

QWG 12 – C2 Reprocessing Outlook

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REPROCESSING C2



Reprocessing Scope of Collection 2 (C2)

- Data - All collections:
 - L1C data
 - L2A data in 100 - 300 m & 1 km
 - L3 data in 100 - 300 m & 1 km
- Timeframe: October 16, 2013 to June 30, 2020, starting from TFFs
- Output data:
 - Naming scheme: .v2xx
 - In HDF5 format and Cloud Optimized Geotiff (COG)
 - On disk (MEP & catalogue)
 - On tape (2 locations)
 - New collection/folder for Experimental phase data



Updates in C2

- Change 1: Improved Cloud detection algorithm
- Change 2: Updates on the radiometric calibration files
- Change 3: Atmospheric correction update
- Change 4: Update of the product format (COG)
- Change 5: New catalogue (OSCARS)
- Change 6: Bug fixes & updates, mostly on data handling

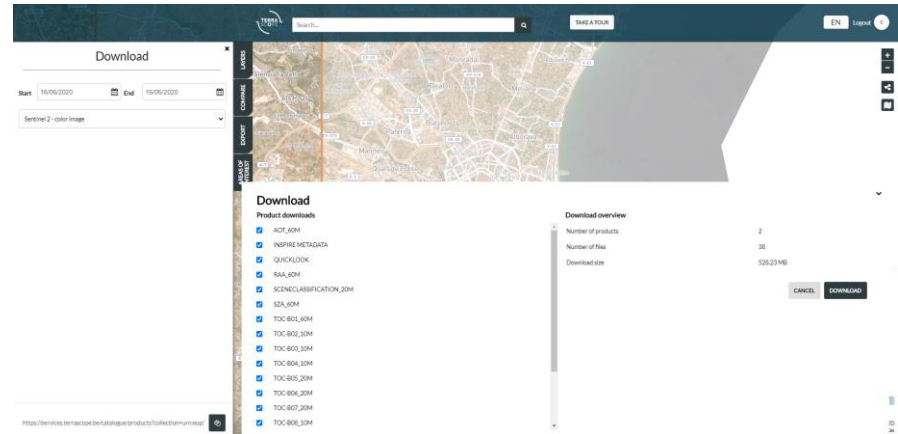
Details: PROBA-V_REPROCESSING_C2_TN_V1.0.pdf (AI11.8)



Collection 2 integration after reprocessing



New user interface
Integrated time series
Comparison features



New catalogue: OSCARS
Authentication update
(Edugain, Google, Facebook, EOSC)



Collection 2 integration after reprocessing

The screenshot shows the MTD - File Manager interface. The left pane displays a directory tree under "/data/MTDA/". The right pane shows a table of files and folders with columns for Name, Size, Type, and Date Modified.

Name	Size	Type	Date Modified
CGS_S1	4.1 kB	folder	04/23/2020
CGS_S2	4.1 kB	folder	04/03/2020
CGS_S5P	4.1 kB	folder	10/02/2020
PROBAV_L1C	4.1 kB	folder	01/01/2020
PROBAV_L2A_1KM	4.1 kB	folder	01/01/2020
PROBAV_L2A_1KM_ANTAR	4.1 kB	folder	01/01/2019
PROBAV_L2A_100M	4.1 kB	folder	01/01/2020
PROBAV_L2A_100M_ANTAR	4.1 kB	folder	01/01/2019
PROBAV_L2A_333M	4.1 kB	folder	01/01/2020
PROBAV_L2A_333M_ANTAR	4.1 kB	folder	01/01/2019
PROBAV_L2A_2018_ANTARCTICA	6 bytes	folder	05/14/2019
PROBAV_L2B_CISAR_REFERENCE_DATASET	8.2 kB	folder	10/09/2018
PROBAV_L3_S1_TOA_1KM	102.4 kB	folder	01/02/2020
PROBAV_L3_S1_TOA_100M	77.8 kB	folder	01/02/2020
PROBAV_L3_S1_TOA_333M	102.4 kB	folder	01/02/2020
PROBAV_L3_S1_TOC_1KM	102.4 kB	folder	01/02/2020
PROBAV_L3_S1_TOC_100M	81.9 kB	folder	01/02/2020
PROBAV_L3_S1_TOC_333M	102.4 kB	folder	01/02/2020
PROBAV_L3_S1_TOC_NDVI_100M	77.8 kB	folder	01/02/2020
PROBAV_L3_S5_TOA_100M	16.4 kB	folder	01/06/2020
PROBAV_L3_S5_TOC_100M	16.4 kB	folder	01/06/2020
PROBAV_L3_S5_TOC_NDVI_100M	16.4 kB	folder	01/06/2020
PROBAV_L3_S10_TOC_1KM	12.3 kB	folder	01/11/2020
PROBAV_L3_S10_TOC_333M	12.3 kB	folder	01/11/2020
PROBAV_L3_S10_TOC_NDVI_1KM	12.3 kB	folder	01/11/2020
PROBAV_L3_S10_TOC_NDVI_333M	12.3 kB	folder	01/11/2020
SpotVGT	4.1 kB	folder	04/04/2017
TERRASCOPE_Sentinel1	27 bytes	folder	04/06/2020
TERRASCOPE_Sentinel2	4.1 kB	folder	03/26/2020
TERRASCOPE_Sentinel3	4.1 kB	folder	08/20/2020
TIFFDERIVED	4.1 kB	folder	08/27/2019



C2 VALIDATION



C2 Validation plan: Data needs

<u>Phase</u>	<u>Dates / Period</u>	<u>Data description</u>	<u>Input needs</u>
1.Verification	5 dates (TBD)	TOA and TOC, both C1 and C2 S1 at 100m, 300m and 1km L1C for ICP update validation For one date also L2A	Brockmann validation report cloud detection Sensitivity analysis ICP files ATBD & validation report A/C ?
2.Validation over 1 year	July 2018 - June 2019	at 1km resolution: both C1 and C2 S1 (TOA and TOC) and S10 (TOC)	MODIS C6 NDVI Landval sites
	July 2018 - June 2019	at 300m resolution: both C1 and C2 S1 (TOA and TOC) and S10 (TOC)	MODIS C6 NDVI Landval sites
	July 2018 - June 2019	At 100m resolution: Both C1 and C2 S1 (TOA and TOC) and S5 (TOC)	MODIS C6 NDVI Landval sites
3.Complete validation	Entire period	Full dataset of S10 (S5 for 100m).	MODIS C6 NDVI + TOC refl, Landval sites Sentinel-3 SYN-VGT SPOT-VGT METOP-AVHRR



Output documentation

- Collection 2 change summary
- PROBA-V Collection 2 Evaluation report + publication
- Comparison report SPOT-VGT C3 - PV C2 - S3 SYN VGT + publication
- Updated Product User Manual
- Updated known issues section



C2 TIMING



Tentative C2 reprocessing timeline

Timeline	2020			2021									
	October	November	December	January	February	March	April	May	June	July	August	September	October
Software implementation													
Change 1: Cloud detection	█												
Change 2: Radiometric calibration			█										
Change 3: A/C module	█	█											
Change 4: COG upgrade			█										
Change 5: Catalogue + UI				█	█	█	█	█	█	█			
Change 6: bug fixes & updates	█	█	█	█									
Infrastructure													
Compute & networking		█	█										
Storage		█	█										
Tape storage			█										
Reprocessing													
TFF restore			█	█	█	█	█	█	█				
Reprocessing				█	█	█	█	█	█				
Validation													
Verification 5 dates				█									
Validation 1 year					█	█							
Complete validation							█	█	█	█	█		
Documentation publication													
C2 change summary			█										
C2 Evaluation report										█	█		
C2 Comparison report SPOT VGT C3 & S3												█	█
Updated PUM											█		
Known issues section											█		
Public release data													
Beta release via VM					█	█	█	█	█	█	█		
Public release data												█	█

A large, stylized white fingerprint graphic is positioned on the left side of the slide, set against a solid green background. The fingerprint lines are thick and white, creating a clear, high-contrast image.

POSSIBLE COLLECTION 3 UPGRADES



Possible Collection 3 upgrades (AI11.10)

- Quality indicators A/C
- Uncertainties layer
- Improved cloud shadow detection
- ARD compliancy

- Harmonization of SPOT-VGT - PV - S3 LTDR

THANK YOU

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