



S3 Product Notice – Altimetry

Mission	S3-A	
Sensor	SRAL	
Product	L1 NRT, STC and NTC	
Product Notice ID	S3A.PN-STM-L1.01	
Issue/Rev Date	06-Apr-2017	
Version	1.0	
Preparation	This Product Notice was prepared by the S3 Mission Performance Centre and by ESA and EUMETSAT experts	
Approval	Joint ESA-EUM Mission Management	

Summary

This is a Product Notice for the public release of Sentinel-3 Surface Topography Mission (STM) Level-1A, Level-1BS and Level-1B. The Product Notice is applicable to all timeliness: Near Real Time (NRT), Short Time Critical (STC) and Non-Time Critical (NTC), but please note that L1A and L1B-S are only produced in STC and NTC.

The Notice describes the Level-1 current status, processing baseline, product quality and limitations, and product availability status.



Processing Baseline

Processing Baseline	<ul style="list-style-type: none"> • IPF Processing Baseline: 2.12
IPFs version	<ul style="list-style-type: none"> • SR_1 IPF version: 06.11

Current Operational Processing Baseline

IPF	IPF Version	In OPE since
SR1	06.11	Land Centres: <ul style="list-style-type: none"> • 12/04/2017 10:30 UTC Marine Centre: <ul style="list-style-type: none"> • 12/04/2017 10:30 UTC



Status of the Processing Baseline

The current processing baseline for Sentinel-3A L1B products is 2.12, IPF SR-1 version 06.11. The baseline was deployed in the Sentinel-3 processing centres on the following dates:

Installation Date	IPF Version	Centre
2016-11-17	SR-1 06.07	Marine Centre
2016-11-22		Core Ground Station
2016-11-23		Land Centre
2017-01-12	SR-1 06.09	Marine Centre
		Core Ground Station
		Land Centre
2017-02-28	SR-1 06.10	Marine Centre
		Core Ground Station
		Land Centre
2017-04-12	SR-1 06.11 (current)	Marine Centre
		Core Ground Station
		Land Centre

The quality of L1 products is within the mission requirements.

Note that since version 06.09 the L1 products are generated with internal netcdf4 compression enabled. This is transparent to the user.



Known product quality limitations

The Sentinel-3A STM products have some known processing limitations, which are reported in the next pages.

Anomaly #1: Error in the SRAL Calibration (S3PDGS-9930)

- An error is observed on the power and phase within the burst for the SRAL calibrations. The value for the first burst is duplicated over all the indices within the burst. This results in applying a constant value for the power and a constant phase set to zero. The impact is negligible on the SRAL derived geophysical parameters in the Level 2 products.
- All versions up to and including 06.09 are impacted
- Fixed in version 06.10

Anomaly #2: Error in the manoeuvre flag (EUM/Sen3/AR/2268)

- There is an inconsistency between the product specifications (S3IPF PDS 003 -i1r7- Product Data Format Specification - SRAL-MWR) and the effective values in the products of the manoeuvre presence flag (values set to 4 or 5 instead of 0 and 1 as specified in the documentation).
- All versions up to and including 06.11 are impacted

Anomaly #3: Orbit file reported in L1 manifest is wrong (SIIMPC-1210)

- The orbit file used in the generation of the L1B file is reported both in the manifest and in the global attributes of the NetCDF file. Until this anomaly was fixed the filename reported in the manifest is incorrect and the one actually used was reported in the NetCDF.
- All versions up to and including 06.09 are impacted
- Fixed in version 06.10

Anomaly #4: Error in applied Calibrations (EUM/Sen3/NCR/2238)

- The power and phase burst calibrations are not well applied; the impact is an increase of the level of noise on the measurements.
- All versions up to and including 06.09 are impacted
- Fixed in version 06.10



Anomaly #5: Invalid product size in manifest for some L1A and L1BS products (SIIMPC 1500)

- The product size in the manifest is not valid for some of the L1A products. Note that this error is not systematic and affect about 25% of the products.
- All versions up to and including 06.10 are impacted
- Fixed in version 06.11

Anomaly #6: Mismatch between auxiliary files reported in the manifest and global attributes (SIIMPC 1537)

- The information reported in the SRAL manifest is different from the one reported in the NetCDF global attributes. The majority of the auxiliary data files (ADFs) reported in the manifest are not reported in the global attributes
- All versions up to and including 06.11 are impacted

Products Availability

- Copernicus Open Access Hub (<https://scihub.copernicus.eu/>), NRT, STC and NTC
- Copernicus Online Data Access (<https://codata.eumetsat.int/>), NRT, STC and NTC (see details below)
- EUMETCast (<https://eoportal.eumetsat.int/>), NRT, STC (see details below)
- EUMETSAT Data Centre (<https://eoportal.eumetsat.int/>), NRT, STC and NTC (see details below)
- EUMETSAT Online Data Access (<ftp://oda.eumetsat.int/>), NRT, STC and NTC (see details below)
- FTP server address login: login password: password

Product	EUMETCast	ODA*	CODA**	EUMETSAT Data Centre
L1B	NRT, STC	NRT, STC, NTC	NRT, STC, NTC	NRT, STC, NTC
L1A	-	STC, NTC	STC, NTC	STC, NTC
L1BS	-	STC, NTC	STC, NTC	STC, NTC

* ODA is available only for Copernicus Services and S3VT users

** CODA is the pilot service Copernicus Online Data Access and is available to all users



Any other useful information

- Note that the SRAL NRT products are 10 minutes length, instead of being dump based as originally specified – this is part of the new Product Definition.
- The fine tracker word is not applied in the L1B waveforms creating saw tooth behaviour on the radargram. This is not considered an anomaly since the range can be computed using the tracker and epoch provided in the product or from the epoch coming from any external retracking applied by the users. All versions up to and including 06.11 are impacted.

References

- Sentinel-3 Mission Requirements Traceability Document (MRTD), C. Donlon, EOP-SM/2184/CD-cd, 2011.
<https://sentinel.esa.int/documents/247904/1848151/Sentinel-3-Mission-Requirements-Traceability>
- Product Data Format Specification - SRAL/MWR Level 1 & 2 Instrument Products, Ref: S3IPF.PDS.003, Issue: 2.5, Date: 24/01/2017
<https://sentinel.esa.int/web/sentinel/user-guides/sentinel-3-altimetry/document-library>

Current Processing Baseline - Static ADFs

- S3__AX__CST_AX_20000101T000000_20991231T235959_20151214T120000_____MPC_O_AL_001.SEN3
- S3A_SR_1_CONCAX_20000101T000000_20991231T235959_20160603T120000_____MPC_O_AL_002.SEN3
- S3__SR_1_CONMAX_20160216T000000_20991231T235959_20161010T120000_____MPC_O_AL_004.SEN3
- S3__SR__LSM_AX_20000101T000000_20991231T235959_20151214T120000_____MPC_O_AL_001.SEN3
- S3A_SR__CHDNAX_20000101T000000_20991231T235959_20160603T120000_____MPC_O_AL_002.SEN3
- S3A_SR__CHDRAX_20000101T000000_20991231T235959_20160603T120000_____MPC_O_AL_002.SEN3

End of the Product Notice