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## LIST OF DATA PRODUCTS IN THE EUCLID SCIENCE ARCHIVE

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# DISTRIBUTION

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**Table of Contents**

- 1. Introduction ..... 4**
  - 1.1. Purpose and scope of the document ..... 4
  - 1.2. Applicable documents..... 4
  - 1.3. Abbreviations and acronyms..... 4
- 2. List of Level-1 and LEVEL-2 data products ..... 5**
- 3. Data products details ..... 6**
  - 3.1. Level 1 data products ..... 6
  - 3.2. Level 2 data products ..... 6
    - 3.2.1. VIS data products ..... 6
    - 3.2.2. NIR data products..... 6
    - 3.2.3. SIR data products ..... 7
    - 3.2.4. MER data products..... 7
    - 3.2.5. PHZ data products ..... 7
    - 3.2.6. SPE data products..... 7
    - 3.2.7. SHE data products ..... 8
  - 3.3. LE3 data products..... 8

## 1. INTRODUCTION

### 1.1. Purpose and scope of the document

This document lists the set of Euclid data products that will be made available to the Euclid Consortium members and to the scientific community (for public data releases only) through the Euclid science archive system. This list is, by default, applicable to the OTF and REG archive environments and to the environments related to the major data releases (internal/public DR1/DR2/DR3). Restriction to a subset of these data products may be implemented for Q-type releases after recommendation by the Euclid Science Team (EST) and endorsement by the Euclid Project Scientist (PS). This document will be under configuration control, subject to SGS CCB approval and EST/PS review. Changes must ultimately be approved by the Euclid Mission Manager.

### 1.2. Applicable documents

ID	Title	Reference	Issue/R ev.	Date
AD-01	Euclid SGS EAS requirements specification document	EUCL-OTS-RS-8-004	2.12	17/04/2018
AD-02	Euclid Science Management Plan (SMP)	ESA/SPC(2013)17	-	03/06/2013
AD-03	<a href="https://www.cosmos.esa.int/documents/10647/12245842/EUCL-EST-ME-8-018_v1_Q1_fields_definition_2024-09-30.pdf/925039c3-6a90-5038-591e-2a8b86dbe19d?t=1730731961642">Q1 fields definition</a> <a href="https://www.cosmos.esa.int/documents/10647/12245842/EUCL-EST-ME-8-018_v1_Q1_fields_definition_2024-09-30.pdf/925039c3-6a90-5038-591e-2a8b86dbe19d?t=1730731961642">https://www.cosmos.esa.int/documents/10647/12245842/EUCL-EST-ME-8-018_v1_Q1_fields_definition_2024-09-30.pdf/925039c3-6a90-5038-591e-2a8b86dbe19d?t=1730731961642</a>	EUCL-EST-ME-8-018	-	23/09/2024

### 1.3. Abbreviations and acronyms

Acronym	Definition
DPDD	(Euclid) <b>Data Product Definition Document</b> , latest version on: <a href="http://st-dm.pages.euclid-sgs.uk/data-product-doc/index.html">http://st-dm.pages.euclid-sgs.uk/data-product-doc/index.html</a>
EAS	Euclid Archive System
ESAS	Euclid Science Archive System
FITS	Flexible Image Transport System
IDR	Intermediate Data Release
LE1	Level 1 data products
LE2	Level 2 data products
LE3	Level 3 data products
NIR	Near-Infrared (data products)
NISP	Near-Infrared Spectrometer and Photometer
OTF	On-the-fly environment of the Euclid science archive
RMS	Root Mean Square
SED	Spectral Energy Distribution
SIR	Spectroscopy Infrared (data products)
SOC	Science Operations Centre
VIS	Visible Instrument (data products)

## 2. LIST OF LEVEL-1 AND LEVEL-2 DATA PRODUCTS

The list of LE1 and LE2 DPS data products, with names as given in the Data Product Definition Document (DPDD) version 10.0.4 that can be ingested in ESAS are:

Level 1 :

- **DpdVisRawFrame**
- **DpdNispRawFrame**

Level 2 :

1. VIS data products:
  - **DpdVisCalibratedQuadFrame**
  - **DpdVisStackedFrame**
  - **DpdVisCalibratedFrameCatalog**
  - **DpdVisStackedFrameCatalog**
2. NIR data products:
  - **DpdNirCalibratedFrame**
  - **DpdNirStackedFrame**
  - **DpdNirCalibratedFrameCatalog**
  - **DpdNirStackedFrameCatalog**
3. SIR data products
  - **DpdSirScienceFrame**
  - **DpdSirCombinedSpectra**
4. MER data products
  - **DpdMerBksMosaic**
  - **DpdMerSegmentationMap**
  - **DpdMerFinalCatalog**
5. PHZ
  - **DpdPhzPfOutputCatalog**
  - **DpdPhzPfOutputForL3**
6. SPE
  - **DpdSpePfOutputCatalog**
7. SHE
  - **DpdSheMeasurements**
  - **DpdSheLensMcChains**

### 3. DATA PRODUCTS DETAILS

All data are FITS format.

#### 3.1. Level 1 data products

LE1 data are the raw data generated at the SOC for VIS and NISP data.

#### 3.2. Level 2 data products

##### 3.2.1. VIS data products

ECDM Data Product name	ID	description
<b>DpdVisCalibratedQuadFrame</b>	DET	Multi-extensions calibrated frame
	WGT	Weight map
	BKG	Background map
	PSF	Point spread function file
<b>DpdVisCalibratedFrameCatalog</b>	CAT	Source catalogue of calibrated frame
<b>DpdVisStackedFrame</b>	STK	Stacked frame
	WGT	Weight map
	BKG	Background map
	PSF	Point spread function file
<b>DpdVisStackedFrameCatalog</b>	CAT	Source catalogue of stacked frame

##### 3.2.2. NIR data products

ECDM Data Product name	ID	description
<b>DpdNirCalibratedFrame</b>	IMAGE	Calibrated frame
	BKG	Background frame
	PSF	Point spread function file
<b>DpdNirCalibratedFrameCatalog</b>	CAT	Source catalogue of calibrated frame
<b>DpdNirStackedFrame</b>	STK	Stacked frame
	PSF	Point spread function file
<b>DpdNirStackedFrameCatalog</b>	CAT	Source catalogue of stacked frame

### 3.2.3. SIR data products

ECDM Data Product name	ID	description
<b>DpdSirScienceFrame</b>	SCIFRM_BKGSUB	SIR science frame
<b>DpdSirCombinedSpectra</b>	COMBSPEC	SIR 1D spectra

### 3.2.4. MER data products

ECDM Data Product name	ID	description
<b>DpdMerBksMosaic</b>	BGSUB	background subtracted mosaic
	BGMOD	background model map
	CATALOG-PSF	Point spread function file
	GRID-PSF	Point spread function file
	FLAG	Flag map
	RMS	RMS map
<b>DpdMerSegmentationMap</b>	SEGMAP	Segmentation map of source
<b>DpdMerFinalCatalog</b>	CAT	Source catalogue
	MORPH-CAT	Source morphology catalogue
	CUTOOTS	Cutout information catalogue

### 3.2.5. PHZ data products

ECDM Data Product name	ID	description
<b>DpdPhzPfOutputCatalog</b>	PHZCAT	Photometric redshift and PDF catalogue
	GALAXYSED	Galaxy SED catalogue
	STARSED	Star SED catalogue
<b>DpdPhzPfOutputForL3</b>	CLASSCAT	Classification catalogue
	PHYSPARAMNIR	NIR physical parameters catalogue
	PHYSPARAM	Physical parameters catalogue
	PHYSPARAMQSO	QSO physical parameters catalogue
	STARCLASS	Star template

### 3.2.6. SPE data products

ECDM Data Product name	ID	description
<b>DpdSpePfOutputCatalog</b>	CAT-Z	Redshift catalogue
	CAT-MOD	Models catalogue
	CAT-LIN	Lines catalogue

### 3.2.7. SHE data products

ECDM Data Product name	ID	description
<b>DpdSheMeasurements</b>		SHE measurements
<b>DpdSheLensMcChains</b>		Lens MC chain measurements

### 3.3. LE3 data products

The current list was defined as part of the Q1 preparation (AD-03, public html link in Applicable Documents) and the full list is in preparation.

ECDM Data Product name	ID	description
<b>DpdHealpixBitMaskVMPZ</b>	VMPZ-ID_HPBITMASK	
<b>DpdHealpixFootprintMaskVMPZ</b>	VMPZ-ID_HPFOOTPRINTMASK	
<b>DpdHealpixCoverageVMPZ</b>	VMPZ-ID_HPCOVERAGE	
<b>DpdHealpixDepthMapVMPZ</b>	VMPZ-ID_HPDEPTHMAP	
<b>DpdHealpixInfoMapVMPZ</b>	VMPZ-ID_HPAA	
	VMPZ-ID_HPBA	
	VMPZ-ID_HPEXPOSURES	
	VMPZ-ID_HPGALACTICEXTINCTION	
	VMPZ-ID_HPNOISE	
	VMPZ-ID_HPPSF	
	VMPZ-ID_HPSAA	
	VMPZ-ID_HPTITLE	
	VMPZ-ID_HPZODIACALLIGHT	