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**Subject: Access and usage of LE1 data products from spacecraft commissioning and performance verification phases**

This document provides guidelines for the access and usage of Level 1 (LE1) science data of observations obtained before the start of the nominal mission.

## LE1 data

LE1 products are generated by the Science Operations Centre (SOC) from the raw telemetry files provided by the Mission Operations Centre (MOC). For Euclid the LE1 products are considered raw science data.

Data from the science instruments can be obtained through direct commanding by MOC. In general, the resulting LE1 products lack essential metadata such that they cannot be further processed by the SGS. We call these LE1 data *incomplete*. Observations that are generated through commanding by the SOC will result in *complete* LE1 products meeting the description provided in the Data Product Description document (DPDD).

The availability of LE1 products is governed by two principles:

1. raw instrument data taken in-orbit that can be processed to LE1 products will be archived in the Euclid Science Archive System until 10 years after the end of operations

according to ESA requirements. Eventually, these data can be made available on request.

2. scientific results based on Euclid data should be verifiable. Data products from nominal scientific observations and from related calibration observations shall be made public in the Euclid SAS at the same time as the scientific publications.

**LE1 data generated before the nominal mission.**

During the spacecraft commissioning phase, the instruments will be commissioned and are used to support the commissioning of the spacecraft subsystems. The observations commanded by the SOC are the PV-001 observations, which are collected as useful filler observations before the start of the PV phase. These data have the same status as PV data.

In view of the large scientific potential of the PV-001 observations, which offers a unique scientific opportunity, the EC is investigating means to maximize the scientific exploitation of these data early in the mission.

Observations obtained during the Performance Verification Phase originate from CalBlocks and are described in the Calibration Framework (CalF), which is an EC effort with commanding support from the SOC. The CalBlock data are necessary for the instrument calibration, pipeline development, and mission performance verification, and therefore fall under principle 2.

We consider the PV data to be EC proprietary and the complete LE1 products shall be released to the public not later than DR1. No support will be provided by the SGS on the use and further processing of these “raw” data.

**Availability of LE1 data**

All LE1 data generated by SOC during the commissioning and PV phases will be ingested and visible in the Data Processing System (DPS). Access to these data will be controlled by the SGS and will be limited to those who are involved in the SGS. Usage of these data will be limited to the work on the processing and calibration of the Euclid data.

All LE1 data generated by SOC during the commissioning and PV phases will be ingested in the Science Archive System (SAS). Only complete LE1 data will be made available to all EC members as soon as the SAS become active, shortly after the Euclid Mission Commissioning Results Review (MCRR).

**Early access to LE1 data for scientific analysis.**

The following cases are identified:

***Transient data and SSO data:***

The two time-domain working groups have requested early access to the LE1 data for the timely discovery and follow up of the transient and SSO observations. Both groups are provided the same LE1 products on a timely basis before the start of the nominal mission. These are limited to the complete LE1 products collected in the SelfCal field. Independently from the SGS, both groups will only extract and analyse the data related to their relevant science case. Other detections shall not be considered by them.

***Early Release Observations (EROs)***.

The EROs were selected based on a call for proposals within the Euclid Science Collaboration. The successful proposers and their teams shall have timely access to the LE1 products related to their observations extracted from the DPS. The proposers shall have the responsibility to process and use the data for the scientific projects described in their proposal independently from the SGS. Around the time of the ERO event, the LE1 data and the derived data products will be made available outside the SAS to the public. At a later stage the ERO data will be processed by the SGS. The resulting SGS products will be made available to the public as part of the Q1 data release.