

SOLAR ORBITER





- 1/11 -

ROC Acceptance Key Point Organization Note

Prepared by:	Function:	Signature:	Date
X.Bonnin	RPW Ground Segment Project Manager		20/12/2019

Change Record				
Issue	Rev.	Date	Authors	Modifications
01	00	20/12/19	X.Bonnin	First issue
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CLASSIFICATION

PUBLIC

RESTRICTED

1. GENERAL

1.1 Scope of the Document

This document defines the procedure for conducting the Acceptance Key Point (AKP) of the RPW Operations Centre (ROC). In particular, this note:

- Defines the context of the review,
- Defines the review objectives,
- Describes the review process, schedule and gives a preliminary agenda of the day of the review,
- Defines the RIDs creation procedure.

The AKP will take place at the Meudon Observatory on January 7, 2020.

1.2 Applicable Documents

This document responds to the requirements of the documents listed in the following table:

Mark Reference/Iss/Rev Title of the document Authors Date



CNRS-Observatoire de PARIS Section de MEUDON – LESIA 5, place Jules Janssen 92195 Meudon Cedex – France

Laboratoire d'Études Spatiales et d'Instrumentation en Astrophysique

AD1		
AD2		
AD3		

1.3 Reference Documents

This document is based on the documents listed in the following table:

Mark	Reference/Iss/Rev	Title of the document	Authors	Date
RD1				
RD2				
RD3				

2. CONTEXT

In the framework of a Solar Orbiter launch scheduled on February 2020, and in absence of review from ESA, a 'acceptance' key point (AKP) is organized, in order to verify the ROC is fully operational to ensure activities planned during the commissioning and cruise phase.

3. OBJECTIVES

The AKP shall fulfil the following objectives:

- Review the capability of the ROC to perform activities planned during the commissioning;
- Review the capability of the ROC to perform activities planned during the cruise phase ;

4. PROCESS AND SCHEDULE

1.4 Planning

The table below gives the overall AKP planning. The participants and group definition are given in the next section.

Event	Date	Comment
AKP data package delivery by the project group	20/12/2019	The AKP data package will be delivered using the TBD mechanism. The data package content is described in the section 5.
AKP meeting	07/01/2019	The AKP meeting will take place in the conference room at the Chateau (9th building) of the Meudon Observatory (Paris, France). A map of Meudon Observatory site is given in the section 7. A visiocon system will be also available.
AKP RIDS release	To be decided in conclusion of the AKP meeting	All of the RIDS have been sent to the AKP participants, as explained in the section 1.6.
AKP project group RIDS response release	To be decided in conclusion of the AKP meeting	All of the RIDS responses have been released by the project group, as explained in the section 1.6.
AKP	To be decided in	A dedicated meeting may be organized

questions/answers	conclusion of the AKP	between the project and review groups
meeting	meeting	
AKP closure	To be decided in	
meeting and	conclusion of the AKP	
review group	meeting	
final report		

1.5 Participants

1.5.1 Project group

The project group has to:

- Prepare and deliver the KP package
- Participate to the KP meeting, especially it must present progresses made in the project to the reviewer, in agreement with the KP objectives.
- Submit RIDS responses to the reviewer group
- Participate to the KP questions/answers meeting

The project group is formed of the following people. The group leader is indicated in bold.

Name	Institute	Function
Olga Alexandrova	LESIA	RPW CoI
Xavier Bonnin	LESIA	RPW ground segment project manager
Sylviane Chaintreuil	LESIA	RPW system manager
Moustapha Dekkali	LESIA	RPW MEB manager
Nicolas Fuller	LESIA	RPW ground segment software engineer
Loic Gueguen	LESIA	RPW MEB GSE manager
Sonny Lion	LESIA	RPW ground segment software engineer
Milan Maksimovic	LESIA	RPW PI & TNR-HFR Lead CoI
Lee-Roy Malac Allain	LESIA	RPW flight software & command/control engineer
Quynh Nhu Nguyen	LESIA	RPW ground segment & TNR-HFR software engineer
Stéphane Papais	LESIA (NEXEYA)	RPW ground segment software product assurance manager
Philippe Plasson	LESIA	RPW flight software & command/control manager
Antonio Vecchio	LESIA	RPW ground segment support scientist

The following people also belong to the project group as RPW lead CoI teams.

Name	Institute	Function
David Pisa	IAP	TDS data calibration software engineer

	Jan Soucek	IAP	TDS Lead CoI
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Name	Institute	Function
Erik Johansson	IRF-U	BIAS data calibration software engineer
Yuri Khotyaintsev	IRF-U	BIAS Lead CoI / RPW data definition support
Andris Vaivads	IRF-U	BIAS Co-I

Name	Institute	Function
Jean-Yves Brochot	LPC2E	SCM data calibration software engineer
M.Kretzschmar	LPC2E	SCM CoI / SCM data calibration and ground segment manager

Name	Institute	Function
Bruno Katra	LPP	LFR flight et data calibration software engineer
Thomas Chust	LPP	LFR Lead Co-I
Rodrigue Piberne	LPP	LFR calibration software support engineer

1.5.2 Review group

The review group has to:

- Read and review the KP data package
- Participate to the KP meeting as reviewers
- Emit the KP RIDS for the project group.
- Participate to the KP conclusion meeting

The review group is formed of the following people. The group leader is indicated in bold.

Name	Institute	Function
Isabelle Fratter	CNES	Solar Orbiter Project Manager (French contribution)
Eric Lorfevre	CNES	RPW project manager / system engineer
Véronique Valette	CNES	INSIGHT System development manager
Desi Raulin	CNES	RPW ground segment development support engineer
Michel Rouzé	CNES	RPW Project exploitation Manager
Dominique Bagot	CNES	Quality assurance engineer
Jean-Michel Travert	CNES	RPW ground segment command/control support engineer

Depending of the availability, the review group may also include the following people from the Solar Orbiter SOC and MOC.

Name	Institute	Function
Sylvain Lodiot	ESOC	Solar Orbiter mission operations manager
Andrew Walsh	ESAC	Instrument operations scientist

1.5.1 Invited group

None

1.6 AKP RIDS management

1.6.1 AKP RIDS life-cycle

Every AKP participant can emit RIDS.

A dedicated Excel template file will be delivered in the AKP data package, in order to fill RIDS.

The naming convention of the template file is:

ROC-GEN-QAP-NTT-00050-LES_IssueXX_RevYY(ROC_RIDS_TEMPLATE_FILE).xlsx

Where XX and YY are respectively the issue and revision of the document.

The Excel files with RIDS will have to be sent to **Desi Raulin** (desi.raulin@cnes) by email - with copy to **Eric Lorfevre** (eric.lorfevre@cnes.fr) - after the AKP meeting and up to one day before the AKP RIDS release deadline.

Desi Raulin will then merge the Excel files and communicate by email the resulting file to the AKP participants.

In the same time, the list of RIDS will be reported by Desi Raulin into the dedicated ROC-REVIEWS project of the LESIA JIRA Web site.

Then, the project group leader shall reply to RIDS using JIRA. It shall be done before the AKP RIDS responses release deadline.

In addition to the minutes of meeting, possible updates of the RIDS on JIRA will be realized by a project group member during the AKP questions/answers meeting, in order to keep track of the modification.

The final review group report, as well as an export file of the RIDS on JIRA will have to be sent by email to all of the AKP participants and and in the dedicated /RIDS folder of the data package.

1.6.1 AKP RIDS template file description

The RIDS template file shall at least contain the following columns:

- The RIDS sequence number in the file (i.e., integer number starting at 1)
- The status of the RIDS ("OPEN", "CLOSED")
- The level of severity ("Major" or "minor")
- The name of the RIDS originator
- The reference and document title
- The page and section

- The discrepancy description
- The project group reply
- The originator comment (with date)

Dedicated columns for the project group replies and the originator comments will have to be let empty when the reviewers submitting RIDS.

5. AKP DATA PACKAGE

The AKP data package will have to be delivered as a single zip file, which the following name convention:

ROC-GEN-DPK-EID-00117-LES_IssXX_RevYY(AKP_Datapackage).zip

, Where XX and YY are respectively the issue and the revision of the package. The first release shall be the issue 01 revision 00.

The AKP data package shall contain the following items:

- /Submitted contains the AKP deliverables
- /Refs contains the applicable/reference documents
- ROC-GEN-QAP-NTT-00050-LES_IssueXX_RevYY(ROC_RIDS_TEMPLATE_FILE).xlsx
- readme.txt
- /Presentations will contain the AKP meeting presentations
- RIDS/ -- will contain the RIDS export file and review group final report

The table below gives the list of documents to be found into the /Submitted directory. The "submitted" documents are considered as major and shall be read by the review group.

Document title	Document reference	Issue
ROC Concept & Implementation Requirements Document (CIRD)	ROC-GEN-SYS-PLN-00002-LES	2.0
ROC Software System Specification (RSSS)	ROC-GEN-SYS-SPC-00026-LES	1.2
ROC User Requirements Document (URD)	ROC-GEN-SYS-URD-00064-LES	1.0
ROC Software Product Assurance Plan (SPAP)	ROC-GEN-MGT-QAD-00033-LES	1.3
ROC Validation and Verification Plan (RVVP)	ROC-GEN-SYS-PLN-00040-LES	2.2
RPW science Data Validation and Verification Plan (DVVP)	ROC-GEN-SCI-PLN-00077-LES	1.0
ROC Software System V4 Validation Campaign Test Plan (RSS4VC Test Plan)	ROC-TST-VAL-PLN-00108-LES	1.1

ROC Software System V4 Validation Campaign Test Report (RSS4VC Test Report)	ROC-TST-VAL-PLN-00111-LES	1.2
ROC Software Product Assurance Milestone Report (SPAMR)	ROC-GEN-QAP-NTT-00051-LES	2.0
ROC traceability matrix	ROC-GEN-SYS-CVM-00049-LES	2.0
ROC Software Source Code Analysis	ROC-GEN-QAP-NTT-00112-LES	1.0
RODP Software Configuration File	ROC-GEN-QAP-CDL-00113-LES	1.0
RGTS Software Configuration File	ROC-GEN-QAP-CDL-00114-LES	1.0
MUSIC Software Configuration File	ROC-GEN-QAP-CDL-00115-LES	1.0

In addition, the /Refs directory shall contain all of the applicable/reference documents in the pdf format.

"*ROC-GEN-QAP-NTT-00050-LES_IssueXX_RevYY(ROC_RIDS_TEMPLATE_FILE).xlsx*" is the Excel template to be used for the RIDS (see section 1.6.1).

A "readme.txt" file shall be included to provide the description of the data package content, in order to help the readers to find a document easily.

6. AKP MEETING AGENDA

Table below gives the agenda of the AKP meeting. Time for questions is included in the duration of the presentations.

The room should be open 30 minutes before the AKP start.

START TIME	DURATION	ΤΟΡΙϹ	PRESENTER
10:00	5 min	Welcome, round table, objectives of the KP	X.Bonnin
Context			
10:05	15 min	ROC operational design	X.Bonnin
10:20	10 min	ROC validation test environment	S.Lion
10:30	10 min	ROC software quality	S.Papais
ROC data processing capability review			

10:30	2h30	ROC data processing capability review (including coffee break):	All	
		• Data retrieval		
		• Data production		
		• Data distribution		
		• Data storage/archive		
		• Data processing infrastructure monitoring		
13:00	1h30	Lunch		
	ROC operations capability review			
14:30	2h30	ROC operations capability review (including coffee break):	All	
		• RPW commanding		
		• RPW monitoring		
		• RPW ground support		
		• RPW operation infrastructure monitoring		
		Ending sessions		
17:00	30 min	Review group debriefing	Review group only	
17:30	30 min	Conclusion and action-items	Review group leader	
18:00		End of meeting		

7. ANNEX: MEUDON OBSERVATORY LOCATION AND MAP

The Meudon Observatory is located at:

Observatoire de Paris, site de Meudon

5, place Jules Janssen

92195 MEUDON

Figure above gives a map of the Meudon Observatory site. The meeting will take place at the **conference room** of the "Chateau" building (N° 9 on the figure).

See also https://www.obspm.fr/acces-au-site-de-meudon-de-l.html.



8. DISTRIBUTION LIST

LISTS	Tech_LESIA
See Contents lists in "Baghera Web":	Tech_MEB
Project's informations / Project's actors / RPW_actors.xls	Tech_RPW
and tab with the name of the list	[Lead-]Cols
or NAMES below	Science-Cols

INTERNAL



LESIA	
CNRS	

EXTERNAL (To modify if necessary)

	C. FIACHETTI
	E.GUILHEM
	C. LAFFAYE
	R.LLORCA-CEJUDO
CNES	E.LOURME
	M-O. MARCHE
	J.PANH
	B.PONTET
	L. BYLANDER
	C.CULLY
IRFU	A.ERIKSSON
	SE.JANSSON
	A.VAIVADS
	P. FERGEAU
	G. JANNET
LPC2E	T.DUDOK de WIT
	M. KRETZSCHMAR
	V. KRASNOSSELSKIKH
SSL	S.BALE

AsI/CSRC	J.BRINEK
	P.HELLINGER
	D.HERCIK
	P.TRAVNICEK
	J.BASE
	J. CHUM
11.5	I. KOLMASOVA
IAP	O.SANTOLIK
	J. SOUCEK
	L.UHLIR
	G.LAKY
	T.OSWALD
IWF	H. OTTACHER
	H. RUCKER
	M.SAMPL
	M. STELLER
	T.CHUST
LPP	A. JEANDET
	P.LEROY
	M.MORLOT