

MARS used at SMHI

What we use it for

- GRIB
 - Only GRIB ed 1 today

- Not BUFR or NETCDF

- Archived on tape + cach
 - Doubled tape

Setup

MARS Op

- Archiving operational
- Met / Oceano models

MARS Re

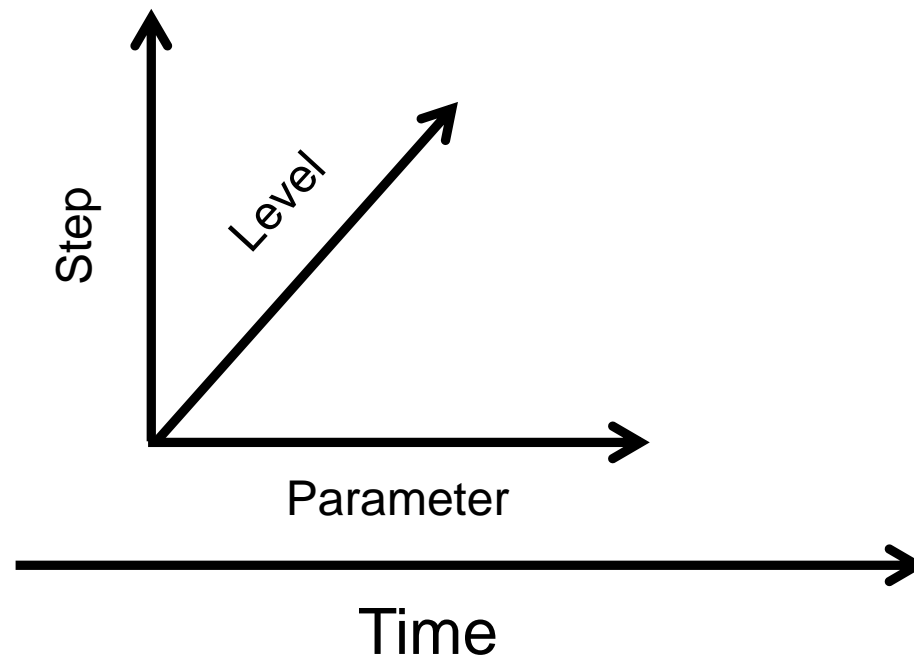
- Research data
- Rerun / Chem mod / Climat mod

MARS Op

- Similar models
- Few constant hypercubes
- Full model runs stored
 - 3 different models + different setups of each
- Simple standard GRIB metadata
- Setup not to erase data
 - Long time archive
- One user archiving / many users retrieving

MARS Op

- Timestep differ dependant on leveltype



MARS Re

- Widely spread type of models
- Complicated GRIB metadata
 - Local section / none standard time parameters
- Different hypercubes for each mars Id
- Erasing data on user level

Build

- GRIB-API 1.13.0 from ECMWF
 - Rewritten definitions and table-files
 - Local section used for MARS metadata
 - Special keys/parameters for chem model
 - Rewritten code to override ECMWF
- MARS ver? from ECMWF
 - Added sections due to chem model

Build

- Korn shell / Python scripting
 - Reorganise files due to hypercube
 - Error handling
 - Mars archiving

Proxy server

- Used to retrieve from your desktop
- Handle local/central user administration
- Local client installed on desktop

Usage

- Monthly manual archiving
- Started automatic/scheduled archiving
- Combined with 6 months file server storage
 - Plans reducing file server

Amount of data

- **Arome:** 64 GB/day MARS Op: **162** TiB
- **Hiromb:** 15.5 GB/day MARS Re: **125** TiB

- **Hirlam:** 72 GB/day
 - Discontinued