MONTHLY OPERATIONS REPORT

MOR#101

Reporting period from 16-Apr-2022 to 15-May-2022

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1.0	19/05/2022	All	Initial version	

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1. Summary

Since October 2021, the PROBA-V mission seized its acquisition activities. The PDGS activities are focussing on off-line dissemination of the entire archive, next to the exploitation activities in the PROBA-V MEP.

All activities were nominal in the last month. 34 new users registered that actually downloaded products.

In terms of the C2 reprocessing activities, the focus is on provision of period October 2013 – December 2017. At the time of writing, we are processing April 2014.

2. System Infrastructure

Category	% Up Time	% Down Time
Switches	100.0	0.0
Database Servers	100.0	0.0
Mid Term File Servers	100.0	0.0
Short Term File Servers	100.0	0.0
Master Servers	100.0	0.0
Worker Nodes	100.0	0.0
PDF	100.0	0.0

Table 1: System Infrastructure availability for this reporting period

3. Image Processing Services

3.1. Dissemination service

Product type	Added to catalogue	Ordered	Delivered
PROBAV_L1C	0	0	1
PROBAV_L2A_100M	0	0	0
PROBAV_L2A_300M	0	0	0
PROBAV_L2A_1KM	0	79	3614
PROBAV_L3_S1_TOA_100M	0	0	115
PROBAV_L3_S1_TOC_100M	0	509	765
PROBAV_L3_S1_TOC_NDVI_100M	0	615	611
PROBAV_L3_S5_TOA_100M	0	0	3
PROBAV_L3_S5_TOC_100M	0	217	224
PROBAV_L3_S5_TOC_NDVI_100M	0	980	947
PROBAV_L3_S1_TOA_300M	0	0	0
PROBAV_L3_S1_TOC_300M	0	0	0
PROBAV_L3_S10_TOC_300M	0	0	0
PROBAV_L3_S10_TOC_NDVI_300M	0	252	469
PROBAV_L3_S1_TOA_1KM	0	0	15
PROBAV_L3_S1_TOC_1KM	0	587	548
PROBAV_L3_S10_TOC_1KM	0	1786	1697
PROBAV_L3_S10_TOC_NDVI_1KM	0	825	869

Table 2: Ordered and delivered products for this reporting period

3.2. End-user activity

34 new user(s) were registered in this reporting period.
The total number of users registered for PROBA-V data and that have ordered data is **2081** with **124** different nationalities representing **1492** different companies/universities.

Product type	Africa	Asia	Europe	N-America	Oceania	S-America
PROBAV_L1C	0	0.33	0	0	0	0
PROBAV_L2A_100M	0	0	0	0	0	0
PROBAV_L2A_300M	0	0	0	0	0	0
PROBAV_L2A_1KM	0	0	191.42	0	0	0
PROBAV_L3_S1_TOA_100M	0	0	19.70	0	0	0
PROBAV_L3_S1_TOC_100M	0	460.21	36.70	0	0	0
PROBAV_L3_S1_TOC_NDVI_100M	4.86	0.02	84.19	0	0	0
PROBAV_L3_S5_TOA_100M	0	0	0	0.59	0	0
PROBAV_L3_S5_TOC_100M	0	748.79	78.19	0	0	0
PROBAV_L3_S5_TOC_NDVI_100M	0.03	407.93	0	0	0	0
PROBAV_L3_S1_TOA_300M	0	0	0	0	0	0
PROBAV_L3_S1_TOC_300M	0	0	0	0	0	0
PROBAV_L3_S10_TOC_300M	0	0	0	0	0	0
PROBAV_L3_S10_TOC_NDVI_300M	0	12.59	1.22	0	0	85.43
PROBAV_L3_S1_TOA_1KM	0	0	0.01	0.01	0	0
PROBAV_L3_S1_TOC_1KM	0.00	49.19	0	0	0	0
PROBAV_L3_S10_TOC_1KM	0	242.83	0	0	0	0
PROBAV_L3_S10_TOC_NDVI_1KM	0.68	16.77	0	0.04	0	0

Table 3: Data download (GB) in total per Origin of the User for the reporting period

Product Type	Global
L1C	0.33
PROBAV_L2A_100M	0
PROBAV_L2A_300M	0
PROBAV_L2A_1KM	191.42
PROBAV_L3_S1_TOA_100M	19.70
PROBAV_L3_S1_TOC_100M	496.91
PROBAV_L3_S1_TOC_NDVI_100M	89.07
PROBAV_L3_S5_TOA_100M	0.59
PROBAV_L3_S5_TOC_100M	826.98
PROBAV_L3_S5_TOC_NDVI_100M	407.96
PROBAV_L3_S1_TOA_300M	0
PROBAV_L3_S1_TOC_300M	0
PROBAV_L3_S10_TOC_300M	0
PROBAV_L3_S10_TOC_NDVI_300M	99.24
PROBAV_L3_S1_TOA_1KM	0.02
PROBAV_L3_S1_TOC_1KM	49.19
PROBAV_L3_S10_TOC_1KM	242.83
PROBAV_L3_S10_TOC_NDVI_1KM	17.48

Table 4: Data download (GB) in total for the reporting period

Company	# Downloads
MAGELLIUM	3614
CHENGJIAN UNIVERSITY	3151
TEACHERS ASSOCIATION	1030
PKNU	1007
UNI. VALENCIA	374
KU LEUVEN	191
CHENGDUUNIVERSITY	162
JOINT RESEARCH CENTRE	157
CARGILL	60
UNIVERSITY OF QUEBEC	54

Table 5: Top 10 user companies for the reporting period

Country	# Users
CHINA	238
BELGIUM	172
INDIA	100
FRANCE	94
BRAZIL	86
UNITED STATES	86
ITALY	81
NETHERLANDS	71
UNITED KINGDOM	67
GERMANY	64

Table 6: Top 10 countries with most registered users

List of issues raised by users:

- VGT P Products Auxiliary Data

4. Image Calibration services

For the next phase in its lifetime, PROBA-V will acquire only a limited amount of segments, for accommodating instrument sanity, while it is in a hibernate condition. The instrument is kept in stand-by for reasons the thermal stability.
A limit number of calibration images will be acquired to monitor both radiometric and geometric sanity of the instrument. The acquisitions will serve both methods 'at once' as much as possible.

For radiometry it is decided that lunar measurements over the full cycle will be continued every month. As an addition to this, few dark current (DC) acquisitions will be done to allow for the automated monitoring of the dark signal and bad pixel detection. The DC will be acquired for all 3 cameras. The amount of calibrations in a month will be 19 form lunar and 2 for DC resulting in < 1GByte in data.

To combine acquisitions for absolute radiometric and geometric calibration, a survey is still on-going to identify the appropriate location/site. The calibration region needs to contain both a radiometric reference in the absolute scale and sufficient geometric features. A good candidate is currently being investigated : Railroad Valley, which is an instrumented RadCalNet-site. The wider range area also contains quite a few geometric features to be used to perform a limited geometric assessment.

Figure 1: Railroad Valley area

5. KPI metrics

5.1. Management Service

5.1.1. PROV-KPI-0010: Reporting

Report	Due Date	Delivery Date	Delay	Remarks
PROBAV_D6_MOR-100_2022_04_v1.0.pdf	20/04/2022	20/04/2022	0	
KPI value (1 if 100% within time)			**1**	

Table 7: PROV-KPI-0010 calculation for this reporting period

5.2. System infrastructure services

5.2.1. PROV-KPI-0040: Network availability

Network	Issue	Reported at	Solved by	Delay	Remarks
LAN	None			0	
Inter-site	None			0	
Internet	None			0	
KPI value (1 if max. delay < 18h)				**1**	

Table 8: PROV-KPI-0040 calculation for this reporting period

5.2.2. PROV-KPI-0041: System infrastructure availability

Issue	Reported at	Solved by	Delay	Remarks
None			0	
KPI value (1 if max. delay < 18h)			**1**	

Table 9: PROV-KPI-0041 calculation for this reporting period

5.3. End-user support services

5.3.1. PROV-KPI-0050: Helpdesk response time

Issue	Created at	Answered by	Delay	Remarks
VGT P Products Auxiliary Data	21/04/2022 14:19	22/04/2022 21:07	1,50	
		KPI value (1 if ≥ 95.0 % < 2 NWD)	**1**	

Table 10: PROV-KPI-0050 calculation for this reporting period

5.4. KPI evaluation

Each KPI is assigned a weighing factor (w) from 0 to 10, this weighing factor is used to calculate the service credits due according to the formula:

$$\text{Service Credit} = \frac{\sum_i w_i\,(1-KPI_i)}{\sum_i w_i} \times \max Monthly\ Service\ Credit$$

KPI Reference	Description	Metric	1-KPI	Weight	Result
PROV-KPI-0010	Reporting	1	0	10	0
PROV-KPI-0040	Network availability	1	0	6	0
PROV-KPI-0041	System infrastructure availability	1	0	6	0
PROV-KPI-0050	Helpdesk response time	1	0	9	0
			Totals	31	0
			Service credit coefficient	100%	
			Service Credit	**0**	

Table 11: Service credit evaluation for this reporting period

6. Ongoing and future activities

6.1. Reprocessing activities

The first priority in the full C2 reprocessing activities was period January 2018 to June 2020. This whole period is processing since last month and is currently under validation.

In this reporting period, we have started processing the first part of the archive being October 2013 to December 2017. At the time of writing, April 2014 is being processed.