

FDR4ALT

FDR4ALT Test Data Set User Notice



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Public

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1 Introduction

This document has been written in the frame of the ESA FDR4ALT project.

1.1 The FDR4ALT Project

In the framework of the European Long Term Data Preservation Program (LTDP+) which aims at generating innovative Earth system data records named Fundamental Data Records (basically level 1 altimeter and radiometer data) and Thematic Data Records (basically level 2+ geophysical products), ESA/ESRIN has launched a reprocessing activity of ERS-1, ERS-2 and ENVISAT altimeter and radiometer dataset, called the FDR4ALT project (Fundamental Data Records for Altimetry). A large consortium of thematic experts has been formed to perform these activities which are:

- 1) To define products including the long, harmonized record of uncertainty-quantified observations.
- 2) To define the most appropriate level 1 and level 2 processing.
- 3) To reprocess the whole times series according to the predefined processing.
- 4) To validate the different products and provide them to large communities of users focused on the observation of the atmosphere, ocean topography, ocean waves, coastal, hydrology, sea ice, ice sheet regions. The different products are:
 - ALT FDR: Fundamental Data Records (altimetry)
 - MWR FDR: Fundamental Data Records (radiometry)
 - Inland Waters Thematic Data Product
 - Ocean & Coastal Topography Thematic Data Product
 - Ocean Waves Thematic Data Product
 - Land-Ice Thematic Data Product
 - Sea-Ice Thematic Data Product
 - Atmospheric Thematic Data Product

1.2 Purpose and scope of this user notice

This test dataset was produced to give users a first glimpse of the future FDR4ALT products that will be released in 2023. This test dataset will especially help users to familiarize with the format and content of the future FDR4ALT products. At the time of delivering this test dataset, the FDR4ALT project is still on-going and is planned to end in March 2023.

2 Description of the Test Dataset

2.1 Data Access

The Test Data Set (TDS) is available via FTP:

FTP address :ftp.cls.fr

Login : FDR4ALT

Password : communicated separately

To obtain the password, please contact fpiras@groupcls.com (Fanny Piras, Project Officer) or pierre.femenias@esa.int (Pierre Féménias, ESA Contract Officer).

2.2 General information about the test dataset

This test dataset is available only for the ENVISAT mission, over two cycles of data: cycle 55 (winter) and cycle 80 (summer).

This test dataset is identified as version 0.0 of the FDR4ALT products.

2.3 Detailed information about the test dataset

All information about format and content of the dataset can be found in the [Products Requirements & Format specifications document](#) that is available in the FTP together with the test data set. Please note that this document is not in final version yet and could be modified before the end of the project.

Please note that this test dataset has some differences with the future FDR4ALT final products. These differences are detailed in this section for each TDP/FDR.

Information about the product's content and the FDR4ALT project can also be found on the project website www.fdr4alt.org.

2.3.1 ALT FDR

The test dataset is identical to the future FDR4ALT products.

2.3.2 MWR FDR

Please note that the fields “*short tb_238_uncertainty*” and “*tb_365_uncertainty*” are filled with default value. They will be replaced by real values for the official release of the FDR4ALT products.

2.3.3 Inland Waters TDP

The test dataset is identical to the future FDR4ALT products.

2.3.4 Ocean & Coastal Topography TDP

Please note that the dedicated coastal processing is not available for the 1Hz groups (it has been replaced with the open ocean processing for the sake of this TDS) but will be available for the official release of the FDR4ALT products.

Also note that the uncertainty fields are not filled for this TDS but will be available in the future FDR4ALT products.

2.3.5 Ocean Waves TDP

Please note that the uncertainties are not filled for this TDS but will be available in the future FDR4ALT products.

2.3.6 Land-Ice TDP

The test dataset is identical to the future FDR4ALT products.

2.3.7 Sea-Ice TDP

The test dataset is identical to the future FDR4ALT products.

2.3.8 Atmospheric TDP

Please note that the “expert” group is not available in the Test Data Set. Only the “main” group has been produced. The expert group will be of course available for the official release of the FDR4ALT products.

Appendix A - FDR4ALT deliverables

The table below lists all FDR4ALT deliverables with their respective ID number and confidentiality level.

Document	ID	Confidentiality Level
Products Requirements & Format Specifications Document	[D-1-01]	Public
	[D-2-02]	
Roadmap & Product Summary Document	[D-1-02]	Project Internal
Data Requirements Document	[D-1-03]	Project Internal
System Maturity Matrix	[D-1-04]	Project Internal
Examples of products	[D-1-05]	Project Internal
Review Procedure Document	[D-1-06]	Project Internal
Review Data Package	[D-1-07]	Project Internal
Phase 1 Review Report Document	[D-1-08]	Project Internal
Detailed Processing Model Document	[D-2-01]	Public
Round Robin Assessment Report Document	[D-2-03]	Public
Data Production Status Report	[D-3-01]	Project Internal
Final Output Dataset	[D-3-01]	Public
Product Validation Plan	[D-4-01]	Project Internal
Product Validation Report	[D-4-02]	Public
Uncertainty Characterization Definition Document	[D-5-01]	Project Internal
Uncertainty Characterization Report	[D-5-02]	Public
Product User Guide	[D-5-03]	Public

Table 1 : List of FDR4ALT deliverables

Appendix B - Acronyms

ALT	Altimetry
CLS	Collecte Localisation Satellite
ENVISAT	ENVIronment SATellite
ERS	European Remote-Sensing Satellite
ESA	European Space Agency
FDR	Fundamental Data Records
MWR	Microwave Radiometer
OIB	Operation Ice Bridge
OLC	Open Loop Calibration
OSTST	Oceanography Surface Topography Science Team
RD	Reference Document
SST	Sea Surface Temperature
SWH	Significant Wave Height
TDP	Thematic Data Products
TDS	Test Data Set
WTC	Wet Tropospheric Correction