



FileFinderAR5

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1. Adress

<http://ocmip5.ipsl.fr/FileFinderAR5>

2. Description and usage

Find files from the OCMIP5 and CMIP5 repositories and **Run** a ferret script over your selection.

Following your choice, the search is made from:

- o a catalog built from the local repository (IPSL ciclad cluster and its hundreds tera bytes of disks) to work with files,
- o a catalog built from the IPSL THREEEDS Server (<http://vesg3.ipsl.fr/thredds/catalog.html>) to work with aggregations.

With your selection of files or aggregations, you can work:

- o from the ciclad cluster,
- o from your computer using remote access using OPeNDAP URLs,
- o from your computer by downloading your selection.

The selection that match your search is selectable. Thereby you can refine the selection by clicking on the file you don't want (use CTRL to unselect separate items or left button of your mouse to unselect multiple items).

When your selection presents aggregation, OPeNDAP or HTTP items, they are displayed as links. So to capture items from selection for further use, please place your mouse at the very first part of the lines.

If you display the *Ferret script dialog*, you can then run a script on your selection and produce images.

Running ferret script is possible only if selection has less then 30 items, format is set "as list" and source

set as "Local (ciclad cluster)" or "THREEDS Server (aggregation catalog)".

Once run, your plots are stored for 14 days in a temporary directory. You can browse it by adding "/files" to the URL displayed.

A ferret syntax option is proposed to prepare your own scripting work.

3. Understand regular expressions

The OCMIP5 and the CMIP5 output are organized following a DRS (Data Reference Syntax) that defines the structure of the repositories.

```
# AR5
# http://cmip-pcmdi.llnl.gov/cmip5/docs/cmip5_data_reference_syntax.pdf
#
# ESGF data node directory structure:
# <Activity>/<Product>/<Institute>/<Model>/<Experiment>/<Frequency>/<Modeling_Realm>/<MIP_Table>
# /<Ensemble_Member>/<Version_Number>/<Variable_Name>/<CMOR_filename>.nc
#
# CMOR filename encoding:
# <Variable_Name>_<MIP_Table>_<Model>_<Experiment>_<Ensemble_Member>[_<Temporal_Subset>].nc
#
```

You can search on the repositories using regular expressions (http://en.wikipedia.org/wiki/Regular_expression#Syntax) on each component of the DRS.

Here are some real cases:

- Experiment = **decadal.***
search on decadal1960, decadal1965, decadal1970, decadal1975, ...
- Institute = **(IPSL|CNRM.*)**
search on IPSL or CNRM-CERFACS
- Variable = **.*(min|max)**
search on all variables that end with min or max

4. Limits and settings to know

- Selection is displayed only if the search result contains less than **2000** items.
- ferret script can be run only if the selection contains less than **30** items.
- Plots produced are cleaned after **14** days.
- ferret script run can request heavy calculations, so be aware of what you are doing and try first on a smaller selection.
- Aggregation can represent a very very large dataset, so be aware of what you are doing.
- Aggregations can be unreachable despite they are indicated in the catalog.
Retry and if the problem persists send a mail to IPSL to Sebastien.Denvil@ipsl.jussieu.fr and Ashish.Bhardwaj@ipsl.jussieu.fr
3 types of problems can be encountered:
 - Overlapping (different files cover same period with overlaps)
 - Non existing aggregation despite existing fragmented files
 - Use of aggregation give error (try 2 times because there may have latency response from the Thredds server)
- The catalogs of files and aggregations are built every day respectively at 23:05 and 23:35.

5. ferret scripting

The ferret script dialog allows you to run your own ferret script on your selection.

Here are some usecases that may help you to design your script:

- By default, the ferret script dialog proposes to draw a spatial map whatever the type of input grids (rectilinear or curvilinear). This is done by the **go CMIP5_shade.jnl** script. You can find and download the CMIP5 scripts from <http://ocmip5.ipsl.fr/forgue/ferret>
- Reload the page to get the initial ferret script
- Open another item (file or aggregation) from each item of the selection
Use a sed to replace the Variable_Name by your choice for each item of your selection.

```
!-----
def sym Filename2=`SPAWN("echo ($Filename) | sed -e 's/($Variable_Name)/tasmax/g'")`
use "($Filename2)"
shade tasmax[k=1,l=1,d=2]-var[k=1,l=1,d=1]
```

- Display 2 plots for each item
You can specify viewports to produce an image with 2 plots for each item of your selection.

```
!-----  
set v left  
shade var[k=1,l=1]  
set v right  
shade var[k=1,l=7]
```

6. Version history

- **Version 2.1** ---> *Released the 2012/04/13*
 - Add modal JQuery control dialog to stop or continue ferret scripting
- **Version 2.0** ---> *Released the 2012/04/09*
 - Code modification to handle different prepared lists from Activities
 - Create Google map from IPs get from logs
- **Version 1.9** ---> *Released the 2012/04/04*
 - New repositories indexed
 - OCMIP5/RECCAP
 - PMIP3
 - Add logs
- **Version 1.8** ---> *Released the 2012/03/19*
 - Access control is now set to run ferret script (User: **ipsl** Passwd: **vivaipsl**) for IPs outside from LSCE and Jussieu
- **Version 1.7** ---> *Released the 2012/03/15*
 - Selections become selectable
 - Internal reorganization to pass information to ferret dialog
- **Version 1.6** ---> *Released the 2012/03/12*
 - All input are now checked against their validity (they must be regular expressions < 80 characters)
 - Use of a cookie to recall last success input fields
- **Version 1.5** ---> *Released the 2012/03/08*
 - Indexes are built against
 - OCMIP5/derived
 - OCMIP5/derived_CMIP5
 - Added running ferret script feature on your selection
 - ferret script is based on FAST and scripts used available from <http://ocmip5.ipsl.fr/forge/ferret/>
 - New logo
- **Version 1.4** ---> *Released the 2012/02/07*
 - Added HTTP Server as source to allow downloads
- **Version 1.3** ---> *Released the 2012/01/10*
 - Added index of aggregations
 - Added THREEEDS Server as source to work with aggregations
- **Version 1.2** ---> *Released the 2011/11/09*
 - FileFinder becomes FileFinderAR5
 - OCMIP5 repository adopts the CMIP5 DRS
 - Index is built from:
 - OCMIP5/merge
 - CMIP5/merge
- **Version 1.1** ---> *Released the 2011/10/28*
 - Index is built from:
 - OCMIP5/OUTPUT