RPC-LAP
OPERATIONS REPORT
EARTH SWING-BY 2 MISSION PHASE

September 13, 2007 - January 27, 2008

IRFU-ROS-OPR-EAR2
Version 1.0
31 Aug 2019

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Contents

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 Earth swing-by 2 (EAR2) phase of the Rosetta mission, covering the period September 13, 2007 - January 27, 2008. This included the following operational slots for LAP:

- September 16 and 28 - 29, 2007: Payload checkout 6 (PC6)
- November 7 - 20, 2007: Earth swing-by 2 itself (ESB2)
- January 7-8, 2008: Payload checkout 7 (PC7)

2   Operations overview

LAP operations in PC6 consisted of uploading and testing of new macros in September 16, 2007, and regular checkout operations (offset determination and sweeps for photoemission monitoring) in September 28-29.

LAP was on for the full ESB2, November 7-20, 2007. Closest approach occured at 21:00 UT in November 13. LAP operations were mainly intended to gain experience for coming operations, including co-planning with other RPC instruments, and to obtain data in a relatively well known environment.

LAP PC7 operations only included the regular checkout (offset determination and sweeps for photoemission monitoring) on January 7-8, 2007.

All operations worked as planned.

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
PC6			
2007-09-16T09:03:06.041	2007-09-16T09:07:54.041	212	
2007-09-16T09:22:18.041	2007-09-16T09:48:26.587	705	
2007-09-16T09:52:42.042	2007-09-16T10:19:22.587	703	
2007-09-16T10:22:34.042	2007-09-16T10:48:42.042	704	
2007-09-16T10:52:26.042	2007-09-16T11:07:54.043	706	
2007-09-16T11:32:58.043	2007-09-16T11:48:26.588	703	
2007-09-16T11:52:42.043	2007-09-16T12:02:50.588	705	
2007-09-16T12:07:38.043	2007-09-16T12:23:06.588	703	
2007-09-16T12:27:22.043	2007-09-16T12:43:54.044	704	
2007-09-16T12:47:38.044	2007-09-16T13:03:06.589	705	
2007-09-16T13:08:26.044	2007-09-16T13:24:58.044	200	
2007-09-28T22:42:50.240	2007-09-28T23:07:22.241	104	
2007-09-28T23:12:42.241	2007-09-28T23:27:38.241	105	
2007-09-28T23:32:26.241	2007-09-28T23:59:38.241	204	
2007-09-29T00:00:10.241	2007-09-29T00:29:30.242	204	
2007-09-29T00:32:42.242	2007-09-29T00:47:06.242	104	
2007-09-29T00:52:26.242	2007-09-29T01:04:42.242	105	

Block start	Block end	Macro	Notes
ESB2			
2007-11-07T01:32:58.860	2007-11-07T01:58:34.861	600	
2007-11-07T02:02:18.861	2007-11-07T02:26:50.861	104	
2007-11-07T02:32:42.861	2007-11-07T23:59:39.420	705	
2007-11-08T00:00:00.458	2007-11-08T23:59:39.436	705	
2007-11-09T00:00:00.474	2007-11-09T23:59:39.452	705	
2007-11-10T00:00:00.490	2007-11-10T07:57:31.457	705	
2007-11-10T08:02:18.912	2007-11-10T08:24:10.912	600	
2007-11-10T08:32:42.913	2007-11-10T08:57:14.913	104	
2007-11-10T09:02:34.913	2007-11-10T23:59:39.468	705	
2007-11-11T00:00:00.506	2007-11-11T23:59:39.484	705	
2007-11-12T00:00:00.522	2007-11-12T23:59:39.499	705	
2007-11-13T00:00:00.538	2007-11-13T02:59:23.501	705	
2007-11-13T03:02:34.956	2007-11-13T12:57:46.963	706	
2007-11-13T13:02:34.963	2007-11-13T19:30:50.967	704	
2007-11-13T19:34:34.967	2007-11-13T19:59:38.968	706	
2007-11-13T20:04:26.968	2007-11-13T21:26:34.969	604	
2007-11-13T21:30:18.969	2007-11-13T23:59:38.970	704	
2007-11-14T00:00:00.008	2007-11-14T01:04:10.971	704	
2007-11-14T01:07:22.971	2007-11-14T02:57:46.972	706	
2007-11-14T03:21:14.973	2007-11-14T23:59:39.531	705	
2007-11-15T00:00:00.569	2007-11-15T23:59:39.547	705	
2007-11-16T00:00:00.585	2007-11-16T06:59:23.552	705	
2007-11-16T07:02:35.007	2007-11-16T14:56:43.012	600	
2007-11-16T15:02:35.012	2007-11-16T23:59:39.563	705	
2007-11-17T00:00:00.601	2007-11-17T23:59:39.579	705	
2007-11-18T00:00:00.617	2007-11-18T06:59:23.583	705	
2007-11-18T07:02:35.038	2007-11-18T13:56:27.043	600	
2007-11-18T14:02:19.043	2007-11-18T14:26:51.043	104	
2007-11-18T14:32:11.043	2007-11-18T23:59:39.595	705	
2007-11-19T00:00:00.633	2007-11-19T23:59:39.610	705	
2007-11-20T00:00:00.648	2007-11-20T06:58:19.615	705	
2007-11-20T07:02:35.070	2007-11-20T13:52:43.075	600	
PC7			
2008-01-07T22:46:59.841	2008-01-07T23:10:59.841	104	
2008-01-07T23:16:19.841	2008-01-07T23:31:15.842	105	
2008-01-07T23:36:35.842	2008-01-07T23:59:31.842	204	
2008-01-08T00:00:03.842	2008-01-08T00:33:39.842	204	
2008-01-08T00:36:19.842	2008-01-08T00:51:15.843	104	
2008-01-08T00:56:35.843	2008-01-08T01:08:51.843	105	