

Planck HFI	HFI Naming Convention	Ref.: TN-PH-190302-LAL Authors: LAL team Issue: Draft 1 Rev.: 0 Date: March 19th, 2002 Page: 1
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1. INTRODUCTION

This document show how the naming conventions (H-P-1-ASPI-SP-0141) specified by ASPI can be applied to the Planck/HFI for a subset of items.

The following table indicates how to format the SCOS name.

Item	scos-name	Name	Convention	ASPI
Command parameter name	CPC_PNAME	HP xxx ppp	5130	<u>OK</u>
Monitor parameter name	PCF_NAME	HM xxx ppp	5130	<u>OK</u>
TC packet identifier	CCF_CNAME	HC xxx ppp	4580	<u>OK</u>
TM packet number	PID_SPID	##08 nnn ppp	4380	<u>(1)</u>
Command num calibration	CCA_NUMBR	## nnn ##	5370	<u>(2)</u>
Command txt calibration	PAF_NUMBR	## nnn ##	5370	<u>(2)</u>
Monitor num calibration	CAF_NUMBR	## nnn ##	5370	<u>(2)</u>
Monitor txt calibration	TXF_NUMBR	## nnn ##	5370	<u>(2)</u>
Polynomial calibration	MCF IDENTNUM BR	## nnn ##	5370	<u>(2)</u>
Numerical display	DPF_NUMBE	HA nnn ppp	6100	<u>OK</u>
Graphical display	GPF_NUMBE	HG nnn ppp	6110	<u>OK</u>
Scrolling display	SCF_NUMBE	HL nnn ppp	6130	<u>OK</u>
TM Parameter Identifier	PCF_PID	0 - 65535	7800??	<u>OK</u>
Monitoring text curve id	TXF_NUMBR	## nnn nnn	5370	<u>(2)</u>
Monitor packet identifier variable length	PID_TPSD	##08 nnn ppp	4380	<u>(1)</u>
TC packet header	TCP_ID	HXTCPS aa bb	4505	<u>OK (3)</u>
TC packet header parameter	PCPC_PNAME	HY xxx ppp	5130	<u>OK (3)</u>
Command Sequence	CSF_NAME	HS xxx ppp	4660	<u>OK</u>
Command sequence formal parameter	CSP_FNAME	HF xxx ppp---	4074	
Verification stage identifier	CVS_ID	00001 – 02999		<u>OK</u>
Command parameter set	PST_NAME	HT xxx ppp---	5215	
Command parameter set value	PSV_PVSID	HV xxx ppp---	5225	
Command textual curve	PAF_NUMBR	## nnn nnn	5370	<u>(2)</u>

(1)Due to an error in previous issue and due to PACS needs, has been changed

(2)If you are using a SCOS-2000 version supporting only calibration identifier coded as Number(4), please code any curve reference under Number(3) format unique for all your curves (maximum number of curves is 1000) - If you are using a SCOS-2000 version supporting calibration identifier coded over as Char(10) please code the common curves (shared by several parameters) according to 5370 ("289 nnn") and the specific curve (associated to one and only one parameter) according to 5375 ("HP xxx ppp cc" for command parameter or "HM xxx ppp cc" for monitoring parameter)

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ttt is a number in the range [240-~~287~~ U [289]~~289~~ type of system element for HFI

aa service type of the TC

bb service sub-type of the TC

nnn is a running number 000-999

nnnn is a running number 0000-9999

rrr real element

ppp is a number in the range [240-~~287~~ U [289] position allocation for HFI

xxx is in the range (0-9) and (A-Z but not O,Q,I)

cc is the condition number (for conditioned calibration curve) - If not supported by your SCOS-2000 version to be forced to "00".

1.1 System Element (ttt)

Subsystem	Number	<u>ASPI</u>
OBSW	240	<u>OK</u>
DPU	250	<u>OK</u>
4KDCE	260	<u>OK</u>
DCE	270	<u>OK</u>
REU	280	<u>OK</u>

1.2 Position Identifier (ppp)

Subsystem	Theoretical	CQM	PFM	FS	<u>ASPI</u>
OBSW	240				<u>OK</u>
DPU prime	250	250	250	250	<u>OK</u>
DPU redundant			251		<u>OK</u>
4KDCE	260	260	260	260	<u>OK</u>
DCE	270	270	270	270	<u>OK</u>
REU prime	280	280	280	280	<u>OK</u>
REU redundant			281		<u>OK</u>

1.3 Real Element number (rrr)

Subsystem	CQM	PFM	FS	<u>ASPI</u>
OBSW	100	300	500	<u>OK</u>
DPU prime	100	300	500	<u>OK</u>
DPU redundant		200		<u>OK</u>
4KDCE	100	300	500	<u>OK</u>
DCE	100	300	500	<u>OK</u>
REU prime	100	300	500	<u>OK</u>

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REU redundant	200	<u>OK</u>
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2. PCF_NAME VERSUS PCF_PID

In order to associate easily the PCF_NAME (Monitoring parameter identifier) and the PCF_PID (OBSW parameter identifier used in PSICD service 3), the same numerical value on 3 digits (000 to 999) is taken in association with the sub-system Position Identifier (only the 2 high order digit for the PCF_PID - ASPI comments : "well done" for nominal / redundant).

Subsystem	PCF_NAME			PCF_PID	ASPI
	HM	xxx	ppp	xxxxx	<u>OK</u>
OBSW	HM	0 – 999	240	24000 – 24999	<u>OK</u>
DPU prime	HM	0 – 999	250	25000 – 25999	<u>OK</u>
DPU redundant	HM	0 – 999	251	25000 – 25999	<u>OK</u>
4KDCE	HM	0 – 999	260	26000 – 26000	<u>OK</u>
DCE	HM	0 – 999	270	27000 – 27999	<u>OK</u>
REU prime	HM	0 – 999	280	28000 – 28999	<u>OK</u>
REU redundant	HM	0 – 999	281	28000 – 28999	<u>OK</u>

Note : this allocation applies for HFI software, different allocation will be provided automatically by HPSDB for CDMS software (for HFI parameters processed by CDMS : FDIR, ...)

3. PCF_NAME VERSUS CALIBRATION NAMES

The nnn digit of the CCA_NUMBR, PAF_NUMBR, CAF_NUMBR, TXF_NUMBR and MCF_NUMBR shall be the same as the PCF_NAME and PCF_PID. Therefore the range of the calibration numbers for a given sub-system stays the same.

Example:

Parameter Description	PCF_NAME	PCF_PID	CAF_NUMBR	ASPI
REU Prime cryogenic temperature #0	HM 515 280	28515	280 515 rrr	<u>(2)</u>

First instantiation for the first calibration of CQM REU cryogenic temperature #0:

Parameter Description	PCF_NAME	PCF_PID	CAF_NUMBR	ASPI
REU Prime cryogenic temperature #0	HM 515 280	28515	280 515 100	<u>(2)</u>

4. RANGE OF VALUE FOR TC PACKET IDENTIFIER (CCF_CNAME)

A first repartition of the xxx numerical value is given below in function of the sub-system and the Planck PS.ICD service type:

Subsystem	PS.ICD service type	HC	xxx	ppp	ASPI
OBSW (On-board management)	8 (unified)	HC	000 – 149	240	<u>OK</u>
OBSW (Science management)	8 (unified)	HC	150 – 299	240	<u>OK</u>

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OBSW (General services)	3, 9, 14, 17	HC	300 – 399	240	<u>OK</u>
DPU prime	6 & 8 (private)	HC	300 – 399	250	<u>OK</u>
DPU redundant	6 & 8 (private)	HC	400 – 499	251	<u>OK</u>
4KDCE	6 & 8 (private)	HC	500 – 599	260	<u>OK</u>
DCE	6 & 8 (private)	HC	600 – 699	270	<u>OK</u>
REU prime	6 & 8 (private)	HC	600 – 699	280	<u>OK</u>
REU redundant	6 & 8 (private)	HC	700 – 799	281	<u>OK</u>

Let us note that the general TC are always sent to OBSW (ppp = 240). ASPI comment : right.

5. TELEMETRY PACKET NUMBER PID_SPID

ASPI comment : Refer to (1)

The PID_SPID is a number N10 with ttt nnnn ppp.

The PID_SPID shall be formatted as 240nnnn240 (possible update to 08nnnn240 - ASPI comment : confirmed refer to (1)). The numerical value nnnn is separated in 2 field:

- 2 high order digit gives the Planck PS.ICD service type
- 2 low order digit gives the packet numbering range for a Planck PS.ICD service sub-type.

Planck PS.ICD service type and subtype	Nnnn	<u>ASPI</u>
HSK packet TM(3,25)	0300 – 0319	<u>OK</u>
Diagnostic packet TM(3,36)	0320 – 0339	<u>OK</u>
Event Report TM(5,1)	0500 – 0519	<u>OK</u>
Exception Report TM(5,2)	0520 – 0539	<u>OK</u>
Alarm Report TM(5,4)	0540 – 0559	<u>OK</u>
Nominal Science	2100	<u>OK</u>
Science Type B1	2101	<u>OK</u>
Science Type B2	2102	<u>OK</u>
Diagnostic Science	2103	<u>OK</u>
Auxiliary Science	2104	<u>OK</u>
TC Acceptance Report TM(1,1)	0100	<u>OK</u>
TC Acceptance Report TM(1,2)	0101	<u>OK</u>
TC Acceptance Report TM(1,7)	0102	<u>OK</u>
TC Acceptance Report TM(1,8)	0103	<u>OK</u>
HSK Parameter Report TM (3,10)	0340-0359	<u>OK</u>
Diagnostic Parameter Report TM (3,12)	0360-0379	<u>OK</u>
Memory dump TM(6,6)	0600-0619	<u>OK</u>
Memory Check TM(6,10)	0620-0639	<u>OK</u>
Function Status Report TM(8,6)	0800 – 0819	<u>OK</u>
Time Verification Report TM(9,9)	0900	<u>OK</u>
Enabled Telemetry Packet Report TM(14,4)	1400	<u>OK</u>

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Some range is open to sub-division. Others can be set to a unique value.