

**Herschel Legacy Product task force meeting #7**  
**29/03/20167- 10:00 am CEST - Room E018**

**Minutes of Meeting.**

**Present:** KE, EPu, EV, IV, MR, DT, JCS (p.t.), ER (p.t.), PGL (p.t.)

1. Review of action items

<b>AI</b>	<b>Description</b>	<b>Actionee</b>	<b>Due date</b>	<b>Status</b>
<b>HPDP6-AI1</b>	Distribute code snippet to apply the FITS header category	DT	16/12/16	<b>Closed</b>
<b>HPDP6-AI2</b>	All to assign categories to the HPDP under their custody (see discussion in agenda item 4 for details)	ICS	20/03/17	PACS done HIFI <b>open</b> SPIRE <b>open.</b>  <b>Action to be rephrased</b>
<b>HPDP6-AI3</b>	DT to copy the JScanam HPDP files delivered by JGC on VOspace into the upd area, prior to official delivery on repository area	DT	15/01/17	<b>Closed - HPDP completed</b>
<b>HPDP6-AI4</b>	Figure out which obsids from the non-standard AOT list have a counterpart done with a standard AOT	KE, EP	20/03/17	Open, but considered <b>obsolete</b>
<b>HPDP6-AI5</b>	Discuss timeline for provision of new SPIRE-P HiRes HPDP	DT, IV	15/01/17	<b>Closed - HPDP completed</b>

2. Status of HSA 8.1 and 8.2 (EV, JCS, ER)

HSA 8.1.1 is the current operational version. Work will now be started on 8.2, which will implement the HPDP and ADP interface – see the list of screws currently in the system:

<https://satscm.esac.esa.int/redmine/projects/31/issues?sort=position>

We discussed and agreed on the following additional points:

- The “standard data” tick box shall be de-activated upon selection of at least one HPDP in the dedicated menu
- It shall be possible to use as release note (i.e. as file to download upon selection of “Documentation” in the download menu) the README.html

files sometimes used as release notes for the HPDP (see for ex. [http://archives.esac.esa.int/hsa/legacy/HPDP/SPIRE/SPIRE-S/spectral\\_feature\\_catalogue/README.html](http://archives.esac.esa.int/hsa/legacy/HPDP/SPIRE/SPIRE-S/spectral_feature_catalogue/README.html)). It is considered acceptable as long as any image or link featured in the html file uses absolute paths/references. Action on all of us to confirm this is the case for every HPDP release note prepared this way so far.

- We need to inform about the category of a given HPDP. We agree that an HPDP can be either:
  - A “better” product: HPDPs of this category should be used with precedence over the equivalent SPG products as they fix residual artefacts still present in the pipeline products.
  - An “alternative” product”: HPDPs of this category correspond to a variant data processing from that done in the pipeline, and offer a product that may be more suited than the SPG one, or not, depending on the science case or source characteristics. For those it will be up to the user to decide which of the SPG or HPDP is best to use
  - A “complementary” product: HPDPs of this category offer added value products to those from the SPG, in the form of complementary scientific content (e.g. catalogues, off-target line-of-sight, etc)
- In order to convey the above info, we agree to create a new attribute “category” in the xml file, which will be displayed as a new column in the query result table. The category keywords to use would be “better”, “alternative” and “complementary”. Action **HPDP6-AI2** needs to be extended in order to perform this assignment for each HPDP contemplated so far (delivered and in work)
- We will also use this category to order the various HPDPs in case an obsid features more than one HPDP. The order is B, A, C.
- SAT needs to know how to recognize the prime postcard. Although the use of a suffix “\_Prime” was recommended some time ago, it is not guaranteed it was applied to the various naming convention existing in the delivered HPDPs. There is a new action on each HPDP custodian to indicate for each HPDP what is the rule to recognize the prime postcard. This logic shall then be applied in the generation of the xml file prior to ingestion.
- We agreed that, in order to speed up the process in case of a full download request via the HSA, it should be possible to directly fetch an already prepared complete tar.gz dataset of the corresponding HPDP. These prepared tarball shall be hosted on the legacy repository, preferably under a hidden directory. Proposal is to use: <http://archives.esac.esa.int/hsa/legacy/HPDP/.forHSA>. All tarball’s will be made available under this directory in a flat structure. New action to copy the corresponding data-sets for already delivered HPDPs

We then discuss the situation for ADPs

- ADPs will not be ingested in the HSA. This means there is no way to associated specific info per ADP, like abstract, etc. This information should be deferred to the dedicated cosmos page

(<https://www.cosmos.esa.int/web/herschel/ancillary-data-products>), for which a link in the ADP tab should be made visible (as well as in the HSA help). As such it would be useful for users to also get an idea of the total size of the full download, so this should be added to the table.

- They will only be served as full download
- The same approach as for the HPDP full download shall be used, hosting all tarball's under a common hidden directory

<http://archives.esac.esa.int/hsa/legacy/ADP/.forHSA>. New action to copy the corresponding data-sets for already delivered ADPs

### 3. Current status of HPDP objectives per instrument and their schedule

#### a. Existing or on-going deliveries for HPDPs and ADPs/review of priorities

The following table summarises the status, timeline and priority of currently contemplated HPDPs. The target delivery dates in the table reflect the discussion held during the meeting.

HPDP name	Status	Expected delivery	Priority/ custodian
<b>HIFI</b>			
Expert-reduced Spectral SScans	TBD	06/2017	1 / DT
Expert-reduced Spectral Maps	V1 delivered	V2 07/2017	1 / PM, SB
Flux Uncertainty error budget tables	Delivered	N/A	2 / DT
OFF spectra data products	Delivered	N/A	2 / DT,MR
Non-averaged level 2 (UPDP)	Delivered	N/A	2 / DT
Spectral line catalogue	On-going	06/2017	3 / IRAP
Fix of anomalous observations	TBD	06/2017	3 / DT
<b>PACS</b>			
PACS-S red leak range	Delivered	03/2017	1 / EP
PACS -S blue range	TBD	04/2017	2 / EP
PACS-S unchopped baseline correction	TBD	04-06/2017	2 / KE
PACS-S OFF spectra	TBD	04/2017	2 / KE
PACS-S POC	TBD	06/2017	3 / EP
PACS-S fix of anomalous observations	TBD	06/2017	3 / KE
PACS-S non-standard AOT	TBD	09/2017	3 / EP
PACS-S extremely bright sources	As UPDP	??	3 / UPDP
HPPSC	On-going	03/2017	1 /Konk.
PACS-P Unimap HPDP	On-going	03/2017	1 / LC
PACS-P JScanam HPDP	Delivered	03/2017	3 / JGC
PACS-P Mini-Scan level 2.5	De-scope ?	??	3 / LC
Unimap on cosm. fields revisited	As UPDP	10/2017	3/ BA
<b>SPIRE</b>			
SPIRE-S background correction	Delivered	N/A	1 / IV
SPIRE-S SECT and POCT calibration	Delivered	12/2016	1 / RH

spectra			
SPIRE-S high absResolution spectra	Delivered	12/2016	2 / RH
SPIRE-S non-averaged spectra	Delivered	12/2016	2 / RH, IV
SPIRE-P HiRes products (NEW)	Delivered	01/2017	2 / IV
SPIRE-S spectral feature catalogue	V1 delivered	V2 04/2017	2 / IV
HSPSC	V1 delivered	V2 06/2017	2 / IV
SPIRE-P level3 maps of Gal plane	De-scoped	??	3 / ICC
SPIRE-S fix of anomalous observations	TBD	06/2017	3 / IV
SPIRE-P destriped maps (tentative)	TBD	06/2017	3 /DC, IV

Some detailed inputs on isolated HPDPs:

- Daniela and Ivan will sit together on March 30<sup>th</sup> to kick off the work on setting up script and infrastructure for bulk generation of the SPIRE-P destriped maps
- PACS-P Unimap: all fields processed, Luca working on release notes. Expected to be wrapped up after his visit beginning of April. DT will take care of postcards.
- PACS-S POC: priority has been lowered due to new position of Elena from June onward.
- Postponement of low priority PACS-S HPDPs: now planned between June and September, so close to best effort basis.
- PACS-P GOODS fields: Koryo is visiting to ESAC this week. Products generated in framework of Astrodeep project (PI D. Elbaz). PI prefers to have a global validation of all fields done by team, and expects this will take another 6-8 months. We have agreed to finally treat it as a UPDP.
- SPIRE SFC and PSC are expected to come as a V2 – this is all in the hands of Ivan so depends on his availability. Set to mid priority though as these are considered important updates.

The following tables summarises the status, timeline and priority of currently contemplated ADPs

ADP name	Status	Expected delivery	Priority/Custodian
<b>HIFI</b>			
HIFI Trend Analysis Data Products	Delivered	N/A	3 / DT
HIFI Tsys Data Products	Delivered	N/A	3 / DT
HIFI Beam Data Products	Delivered	N/A	1 / DT
HIFI OBSW images	Delivered	12/2016	3 / DT
HIFI LCUSW and Safety tables	Delivered	12/2016	3 / DT
<del>ILT diplexer data products</del>	<b>De-scoped</b>	01/2017	3 / DT
ILT gascell data products	Delivered	03/2017	3 / DT
SEU monitoring data products	Delivered	01/2017	3 / DT
<b>SPIRE</b>			
SPIRE-S and SPIRE-P Beams	Delivered	N/A	1 / IV
SPIRE-P filter transmission curve	Delivered	N/A	1 / IV
SPIRE-S diffraction losses	Delivered	N/A	1 / IV

SPIRE OBSW images	Delivered	N/A	3 / RH
Trend monitoring data products	Delivered	N/A	3 / IV
CDMS simulator	TBC	Best effort basis	3 / RH, IV
Noise spectra for SPIRE-S	On-going	03/2017	3 / IV, RH
<b>PACS</b>			
PACS-P and PACS-S Beams	On-going	04/2017	1 / LC, EP
PACS-P filter transmission curve	On-going	04/2017	1 / LC
PACS OBSW (CDU and SPU)	Delivered	12/2016	3 / ICC
Trend monitoring data products	Delivered	12/2016	3 / ICC
SEU monitoring/log	Delivered	12/2016	3 / ICC

We briefly discussed what to do with the CDMS simulator. Ivan needs to check with Steve if there is any chance that this will happen on the short term. If not we shall de-scope this item.

#### **b. Product generation: on the use of HIPE 15 for restructured headers**

We need to get an overview of which of the delivered HPDP already feature the refurbished FITS headers, and which ones don't, and take action to homogenize the format to all possible existing HPDPs. Since Elena reports that the red leak HPDP is already in shape, this is a new action on DT and IV to check the HIFI and SPIRE HPDPs in that respect.

#### 4. Point source catalogues interface in the HSA

The discussion touched upon which cut from the catalogue one wants to provide for a given obsid. We agreed that the geometrical cross-match is the desired one, rather than the pure obsid X-ID cut. This has no effect on the HSA interface and the current generic requirements for HPDP will support the use case of the PSC's as well.

#### 5. Discussion: Legacy Data Products

No dedicated discussion, but we remarked that the decision to add a new column about the category of HPDPs is a first step towards the definition of legacy products.

#### 6. AOBs/next meeting

We will have our next meeting in June this year. This will be a good opportunity to check the status of the HPDP interface HSA 8.2.

#### 7. New and old action items:

AI	Description	Actionee	Due date
HPDP6-AI2	All to assign categories to the HPDP under their custody: possible categories are "Better",	DT, IV, KE	07/04/17

	“Alternative”, “Complementary” (see also agenda item 2)		
<b>HPDP7-AI1</b>	Check which of the delivered HPDPs still need to get their headers refurbished, and apply the update when needed.	DT, IV	13/04/17
<b>HPDP7-AI2</b>	Check for which of the delivered HPDP what’s the rule to recognize the prime postcard	ICS	13/04/17
<b>HPDP7-AI3</b>	Check that all README or release notes in the form of html pages are self-contained and use absolute paths for images or hyperlinks	ICS	13/04/17
<b>HPDP7-AI4</b>	Copy full HPDP tarballs into dedicated area for full download via the HSA ( <a href="http://archives.esac.esa.int/hsa/legacy/HPDP/.forHSA">http://archives.esac.esa.int/hsa/legacy/HPDP/.forHSA</a> )	DT	07/04/17
<b>HPDP7-AI5</b>	Copy full HPDP tarballs into dedicated area for full download via the HSA ( <a href="http://archives.esac.esa.int/hsa/legacy/ADP/.forHSA">http://archives.esac.esa.int/hsa/legacy/ADP/.forHSA</a> )	DT	07/04/17