S6VT Terms of Reference

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Change Record

Version	*Date*	*Description of Changes*
1	18/11/2019	Initial version for review by MPWG
1A	22/01/2020	Revised based on inputs from MPWG
1B	23/01/2020	Version coordinated by EUMETSAT and ESA

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1 INTRODUCTION

Jason-CS/Sentinel-6 mission is implemented by ESA, EUMETSAT, NASA and NOAA, with the system support of CNES. The agencies seek the involvement of the international community with experience in conducting scientific verification and validation of Jason-CS/Sentinel-6 type data, and in using independent Fiducial Reference Measurements (FRM), field experiments and campaigns to validate these data. In order to achieve this purpose, ESA, EUMETSAT, NASA, NOAA and CNES have convened a Jason-CS/Sentinel-6 Validation Team (S6VT) selected through:

- a permanent open call issued jointly by EUMETSAT and ESA for worldwide PIs selection;
- a specific ROSES call issued by NASA and NOAA for selection of US members via the Ocean Surface Topography Science Team.
- a specific TOSCA call issued by CNES for selection of members via the Ocean Surface Topography Science Team.

1.1 Purpose and scope

The purpose of this document is to specify the scope and membership of the Jason-CS/Sentinel-6 Validation Team.

1.2 Reference Documents

RD-1	Sentinel-6 End User Requirements Document	EUM/LEO-JASCS/REQ/12/0013, issue v3E
RD-2	Cal/Val Concept Plan	ESA JC-PL-ESA-MI-0500, issue 2 rev 1

2 JASON-CS/SENTINEL-6 VALIDATION TEAM

2.1 Objectives

The overall objective of the S6VT is to **support the implementation of the Jason-CS/Sentinel-6 calibration and validation activities and ensure the best possible outcomes for the mission.**

The group will perform validation activities to provide independent validation of the products, experimental data and advice to the Agencies for improvement. They will report formally to the Sentinel-6 mission partners, through the Sentinel-6 Mission Performance Working Group, to characterise the quality and performance of the Mission and to support the compliance with the End User Mission Requirements [RD-1].

Specifically, under this call, the Agencies seek contribution to:

- Altimeter validation experiments and support of calibration activities;
- Microwave radiometer validation experiments and support of calibration activities;
- Level 1 and Level 2 product validation experiments and support of calibration activities;
- The use of independent Fiducial Reference Measurements to achieve the above means;
- Precise Orbit Determination (POD) validation experiments and support of calibration activities;
- User product development and detailed investigation of Level 1 and Level 2 processing algorithms.
- Advice towards evolution of Level 1 and Level 2 processing algorithms and ancillary models.

S6VT members are expected to interact with the Agencies for common goals (e.g. vicarious calibration, cal/val systems and tools, options for shared field campaigns, expertise, shared reporting). The main activities foreseen by the S6VT include:

1. Gathering and coordinating international expertise to support the partners with Mission Performance assessments;
2. Facilitating access to operational network datasets (e.g. buoys data, radiosondes) and infrastructures (e.g. tide gauges, transponder);
3. Performing dedicated campaigns addressing specific issues;
4. Foster international cooperation with other Cal/Val projects, other scientific communities and Agencies;
5. Enhance communication on Jason-CS/Sentinel-6 mission performance.

2.2 Membership

The S6VT will bring together leading scientists from the altimetry community with experience in validation activities to support the Agencies in performance assessment and improvements of the products of the mission.

S6VT members are selected after submission of a proposal to the respective calls for membership and selection by the respective collaborating project partners - EUMETSAT, ESA,

NOAA and NASA supported by CNES. A collaborative agreement will be established with the S6VT members formalising the terms and conditions of the collaboration.

EUMETSAT and ESA will issue a specific call for participation in the S6VT, aimed towards non-US members, and will be responsible for selecting members from responses to that call. This call will be a permanently open call allowing the submission of a proposal at any time. This is designed to provide the widest opportunity for the S6VT to engage with the mission.

S6VT US members will be selected through the NASA and NOAA ROSES call for participation in the Ocean Surface Topography Science Team. CNES will select members through a TOSCA call coordinated with the ROSES call from NASA and NOAA. Because existing NASA, NOAA and CNES calls already included requests for validation support of Jason-CS/Sentinel-6, researchers successfully funded under those existing teams will be invited to join the S6VT, until new selections are made.