Metview – Recent developments

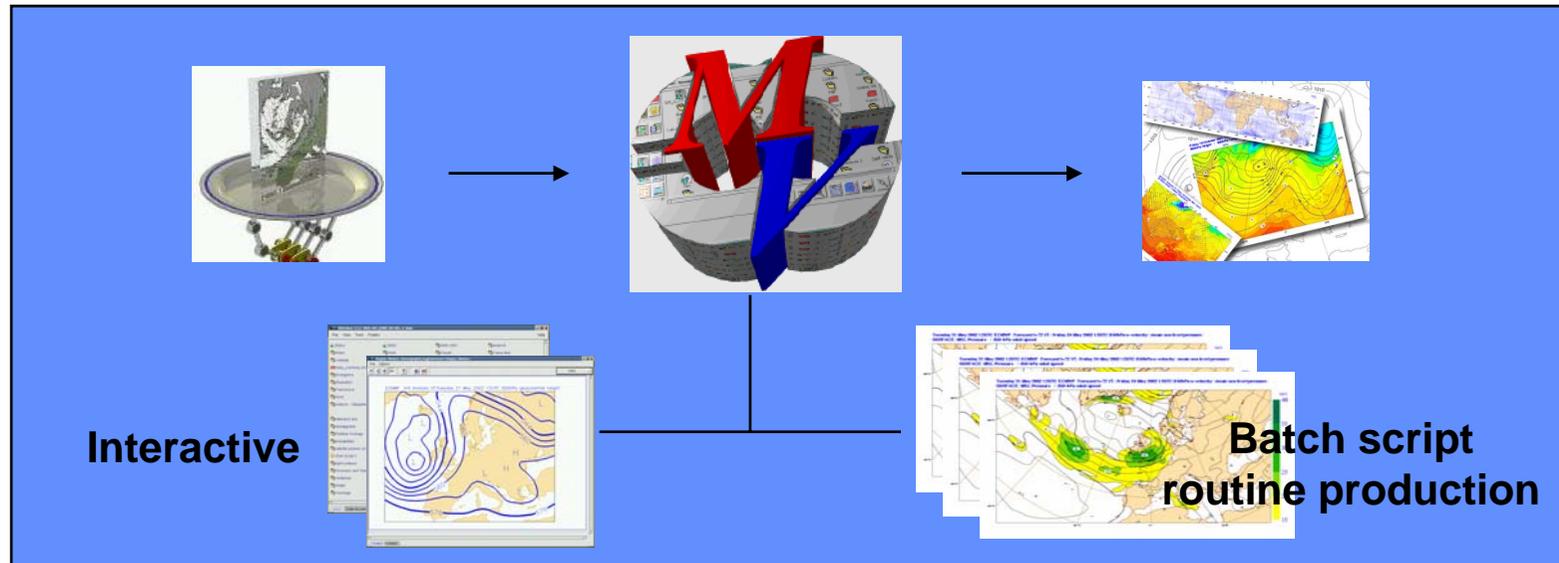## Fernando Ii

ECMWF
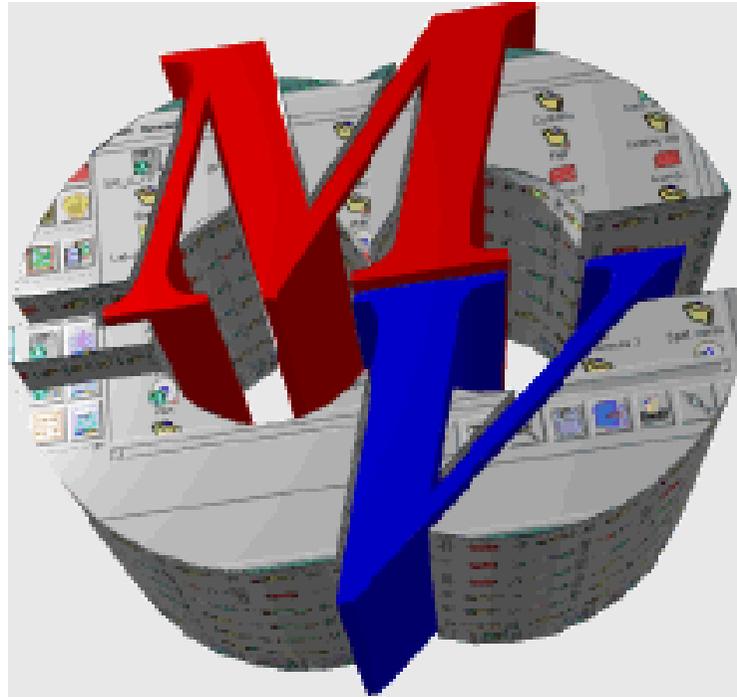
Overview

- **Metview background**

- **New features**

- **Future perspectives**

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Metview is...

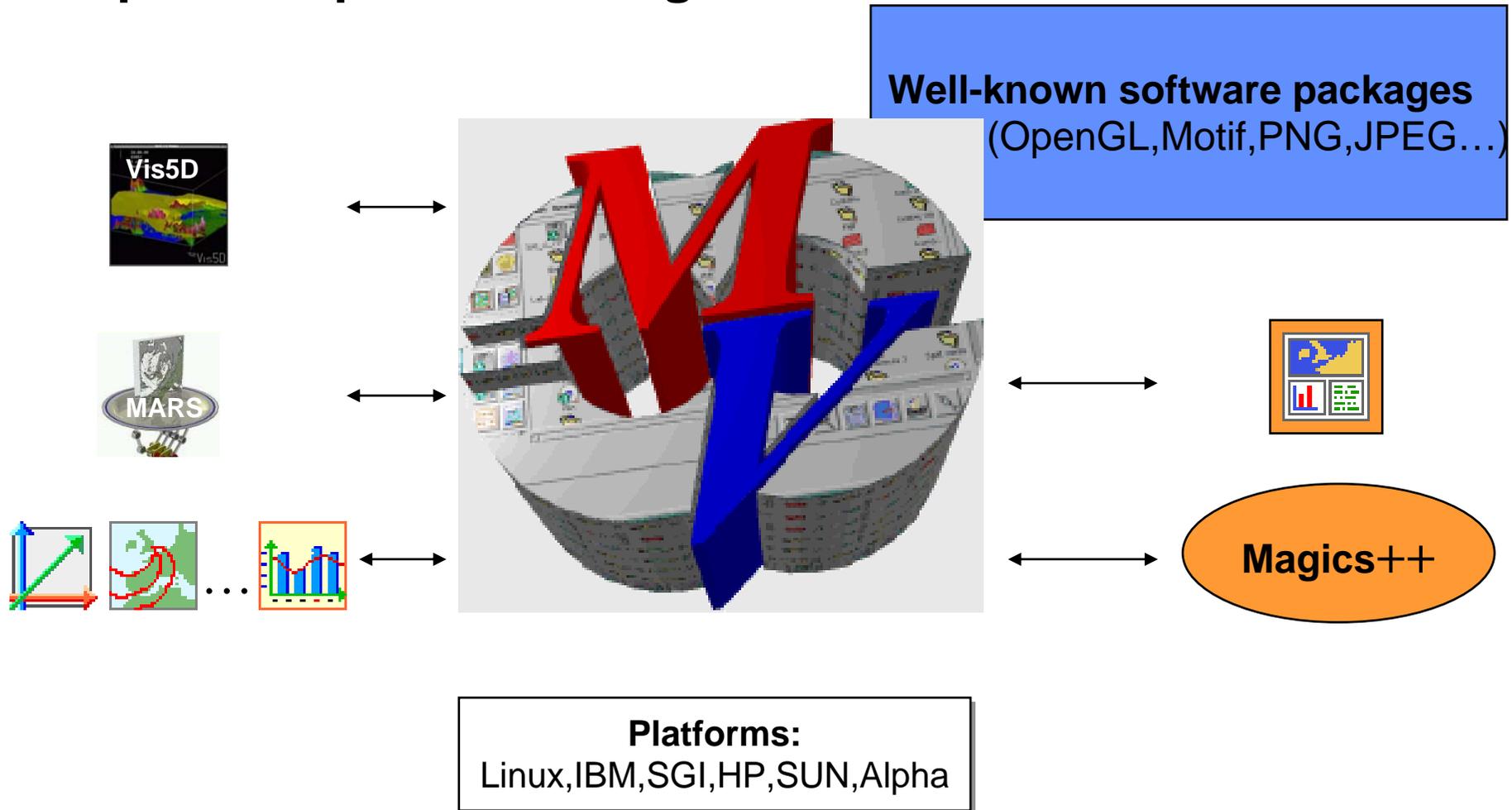**Interactive**

Batch script routine production

- **Working environment for Operations and Research**

- **Meteorological Desktop Plotting Package**

- **Meteorological Data Processing Package**

- *Co-operative project:*

  ➔ *ECMWF – INPE/CPTEC(Brazil) – Meteo-France*

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Main Features

● **Open and portable design**

Vis5D

MARS

...

Well-known software packages
(OpenGL,Motif,PNG,JPEG…)

Magics++

Platforms:
Linux,IBM,SGI,HP,SUN,Alpha

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Main Features

● **Interactive and batch modes**

● **Macro language**

➔ **Powerful meteorologically oriented language**

- **Simple script language + modern computer language**

- **Extensive list of operators/functions**

- **Macro programs: interactive or batch mode**

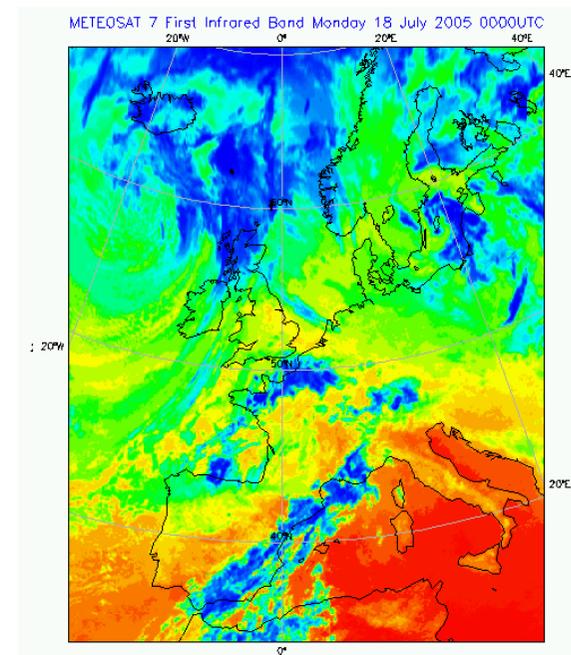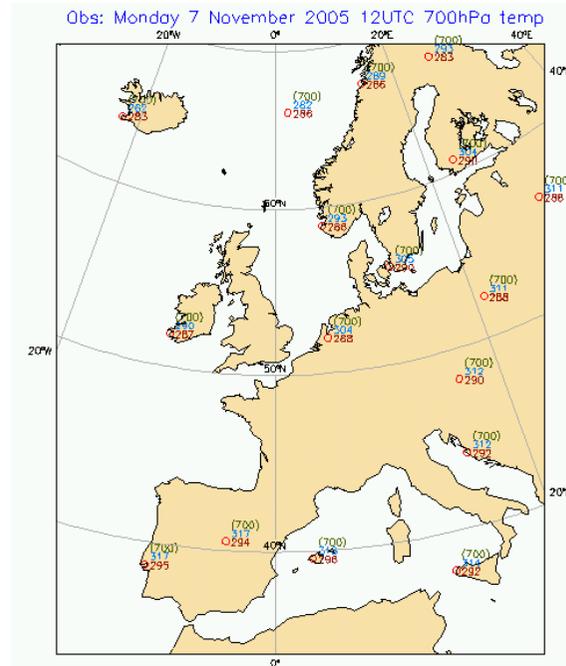- **Macro editor selected by user**

- **NEdit: enhanced Macro editor**

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Main Features

● **Icon-based interface**

Opened Desktop

Main Desktop

Menu Bar

Click-Right for Desktop Menu

Edit to open Desktop

Icon Drawers

New icon...
New link...
Sort by name
Sort by class
Rescan folder
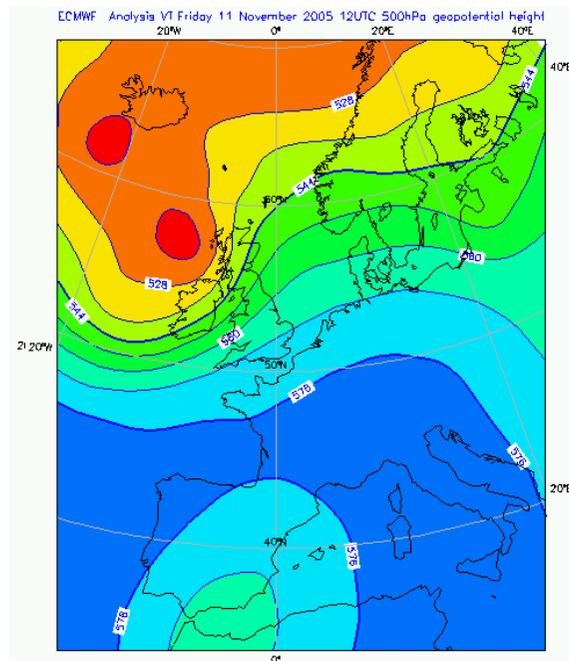Toggle icon size
Show last icon created

Desktop Menu

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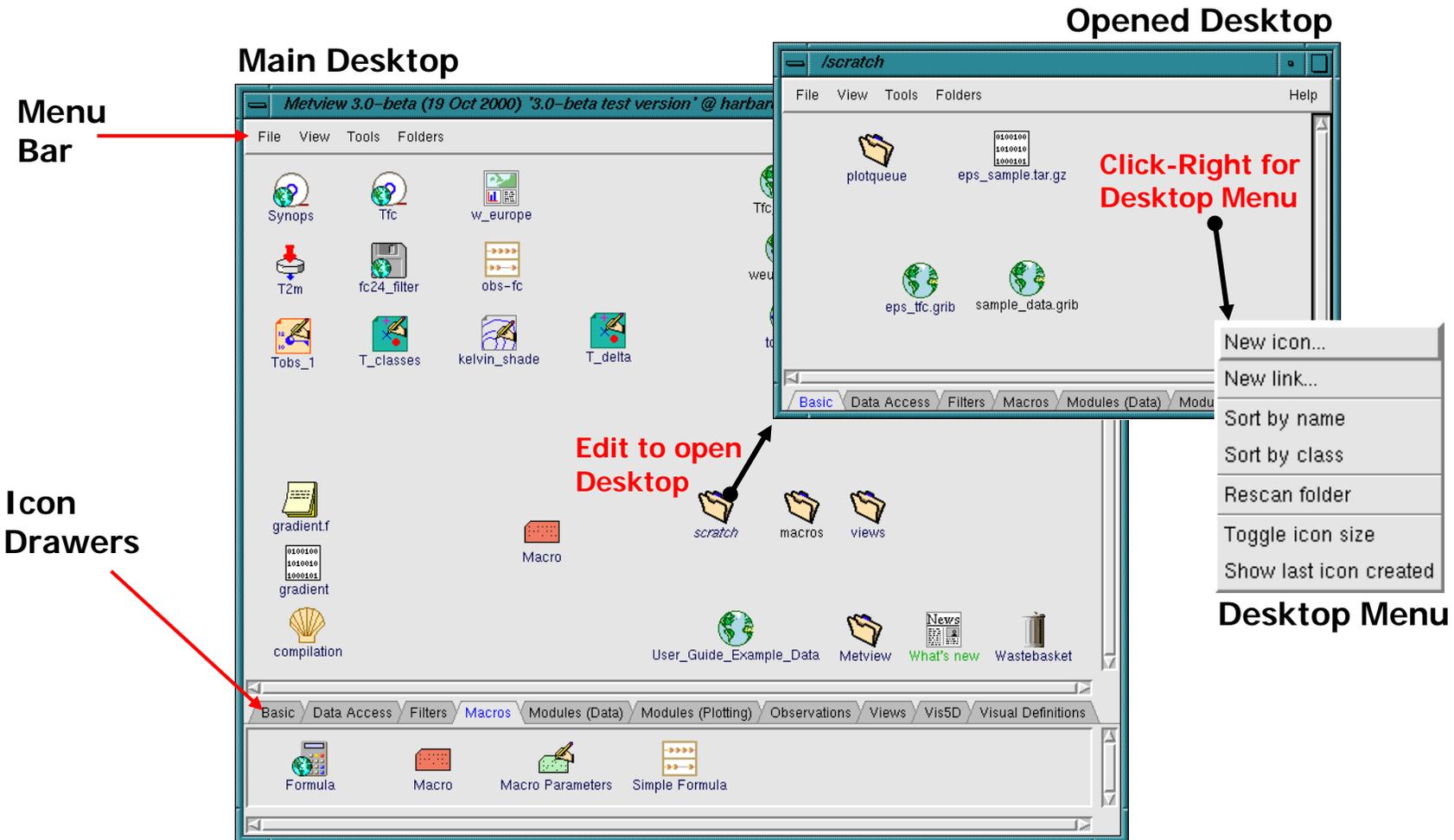
Main Features

- **Handles a variety of data**

- **Rich set of visualisation attributes**

New Developments

● **Hovmøller diagrams**

HOVMOELLER DIAGRAM
Previous analyses and forecast
Wind V-component at 250 hPa BETWEEN LAT 35 AND 60
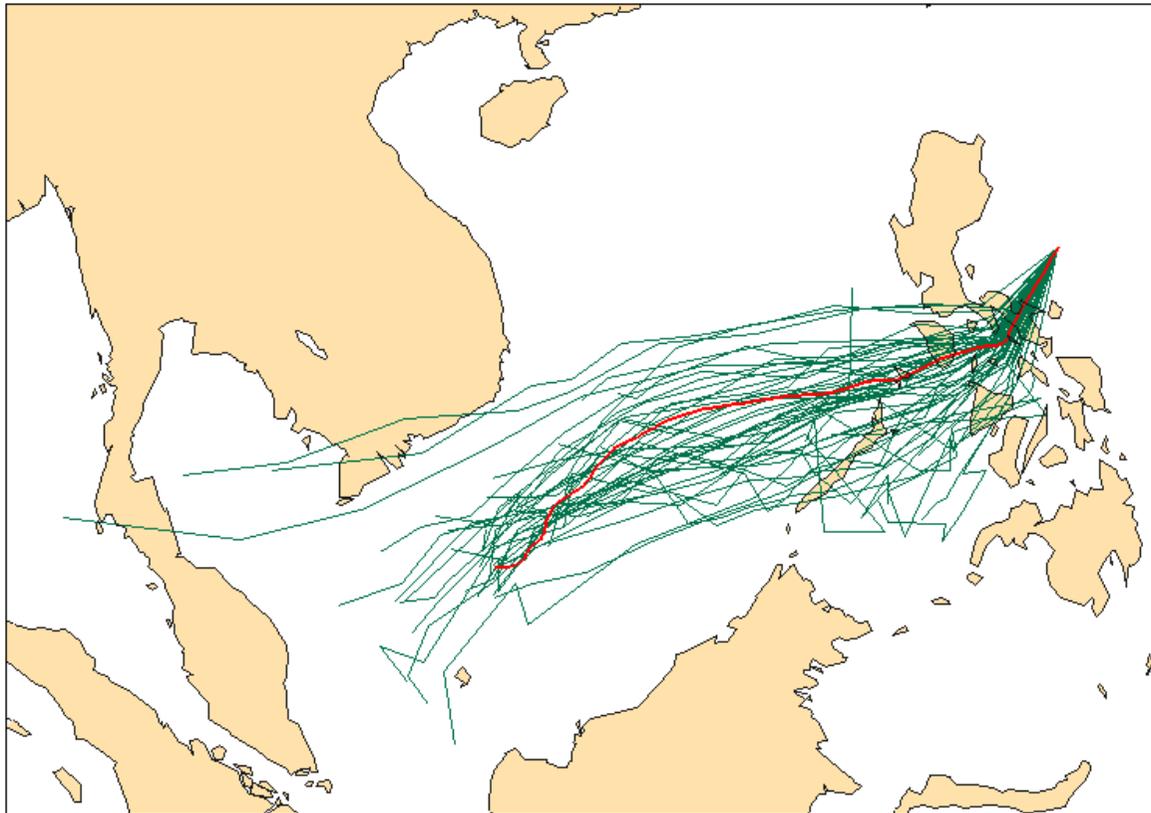FORECAST BASE DATE: 3/11/2004 UTC
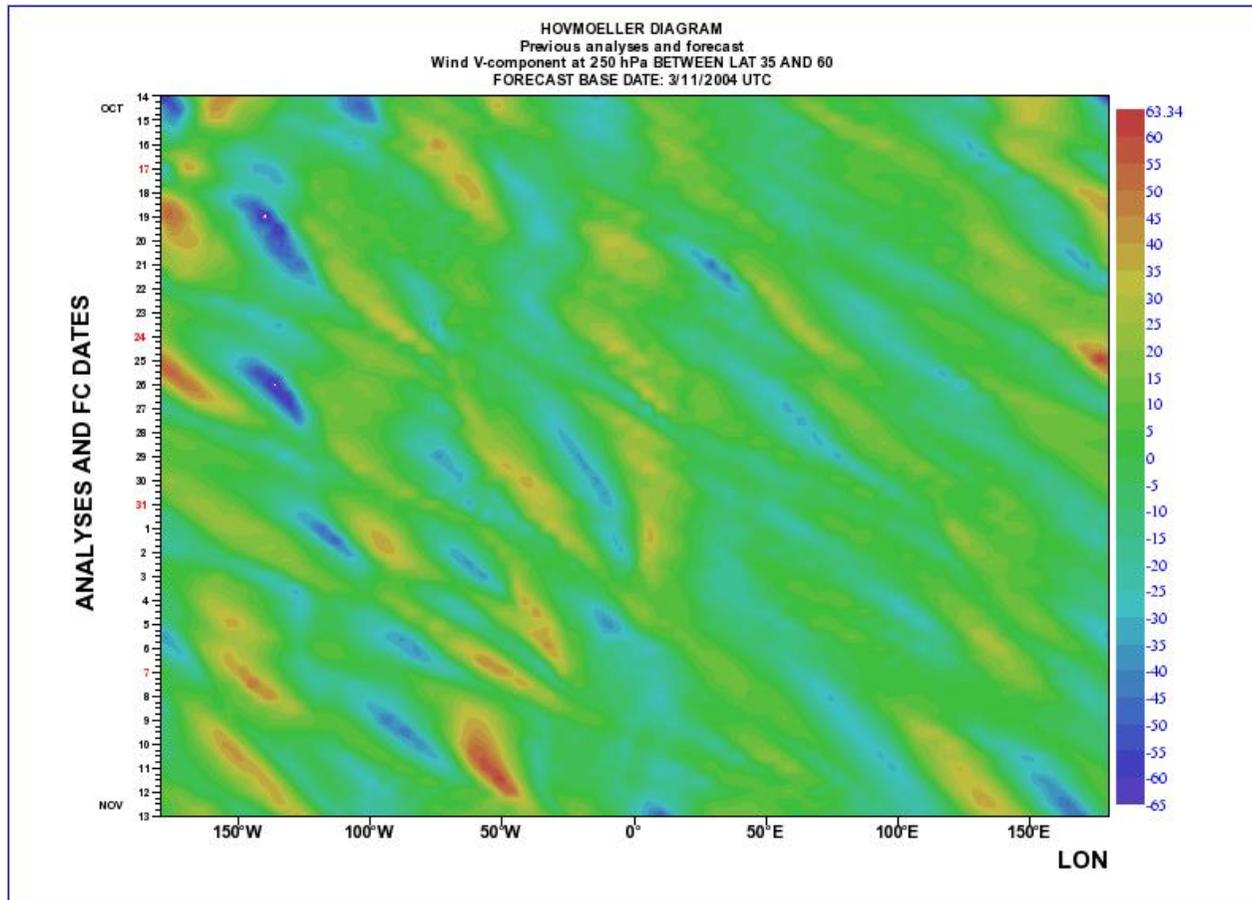
New Developments

● **Tropical Cyclone Tracks**
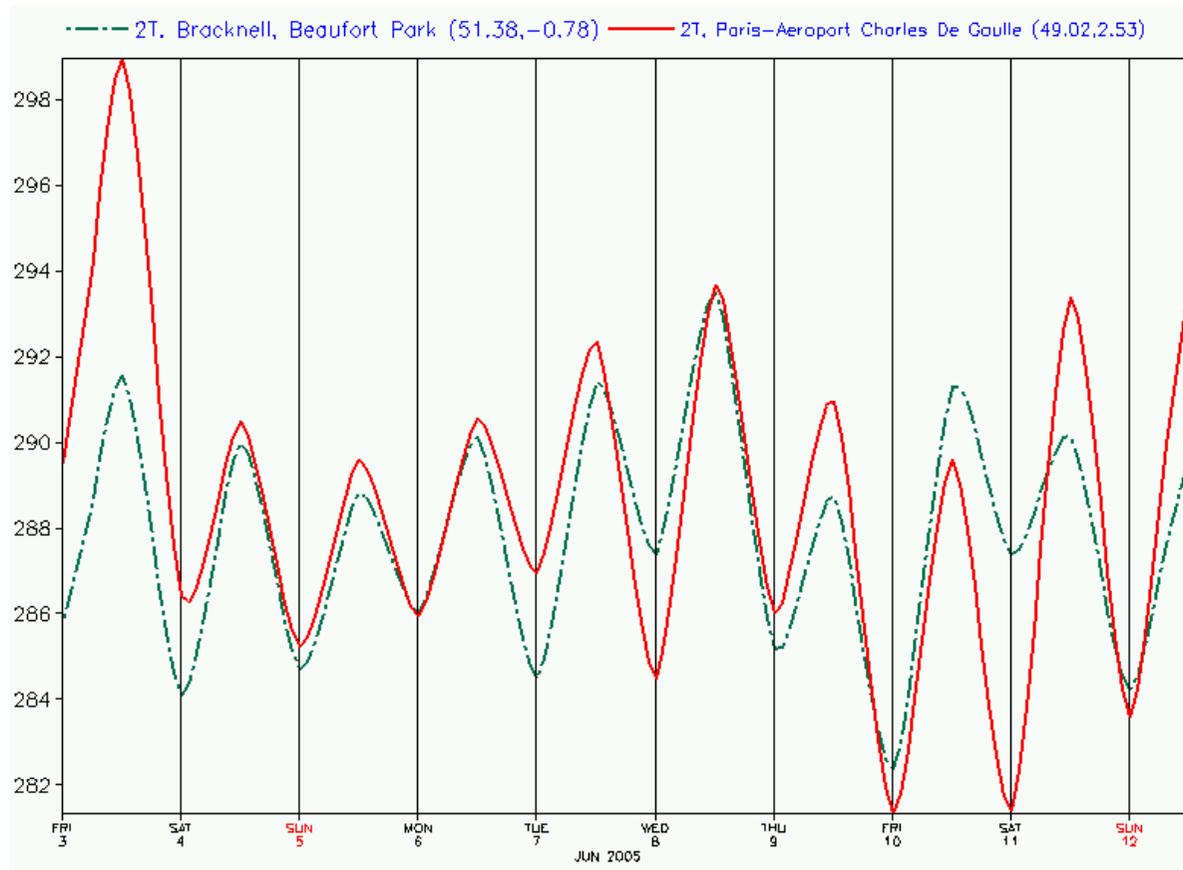

MUIFA(35W) storm centre tracks from 2004-11-19 00:00

New Developments

● **TimeSeries application**

New Developments

● **New Macro facilities**

➔ **Automatic compilation of inlined functions**

➔ **Interactive debug facilities: -mfdbg**

➔ **New flags for debugging batch jobs: -slog, -qlog, -mlog**

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Future Perspectives

- **Constant improvements to cope with:**
  - ➔ **New data types**
  - ➔ **New user requirements**
  - ➔ **New software facilities**
- **More automated installation**
  - ➔ **Learning from Magics++**

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Future Perspectives

- **Integration with Magics++**

  - ➔ **New visualisation module**

  - ➔ **Benefits**

    - ▪ **Improved communication**

    - ▪ **Improved maintainability**

    - ▪ **Easier to add new data formats**

    - ▪ **Improved facilities for user interactivity**

    - ▪ **Macro: multiple simultaneous output formats**

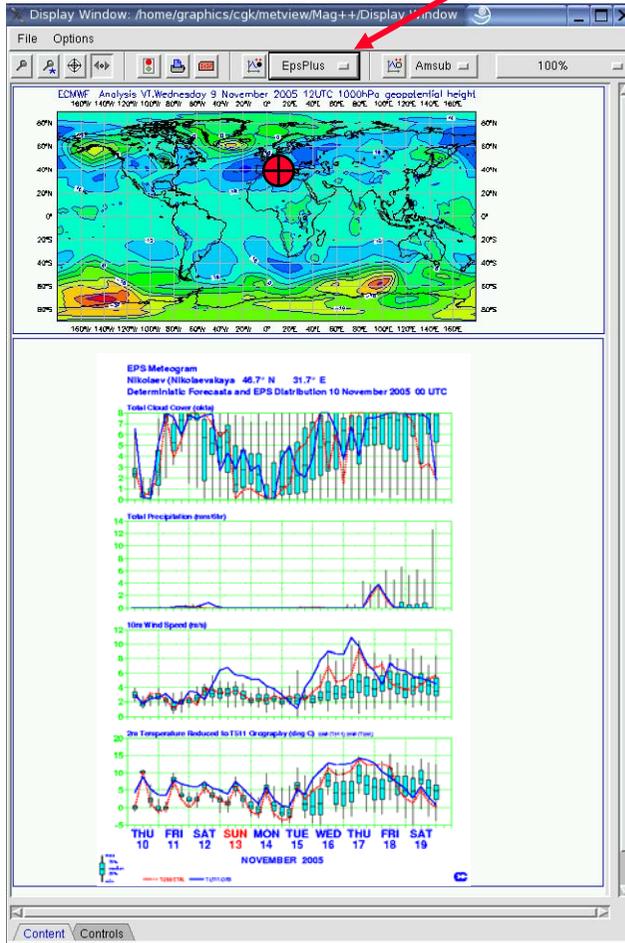   - ▪ **Improved support for text and graphical annotations**

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Future Perspectives

➔ **Case study (First prototype)**

- ▪ **Explore one such benefit by using Metview as a user interface to MagML plot descriptions**
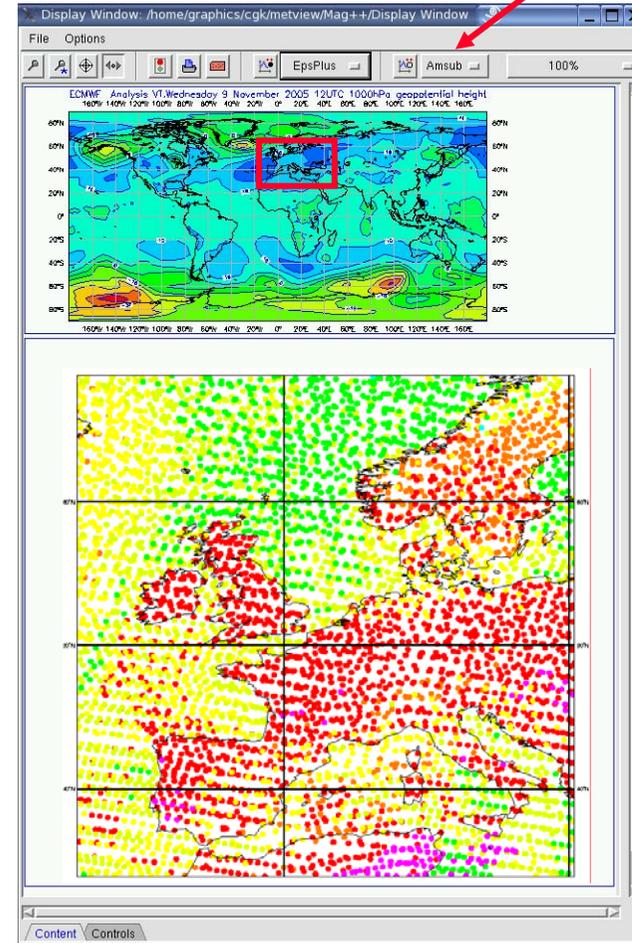
- ▪ **MagML is an XML-based plot description language**

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Future Perspectives

Point selection

Area selection

Future Perspectives

Existing facilities

 Visualisation

 Visualisation

 Editor

Configuration file
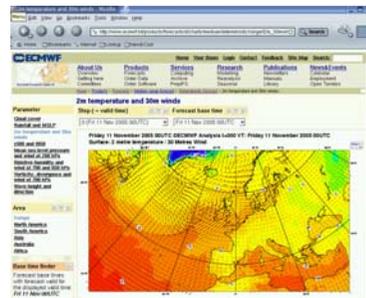
Plot on demand

MagML

Plot Templates

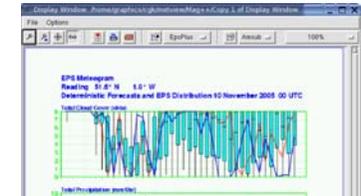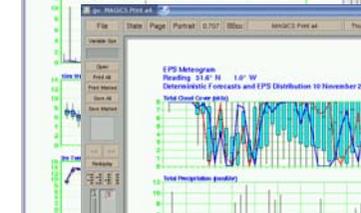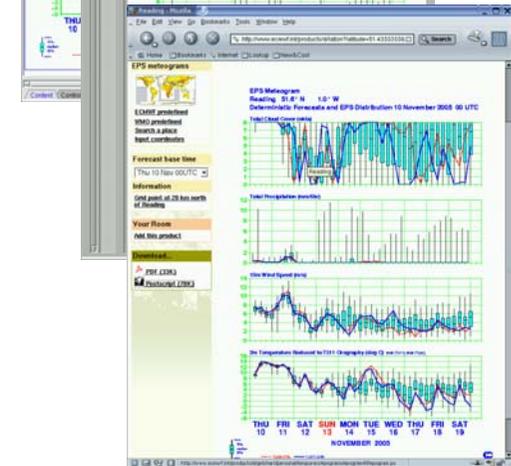**Magics++**

Metview

Batch

Web

Metview - Summary

- **Meteorological data processing and plotting package**

- **For operational and research meteorologists**

- **Highly adaptable and modular package**

- **Milestones:**

  ➔ **1993 / V1.0: First operational version**

  ➔ **1998 / V2.0: New visualisation module (OpenGL)**

  ➔ **2000 / V3.0: New User Interface, Vis5D**

  ➔ **Version 4.0: New visualisation module, Magics++**

Thank you!

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