esac

European Space Astronomy Centre
P.O. Box 78
28691 Villanueva de la Cañada
Madrid
Spain
T +34 91 8131 100
F +34 91 8131 139
www.esa.int

DOCUMENT

MIDAS: Rosetta Enhanced Science Archive Review Procedure

Prepared by Diego Fraga
Reference RO-SGS-PR-2021-App6
Issue 1
Revision 0
Date of Issue 08/08/2017
Status For information
Document Type PR
Distribution

European Space Agency
Agence spatiale européenne

APPROVAL

Title	
Issue 1	**Revision** 0
Author	**Date** 08/08/2017
Approved by	**Date**

CHANGE LOG

Reason for change	Issue	Revision	Date

CHANGE RECORD

Issue 1	Revision 0		
Reason for change	**Date**	**Pages**	**Paragraph(s)**

Table of contents:

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 **MIDAS**.

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 data under review is:

- One dataset per mission phase of level 3 (calibrated data) which include improvements compared to the previously reviewed version. These changes include for example new documents, a new XYZ calibration and browse images.
- A new Level 5 (derived) dataset including a particle catalogue.
- Flight Spare (FS) dataset. These are experimental and calibration tests that were done on ground with the spare instrument that stayed on ground. It is included in the review one sample dataset covering part of the ground data which is representative of the whole ground data.

The following subsections list all datasets submitted for this review.

2.1.1 Level 3 Comet Phase Data:

RO-D-MIDAS-3-PRL-SAMPLES-V3.0
RO-C-MIDAS-3-ESC1-SAMPLES-V3.0
RO-C-MIDAS-3-ESC2-SAMPLES-V3.0
RO-C-MIDAS-3-ESC3-SAMPLES-V3.0

RO-C-MIDAS-3-ESC4-SAMPLES-V3.0
RO-C-MIDAS-3-EXT1-SAMPLES-V3.0
RO-C-MIDAS-3-EXT2-SAMPLES-V3.0
RO-C-MIDAS-3-EXT3-SAMPLES-V3.0

2.1.2 Level 5 data

RO-C-MIDAS-5-PRL-TO-EXT3-V1.0

2.1.3 FS ground data

RO-CAL-MIDAS-3-GRND-REF-2008-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

There are no known scientific level issues, and all RIDs from previous reviews have been addressed. 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).

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
    - 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.
    - 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)
    - **MIDAS-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 MIDAS 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	

7 APPENDIX: SUMMARY OF CHANGES COMPARED TO PREVIOUS VERSIONS

Level 3 dataset updates (from V2.0)

Version 3.0 implements the dataset improvements agreed in the MIDAS Enhanced Archive Data Delivery Contract work packages 101, 102 and 302.
The following datasets are affected:
RO-C-MIDAS-3-EXT3-SAMPLES-Vx.0
RO-C-MIDAS-3-EXT2-SAMPLES-Vx.0
RO-C-MIDAS-3-EXT1-SAMPLES-Vx.0
RO-C-MIDAS-3-ESC4-SAMPLES-Vx.0
RO-C-MIDAS-3-ESC3-SAMPLES-Vx.0
RO-C-MIDAS-3-ESC2-SAMPLES-Vx.0
RO-C-MIDAS-3-ESC1-SAMPLES-Vx.0
RO-D-MIDAS-3-PRL-SAMPLES-Vx.0

General (/):

Updated contact names and addresses (VOLDESC.CAT)
Updated dataset content description (AAREADME.TXT)

Documentation (/DOCUMENT):

Updated DOCINFO.TXT, MID_EAICD.ASC|PDF
Added image scan table MID_IMG_CATALOG.TAB|LBL
Added tip mapping table MID_TIP_CATALOG.TAB|LBL
Added enhanced calibration report MID_CALIBRATION.PDF
Added reconstructed images report MID_REC_IMAGES.PDF
Added tip image catalogue MID_TIP_IMAGES.PDF
Added MIDAS analysts notebook MID_ANALYSTS_NBOOK.PDF

Data files (/DATA/IMG, /DATA/ROI, /DATA/SPA):

Recalibrated images in X/Y/Z based on the results from the calibration target scans
Complemented dataset with reconstructed images (marked with (R) in DATASET.CAT)
Added particle mask image files (*_MK.IMG)
Added document links to detached label files (*_DESC references)
Fixed HORIZONTAL/VERTICAL_PIXEL_SCALE calculation (*.LBL)
Fixed xlength/ylength calculation in image files (*.IMG)
Fixed number of columns in ROI and SPA data products

Browse data files (**NEW**, /BROWSE):

Added browse images for Planetary Science Archive (/BROWSE/PRV_*_ZS.JPG)

Catalog files (/CATALOG):

Updated to latest versions (/DOCUMENT/CATALOG)
Marked reconstructed and mask images in image list (DATASET.CAT)

Level 5 Dataset (**NEW**)

This new dataset contains enhanced image data products, covering all mission phases after hibernation (PRL to EXT3). Only images containing cometary dust particles are included.
The name of the dataset is as follows:
RO-C-MIDAS-5-PRL-TO-EXT3-V1.0

Data files (/DATA):

The level 5 dataset just contains the image data products (/IMG) as well as the cumulative cantilever and target history files

Browse data files (/BROWSE):

Additional browse images showing scan position on target (PRV_*_SP.JPG)
Additional browse images showing identified particles (PRV_*_MK.JPG)

Catalog files (/CATALOG):

Like in the level 3 datsets, the DATSET.CAT file contains a complete list of images provided in the dataset.

FS ground data (**NEW**)

This new dataset contains calibration/test data obtained on ground with the FS model (model that stayed on ground). The provided dataset is representative of the whole produced data. All the ground data will be delivered following the same approach in the future.

The name of the dataset is as follows:
RO-CAL-MIDAS-3-GRND-REF-2008-V1.0