MONTHLY OPERATIONS REPORT

MOR#100

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

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Author(s): Dennis Clarijs, Sindy Sterckx, Erwin Wolters, Jan Vanhout
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Signatures

Author(s)   Dennis Clarijs, Sindy Sterckx, Erwin Wolters, Jan Vanhout

Reviewer(s)   Dennis Clarijs

Approver(s)   Dennis Clarijs

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1.0	20/04/2022	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. 18 new users were registered that actually downloaded products.

In terms of the C2 reprocessing activities, the focus is on provision of period January 2018 – June 2020. At the time of writing, we are processing June 2020.

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	0
PROBAV_L2A_100M	0	0	3
PROBAV_L2A_300M	0	0	0
PROBAV_L2A_1KM	0	0	1
PROBAV_L3_S1_TOA_100M	0	42	2504
PROBAV_L3_S1_TOC_100M	0	42	3638
PROBAV_L3_S1_TOC_NDVI_100M	0	2598	2599
PROBAV_L3_S5_TOA_100M	0	0	0
PROBAV_L3_S5_TOC_100M	0	107	120
PROBAV_L3_S5_TOC_NDVI_100M	0	193	191
PROBAV_L3_S1_TOA_300M	0	0	2
PROBAV_L3_S1_TOC_300M	0	0	1
PROBAV_L3_S10_TOC_300M	0	0	0
PROBAV_L3_S10_TOC_NDVI_300M	0	27	819
PROBAV_L3_S1_TOA_1KM	0	0	3
PROBAV_L3_S1_TOC_1KM	0	0	1
PROBAV_L3_S10_TOC_1KM	0	0	1
PROBAV_L3_S10_TOC_NDVI_1KM	0	106	296

Table 2: Ordered and delivered products for this reporting period

3.2. End-user activity

18 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 **2047** with **124** different nationalities representing **1485** different companies/universities.

Product type	Africa	Asia	Europe	N-America	Oceania	S-America
PROBAV_L1C	0	0	0	0	0	0
PROBAV_L2A_100M	0	0	0.35	0.37	0	0
PROBAV_L2A_300M	0	0	0	0	0	0
PROBAV_L2A_1KM	0	0	0.06	0	0	0
PROBAV_L3_S1_TOA_100M	0	0.26	1296.67	0	0	0
PROBAV_L3_S1_TOC_100M	0	0	1404.24	0	0	0
PROBAV_L3_S1_TOC_NDVI_100M	0	0.05	1181.38	0	0	0
PROBAV_L3_S5_TOA_100M	0	0	0	0	0	0
PROBAV_L3_S5_TOC_100M	0	0	9377.19	0	0	0
PROBAV_L3_S5_TOC_NDVI_100M	0.05	12.15	1363.58	0	0	0
PROBAV_L3_S1_TOA_300M	0	0	0.11	0.00	0	0
PROBAV_L3_S1_TOC_300M	0	0	0	0.00	0	0
PROBAV_L3_S10_TOC_300M	0	0	0	0	0	0
PROBAV_L3_S10_TOC_NDVI_300M	0.43	36.84	6.33	0	0	71.54
PROBAV_L3_S1_TOA_1KM	0	0	0.01	0	0	0
PROBAV_L3_S1_TOC_1KM	0	0	0	0	0	0
PROBAV_L3_S10_TOC_1KM	0	0	0.00	0	0	0
PROBAV_L3_S10_TOC_NDVI_1KM	0.09	1.32	0.00	0	0	0

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

Product Type	Global
L1C	0
PROBAV_L2A_100M	0.72
PROBAV_L2A_300M	0
PROBAV_L2A_1KM	0.06
PROBAV_L3_S1_TOA_100M	1296.94
PROBAV_L3_S1_TOC_100M	1404.24
PROBAV_L3_S1_TOC_NDVI_100M	1181.43
PROBAV_L3_S5_TOA_100M	0
PROBAV_L3_S5_TOC_100M	9377.19
PROBAV_L3_S5_TOC_NDVI_100M	1375.77
PROBAV_L3_S1_TOA_300M	0.11
PROBAV_L3_S1_TOC_300M	0.00
PROBAV_L3_S10_TOC_300M	0
PROBAV_L3_S10_TOC_NDVI_300M	115.13
PROBAV_L3_S1_TOA_1KM	0.01
PROBAV_L3_S1_TOC_1KM	0
PROBAV_L3_S10_TOC_1KM	0.00
PROBAV_L3_S10_TOC_NDVI_1KM	1.42

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

Company	# Downloads
UNI. VALENCIA	6051
KU LEUVEN	2595
JOINT RESEARCH CENTRE	399
CASS	278
XI'AN UNIVERSITY OF SCIENCE AND TECHNOLOGY	173
FST	137
UNIVERSITY OF JENA	133
UNIVERSITY OF LEICESTER	107
DESCARTES UNDERWRITING	82
CARGILL	63

Table 5: Top 10 user companies for the reporting period

Country	# Users
CHINA	234
BELGIUM	171
INDIA	100
FRANCE	94
BRAZIL	86
UNITED STATES	85
ITALY	81
NETHERLANDS	71
UNITED KINGDOM	67
GERMANY	64

Table 6: Top 10 countries with most registered users

List of issues raised by users:

- Image for 4S Symposium publication

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-99_2022_03_v1.0.pdf	20/03/2022	22/03/2022	1	
PROBAV_D7_QOR-033_2022_Q1_v1.0.pdf	20/03/2022	22/03/2022	1	
KPI value (1 if 100% within time)			0	

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
Image for 4S Symposium publication	11/04/2022 16:39	12/04/2022 16:42	1	
		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	1	10	10
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		30%	
		Service Credit		0	

Table 11: Service credit evaluation for this reporting period

6. Ongoing and future activities

6.1. Reprocessing activities

In this reprocessing phase, the focus is on provision of the C2 collection of period January 2018 – June 2020. At the time of writing, we are processing June 2020.

After C2 for period January 2018 to June 2020 is finished, we will continue from October 2013 – December 2017.