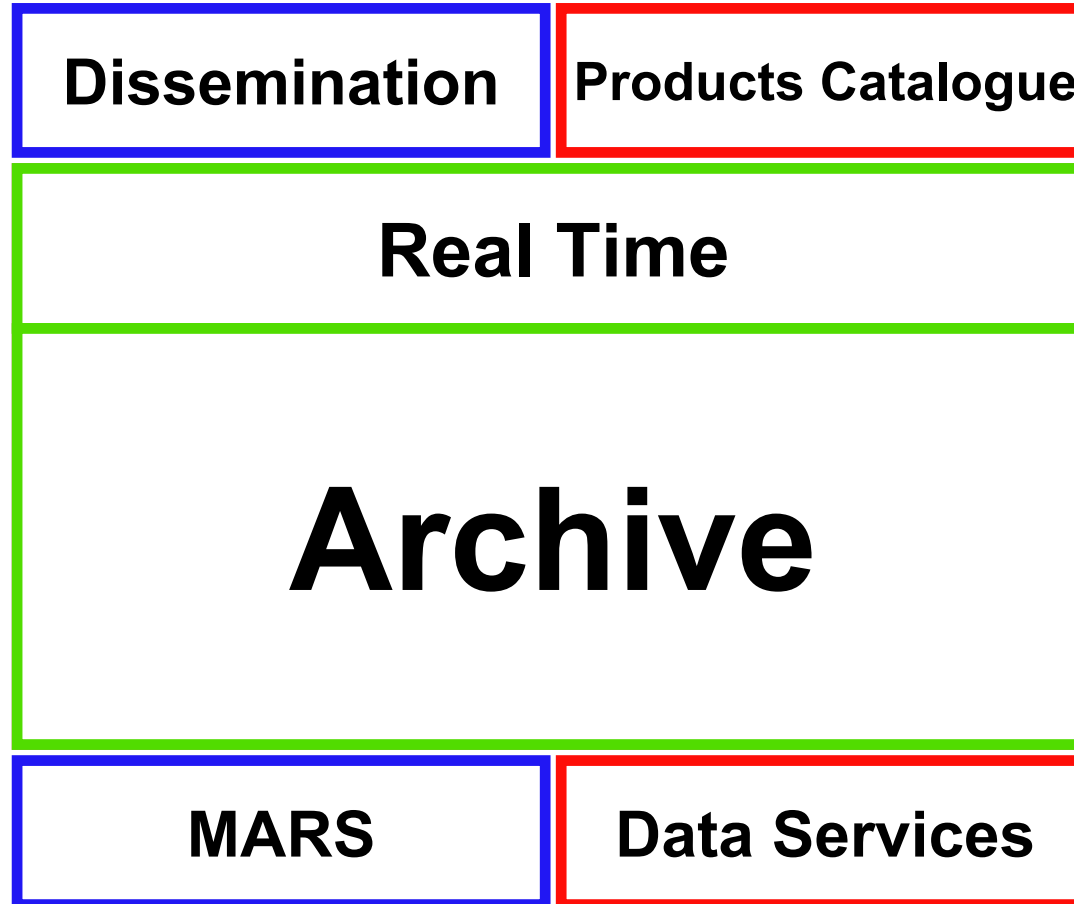


# ECMWF Data Services

**Baudouin Raoult**  
**Data and Services Section**

# Data and Services



# Data And Services Section

- **Providing access to the Centre's data**
  - To internal users
  - To the member states
  - To the research community
  - To the general public
- **Managing the Centre's catalogues:**
  - Real-time
  - Dissemination
  - Archive
  - Software

# Background

- **Services**

- **Cater for different needs**
- **Have evolved independently**
- **Were designed by different persons**
- **Often have a different understanding of the data**

- **Our goals**

- **Unify vocabulary**
- **Unify catalogues**
- **Unify request language**
- **Unify interfaces**

# Web based Data Services

- **Web MARS**
  - **Access to the archive for registered users**
- **Data Server**
  - **Public access to a selected datasets for research purposes**
- **Data Services**
  - **Sale of archived data**
  - **Public access**
- **Costing of products from the real-time catalogue**
  - **Restricted access**
- **Dissemination (in development)**
  - **Edition of dissemination requirements, restricted access**

# Web MARS – What is it?

- **Web interface to MARS**
  - **Monitoring**
  - **Catalogue browsing**
  - **Retrieval**
  - **Plot**
  - **Data finder**
  - **Changes in the archive**
  
- **Targeted at internal and Member State users**

# Web MARS – Issues

- **User identification**
  - **Access controls**
- **Large catalogue (metadata)**
  - **Consistent Navigation**
- **Large amount of retrieved data**
  - **Very long transactions**
  - **Large data transfers**
- **Garbage collection**
  - **Local disk management**

# Web MARS - Ca

Operational archive - Microsoft Internet Explorer

1 - Microsoft Internet Explorer

January - Microsoft Internet Explorer

Pressure levels - Microsoft Internet Explorer

File Edit View Favorites Tools Help

European Centre for Medium-Range Weather Forecasts


Home Feedback Login Your Room Search:

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Who are we Forecasts Computing Modelling Newsletters Employment  
Organisation Order Data Archive Reanalysis Manuals Calendar  
Committees Order Software PrePIFS Seasonal Library Open Tenders

Home > Services > Archive > Catalogue > Operational archive > Atmospheric model > 1 > Analysis > 2002 > January >  
Pressure levels >

## Pressure levels



Date (7 values)	Time (4 values)	levels (21 values)	Parameter (9 values)
2002-01-01	00:00:00	150	Divergence
2002-01-02	06:00:00	200	Geopotential
2002-01-03	12:00:00	250	Ozone mass mixing ratio
2002-01-04	18:00:00	300	Potential vorticity
2002-01-05		400	Relative humidity
2002-01-06		500	Specific humidity
2002-01-07		700	Temperature
		850	Vertical velocity
		925	Vorticity (relative)
		1000	

Archive

Overview  
Catalogue  
Data Finder  
Last Update  
Server Activity

Personal

Your Account  
Your Results

- [Check for availability](#)
- [View the batch request](#)
- [Estimate request cost](#)
- [Retrieve the selection](#)
- [Plot the selection](#)

Note about availability

Some of the fields may not be archived at all levels or all forecast time steps. Before retrieving or plotting data you may want to check the availability of the requested fields. For that, follow the *Check for availability* link.

Retrieving and plotting

© ECMWF

Search:

News&Events


Employment  
Calendar  
Open Tenders

> 2002 > January >

1991, 1992, 1993,

7, 31, 32, 99,

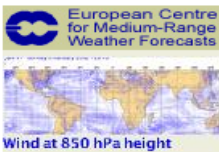
, maed, maw,  
, toga, waef,





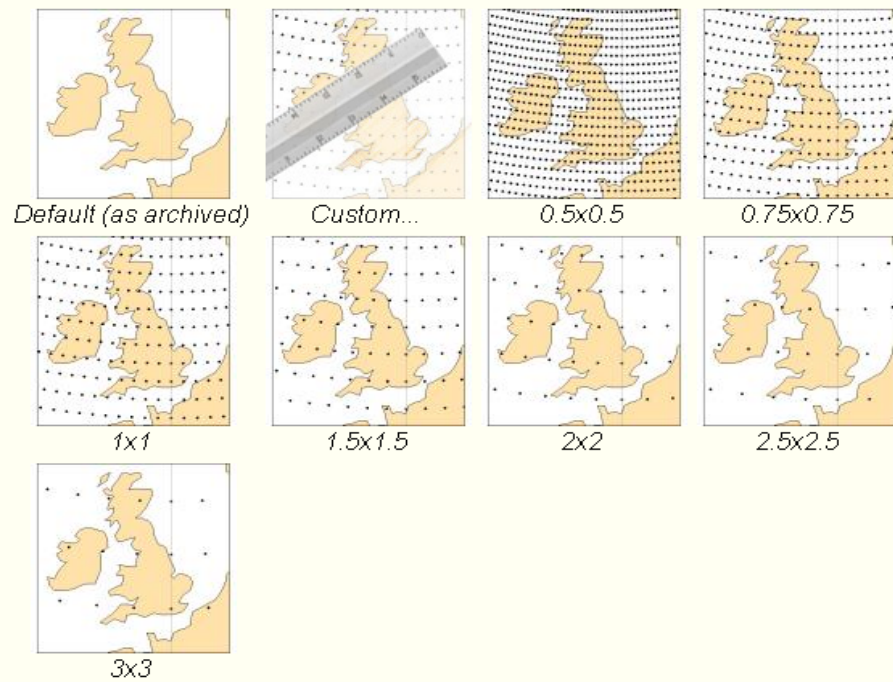
# Web MARS

The screenshot shows a Microsoft Internet Explorer browser window displaying the 'retrieval2' website. The browser's address bar shows 'retrieval2 - Microsoft Internet Explorer'. The website header includes the logo for the European Centre for Medium-Range Weather Forecasts (ECMWF) and navigation links: Home, Feedback, Login, Your Room, and Search. A secondary navigation bar contains links for Research, Publications, and News&Events, with sub-links for Modelling, Reanalysis, Seasonal, Newsletters, Manuals, Library, Employment, Calendar, and Open Tenders. The main content area is titled 'Grid for retrieval2' and features a grid of map thumbnails showing different grid resolutions over Europe. The thumbnails are labeled: 'Default (as archived)', 'Custom...', '0.5x0.5', '0.75x0.75', '1x1', '1.5x1.5', '2x2', '2.5x2.5', and '3x3'. A large map of Europe is visible in the background of the main content area. The footer of the website includes the date '07-01-2002' and the ECMWF logo. A sidebar on the right side of the browser window shows a search bar and a list of links under 'News&Events', including Employment, Calendar, and Open Tenders.



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- Forecasts  
Order Data  
Order Software
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Archive  
PrepIFS
- Modelling  
Reanalysis  
Seasonal
- Newsletters  
Manuals  
Library
- Employment  
Calendar  
Open Tenders

## Grid for retrieval2

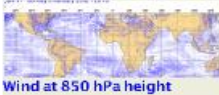
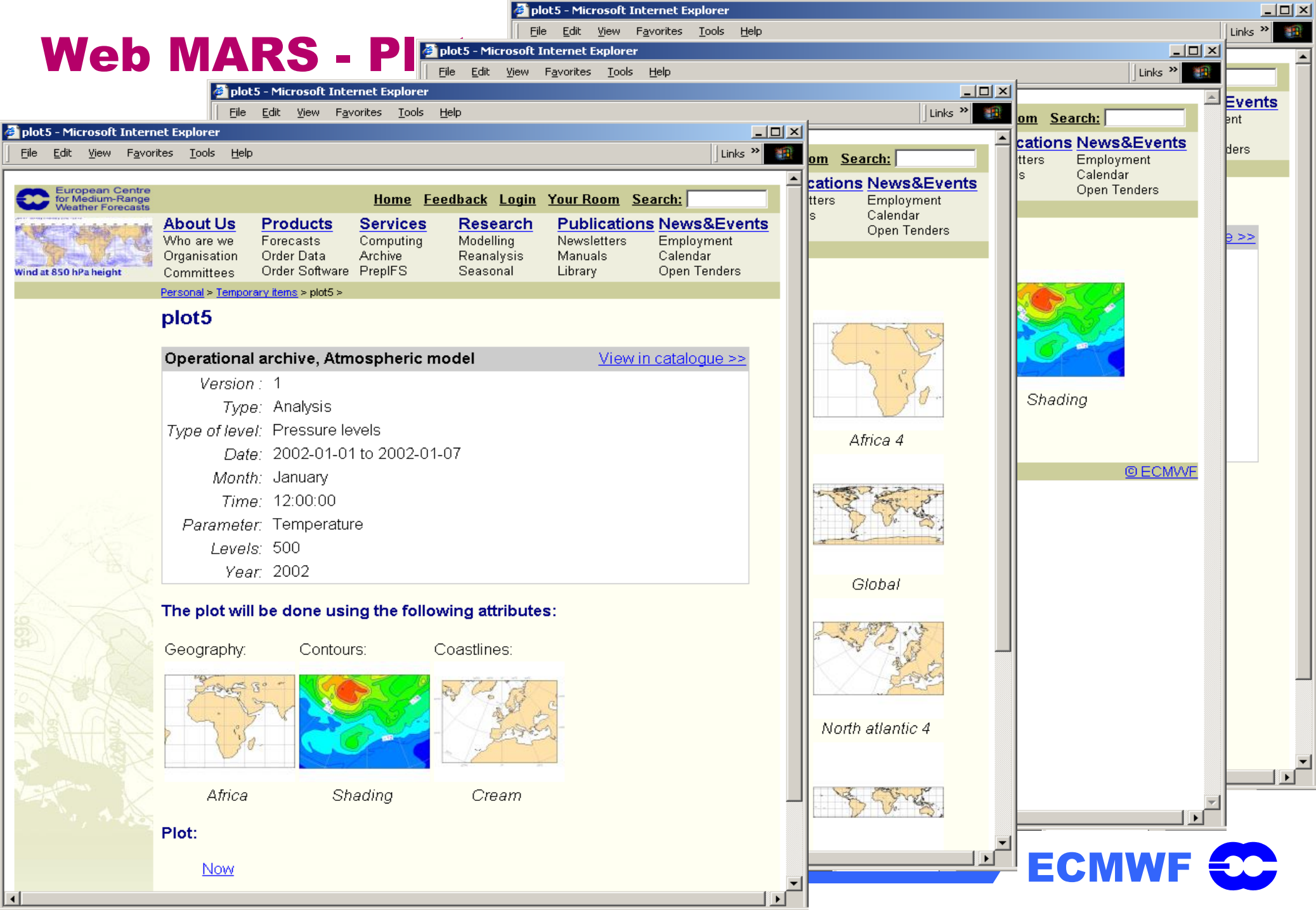


07-01-2002

© ECMWF



# Web MARS - PI




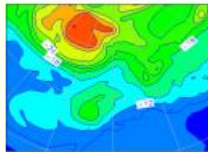

Personal > Temporary items > plot5 >

## plot5

### Operational archive, Atmospheric model [View in catalogue >>](#)

Version : 1  
Type: Analysis  
Type of level: Pressure levels  
Date: 2002-01-01 to 2002-01-07  
Month: January  
Time: 12:00:00  
Parameter: Temperature  
Levels: 500  
Year: 2002

### The plot will be done using the following attributes:

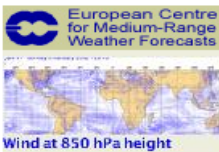
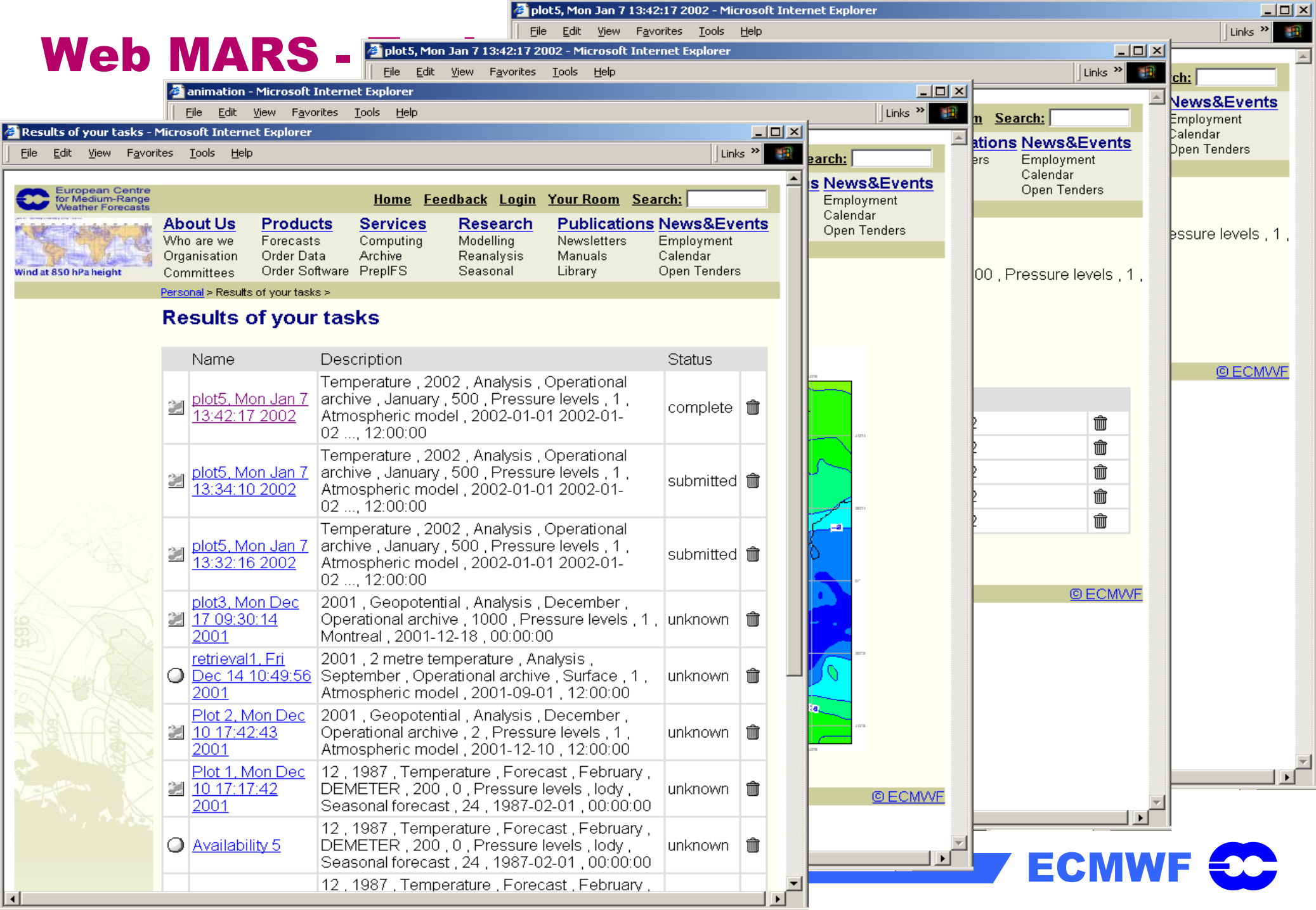
Geography:	Contours:	Coastlines:
		
Africa	Shading	Cream

### Plot:

[Now](#)



# Web MARS -

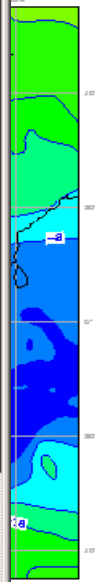


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[Personal](#) > Results of your tasks >

## Results of your tasks

Name	Description	Status
<a href="#">plot5, Mon Jan 7 13:42:17 2002</a>	Temperature , 2002 , Analysis , Operational archive , January , 500 , Pressure levels , 1 , Atmospheric model , 2002-01-01 2002-01-02 ..., 12:00:00	complete
<a href="#">plot5, Mon Jan 7 13:34:10 2002</a>	Temperature , 2002 , Analysis , Operational archive , January , 500 , Pressure levels , 1 , Atmospheric model , 2002-01-01 2002-01-02 ..., 12:00:00	submitted
<a href="#">plot5, Mon Jan 7 13:32:16 2002</a>	Temperature , 2002 , Analysis , Operational archive , January , 500 , Pressure levels , 1 , Atmospheric model , 2002-01-01 2002-01-02 ..., 12:00:00	submitted
<a href="#">plot3, Mon Dec 17 09:30:14 2001</a>	2001 , Geopotential , Analysis , December , Operational archive , 1000 , Pressure levels , 1 , Montreal , 2001-12-18 , 00:00:00	unknown
<input type="radio"/> <a href="#">retrieval1, Fri Dec 14 10:49:56 2001</a>	2001 , 2 metre temperature , Analysis , September , Operational archive , Surface , 1 , Atmospheric model , 2001-09-01 , 12:00:00	unknown
<a href="#">Plot 2, Mon Dec 10 17:42:43 2001</a>	2001 , Geopotential , Analysis , December , Operational archive , 2 , Pressure levels , 1 , Atmospheric model , 2001-12-10 , 12:00:00	unknown
<a href="#">Plot 1, Mon Dec 10 17:17:42 2001</a>	12 , 1987 , Temperature , Forecast , February , DEMETER , 200 , 0 , Pressure levels , lody , Seasonal forecast , 24 , 1987-02-01 , 00:00:00	unknown
<input type="radio"/> <a href="#">Availability 5</a>	12 , 1987 , Temperature , Forecast , February , DEMETER , 200 , 0 , Pressure levels , lody , Seasonal forecast , 24 , 1987-02-01 , 00:00:00	unknown
	12 , 1987 , Temperature , Forecast , February ,	



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# Web MARS - Data

Microsoft Internet Explorer - MARS Data finder

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Computing Archive PreplIFS  
Modelling Reanalysis Seasonal  
Newsletters Manuals Library  
Employment Calendar Open Tenders

Home > Services > Archive > Data finder >

## Select a period of time

Your choices so far:

- Class: 15 years reanalysis
- Stream: Atmospheric model
- Type: Analysis
- Parameter: Snow depth

Select a period of time then proceed to the next step:

- [Finish](#)

Start date:  End date:

S	M	T	W	T	F	S	S	M	T	W	T	F	S	
					1	2			1	2	3	4	5	
3	4	5	6	7	8	9		6	7	8	9	10	11	12
10	11	12	13	14	15	16		13	14	15	16	17	18	19
17	18	19	20	21	22	23		20	21	22	23	24	25	26
24	25	26	27	28	29	30		27	28					
31														

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

1994  
1993  
1992  
1991

Microsoft Internet Explorer - MARS Data finder

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Home > Services > Archive > Data finder >

## Select a period of time

Your choices so far:

- Class: 15 years reanalysis
- Stream: Atmospheric model
- Type: Analysis
- Parameter: Snow depth

Select a period of time then proceed to the next step:

- [Finish](#)

Start date:  End date:

S	M	T	W	T	F	S	S	M	T	W	T	F	S	
					1	2			1	2	3	4	5	
3	4	5	6	7	8	9		6	7	8	9	10	11	12
10	11	12	13	14	15	16		13	14	15	16	17	18	19
17	18	19	20	21	22	23		20	21	22	23	24	25	26
24	25	26	27	28	29	30		27	28					
31														

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

1994  
1993  
1992  
1991

15 years reanalysis, Atmospheric model, Analysis

15 years reanalysis, Atmospheric model, Forecast

15 years reanalysis, Atmospheric model, Forecast accumulation

Operational archive, Atmospheric model, 4d variational analysis

Operational archive, Atmospheric model, Analysis

Operational archive, Atmospheric model, First guess

Operational archive, Atmospheric model, Forecast

Operational archive, Atmospheric model, Initialised analysis

Operational archive, Atmospheric model, Oi analysis

Operational archive, Atmospheric model (short cutoff), Analysis

# Web MARS – What's new?

- **Better plotting**
  - **Winds**
  - **Overlay of several parameters**
  - **Bases on set of rules**
  - **New navigation through the frames**
- **Basic support for observations**
- **Changes database**
- **Parameter database**

# Web MARS – Better Plotting

Personal > Results of your tasks > plot25, Sun Nov 9 14:51:47 2003 > Plots >

## Plots

Date

20031101  
20031102  
20031103  
20031104

Time

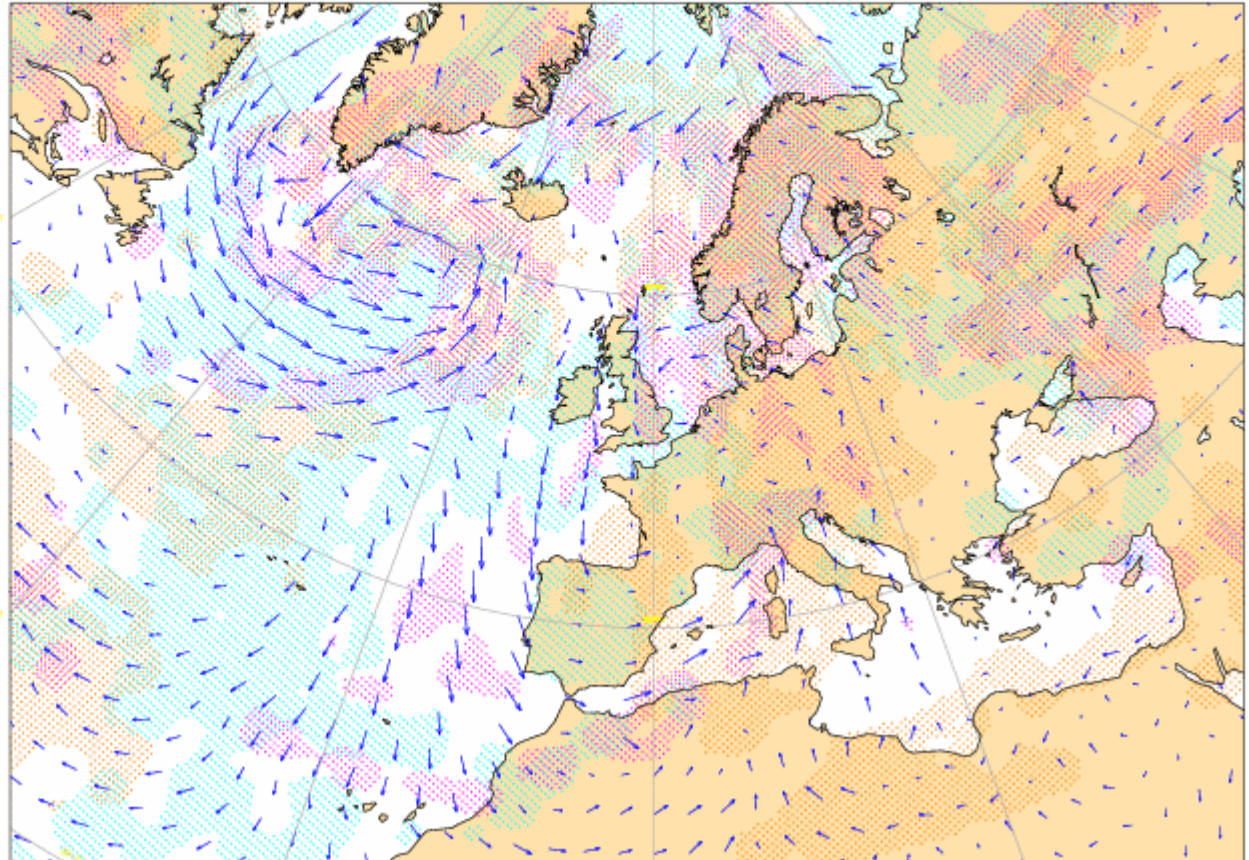
0000  
0600  
1200  
1800

Download...

 Postscript (2M)

Navigation

ECMWF Analysis VT: Saturday 1 November 2003 00UTC Surface: low cloud cover/Surf: medium cloud cover/Surf: high cloud cover/Surf: 10 mtr



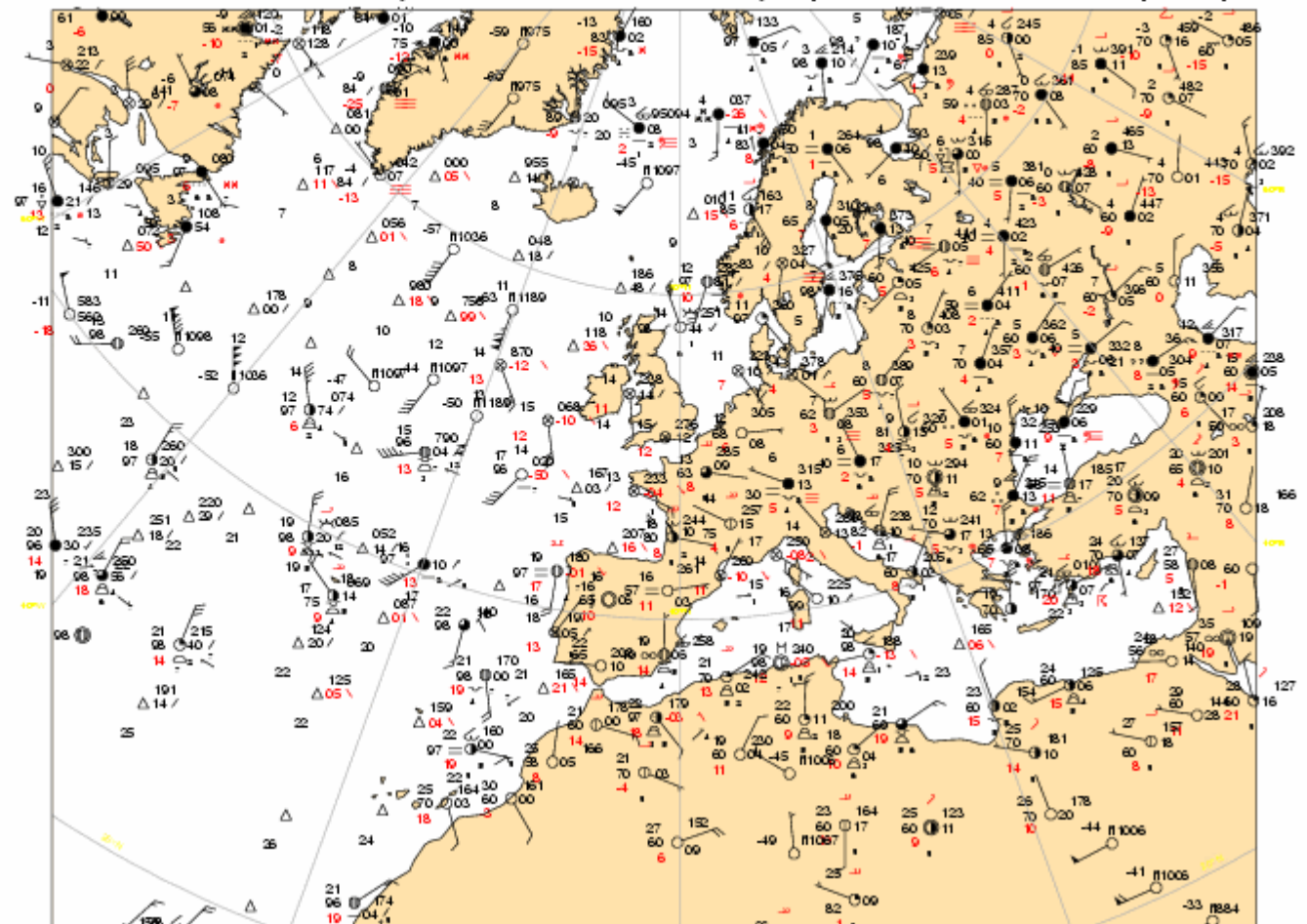
# Web MARS – Observation support

Download...



Postscript (185K)

Obs: 12-14UTC Thursday 6 November 2003 Surf:synop/dribu 197/500hPa airep/temp



# Web MAPS

- Arch
- A
- D
- M
- Scar
- T
- Upda

Changes on Operational archive, Atmospheric model, Forecast for the year 1988 - Mozilla

Changes on Operational archive, Atmospheric model, Forecast for the year 1988 - Mozilla

http://www.ecmwf.int/services/archive/d/changes/1/

## Changes on Operational archive, Atmospheric model, Forecast for the year 1988

**Years**

- [1985 \(7 events\)](#)
- [1986 \(6 events\)](#)
- [1987 \(2 events\)](#)
- [1988 \(4 events\)](#)
- [1989 \(3 events\)](#)
- [1990 \(3 events\)](#)
- [1991 \(3 events\)](#)
- [1992 \(6 events\)](#)
- [1993 \(8 events\)](#)
- [1994 \(10 events\)](#)
- [1995 \(5 events\)](#)
- [1997 \(16 events\)](#)
- [1999 \(6 events\)](#)
- [2000 \(15 events\)](#)
- [2001 \(6 events\)](#)

**Source**

Operational archive, Atmospheric model, Forecast

### 1988-04-18

#### Missing, Pressure levels

*Parameter:* Relative humidity  
*Step:* 216  
*Level:* 10

### 1988-11-29

#### Added, Model levels

*Time:* 00:00:00  
*Step:* 6 to 60 by 6  
*Parameter:* Divergence, Specific humidity, Temperature, Vertical velocity, Vorticity (relative)  
*Level:* 1 to 19  
*Parameter:* Logarithm of surface pressure  
*Level:* 1

#### Added, Pressure levels

*Time:* 00:00:00  
*Step:* 6 to 60 by 6

#### Added, Surface

*Time:* 00:00:00  
*Step:* 6 to 60 by 6

Ninth E Transferring data from www.ecmwf.int...



# Web MARS – Parameter database

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[IFS documentation Front Page](#)

[Next Section](#)  
[Previous Section](#)

## 9.8 Albedo

### Table of contents

[Chapter 1.](#) Overview

[Chapter 2.](#) Radiation

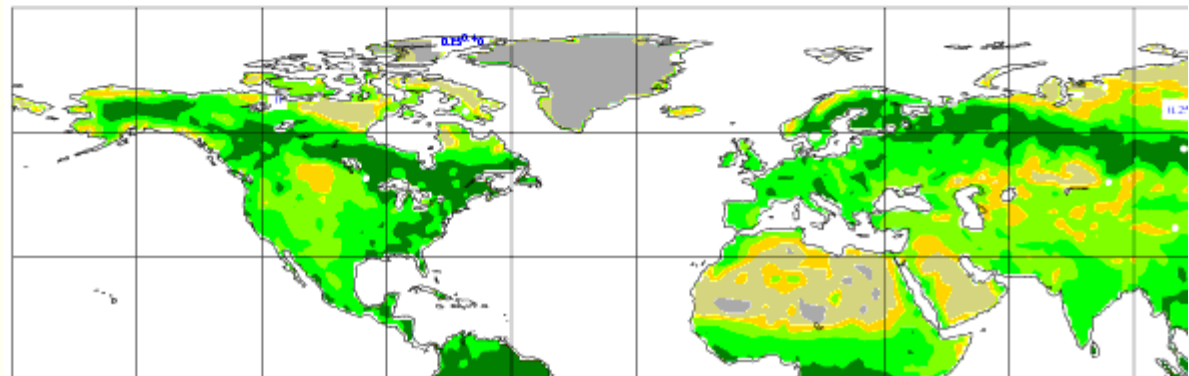
[Chapter 3.](#) Turbulent diffusion and interactions with the surface

[Chapter 4.](#) Subgrid-scale orographic drag

[Chapter 5.](#) Convection

[Chapter 6.](#) Clouds and large-scale precipitation

The background land albedo is interpolated to the model grid from the monthly mean values of a snow-free combined 1982-1990 years. The albedo for that dataset was computed using the method of Sellers *et al.* (1 soil reflectance, new values of vegetation reflectance, and the biophysical parameters described by Los *et al.* January, April, July and October are shown in [Fig. 9.12](#) , [Fig. 9.13](#) , [Fig. 9.14](#) , and [Fig. 9.15](#) . To obtain : the model does a linear interpolation between successive months, assuming that the monthly field applies : model adapts the background albedo over water, ice and snow as documented in the chapter on radiation



# Data Services – Issues

- Sale on archived data research and commercial users
- Large catalogue, many datasets
- Many changes in the archives
  - Resolutions
  - Missing data
  - Additions of new parameters, models, ...
- Complex costing algorithm
  - Based on volume, number of fields, interpolation,...
- Time consuming for Data Services staff
  - Answer “*What if?*” scenarios
  - Several interaction between Data Services and client

# On-line Data Services – What is it?

- On-line ordering system
- Allow users iterate through:
  - Find the data
  - Apply post-processing
  - Get a quote
  - Refine
- Components of Web MARS:
  - Changes in the archive
  - Own Data Finder
- Targeted at external users (extensive help)

Or

Ordering: Select Parameters - Mozilla <2>

http://www.ecmwf.int/products/data/d/ordering/param/clas

Back Forward Reload Stop Search Print

Cart Account

### Ordering: Select Parameters

The table below includes the available parameters and levels for your selections so far. Click on the boxes that interest you.

[Proceed to the next step](#)

**Select parameters and levels**

	1000	925	850	700	500	400	300	250	200	150	100	70	50	30	10
<b>Divergence</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Geopotential</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Relative humidity</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Specific humidity</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Temperature</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>U velocity</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>V velocity</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Vertical velocity</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Vorticity (relative)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- If you wish to select an entire column (all the parameters for a particular level) click on the level's name
- If you wish to select an entire row (all the levels of a particular parameter) click on the parameter's name
- For reset just click again on the parameter or level's name

**Select All or Clear up**

[Proceed to the next step](#)

**Please note:**

1991-12-10 added

Level: 925

**elp**

**Changes in the archive**

On

request15 - Back Forward Reload Stop http://www.ecmwf.int/products/data/d/edit/personal/req Search Print

## Your Shopping Cart

Review your requests so far and [Start a new request](#) or [Proceed to checkout](#)

### The indicative costings of Your Shopping Cart

<i>For non research use:</i>	
Total handling charge	367.00 GBP
Total discounts	0.00 GBP
Total information cost	27.00 GBP
<b>Total non research charge</b>	<b>394.00 GBP</b>
<i>For research use :</i>	
Total handling charge	367.00 GBP
Total discounts	0.00 GBP
Total information cost	0 GBP
<b>Total research charge</b>	<b>367.00 GBP</b>

### The details of Your Shopping Cart

Name	Description	Handling charge	Information cost	Volume	Fields	
<a href="#">request12</a>	Atmospheric model , 80 , 12:00:00 , 1 , Surface , Albedo , 40 years reanalysis , 1957-09-01...1957-09-30, an	11.00 GBP	12.00 GBP	3 MB	30	
<a href="#">request15</a>	925 , Atmospheric model , -27 33 ..., 1991-12-10:1991-12-31 , levelist , 3 3 , 12:00:00 , 1 , Pressure levels , Temperature , Operational archive , an date	356.00 GBP	15.00 GBP	6 MB	5,132	
<b>Total</b>		<b>367.00 GBP</b>	<b>27.00 GBP</b>	<b>9 MB</b>	<b>5,162</b>	

**Please note:**

- For orders with volume more than **200 MB** data will be delivered only on [removable media](#).
- For data delivered on [removable media](#) a [shipping charge](#) of **20 GBP** will be applied.
- Pricing appearing in your shopping cart is **indicative only** and is subject to confirmation by e-mail from ECMWF Data Services.

request15 - Back Forward Reload Stop http://www.ecmwf.int/products/data/d/edit/personal/req Search Print

## Your Shopping Cart

Review your requests so far and [Start a new request](#) or [Proceed to checkout](#)

### The indicative costings of Your Shopping Cart

<i>For non research use:</i>	
Total handling charge	367.00 GBP
Total discounts	0.00 GBP
Total information cost	27.00 GBP
<b>Total non research charge</b>	<b>394.00 GBP</b>
<i>For research use :</i>	
Total handling charge	367.00 GBP
Total discounts	0.00 GBP
Total information cost	0 GBP
<b>Total research charge</b>	<b>367.00 GBP</b>

### The details of Your Shopping Cart

Name	Description	Handling charge	Information cost	Volume	Fields	
<a href="#">request12</a>	Atmospheric model , 80 , 12:00:00 , 1 , Surface , Albedo , 40 years reanalysis , 1957-09-01...1957-09-30, an	11.00 GBP	12.00 GBP	3 MB	30	
<a href="#">request15</a>	925 , Atmospheric model , -27 33 ..., 1991-12-10:1991-12-31 , levelist , 3 3 , 12:00:00 , 1 , Pressure levels , Temperature , Operational archive , an date	356.00 GBP	15.00 GBP	6 MB	5,132	
<b>Total</b>		<b>367.00 GBP</b>	<b>27.00 GBP</b>	<b>9 MB</b>	<b>5,162</b>	

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- Pricing appearing in your shopping cart is **indicative only** and is subject to confirmation by e-mail from ECMWF Data Services.

request15 - Back Forward Reload Stop

request15 - Back Forward Reload Stop

# Data Server – What is it?

- **Public (non-commercial) distribution of data**
  - **Self-registration**
- **Datasets**
  - **DEMETER, 24GBytes**
  - **ERA-15, 1GByte**
  - **ERA-40, 400GBytes, 2.5 degree**
- **Based on Web MARS**
  - **Disk-only MARS server**
  - **MARS client, Metview, SMS**
  - **fastCGI, Perl, MySQL**
- **A standalone PC-Linux system outside the firewall**

# Data Ser

ECMWF 15 Years Re-Analysis - Mozilla

File Edit View Go Bookmarks Tools Window Help

Home > Data > ECMWF 15 Years Re-Analysis >

## ECMWF 15 Years Re-Analysis

**Datasets**

- DEMETER
- ENACT
- ERA 15
- ERA 40

**Personal**

- Your Requests

**Data usage**

- Conditions

**See also...**

- Data Services
- ECMWF Archive

**Select date**

Select a date range:

Start date: 1979-01-01 End date: 1993-12-31

Select a list of month:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1979	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1980	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1981	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1982	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1983	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1984	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1985	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1986	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1987	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1988	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1989	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1990	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1991	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1992	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1993	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Select All or Clear

**Select parameters**

Pressure levels:

	1000	850	500	200
Geopotential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U velocity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V velocity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select All or Clear

Surface:

2 metre temperature     2 metre dewpoint temperature     10 metre U wind component

10 metre V wind component     Total cloud cover

Select All or Clear

Retrieve GRIB    Retrieve NetCDF    Plot data

**Note:**

The provision of NetCDF is **experimental** and the format of produce **will change** in the future

dates

parameters

action

Search:

[News&Events](#)

- Calendar
- Employment
- Open Tenders

ose one of the links

out the dataset can be as well as the forecast used the data have been contact [us](#).

# Data Set

European Centre for Medium-Range Weather Forecasts

Home Your Room Login Contact Feedback Site Map Search:

[About Us](#) [Products](#) [Services](#) [Research](#) [Publications](#) [News&Events](#)

Overview  
Getting here  
Committees

Forecasts  
Order Data  
Order Software

Computing  
Archive  
PrepIFS

Modelling  
Reanalysis  
Seasonal

Newsletters  
Manuals  
Library

Calendar  
Employment  
Open Tenders

Home > Data > Personal > Results of your tasks > netcdf63, Fri Sep 26 22:51:47 2003 >

## netcdf63, Fri Sep 26 22:51:47 2003

Surface , 2 metre temperature , 40 years reanalysis , 1957-09-01...2002-08-31, 12:00:00

Task complete

16436 fields retrieved

	Name	Size	Created	
	<a href="#">grib (HTTP) (FTP)</a>	333M	Fri Sep 26 22:56:01 2003	
	<a href="#">nc (HTTP) (FTP)</a>	330M	Fri Sep 26 22:59:34 2003	

26-09-2003 [© ECMWF](#)



# Data Server - Conclusion

- **User interface**
  - different for each dataset
  - built dynamically from MySQL contents
- **NetCDF is produced on-the-fly from GRIB Experimental**
- **Very popular since ERA 40 made available**
  - About 1000 users
  - Download about 1TB/month
- **Useful tool for sharing data among project collaborators**

# Costing of real-time products – What is it?

- Provides a centralised costing facility to be used by the *Catalogue Catalogue Contact Points*.
- Embody the rules decided by Council (e.g. mandatory times steps)
- Avoid misunderstandings on data availability
- Avoid costing discrepancies between member state
- Allow browsing and searching real time catalogues easily
- Provide extensive help and up-to-date documentation
- Allow *What if?* scenarios

# Costing of real-time products – Data sets

The screenshot shows a web browser window with the title "Select Data Set - Mozilla {Build ID: 2002082607}". The browser's menu bar includes "File", "Edit", "View", "Go", "Bookmarks", "Tools", "Window", and "Help". The page content is titled "Select Data Set" and includes a navigation sidebar on the left and a main content area.

**Navigation Sidebar:**

- Client** (with smiley icon) and **Cart** (with shopping cart icon)
- Realtime** section: [Home](#), [New request](#), [All clients](#)
- Change client** section: [Default client](#), [Environmental Center](#), [TV34](#), [NTLRT](#), [ADV1](#)
- Change cart** section: [Wave data](#), [Important](#), [Air pollution project](#)
- Create new** section: [Client](#), [Cart](#)

**Main Content Area:**

The list below includes all our available Data Sets. Read the **description** and **order** the data set that interests you.

- Ensemble Prediction System (EPS)
  - Surface Fields in GRIB code [order](#) [description](#)
  - Multi-level Pressure Fields in GRIB code [order](#) [description](#)
- Global Deterministic Atmospheric Model (GDAM)
  - Surface Fields in GRIB code [order](#) [description](#)
  - Multi-level Pressure Fields in GRIB code [order](#) [description](#)
  - Model-level Fields in GRIB code [order](#) [description](#)

Red annotations on the image include a red circle around the "order" link for "Multi-level Pressure Fields in GRIB code" under the EPS section, and two red arrows pointing from the text "Current client and Cart" to the "Change client" and "Change cart" sections of the sidebar.

 Client  Cart

## Select grid, area, times, parameters

### Realtime

[Home](#)  
[New request](#)  
[All clients](#)

### Change client

[Default client](#)  
[Environmental Center](#)  
[TV34](#)  
[NTLRT](#)  
[ADV1](#)

### Change cart

[Wave data](#)  
[Important](#)  
[Air pollution project](#)

### Create new

[Client](#)  
[Cart](#)

You have selected the dataset *Ensemble Prediction System (EPS) Multi-level Pressure Fields in GRIB code*.

#### Please note:



You have selected the Ensemble Prediction System (EPS). In that case the corresponding deterministic products are mandatory and should be purchased together with the EPS products

#### Select grid



1.0  1.5  2.0  2.5

#### Select Area



- Select a standard area:

[Full Globe](#) [Northern Hemisphere](#) [Southern Hemisphere](#)

- Or edit the coordinates directly:

### Select Time Steps

00  
  12  
  24  
  36  
  48  
  60  
  72  
  84  
  96  
  108  
 120  
  132  
  144  
  156  
  168  
  180  
  192  
  204  
  216  
  228  
 240

Select All or Select None

### Select Parameters and Pressure Levels

#### Abbreviations

	P	GH	Q	R	I	U	V	YO	W
200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
500	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
700	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
850	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- If you wish to select an entire row (all the Pressure Levels for a particular Parameters) click on the level's name
- If you wish to select an entire column (all the Parameters of a particular Pressure Levels) click on the parameter's name
- For reset just click again on the Pressure Levels or Parameters's name

Select All or Select None

Submit your request

# Costing of real-time products – Data request

The screenshot shows a web browser window titled "request27 - Mozilla {Build ID: 2002082607}". The browser's address bar shows the path: Home > Products > Catalogue > On-Line > Personal > realtime > TV34 > Important > request27 >. The page content includes a navigation menu, a sidebar with client and cart options, and a main section for "request27".

**request27**

View your current request's costing and description below and add it to your selected shopping cart.  
(Note: You can remove it later)

[Add to Important](#)

**Costing of your current request:**

Volume per day	876 MB
Fields per day	8,424
EPUS per year	1,081,811

**Description of your current request:**

**Operational archive, Ensemble prediction system**

Type of level: Pressure levels

Parameter: D;1000, D;200, GH;1000, GH;200, Q;1000, Q;200, R;1000, R;200, T;1000, T;200, U;1000, U;200, V;1000, V;200, VO;1000, VO;200, W;1000, W;200

Step: 00, 12, 24, 72, 96, 120, 132, 144, 168

Area: 90.0°N 180°W 90°S 180°E

Grid: 1.0° x 1.0°

dataset: Ensemble Prediction System (EPS)

**Cost**

Client Cart

### Important

Your shopping cart contains the following items:

Name	Description	Volume per day	Fields per day	EPUs per year	Erase
<a href="#">request26</a>	Ensemble prediction system , 90.0 -180.0 ..., 1.0 , Pressure levels , Ensemble Prediction System (EPS) , GH;200 R;200 ..., Operational archive , 132	48.53 MB	520	66,593	
<a href="#">request27</a>	Ensemble prediction system , 90.0 -180.0 ..., 1.0 , Pressure levels , Ensemble Prediction System (EPS) , D;200 GH;200 ..., Operational archive , 00 12 ...	876 MB	8,424	1,081,811	
<b>Total</b>		<b>924.53 MB</b>	<b>8,944</b>	<b>1,148,404</b>	

Data requested

**Realtime**

- [Home](#)
- [New request](#)
- [All clients](#)

**Change client**

- [Default client](#)
- [Environmental Center](#)
- [TV34](#)
- [NTLRT](#)
- [ADV1](#)

**Change cart**

- [Wave data](#)
- [Important](#)
- [Air pollution project](#)

**Current cart**

- [Copy](#)
- [Rename](#)
- [Paste](#)

### Total Costs:

Total EPUs per year	1,148,405
Discount EPUs per year	-873,924
Net chargeable EPUs per year	274,481
Net information cost per year (in EURO)	192,136

Yearly licence fee

[Add a new item on Important](#)

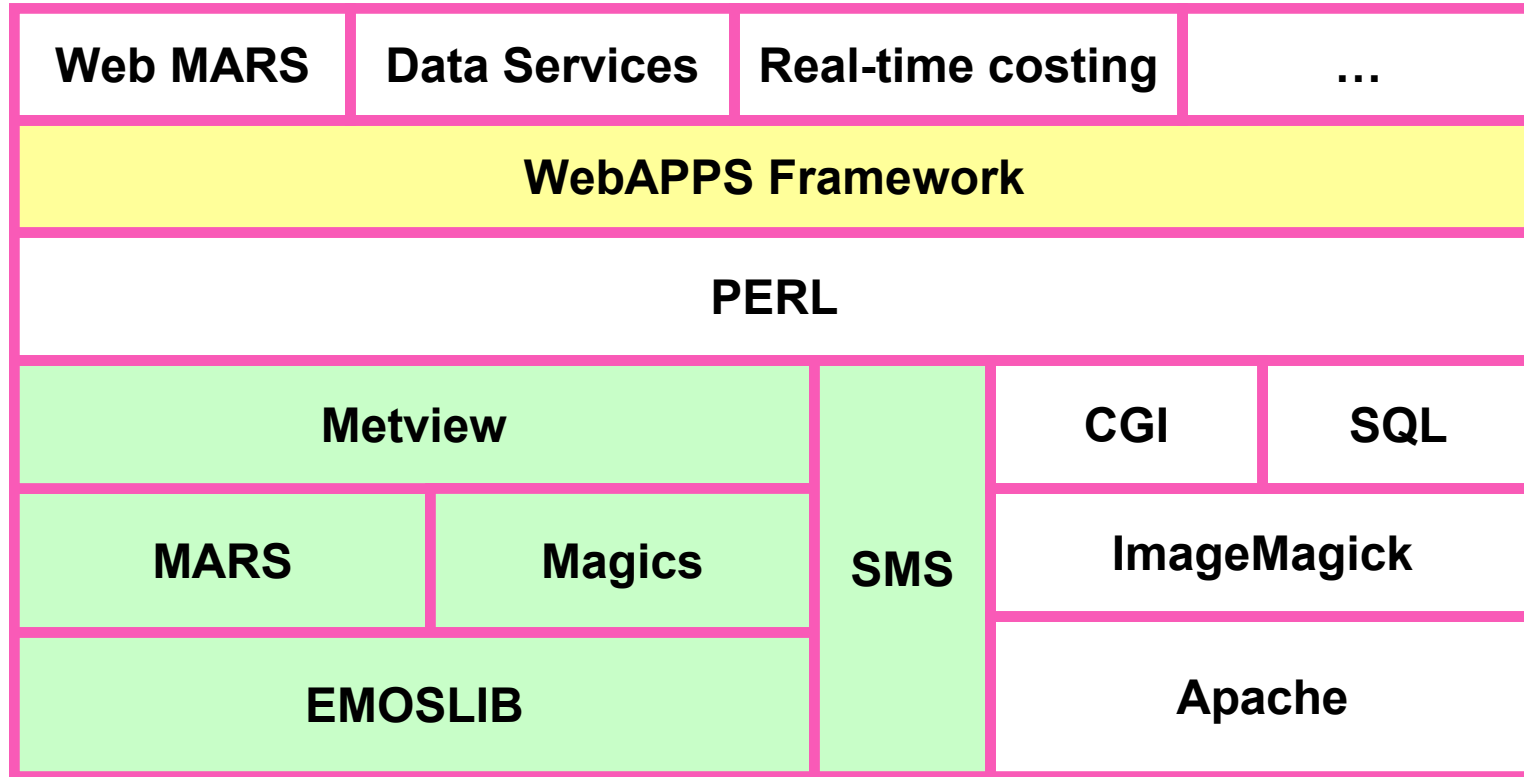
[Download report](#)

# WebAPPS Framework

- Apache, fastCGI
- Perl
  - Object Oriented
  - Rapid prototyping/development
- User identification
  - Certificates, Internet domain, Cookies
  - Access control
- Persistence
  - Very long transactions
  - Keep track of user requests, results, preferences, ...
- MySQL
  - Different *views* of (meta)data



# WebAPPS Framework: Software components



# What needs to be done

- **Next: dissemination**
- **Interoperability**
  - **Define a request for dissemination, get it directly with MARS**
  - **Cost the requirements for a client, add it to dissemination requirements**
  - **Create a plot in Web MARS, add it to “Your room”**
- **Develop further the parameter database**
- **More support for observations**
- **More controls of graphical attributes**

# Conclusion

- **WebAPPS framework**

- Re-use of components, different applications
- View of a very complex system in a simple way
- Provide tools for consistency and interoperability

- **A few URLs:**

- **ECMWF:** <http://www.ecmwf.int/>
- **Web MARS:** <http://www.ecmwf.int/services/archive>
- **Data Server:** <http://data.ecmwf.int/data>
- **Data Services:** <http://www.ecmwf.int/products/data>