.

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Geographical Map | S6B – SMF | LR NR | Average over cycle 6-19



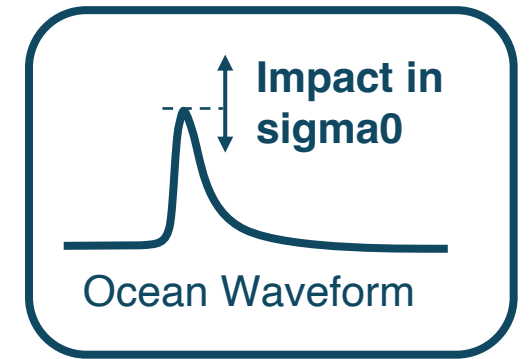
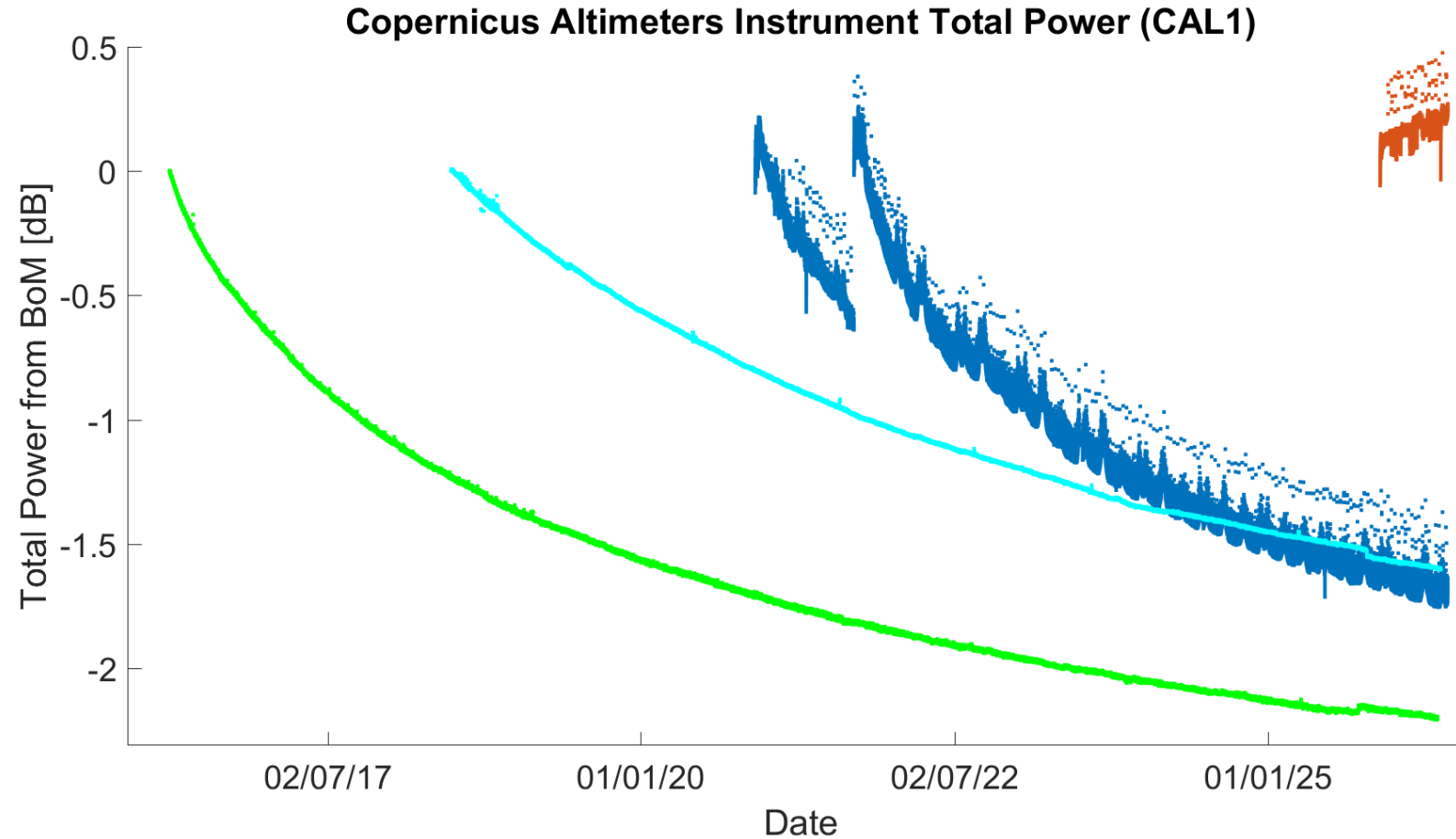
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- Various users reported a few aspects in which S6B performs slightly better than S6MF.

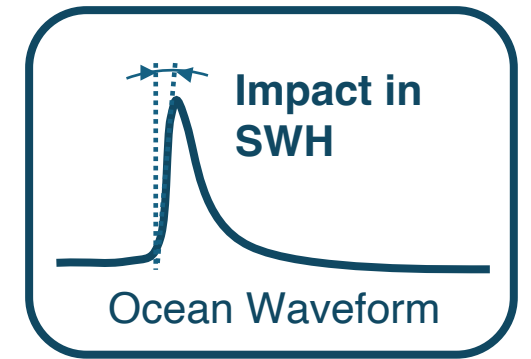
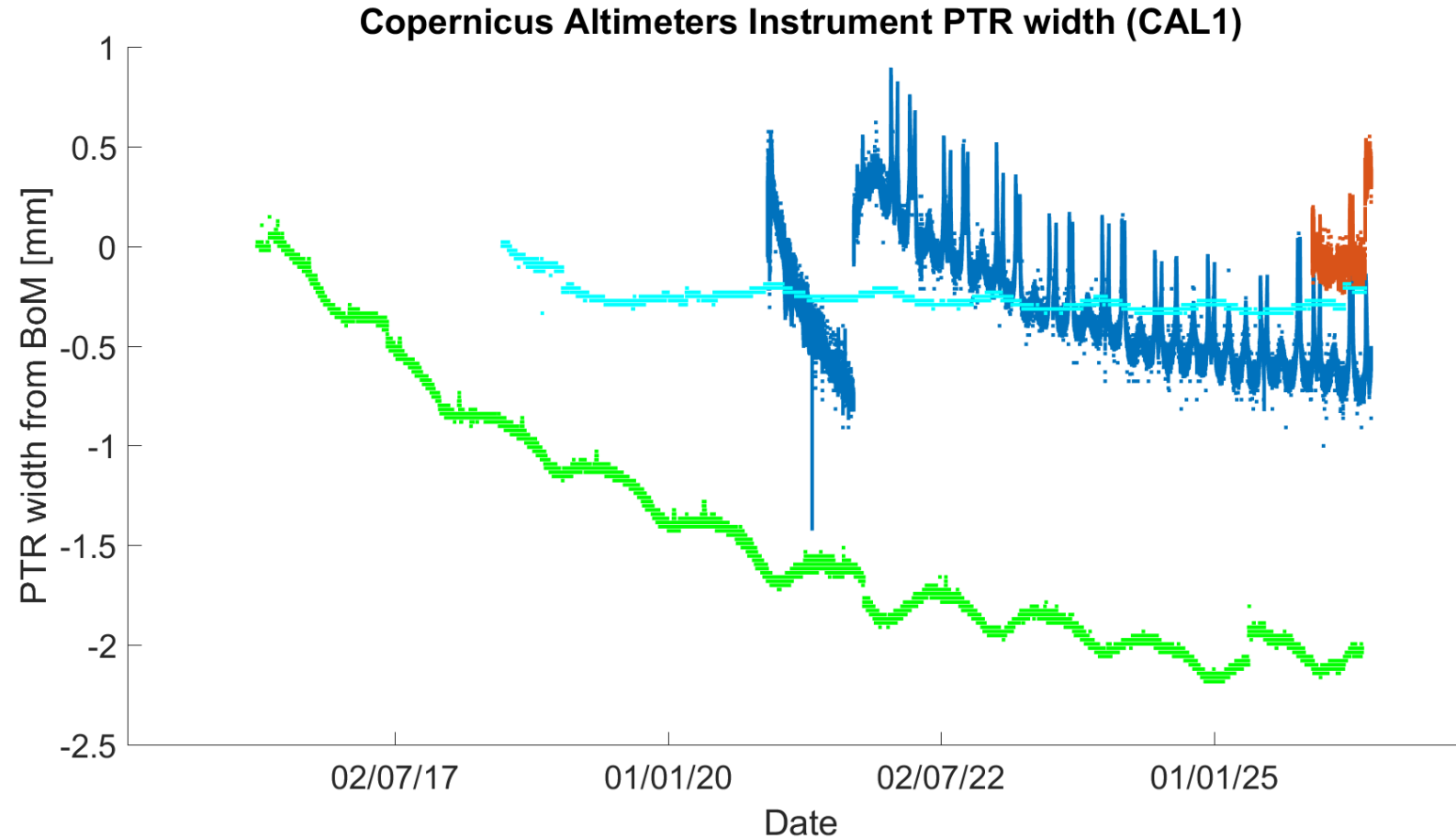
Copernicus altimeters drifts

Copernicus altimeters: S3A - S3B - S6A - S6B



Copernicus altimeters drifts

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Sentinel-6B performance

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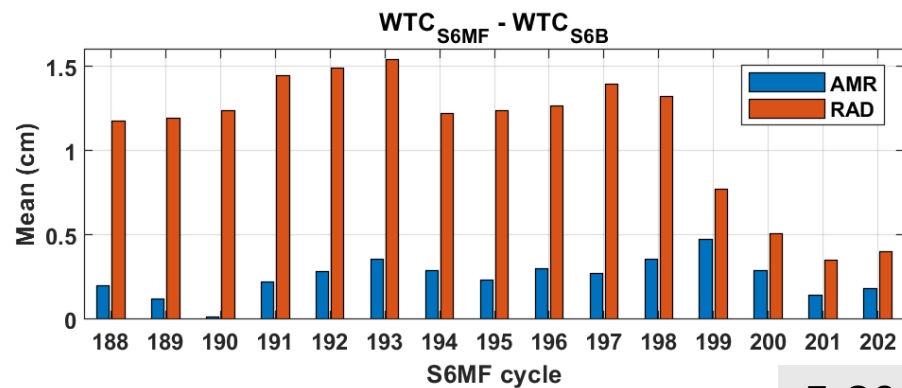
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- The wet tropospheric correction of AMR-C on S6MF shows only a small bias with S6MF, and almost the same bias with ERA5 as S6MF.

S6MF-S6B tandem phase

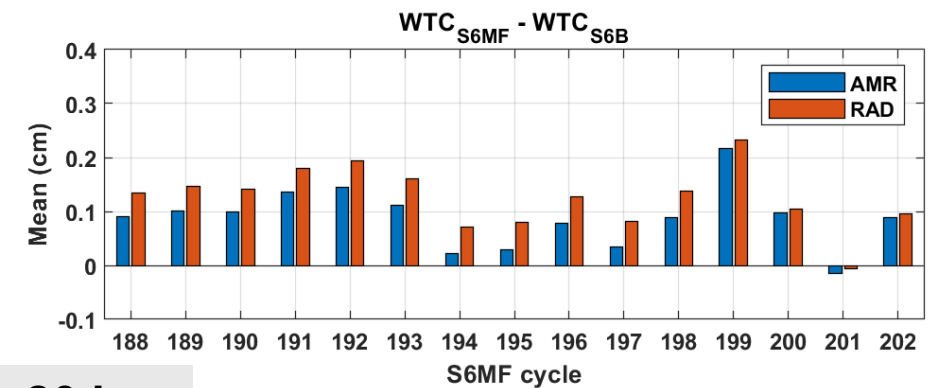
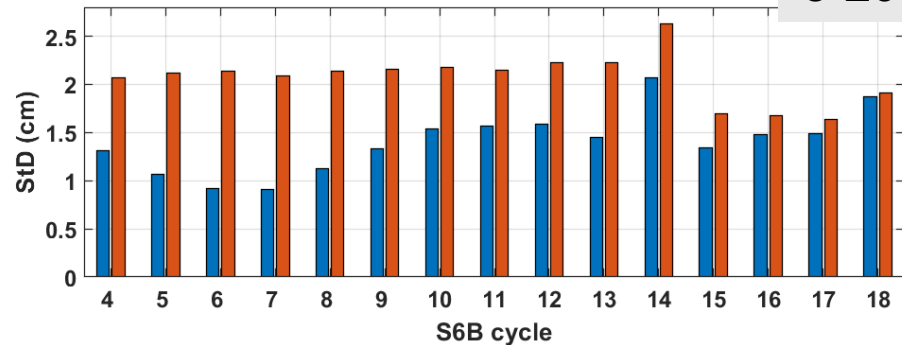
OSTST 2026

- ✓ **5-20 km from the coast:** S6B measures wetter than S6MF by **0.3 cm** and **1.1 cm**, with an RMS of **1.4 cm** and **2.4 cm**.
- ✓ **Open ocean:** S6B measures wetter than S6MF by **0.9 mm** and **1.3 mm**, with an RMS of **0.4 cm** for both.

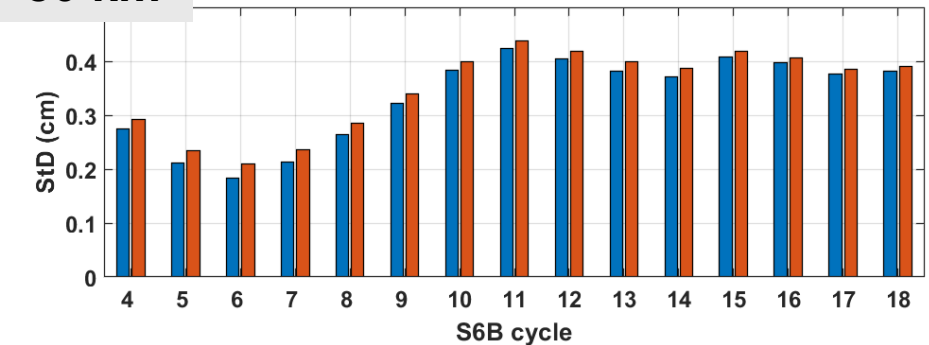
S6B measures wetter than S6MF, mainly for cycles 4-14 over coastal zones



5-20 km



>80 km



Sentinel-6B performance

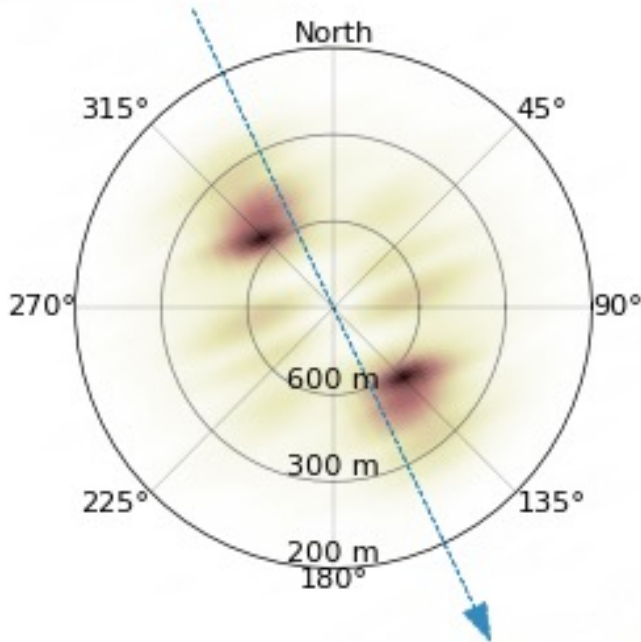
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- The wet tropospheric correction of AMR-C on S6MF shows only a small bias with S6MF, and almost the same bias with ERA5 as S6MF.
- The vast amount of HR RAW data during the commissioning allowed to successfully apply new algorithms to retrieve wave spectra from S6B.

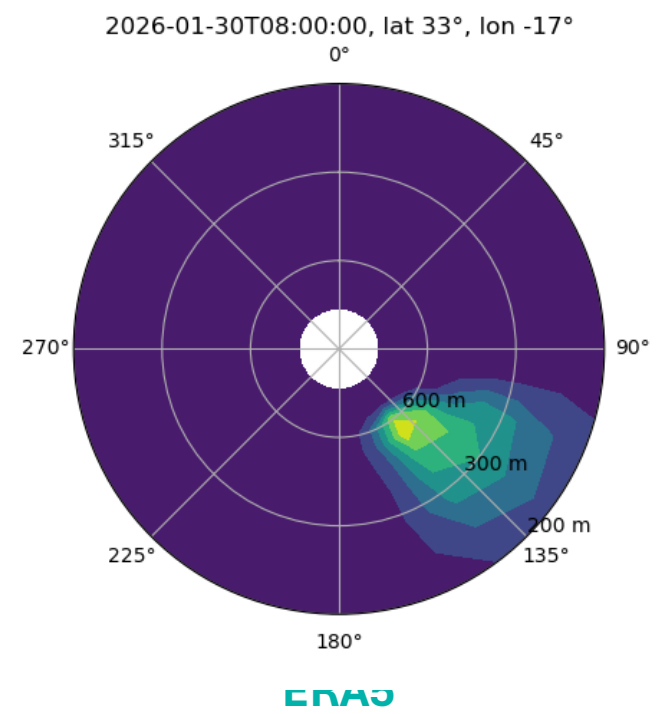
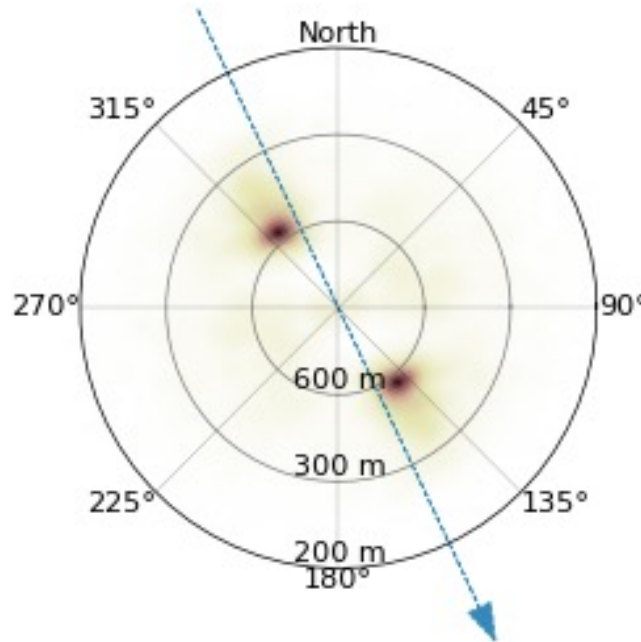
S6B: RAW data mask

Illustration of the improvement due to RAW: even for along-track spectra, the improvement is significant!

S6B (RMC)



S6B (RAW)



Suggestions and recommendations

OSTST 2026

- Users recommend to make wave spectra a standard product of S6NG.
- Users appreciate the swap of the altimeter and radiometer from nominal to redundant sides in order to properly characterise and calibrate both sides. This will ensure a fully consistent data record in case of the need for the redundancy.
- S6VT members agree that the NRT and STC altimeter and radiometer data are ready to be released to the general users.
- Users are looking forward to the full-mission reprocessing of S6B with Baseline G02 after the end of the Commissioning.
- Users recommend to also reprocess the S6MF data during the tandem phase with Baseline G02 after S6B Commissioning (?)