

ITESRE

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TITLE: THE RAW AND FITS DATA ARCHIVE OF THE PICSIT QUALIFICATION MODEL (QM) TESTS PRE/POST VIBRATION (June 2000) AT LABEN

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1 Introduction

1.1 Purpose and scope

In the period 19 May -14 June 2000 a number of tests have been carried out at Laben on the PICsIT Qualification Model (QM) integrated at Module (DFEE) Level in order to verify its performances before and after the vibration tests performed on the detector. Additional tests were also performed related to the detector coating (with and without coating) and the Veto.

The detector was configured as for the PICsIT QM (April 2000) test campaign, where it consisted of one flight representative egg crate containing a complete module (512 pixels), and of one complete DFEE.

The PICsIT Test Equipment (TE) was exploited in order to set and command the detector, and to gather the detector data. The Science Console was in charge of acquiring all the TC and the LBR TM packets (containing the instrument housekeeping) forwarded by the CCOE as well as all the HBR TC and TM packets (containing the science data) forwarded by the HBR SCOE.

The purpose of the present note is to provide information relevant for user of the *QM Pre/Post Vibration Tests [June 2000] at LABEN permanent archive* consisting of 4 CDROMs (in 2 copies) where all the log, raw and FITS data files of the relevant measurements archived by the Science Console have been saved.

A summary of the set up of each measurement is presented in chapter 2.

As the no modification occurred, for all the information devoted to the format and content of the data, the reader should refer to the report of the previous PICsIT QM (April 2000) test campaign [1]; in which:

- the content and the format of the data produced by the instrument are given chapter 2;
- chapter 3 and Annex B details the format of the data buffers produced by the HBR SCOE with the instrument data, and archived in the raw archive by the Science Console;
- chapter 4 gives an overview on the raw data archiving and processing and on the FITS file production on the Science Console; further details on the content and the format of the FITS files are given in annex C;

Hence, the present document is limited to the information specific to this CDROM archive, namely:

- chapter 3 contains the whole directory of the permanent archive on CDROMs and on the Magneto Optical Cartridge which before re-initialisation have been backed up on DAT tapes.

A general description of the Science Console software architecture can be found in [2].

1.2 Reference Documents

- [1] M.Trifoglio, F.Gianotti, J.B.Stephen, The raw and the FITS data archive of the PICsIT Qualification Model (QM) Test Campaign (April 2000) at Laben, IN-IM-TES-RP-0039, Issue 2.0, Internal Report 279/00, June 2000.
- [2] M.Trifoglio, F.Gianotti, J.B.Stephen, G.Ferro, D.Visparelli, The Science Test Equipment for the INTEGRAL-PICsIT instrument, paper presented at the SPIE's Annual Meeting, 18-23 July 1999, Denver, Colorado USA.

1.3 Document History

Issue 1.0 first issue.

2. Measurement log

Summary information on each measurement are provided by the logbook of the Science Console as presented in the following section.

2.1 Science Console Logbook

The table hereafter contains the information noted on the logbook of the Science Console in order to provide for each measurement:

- Runid: the Run Identification number assigned to the measurement;
- Date: the date of the measurement;
- Source: the target: X-Ray source or background (Bkg);
- Exp. Time: the time duration of exposure;
- TH2: voltage threshold of semimodule 2; analogic housekeeping as read (i.e. no engineering conversion) from the module

Additional notes provides information on the environment and the instrument set up.

Runid #	Date	Source	Exp. time (s)	Notes
3031	11.5.00	Cs-137	1800"	This measurement was the last performed during the TV Tests
3104	19.5.00	Bkg	1000"	Without coating (Mapsil) TH2=1.079 Thresholds at B6
3107	19.5.00	Bkg	1000"	Just after coating (fresh Mapsil) TH2=1.081 Thresholds at B6
3108	22.5.00	Bkg	1000"	Well after coating Thresholds at B6
3112	22.5.00	Bkg	3300"	Veto on; 2 μ s/12 μ s active/passive window; Thresholds at B6
3117	30.05.00	Bkg	1800"	Pre-Vibration tests Thresholds at B6
3124	31.5.00	Cs-137	1800"	Pre-Vibration tests
3125	31.5.00	Cs-137	300"	Pre-Vibration tests (terminated because disk full)
3199	13.6.00	Cs-137	1800"	Post-Vibration tests, dismantled from the fixture
3200	13.6.00	Cs-137	1800"	Post-Vibration tests, mounted in the fixture
3205	14.6.00	Bkg	1800"	Post-Vibration tests, mounted in the fixture, just switched on
3207	14.6.00	Bkg	1800"	Post-Vibration tests, mounted in the fixture

3. Permanent Archive Directory

3.1 The CDROM Archive

CDROM#	Run ID	Measurement Date	Measurement Star Time	Measurement Stop Time	Total number of events	Total size (bytes)	Packet Type
0125	3031	2000-05-05	22:40:06	23:10:05	9567414	232062104	T10.3a
0125	3104	2000-05-14	00:10:34	00:26:05	514022	12504612	T10.3a
0125	3107	2000-05-14	01:14:50	01:14:46	282940	6883460	T10.3a
0125	3108	2000-05-16	18:11:20	18:28:23	585230	14232820	T10.3a
0125	3112	2000-05-16	21:30:48	22:25:40	3916784	95043536	T10.3a
0125	3117	2000-05-24	19:52:56	20:22:53	1942912	47151132	T10.3a
0126	3124	2000-05-26	00:46:11	01:16:22	12479804	302620012	T10.3a
0126	3125	2000-05-26	01:16:49	01:21:40	1985052	48369952	T10.3a
0127	3199	2000-06-04	03:22:17	03:52:56	13033042	316021148	T10.3a
0127	3200	2000-06-04	03:54:09	04:24:11	12756380	309319104	T10.3a
0128	3205	2000-06-04	20:54:33	21:25:06	2028654	49239060	T10.3a
0128	3207	2000-06-04	21:28:16	21:58:13	1990642	48316152	T10.3a

3.2 The MO Archive

MO #	Run ID	Measurement Date	Measurement Star Time	Measurement Stop Time	Total number of events	Total size (bytes)	Packet Type
0023	3031	2000-05-05	22:40:06	23:10:05	9567414	232062104	T10.3a
0023	3104	2000-05-14	00:10:34	00:26:05	514022	12504612	T10.3a
0023	3107	2000-05-14	01:14:50	01:14:46	282940	6883460	T10.3a
0023	3108	2000-05-16	18:11:20	18:28:23	585230	14232820	T10.3a
0023	3112	2000-05-16	21:30:48	22:25:40	3916784	95043536	T10.3a
0023	3117	2000-05-24	19:52:56	20:22:53	1942912	47151132	T10.3a
0023	3124	2000-05-26	00:46:11	01:16:22	12479804	302620012	T10.3a
0023	3125	2000-05-26	01:16:49	01:21:40	1985052	48369952	T10.3a
0024	3199	2000-06-04	03:22:17	03:52:56	13033042	316021148	T10.3a
0024	3200	2000-06-04	03:54:09	04:24:11	12756380	309319104	T10.3a
0024	3205	2000-06-04	20:54:33	21:25:06	2028654	49239060	T10.3a
0024	3207	2000-06-04	21:28:16	21:58:13	1990642	48316152	T10.3a

3.3 The MO Archive Backup

MO Cartridge #	DAT Tape #	DAT Tape File
23	1	1
24	1	2