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DOCUMENT

RPC-MIP: Rosetta Enhanced Science Archive Review Procedure

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1 INTRODUCTION

1.1 Purpose and scope

This document provides information on the Rosetta Enhanced (ENH) Science Archive Review with a specific focus on the data and procedures to be followed when reviewing the instrument **RPC-MIP**.

This document complements, and is an Appendix to the Rosetta Archive Enhancement Oct 2018 review procedure document [1], which provides important information on the review as a whole.

1.2 Reference Documents

[1] Rosetta Archive Enhancement Oct 2018 review procedure, RO-SGS-PR-2021, Issue 1.0, 26 July 2018

2 DATA FOR REVIEW

RPCMIP is one of the instruments of the Rosetta Plasma Consortium. They underwent the previous comet review in October 2017 with their calibrated (L3) data sets. The review has been closed after a delta review in 2018.

They have recently provided all data sets containing the electron density (L5) data determined by MIP only. They also provided cross calibrated (MIP-LAP) electron density (L5), a sample of which is added to this review.

The instrument and data are described in the RPC MIP User Guide (RPC-MIP-UG-LPC2E.PDF) document located in the DOCUMENT directory.

2.1 What data is under review?

RPCMIP delivered final L5 MIP only data sets (delivery date 2/5/2018). These electron densities will improve in the future but the reviewer's opinion on the format of the data and on the documentation is welcome.

The cross calibrated sample datasets contain 11 days spread over 4 mission phases, selected to represent different MIP and LAP configurations (in particular different MIP modes and different LAP inputs for the cross-calibration). Mission phases are thus incomplete.

They also delivered a **very preliminary** RPCMIP/RPCLAP cross-calibration report in the documentation that will be updated later.



The reviewer can refer to the team publications to compare the data with the team's results:

2014-10-03, 2014-10-17, 2014-10-19 (**PRL**): Galand et al, MNRAS, 462, S331-S351 (2016), doi: 10.1093/mnras/stw2891, [<http://dx.doi.org/10.1093/mnras/stw2891>]

2015-07-25 (**ESC3**) & 2015-11-28 (**ESC4**): Henri et al, MNRAS, MNRAS, 469, S372-S379 (2017), doi: 10.1093/mnras/stx1540 [<http://dx.doi.org/10.1093/mnras/stx1540>]

2.1.1 Level 5 MIP Data:

RO-C-RPCMIP-5-ESC1-V1.0
 RO-C-RPCMIP-5-ESC2-V1.0
 RO-C-RPCMIP-5-ESC3-V1.0
 RO-C-RPCMIP-5-ESC4-V1.0
 RO-C-RPCMIP-5-EXT1-V1.0
 RO-C-RPCMIP-5-EXT2-V1.0
 RO-C-RPCMIP-5-EXT3-V1.0
 RO-C-RPCMIP-5-PRL-V1.0

2.1.2 Level 5 MIP/LAP Data:

RO-C-RPCMIP_RPCLAP-5-ESC4-V1.0
 RO-C-RPCMIP_RPCLAP-5-EXT1-V1.0
 RO-C-RPCMIP_RPCLAP-5-EXT3-V1.0
 RO-C-RPCMIP_RPCLAP-5-PRL-V1.0

2.2 How to retrieve the data

If you are a reviewer from the US, you will be contacted separately by PDS-SBN with details of how you will be provided with the data. For European reviewers, the data can be retrieved as described below.

If you wish to have a look at the L3 data, they are public and directly available from the PSA. The L5 data are not yet public, and are therefore only available via an SFTP area.

For the L3 calibrated data

It is recommended to use ftp to retrieve the data. Any standard ftp client such as FileZilla can be used to download your data set(s).



From within your preferred client, use an anonymous login to

psa.esac.esa.int

Then navigate to

pub/mirror/INTERNATIONAL-ROSETTA-MISSION/RPCMIP/

The relevant data set(s) can be downloaded from there.

If you wish to first view the list of data sets or select files from within a data set, you can access the PSA ftp directly using the following link:

<ftp://psa.esac.esa.int/pub/mirror/INTERNATIONAL-ROSETTA-MISSION/RPCMIP/>

For the L5 high level data sample

As the Level 5 data are proprietary and not ingested in the PSA, you will have to download them from a secure ftp:

'sftp rospareview.esac.esa.int'

We will send you the credentials by email.

Should you have any issues retrieving the data you wish to review, please contact us using the details provided in Section 6.

3 REVIEW PROCEDURE

Please check the Sections 2 and 5.2 of the Review Procedure Document [1] for an overview of the review objectives, and the strategy you should try to follow when reviewing the data. It is a good idea to try to replicate a published scientific result using the data provided.

3.1 Special things to look out for

The L5 MIP only data is the final sample meanwhile the MIP-LAP cross calibrated data are preliminary sample. The data provided contains data already used in the publications from RPC MIP but also from other instruments. The reviewer is invited to compare with the density information in the RPC papers.



Data should be readable by standard PDS readers such as NASAVIEW (<https://pds.nasa.gov/tools/nasa-view.shtml>) and READPDS (https://pdssbn.astro.umd.edu/tools/tools_readPDS.shtml).

4 THE RID / LIEN SYSTEM

This review will use the ECLIPSE system to raise, track and manage issues raised. Within ESA, issues raised are known as RIDs (Review Item Discrepancies), while PDS refer to these as liens. A User Manual for the ECLIPSE system is provided, and the Rosetta Archive Team is also on-hand to provide direct support should any issues arise (Section 6). You will receive a separate e-mail with your individual login credentials for the ECLIPSE system, and you can then choose your own password.

When you raise a RID, please click on the document associated with the instrument you are reviewing, and fill in all fields available, including recommendations for how any issue you find might be resolved to your satisfaction. The following briefly describes each of the fields available and how they should be filled in:

- The **RID Number** is automatically generated by the system.
- In the **Classification** field, please indicate whether the issue being raised is
 - o Minor: an issue that does not hinder the understanding of the data to an extent by which the data cannot be analyzed by an independent scientist.
 - o Major: an issue that compromises the understanding/use of the data to an extent by which the data cannot be analyzed without additional support.

N.B. Editorial issues (e.g. typographical errors) are not RIDs, and should be raised as described in Section 4.1.
- In the **Originator Reference** field, please follow the convention (note that you will have to type this yourself)
 - o **RPCMIP-AA-XX-YYY** where
 - **AA** is either **EU** for a European RID or **US** for a US RID;
 - **XX** are your initials;
 - **YYY** is a sequential number, starting at 001 for the first of your RIDs.
- The **Panel** is a drop-down selection. If you are a scientific reviewer, please choose *Science Panel*. If you are a technical reviewer (e.g. PDS or PSA), please select *Technical Panel*.



- In the **Title of RID** field, please provide a short title of the RID (max. 52 characters)
- The **Datapak Document** field is filled in automatically by the system.
- In the **Document Page / Section / Para** field, please include the specific DATA_SET_ID and, where applicable, the FILE affected by the issue.
- The **Discrepancy Document** field can be ignored.
- In the **Description of Discrepancy** field, please include a full description of the process you followed to encounter the issue, as well as the issue itself.
- In the **Initiator Recommended Solution** field, please provide a recommendation as to how the RID can be resolved to your satisfaction.

The remainder of the fields will be populated during the panel discussion at the review meeting.

IMPORTANT: The RID deadline is September 28th 2018.

The system will close on 28th September 2018 at 23:59 (CET).

You **must** have all of your items raised within the system by this time.

4.1 Raising Editorial Issues

Editorials are typographical errors and issues that have no impact on the understanding and/or use of the data provided. In case you identify any issues that are editorial in nature, they should be raised using the 'Editorials' menu in the blue bar at the top of the screen. As with a RID, please complete all applicable fields when raising an editorial. Note that these will not be discussed in the review meeting, and will be sent to the teams separately.

5 REVIEW MEETING

The panel meeting for this review will take place 9-10th October 2018 at ESAC, Madrid. For US reviewers, a parallel meeting will take place at PDS SBN, University of Maryland. The exact agenda will be communicated to you by e-mail before the meeting, detailing when each instrument will be discussed within each meeting, and when joint discussions between the US and European reviewers will take place.

Further details of the review meeting are provided in Section 5.4 of the Rosetta Science Archive EOM Comet Data Review Procedure [1].



6 CONTACT POINTS

In case of any questions related to the review, don't hesitate to contact the relevant person from the table below:

Role	Name	E-Mail	Telephone
Review Manager (issues using the ECLIPSE system)	Dave Heather	dheather@cosmos.esa.int	+34 918131183
RPCMIP Archive Scientist (specific RPCMIP issues)	Dave Heather	dheather@cosmos.esa.int	+34 918131183
Rosetta SGS Archive Team (general Rosetta review issues)	Rosetta Archive Team	rsgs_arc@sciops.esa.int	
PDS Contact (specific US issues)	Tilden Barnes	tbarnes4@astro.umd.edu	