

GDR-F & GDR-G Status



**CNES, NASA,
NOAA, EUMETSAT**

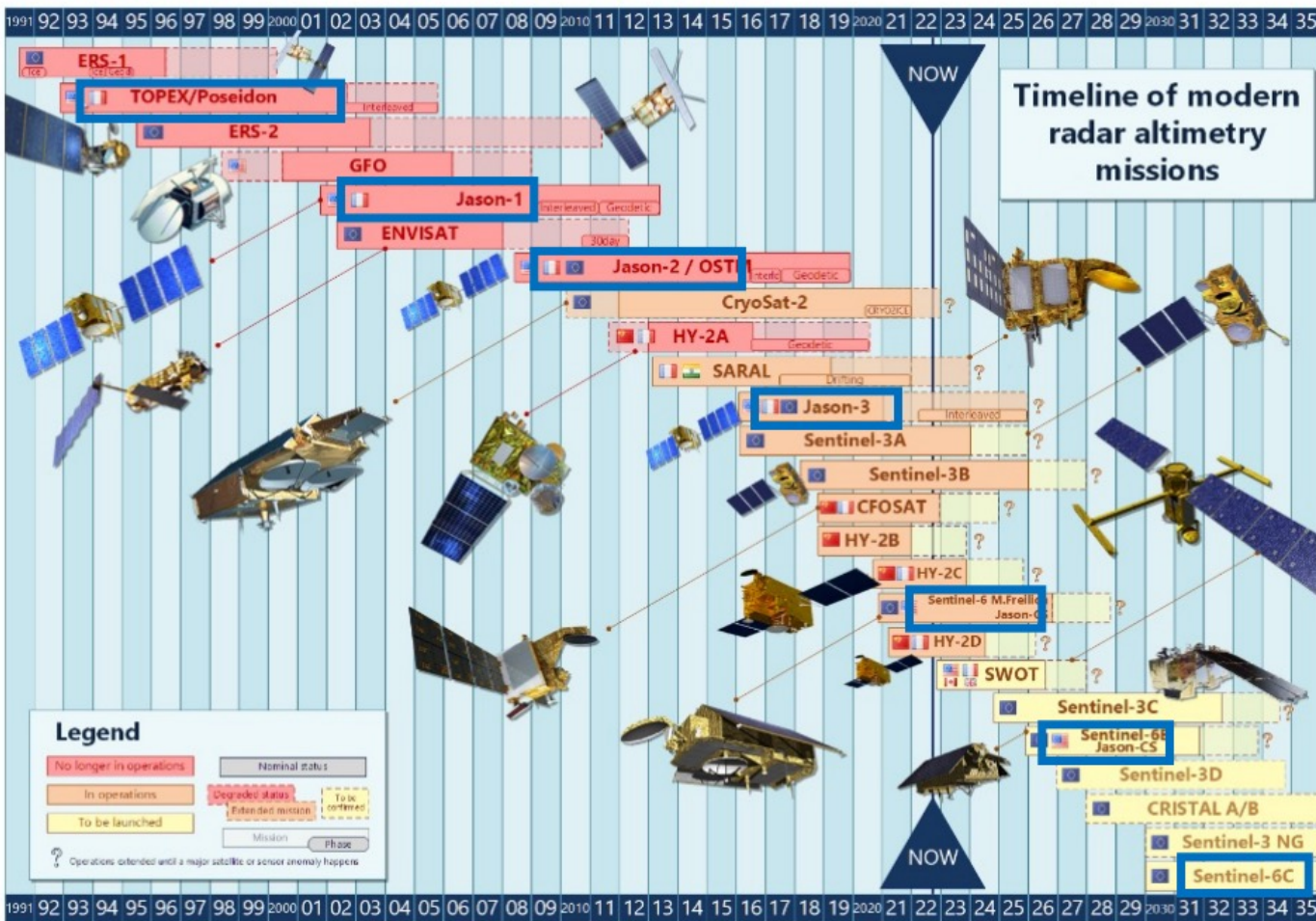
*From all 4 MSEs
Cristina (EUM),
Eric (NOAA),
Shailen (JPL),
Nicolas (CNES)*

OSTST meeting

Altimetry Missions Constellation timeline – 2022 update



... cnes ...



2022, a symbolic year, linking the...

- past: 30th birthday for TOPEX/POSEIDON launched in August 1992
- present: S6 Michael Freilich : new altimetry reference satellite since April 7th, 2022
- future: SWOT innovative wide swath altimeter - Launch date: NET Dec 5th, 2022

Reference altimetry satellite



- Currently **10** flying altimeters, 30 years of past data (since Topex-ERS1) to continue improving data quality.
- And SWOT to come in a few weeks.... Using GDR-F standard
- Most missions are using GDR-F standards, with a quite homogenous processing baseline (thanks to strong coordination between agencies) and with an overall very good data quality.
- SARAL and JA3 are already available in GDR-F, as well as S3 and S6 (see next slides). JA2 and Topex to come next year, then JA1.



S6 standard – refer to S6VT Session presentation



Baseline changes

copernicus.eumetsat.int

- Reprocessing of July 2022
 - Brought all data to the same standard (F06)
 - Recovered some missing data
 - Distributed data not earlier available to general users
- Next reprocessing
 - Baseline F08 with Echo CAL, HRMR, and LR numerical retracking
 - Planned for early 2023

F00	F01	F02	F03	F04	F05	F06	F07	F08	F09
004-012	013-016	017-024	025-033	034-045	046-053	054-064	065-	Q1 2023	Q3 2023

F06 Reprocessing

F08 Reprocessing

CHDR
update

POE
updates

HR:
reduced
number
of looks

MOGF;
Echo-Cal;
AMR-C v4

LR:
numerical
retracking
added

HRMR in
ALT L2
HR: range
walk+NR

Cycle numbers are those of NTC data

EUM/RSP/VWG/2/1336129, v1, 3 November 2022



PROGRAMME OF
THE EUROPEAN UNION



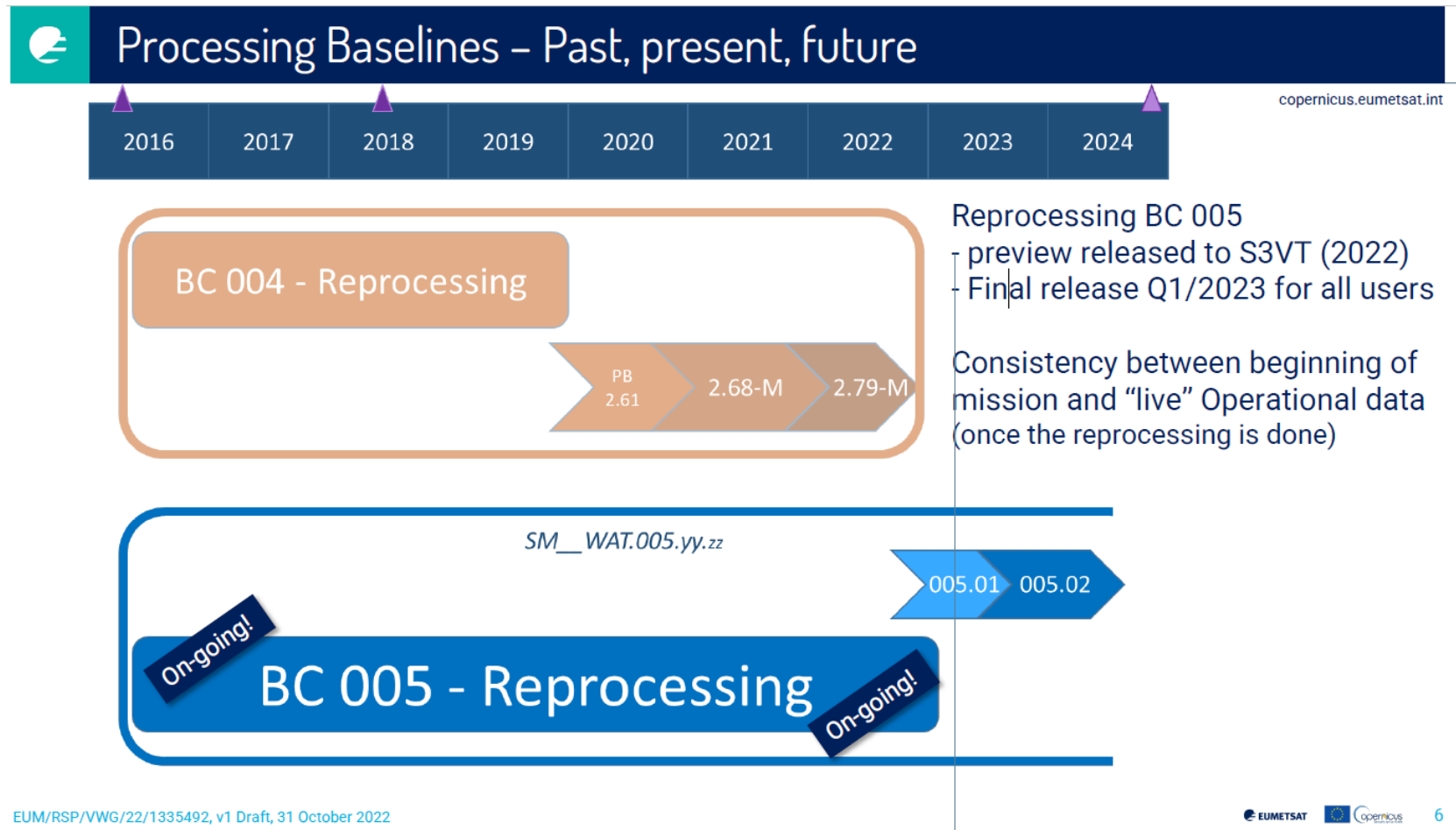
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S3 standard – refer to Open Session presentation



- The new 'fast adaptive' approach for LRM data, several proposal for HR processing but most (it not all) are already planned in future S6 F08/09. Many FF-SAR processing approaches, but remains today in R&D or for specific & dedicated processing (polar, coastal, inland, ...) not for OPE products
- A question on the MLE3 outputs – may we remove it from products ??
- Modify the way to compress the range values (JA3 approach being different from the one used on S6) & Compression at 1Hz round second as done for S6-MF, instead of using 20Hz packets
- Skweness values set to -0.1 or adapted to surface conditions (require some R&D) ?
- SWH < 0 management and SWH compression



- Recommendation to compute SSB over at least 3 to 4 years of data
- The question on JA missions signature over the equator (and potentially at -40°), but no explanation yet – thus just requiring R&D continuation
- Rain flag improvements (at least for SARAL, following Pierre Prandi poster)
- Update the way to compute the GLIM scaling factor, mostly for land community and single freq altimeters but worth to do
- Improve the ionospheric correction filtering
- Verify the way the 'POCA' correction approach is applied on the different missions



- New geophysical standards : tides (FES, GOT, other ?), MSS (CNES&CLS, DTU), MDT (CNES&CLS) with good metrics. No new internal tides models yet (but make sure we use exactly the same model on all missions)
- Implement the use of the native FES grid instead of the Cartesian one). Review the tide individual components provided so far = may we remove some ?
- Add the MSS uncertainties information (when it is available)
- Potentially using ERA5 inputs for DAC computation (GDR and reprocessing only)
- Provide geophysical corrections at 20Hz
- The GDR-G orbit standard, schedule to be precised but likely end of 2023



- Is the group approach convenient for the Users ??

