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)
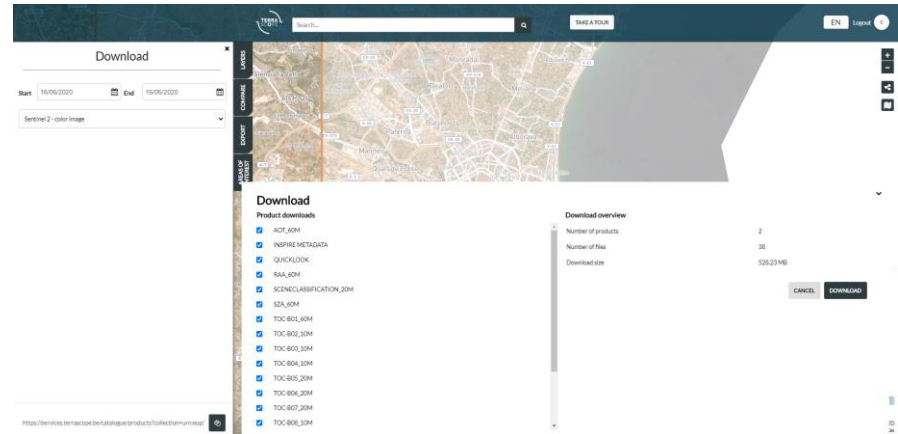- Change 6: Bug fixes & updates, mostly on data handling

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)

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Collection 2 integration after reprocessing

Clean-up collections/File structure

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C2
VALIDATION

C2 Validation plan: Data needs

Phase	Dates / Period	Data description	Input needs
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

Details: PROBA-V_Validation_Plan_C2_V1.0.pdf (AI11.9)

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

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Tentative C2 reprocessing timeline

Timeline	October (2020)	November	December	January	February	March	April	May	June	July	August	September	October (2021)
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												■	■

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

Note: Budget constraints!

THANK YOU

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Sentinel-2 image Copernicus Sentinel data (2016)