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# GUIDE FOR THE RA-2/MWR REAL DATA SAMPLE PRODUCTS CD-ROM

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## 1 INTRODUCTION

This guide describes the contents of the RA-2/MWR real data sample products cd-rom.

Level 2 (geophysical) products for two complete orbits of real data are included in this cd-rom, along with the corresponding auxiliary files that were used to process them. The data products included are Fast delivery RA-2/MWR products, FDGDR, and their extracted marine abridged records products, FDMAR, for both orbits. Also given is one Sensor Geophysical Data Records product, SGDR, containing the RA-2 waveforms.

A description of the main characteristics of the products is presented in section 2.

This cd-rom is structured as a directory tree, and each directory is dedicated to a different orbit. This is described in section 3.

## 2 DESCRIPTION OF THE PRODUCTS

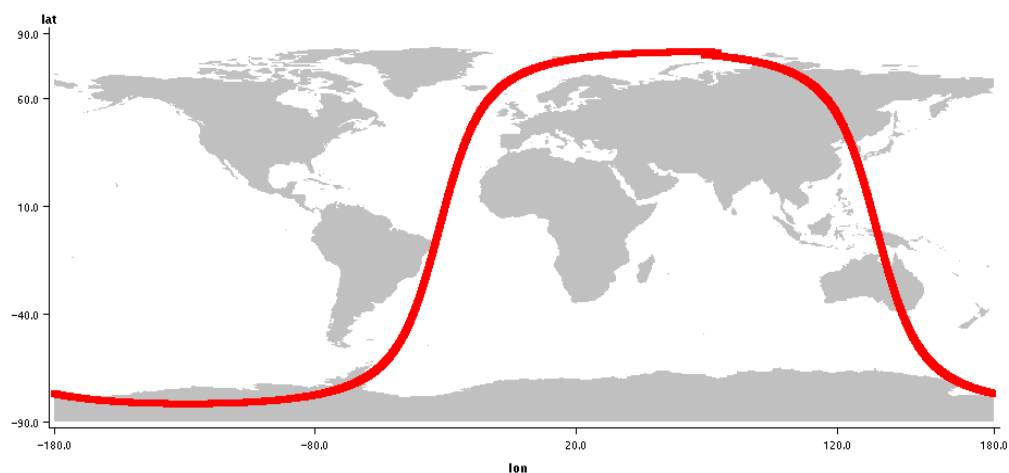
### 2.1 Level 2 products corresponding to orbit 1523

This orbit (duration of almost 100 min containing 5369 RA-2 source packets, approximately 1 Hz measurements) begins and ends over the Arctic, crosses entirely the Atlantic ocean (from North to South) and Antarctica, turning back to the Arctic over Australia and Siberia (see fig. 1).

The overlap with the MWR data is almost complete:

RA-2 sensing start time: 11:43:18  
MWR sensing start time: 11:43:11  
RA-2 sensing stop time: 13:22:58  
MWR sensing stop time: 13:22:10

The Level 2 products for this orbit have been produced using analysed ECMWF PDS formatted data (not included in cd-rom) and a precise DORIS orbit.



Records : 11 to 5369

X : lon (degrees) : field 5.

Y : lat (degrees) : field 4.

File Title : RA2\_WHV\_2PTL0P20020615\_114318\_000059012006\_00467\_01523\_0000.N1

Data Set : RA2\_OCEAN\_DATA\_FOR\_LEVEL\_2

**fig.1: Geographical plot of orbit 1523**

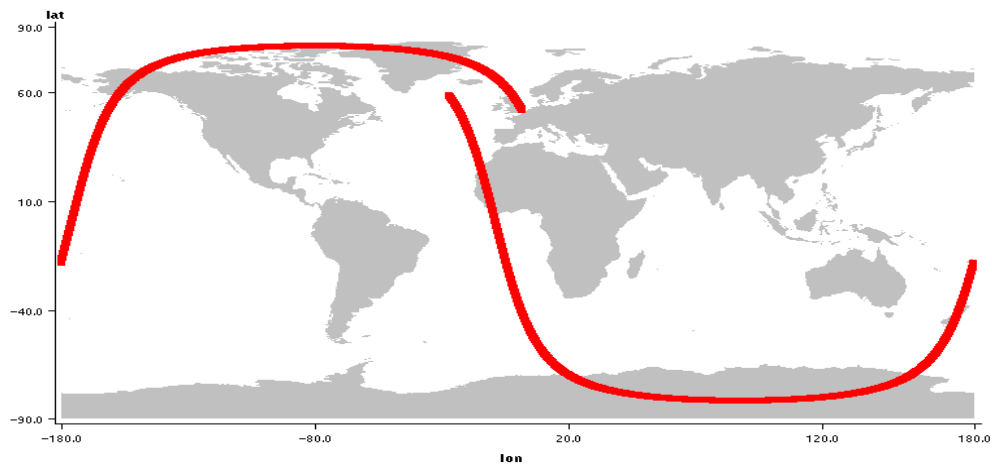
## 2.2 Level 2 products corresponding to orbit 1815

This orbit (over 100 min containing 5519 RA-2 source packets, approximately 1 Hz measurements) begins in Europe (over Netherlands) and ends over Greenland, crossing entirely the Pacific ocean (from North to South) and Antarctica, and turning back along the Atlantic ocean from South to North crossing the Western African coast (see fig. 2).

The overlap with the MWR data is almost complete in this case as well:

```
RA-2 sensing start time: 21:08:11
MWR sensing start time: 21:08:16
RA-2 sensing stop time: 22:50:39
MWR sensing stop time: 22:50:03
```

The Level 2 products for this orbit have been produced using analysed ECMWF PDS formatted data (not included in cd-rom).



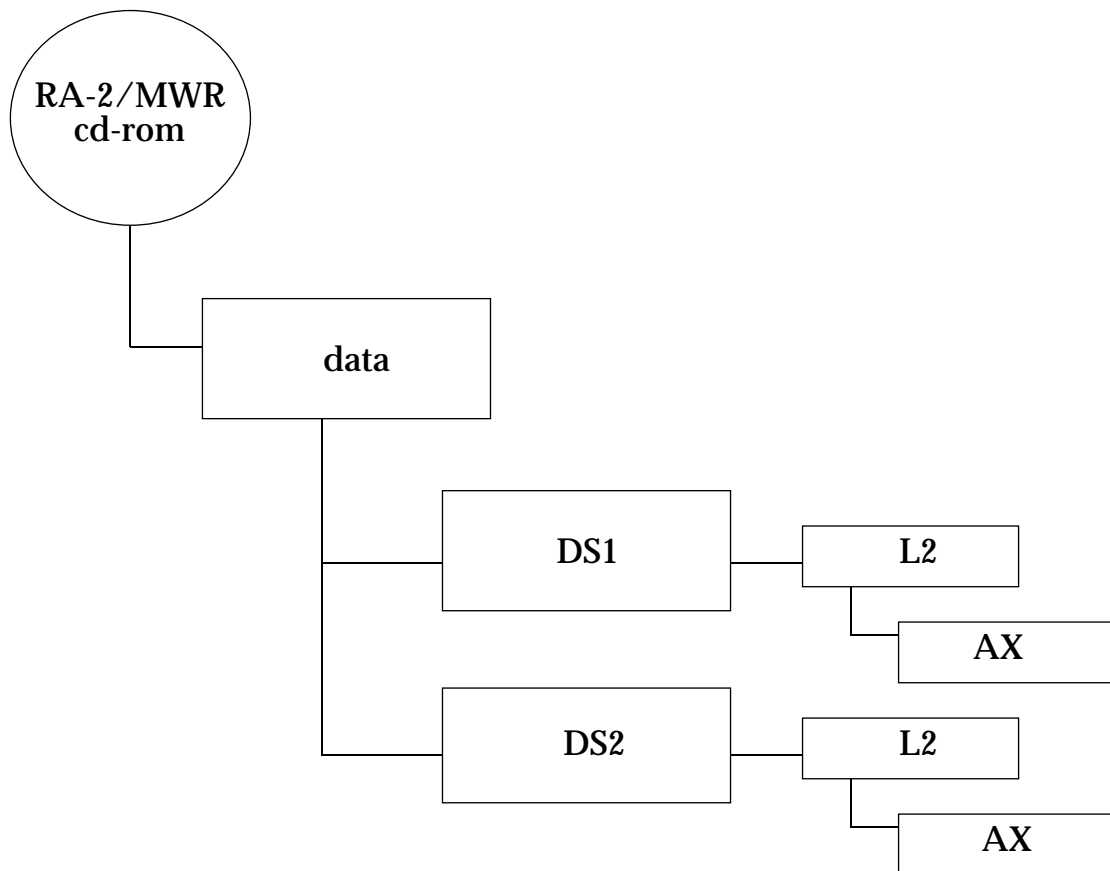
Records : 1 to 5519  
X : lon (degrees) : field 5.  
Y : lat (degrees) : field 4.  
File Title : RA2\_WWV\_2PTLOP20020705\_210811\_000061482007\_00258\_01815\_0000.N1

Data Set : RA2\_OCEAN\_DATA\_FOR\_LEVEL\_2

**fig.2: Geographical plot of orbit 1815**

### 3 CD-ROM DIRECTORY STRUCTURE

The directory tree in the 'data' folder of this cd-rom, containing the sub-directories with the simulated products, is shown in fig.3.



**fig.3: RA-2/MWR sample products cd-rom: 'data' folder structure**

There is a different directory for each orbit mentioned in the previous section. The content of these directories is organized as follows.

#### 3.1 Directory 1 (DS1)

This directory contains one subdirectory L2 that, in turn, contains another subdirectory (AX).



In DS1/L2 the Level 2 product from section 2.1) are included an FDGDR product and an FDMAR product:

RA2\_FGD\_2PTLOP20020615\_114318\_000059812006\_00467\_01523\_0000.N1

RA2\_WWV\_2PTLOP20020615\_114318\_000059812006\_00467\_01523\_0000.N1

In DS1/L2/AX the set of auxiliary files used to generate these products is included:

AUX\_ATT\_AXVIEC20020702\_151846\_20020703\_120000\_20781231\_235959

AUX\_DEM\_AXVIEC20020123\_121901\_20020101\_000000\_20200101\_000000

DOR\_VOR\_AXVF-P20020702\_133300\_20020614\_215528\_20020616\_002328

MWR\_LSF\_AXVIEC20020313\_172218\_20020101\_000000\_20200101\_000000

RA2\_CHD\_AXVIEC20020606\_160240\_20020101\_000000\_20200101\_000000

RA2\_CST\_AXVIEC20020621\_135858\_20020101\_000000\_20200101\_000000

RA2\_DIP\_AXVIEC20020122\_134206\_20020101\_000000\_20200101\_000000

RA2\_GEO\_AXVIEC20020314\_093428\_20020101\_000000\_20200101\_000000

RA2\_ICT\_AXVIEC20020709\_131546\_20020101\_000000\_20200101\_000000

RA2\_IOC\_AXVIEC20020122\_141121\_20020101\_000000\_20200101\_000000

RA2\_MET\_AXVIEC20020204\_073357\_20020101\_000000\_20200101\_000000

RA2\_MSS\_AXVIEC20020313\_175602\_20020101\_000000\_20200101\_000000

RA2\_OT1\_AXVIEC20020313\_173134\_20020101\_000000\_20200101\_000000

RA2\_OT2\_AXVIEC20020313\_173944\_20020101\_000000\_20200101\_000000

RA2\_PLA\_AXVIEC20020706\_184410\_20020101\_000000\_20200101\_000000

RA2\_POL\_AXVIEC20020716\_180922\_20020101\_000000\_20020815\_235959

RA2\_SET\_AXVIEC20020122\_150917\_20020101\_000000\_20200101\_000000

RA2\_SL1\_AXVIEC20020308\_184509\_20020101\_000000\_20200101\_000000

RA2\_SL2\_AXVIEC20020308\_184900\_20020101\_000000\_20200101\_000000

RA2\_SOI\_AXVIEC20020621\_150426\_20020621\_000000\_20101231\_235959

RA2\_SOL\_AXVIEC20020313\_174303\_20020101\_000000\_20030301\_000000

RA2\_SSB\_AXVIEC20020122\_160151\_20020101\_000000\_20200101\_000000

RA2\_TLD\_AXVIEC20020313\_175443\_20020101\_000000\_20200101\_000000

### 3.2 Directory 2 (DS2)

This directory contains one subdirectory L2 that, in turn, contains another subdirectory (AX).

In DS2/L2 the Level 2 product2 from section 2.2) are included an FDGDR product, an FDMAR product and an SGDR product:

RA2\_FGD\_2PTLOP20020705\_210811\_000061482007\_00258\_01815\_0000.N1

RA2\_WWV\_2PTLOP20020705\_210811\_000061482007\_00258\_01815\_0000.N1

RA2\_MWS\_2PTLOP20020705\_210811\_000061482007\_00258\_01815\_0000.N1

In DS2/L2/AX the set of auxiliary files used to generate these product is included. For optimum space management on the cd-rom, the auxiliary files common to both directories have not been repeated here and can be found in DS1/L2/AX.

RA2\_POL\_AXVIEC20020715\_103207\_20020101\_000000\_20020810\_235959