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DOCUMENT

ROSINA: 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 **ROSINA**.

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

2.1 What data is under review?

The entire comet phase for level 3 (calibrated), 4 (resampled) and 5 (derived) is under review. The datasets include data from the three sub-instruments: RTOF, DFMS and COPS.

In addition there is a User Manual draft that is not integrated yet into any data set but that needs to be reviewed. This file is called `rosina_data_user_manual_draft.pdf`.

The exact data set names are the following:

L3 data

RO-C-ROSINA-3-PRL-V1.0
RO-C-ROSINA-3-ESC1-V1.0
RO-C-ROSINA-3-ESC2-V1.0
RO-C-ROSINA-3-ESC3-V1.0
RO-C-ROSINA-3-ESC4-V1.0
RO-C-ROSINA-3-EXT1-V1.0
RO-C-ROSINA-3-EXT2-V1.0
RO-C-ROSINA-3-EXT3-V1.0

Level 4 data

RO-C-ROSINA-4-PRL-V1.0
RO-C-ROSINA-4-ESC1-V1.0



RO-C-ROSINA-4-ESC2-V1.0
RO-C-ROSINA-4-ESC3-V1.0
RO-C-ROSINA-4-ESC4-V1.0
RO-C-ROSINA-4-EXT1-V1.0
RO-C-ROSINA-4-EXT2-V1.0
RO-C-ROSINA-4-EXT3-V1.0

Level 5 data

RO-C-ROSINA-5-PRL-V1.0
RO-C-ROSINA-5-ESC1-V1.0
RO-C-ROSINA-5-ESC2-V1.0
RO-C-ROSINA-5-ESC3-V1.0
RO-C-ROSINA-5-ESC4-V1.0
RO-C-ROSINA-5-EXT1-V1.0
RO-C-ROSINA-5-EXT2-V1.0
RO-C-ROSINA-5-EXT3-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, we will contact you separately with details of how you can obtain the data via a secure ftp connection. The data under review is not public yet in the PSA archive.

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

Please read first the AAREADME.TXT file (in root directory), the DATASET.CAT (in CATALOG directory) and the EAICD document (in the DOCUMENT directory) to familiarize yourself with the data sets before starting to check the data themselves.

Calibration information can be found in the CALIB directory.

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).



There are three types or levels of datasets:

- RO-C-ROSINA-3-XXX-V1.0 = Level 3= Calibrated data (according to PDS definition)
- RO-C-ROSINA-4-XXX-V1.0 = Level 4= Resampled data (according to PDS definition)
- RO-C-ROSINA-5-XXX-V1.0 = Level 5 = Derived (according to PDS definition)

Within each level there are many datasets covering different mission periods. As there is so much data then you might want to choose data for each level from different time periods in the mission in order to cover more periods without multiplying the work.

A summary of what you will find in each dataset and what we would like you to focus on is given below:

Level 3

- Should include data for the whole comet phase including RTOF and DFMS (COPS is included in Level 4 only)
- Should include fragmentation and sensitivity tables.
- The MTP8 directory of the RO-C-ROSINA-3-PRL-V1.0 dataset contains H₂O DFMS spectra with commanded mass 18 with better precision in the mass scale (L3 improved product – sample of ~1 month for mass 18). **Please look at this particular dataset.**
- A preliminary sample of Level 3 data including only RTOF data had already been reviewed whereas DFMS data is totally new. The calibration, specially the DFMS one, has to be reviewed.

Level 4

- Includes calibrated COPS data for the whole comet phase.
- These datasets are new and have never been reviewed.

Level 5

- At this point in time Level 5 should contain times series (local densities) for all major species (H₂O, CO, CO₂, O₂). In the future these datasets will contain other minor species.
- These datasets are new and have never been reviewed.

Outside the dataset folders

In addition please look at the Science User Guide draft document that can be found outside of the dataset folders. A final version of this document will be integrated into the datasets in the future.



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 **ROSINA-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 **Datapack 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
Archive Scientist (specific ROSINA issues)	Diego Fraga	dfraga@sciops.esa.int	+34 91 81 31 578
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	