RPC-LAP
OPERATIONS REPORT
COMMISIONING 1 MISSION PHASE

March 5, 2004 - June 6, 2004

IRFU-ROS-OPR-CVP1
Version 1.0
31 Aug 2019

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Document history

Revision	Date	Comment
1.0	2019-08-31	Initial release

1 Introduction

This is the report from the operations of RPC-LAP in the Commissioning 1 (CVP1) phase of the Rosetta mission, covering the period March 5 -- June 6, 2004. This included the following operational slots for LAP:

- March 17-19, 2004: First RPC commisioning slot (Slot 1)
- May 8-10, 2004: Second RPC commissioning slot (Slot 2)

2 Operations overview

RPC was turned on in space for the first time in March 17, 2004, with LAP operations commencing at 23:30 UT. After verification of basic functionality in housekeeping, the first LAP science macro was started at 23:53 UT. Operations proceeded as planned in the first checkout slot, using the PIU primary side. When RPC was started on the redundant side of the PIU, operations were at first nominal but ceased abruptly shortly after 04:40 UT in March 18. This turned out to be a failure of the power supply on the redundant side of the PIU, so for the rest of the mission we relied on the PIU primary side which worked flawlessly until the very end of the mission.

RPC and LAP were turned on again in the morning hours of March 19, first to verify the instrument suite was still intact and then for boom deployment. These operations were nominal. Originally planned further activities, included an extended operations time to gather RPC data for performance analysis, were postponed awaiting further analysis of the failure of the PIU redundant power supply.

Activities were continued in a second RPC commissioning slot in May 8-10, 2004, during which a variety of LAP macros were tested and found to work nominally. This included the only runs of a few technical test macros (0x100-0x103, 0x105, 0x106) whose data are void of scientific value. Internal signal generation by the instrument in these macros was used also in the following two operations blocks as noted in the list below.

3 Operations list

Below is a list of all LAP operations blocks during this mission phase. A LAP operations block is defined as a continuous run of an instrument macro, though as the archive is organized by calendar days, blocks are defined to break at midnight even if the instrument operation is continuous over this artificial border. If you find operations blocks running the same macros on both sides of midnight, this is likely to actually be a continuous operation. The list is based on the science data stream are included, so pure maintenance operations or periods with LAP idle between macro runs are not shown.

The macro concept is described in the EAICD, and the macro definitions are tabulated in the macro table, both available in the documents directory of the LAP archives in the ESA Planetary Science Archive (PSA). A LAP macro defines all aspects of the instrument operations, though particularly when a probe is in electric field mode, the probe bias (current in the case of electric field mode, otherwise bias voltage) may often be tuned by manual commands.

Block start	Block end	Macro	Notes
LAP Commissioning Slot 1			
2004-03-17T23:57:42.537	2004-03-17T23:59:50.537	204	
2004-03-18T00:00:22.537	2004-03-18T00:00:22.537	204	
2004-03-18T01:30:30.539	2004-03-18T01:31:02.539	200	
2004-03-18T01:32:06.539	2004-03-18T01:47:02.539	206	
2004-03-18T02:12:38.540	2004-03-18T04:41:18.543	204	
2004-03-19T02:55:58.571	2004-03-19T04:34:38.573	205	Boom deployment
LAP Commissioning Slot 2			
2004-05-08T01:13:19.787	2004-05-08T01:24:31.787	105	
2004-05-08T01:25:03.787	2004-05-08T01:44:47.788	104	
2004-05-08T01:50:40.333	2004-05-08T02:14:40.333	404	
2004-05-08T09:01:03.794	2004-05-08T09:10:07.794	300	
2004-05-08T09:15:27.794	2004-05-08T09:39:59.795	203	
2004-05-08T09:46:23.795	2004-05-08T10:10:55.795	301	
2004-05-08T10:17:51.795	2004-05-08T10:35:27.796	501	
2004-05-08T10:42:23.796	2004-05-08T10:47:11.796	304	
2004-05-08T10:54:39.796	2004-05-08T10:55:11.796	305	
2004-05-08T10:58:23.796	2004-05-08T11:03:11.796	306	
2004-05-08T11:06:23.796	2004-05-08T11:11:11.796	307	
2004-05-08T11:18:39.796	2004-05-08T11:31:59.797	202	
2004-05-08T11:43:11.797	2004-05-08T13:42:07.798	204	
2004-05-08T13:47:27.799	2004-05-08T15:17:35.800	302	
2004-05-08T15:24:31.800	2004-05-08T15:27:43.800	106	Tech test
2004-05-08T15:28:15.800	2004-05-08T15:31:27.800	107	Tech test
2004-05-08T15:33:03.800	2004-05-08T15:34:39.800	100	Tech test
2004-05-08T15:36:15.800	2004-05-08T15:37:51.800	101	Tech test
2004-05-08T15:39:27.800	2004-05-08T15:42:39.800	102	Tech test
2004-05-08T15:44:15.800	2004-05-08T16:46:39.801	103	Tech test
2004-05-08T16:53:03.801	2004-05-08T20:58:55.805	204	Internal signal
2004-05-08T21:40:31.806	2004-05-08T22:26:23.806	202	Internal signal
2004-05-08T22:51:27.807	2004-05-08T23:05:19.807	204	
2004-05-08T23:26:07.807	2004-05-08T23:26:07.807	200	
2004-05-09T00:05:35.808	2004-05-09T01:43:43.809	200	
2004-05-09T01:55:59.810	2004-05-09T02:22:07.810	202	
2004-05-09T02:29:35.810	2004-05-09T02:29:35.810	400	
2004-05-09T02:30:39.810	2004-05-09T02:30:39.810	401	
2004-05-09T02:34:55.810	2004-05-09T02:34:55.810	402	
2004-05-09T02:39:43.810	2004-05-09T02:49:19.810	403	
2004-05-09T02:54:07.810	2004-05-09T03:03:11.811	205	
2004-05-09T03:04:15.811	2004-05-09T05:13:19.813	202	
2004-05-09T05:19:43.813	2004-05-09T07:18:39.814	300	
2004-05-09T09:02:07.816	2004-05-09T17:01:03.823	200	
2004-05-09T17:44:15.824	2004-05-09T18:21:35.824	303	

Block start	Block end	Macro	Notes
2004-05-09T18:24:15.824	2004-05-09T18:55:11.825	405	
2004-05-09T23:01:35.829	2004-05-09T23:05:51.829	203	
2004-05-09T23:07:27.829	2004-05-09T23:25:03.829	200	
2004-05-09T23:58:07.829	2004-05-09T23:58:07.829	105	
2004-05-10T00:00:15.829	2004-05-10T00:09:19.830	105	
2004-05-10T00:09:51.830	2004-05-10T00:31:11.830	104	
2004-05-10T00:46:39.830	2004-05-10T00:55:11.830	203	
2004-05-10T00:56:47.830	2004-05-10T01:33:35.831	200	
2004-05-10T01:38:55.831	2004-05-10T02:02:23.831	203	