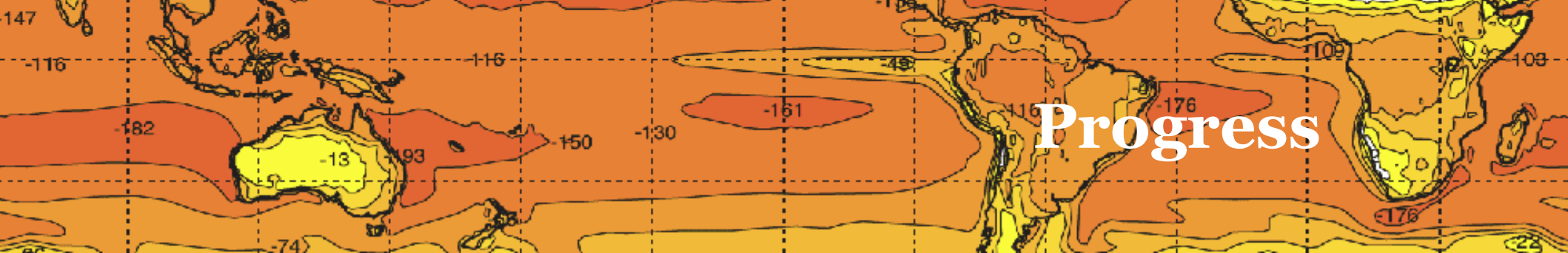


Progress meeting



# Agenda

- Introduction, status and progress over the last months : Jean-François (5-10 min)
- Status of EO gathering, archiving, and availability : Antoine (5 min)
- Status of the homogenization of turbulent fluxes : Abderrahim (+ reporting for Antoine, Sergey) (5 min)
- Status of the sensitivity examinations: Shubha, Hayley (10 min)
- Status of the generation of regional heat constraints for the cage study : Karina (+ reporting for Maria, Keith (10 min)
- Status of the sensitivity studies and algorithm improvement : Abderrahim (+ reporting for Axel), (10 min)
- Status of the use improved retrieval methods for wind speed and humidity : Abderrahim (10 min)
- Status of the evaluation data sets and error characteristics : Rick (10 min)
- Status of OHF portal : Jean François (5 min)
- Plans (tasks, future meetings, ...) (5 min)
- Actions, AOB



- Re-organization of workpackages
- WP-1 : Scientific Requirements Consolidation
  - Delivery of requirement baseline (All)
- WP-2 : Reference Data Set Generation
  - Collection of input EO data and existing fluxes (Ifremer)
  - Improved wind speed and humidity retrieval (Ifremer)
  - Homogenization of data (Ifremer, Serguey)
- WP-3 : Product Generation, Inter-Comparison and Uncertainty Characterizations
  - Sensitivity studies (Ifremer, PML)
  - Cage analysis (MIO)
  - Triplet collocation (NERSC)
- WP-4 : Data Portal Development



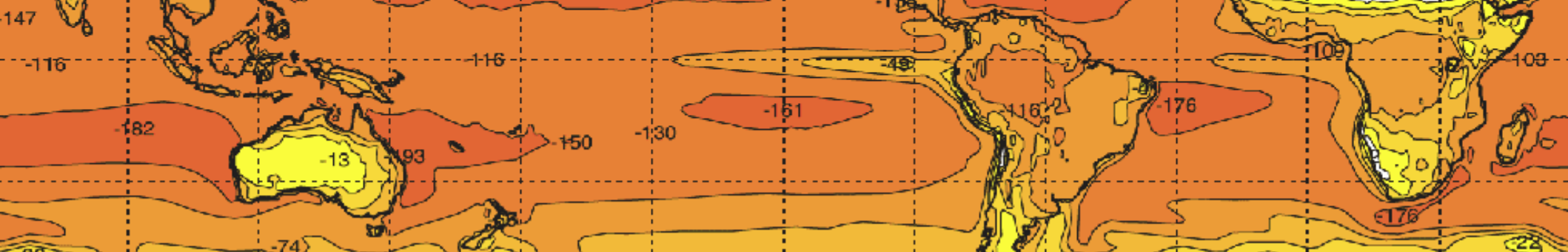
# Publications

Reference	Authors	Status
TIE-OHF: towards improved estimates of ocean heat flux, Flux News, A. Bentamy and K. von Schuckmann, Issue 7, February 2015	A Bentamy K Von Schuckmann	Published
Towards improved estimates of ocean heat fluxes, Bentamy, A., Von Schuckmann, K., Piollé, J. F. SOLAS Newsletter 17 <a href="http://www.solas-int.org/publications/latest-newsletter.html">http://www.solas-int.org/publications/latest-newsletter.html</a>	Bentamy A. Von Schuckmann K. Piollé J. F.	Published
Homogenization of Scatterometer Wind Retrievals , International Journal of Climatology	A Bentamy	In review
“Earth’s energy imbalance: An imperative for monitoring”, Nature Climate Change	K. von Schuckmann (MIO, France), M. Palmer (MetOffice, UK), K. E. Trenberth (NCAR, USA), A. Cazenave (LEGOS/CNES, France), D. Chambers (USF, USA), N. Champollion (ISSI, Switzerland), J. Hansen (UC, USA), S. Josey (NOC, UK), N. Loeb (NASA, USA), P. P. Mathias (ESA)	submitted



# deliverables

WP	Doc ref.	Description	Responsible	Due Date	Status
<b>Scientific Requirements Consolidation</b>					
1	D1.1	Requirement Baseline Document	A Bentamy IFREMER	KO+4	V2.1 provided
<b>Reference Dataset Generation</b>					
2	D2.1	Reference Dataset	A Bentamy IFREMER	KO+6	Initial version completed.
<b>Product generation, inter-comparison and uncertainty characterisation</b>					
3	D3.1	Flux Assessment Report	K. Von Schuckman	KO+11 KO+24	Delayed to October
3	D3.2	Product Handbook	A Bentamy IFREMER	KO+10 KO+23	Requires datasets to be produced. Postponed to end 2015
3	D3.3	Flux Product Dataset	A Bentamy IFREMER	KO+10 KO+21	Postponed to end 2015



### Data Portal Development

4	D4.1	Data Portal initial version at KO+3 for project communication, with presentation content, deliverables, blog,... Updated regularly then.	JF Piollé IFREMER	KO+3 KO+8 KO+14 KO+18 KO+24	v1 provided
---	------	--	----------------------	---	-------------

### Strategic Development

5	D5.1	Scientific Roadmap	B Chapron IFREMER	KO+6 KO+18	end 2015
---	------	--------------------	----------------------	---------------	----------

### Outreach and coordination

6	D6.1	Outreach Material		KO+11 KO+24	presentation, newsletters
6	D6.2	Final Workshop Report	A Bentamy IFREMER	KO+24	
6	D6.6	Biannual newsletter	R Danielson NERSC	Every 6 months	
6	D6.7	Project brochures	R Danielson NERSC	Every 6 months	





# Next meeting

Meeting	Venue	Date	Description	Status
KO	IFREMER	KO	Kick-off meeting	Completed
PM1	IFREMER	KO+7	Progress meeting 1	Completed
<b>PM2</b>	<b>ESRIN</b>	<b>KO+18</b>	<b>Progress meeting 2</b> <b>=&gt; CLIVAR workshop 29/9 – 2/10</b>	
Final workshop	IFREMER	KO + 21	Final project workshop location TBD – joint conference	
FP	ESRIN	KO+24	Final Presentation Meeting – review of products, services, and remaining project deliverables. Analysis of project sustainability.	



# Workshops and conferences

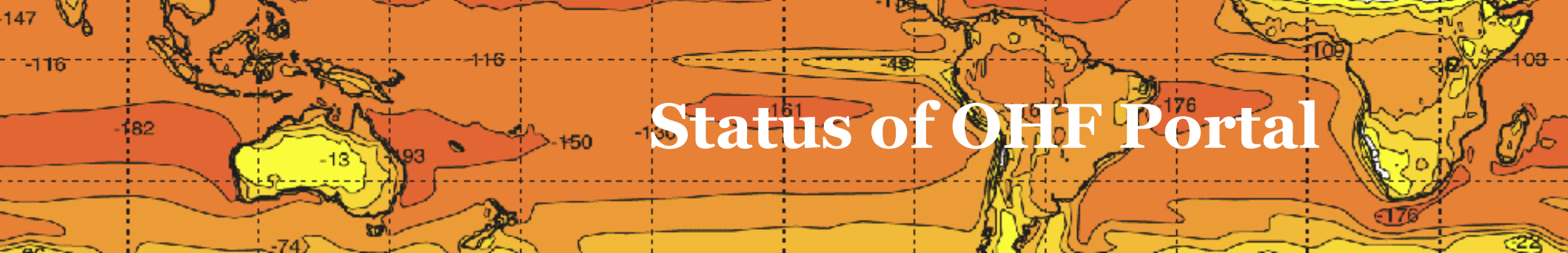
Workshop	Attendant	Status
Challenges of the surface energy budget and proposed ways forward, K. von Schuckmann, S. Josey, S. Gulev, K. Trenberth, C.-A. Clayson, P.-P. Mathieu, M. Wild <i>EGU, Vienna, 12-17 April 2015</i>	K Von Schuckmann	Presented
The Net Energy Budget at the Surface Interface of the “Cold Tongue” Region, Abderrahim Bentamy, Rachel T. Pinker, Banglin Zhang, Anita D. Rapp and Yingtao Ma. <i>EGU (European General Assembly 12 – 17 April 2015, Vienna Austria)</i>	R. Pinker (OHF expert)	Presented
Towards Homogenization of Scatterometer Wind Retrievals, Abderrahim Bentamy, Semyon A. Grodsky, Bertrand Chapron, Anis Elyouncha <i>IOVWST (19 - 21 May 2015 Portland USA)</i>	A Bentamy	Presented
Session “The Earth’s energy imbalance and exchanges at the atmosphere-ocean interface: from fundamental research to societal concern” <i>“Our common future under climate change”, Paris, 7-10 July 2015,</i> <a href="http://www.commonfuture-paris2015.org/">http://www.commonfuture-paris2015.org/</a>	K Von Schuckmann	Accepted
joint CLIVAR RF CONCEPT-HEAT/CLIVAR GSOP/COST ES1402 workshop <i>UK Met Office, Exeter, 28 Sept.-02 Oct.</i>	A Bentamy K Von Schuckmann	Accepted
SOOS - Air-Sea Fluxes for the Southern Ocean: Strategies and Requirements for Detecting Physical and Biogeochemical Exchanges, Frascati, Italy, September 21-23, 2015		
GEWEX (Earth Observation for Water Cycle Science 2015 20th-23rd October 2015 ESA-ESRIN, Italy)		
Oceanflux GHG & Ocean Heat Flux : an open collaborative research framework for ocean fluxes , Open Science 2.0	JF Piollé	Submitted





## Other conferences

- SOOS/WCRP/ESA workshop on Southern Ocean air-sea fluxes : Frascati, Italy, 21-23 September, 2015
- Workshop on energy flow through the climate system: 29 September - 01 October 2015 MetOffice - Exeter - UK
- GEWEX (Earth Observation for Water Cycle Science 2015 20th-23rd October 2015 ESA-ESRIN, Italy)



# Status of OHF Portal

<http://www.oceanheatflux.org/>

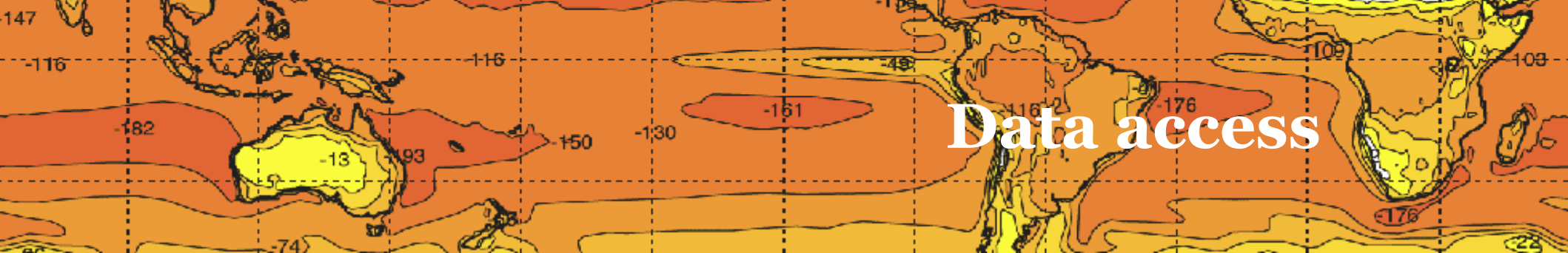
Each project member should have a login/password. If you don't please contact me.

Allows access to private areas (documents)



# Data catalogue

- Internal (DARD) :  
[https://docs.google.com/spreadsheets/d/1yIULG83nOD4C5wbBc-a4nkIs6lEnVi\\_EBXdLHgk4Rs/edit#gid=0](https://docs.google.com/spreadsheets/d/1yIULG83nOD4C5wbBc-a4nkIs6lEnVi_EBXdLHgk4Rs/edit#gid=0)
  - Update with new requested sources of data
- Vocabulary and units :  
[https://docs.google.com/spreadsheets/d/1n5xlMe7G\\_IeWXT9obrVKveZg3mgqP1H9IoqrS1losQ/edit#gid=0](https://docs.google.com/spreadsheets/d/1n5xlMe7G_IeWXT9obrVKveZg3mgqP1H9IoqrS1losQ/edit#gid=0)
  - Please report any missing variable
- External users :  
<http://www.oceanheatflux.org/index.php/data/>



- ftp:  
<ftp://o1ef56:DeJd6uNv@eftp.ifremer.fr/oceanheatflux/>
- OpenDAP possible
- Direct remote access on Nephelae (« sandbox »)

# Access to Nephelae platform

The screenshot shows a Mozilla Firefox browser window displaying the CERSAT website. The browser's address bar shows the URL: `cersat.ifremer.fr/oceanography-from-space/our-domains-of-research/mass-data-processing-and-mining/item/478-accessing-nephelae`. The website header includes the CERSAT logo and navigation menus. The main content area is titled "Accessing Nephelae" and contains the following text:

**Accessing Nephelae**

We offer to our partners the ability to remotely process data on Nephelae, the cloud computing facility at Cersat. This means that the user does not have to download the data archive (which can be a huge amount of data) but instead work and process them remotely. You can find here how to get an access to a virtual machine matching your needs and start playing with the OceanFlux Greenhouse Gases data.

**How to get an access**

First of all, you need an account to access the platform. Please fill in the following form to ask for your account creation : [CERSAT cloud account creation request](#)

**Note:** we reserve ourselves the right to grant or refuse the access to our processing resources, depending on the processing platform load and priorities. The description of your project will help us to set these access priorities in case we face with too many demands.

**Terms and conditions**

Nephelae data and processing resources are public domain and may be used, copied and distributed free of charge. Nephelae data and processing resources may be exploited commercially to develop revenue-generating services where measurable value is added to the Nephelae resources by a service provider. Distribution or copying of unmodified Nephelae resources for commercial purposes or financial gain is strictly prohibited. Users are required to acknowledge Cersat/Nephelae project in any resulting papers, products, presentations or other outreach material.

Any resource made available through OceanFlux is not guaranteed to be: up to date, true, not misleading, free from viruses (or anything else which may have a harmful effect on any technology), or to always be available for use.

No liability shall be accepted for any losses incurred as a result of the use of these data.

**Connecting to Nephelae**

To use Nephelae, each user has to connect to an entry-point virtual machine (shared or user-specific), which is directly connected to the Cersat Cloud infrastructure.



## Cersat Cloud – Account Creation Form



Please note that we reserve ourselves the right to grant or refuse the access to our processing resources, depending on the processing platform load and priorities. The description of your project will help us to set these access priorities in case we face with too many demands.

To create your Cersat Cloud account, please fill the following form :

Name *	<input type="text"/>
First name *	<input type="text"/>
Email *	<input type="text"/>
Phone number *	<input type="text"/>
Organization *	<input type="text"/>
Organization type *	<input type="radio"/> Private / Other <input type="radio"/> Education / Research <input type="radio"/> Government





# Access to Nephelae platform

## Registration

<http://forms.ifremer.fr/los/cersat-cloud-account-creation-form/>

## Confirmation email

*Dear Sir,*

*Here are your Ifremer Intranet account settings :*

*\* Login : mwarren / 7mw=rrz*

*\* SSH access authorized from IP 192.171.164.40 to :*

*- the oceanflux project shared entry point \*vepoceanflux.ifremer.fr\* (134.246.156.149), for basic ssh-only access*

*- your user-specific virtual machine : \*br156-167.ifremer.fr\* (134.246.156.167), for NX Client access.*

*To use your user-specific virtual machine, we recommend you to install the NX Client software to get a graphical remote desktop on the platform : <http://www.nomachine.com/download.php>*

*Once logged, you will find an OCEANHEATFLUX-DATA folder which contains some README.OCEANHEATFLUX.\* and the data access.*

# Access to Nephelae platform

```
ssh -X <user>@<server address>
```

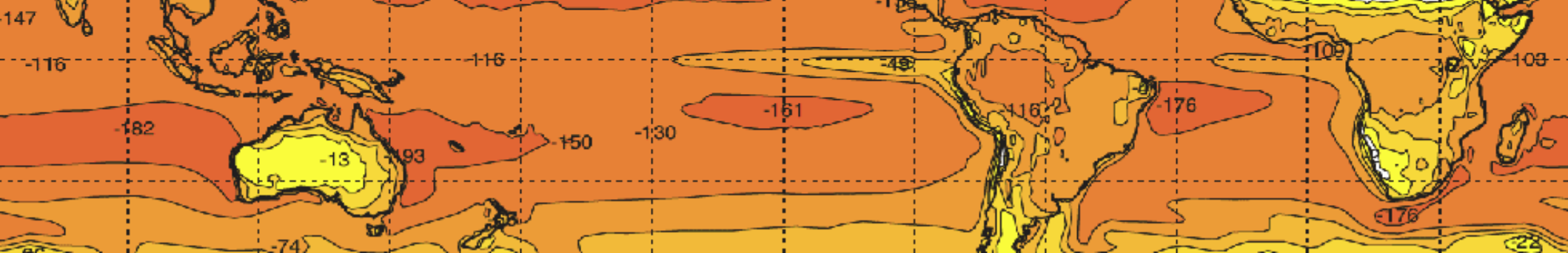
```
br156-167:~% ls  
Bureau  Images  mail  Musique  OCEANFLUX-SHARED  restit  Vidéos  
Documents  internet  Modèles  OCEANFLUX-DATA  Public  Téléchargements  workspace  
br156-167:~% █
```

```
br156-167:~% ls OCEANFLUX-SHARED/*  
OCEANFLUX-SHARED/src:  
climatology  socat
```

```
OCEANFLUX-SHARED/workspace:  
climatology  lgoddijn  socat  
br156-167:~% █
```

# README.OCEANFLUX.DATATREE.TXT

```
jfpiolle@ananda/home/ananda/project/oceanflux/doc/clim-processor
Fichier Édition Affichage Rechercher Terminal Onglets Aide
root@br156-108: ~ x root@br156-109: ~ x jfpiolle@ananda-/git/... x jfpiolle@ananda/hom... x jfpiolle@br156-149-/... x root@br156-149:/ho... x root@adonnante:/usr... x jfpiolle@ananda/hom... x
This file was generated automatically using the following command : tree -d | sed -e 's/->.*//g'
.
├── blended
│   ├── l3
│   │   ├── precipitation
│   │   │   └── tropics
│   │   │       └── trmm-3b42
│   ├── l4
│   │   ├── ocean-temperature
│   │   │   ├── global
│   │   │   └── odysseya
│   │   ├── precipitation
│   │   │   └── global
│   │   └── gpcp
├── climatologies
│   ├── co2-flux
│   │   └── global
│   │       └── takahashi
│   ├── fronts
│   │   ├── global
│   │   ├── navo-avhrr
│   │   └── ostia-gradients
├── composites
│   ├── air_pressure_at_sea_level
│   ├── chlorophyll-a
│   │   ├── global
│   │   └── globcolour
│   ├── colored_detrical_matter
│   │   ├── global
│   │   └── globcolour
│   ├── rain_rate
│   ├── salinity
│   ├── sea_ice_fraction
│   ├── sea_surface_temperature
│   ├── sigma0
│   ├── significant_wave_height
│   └── wind_speed
├── insitu
│   ├── socat
│   └── whitecap
│       ├── atlantic
│       └── noc
└── model
```



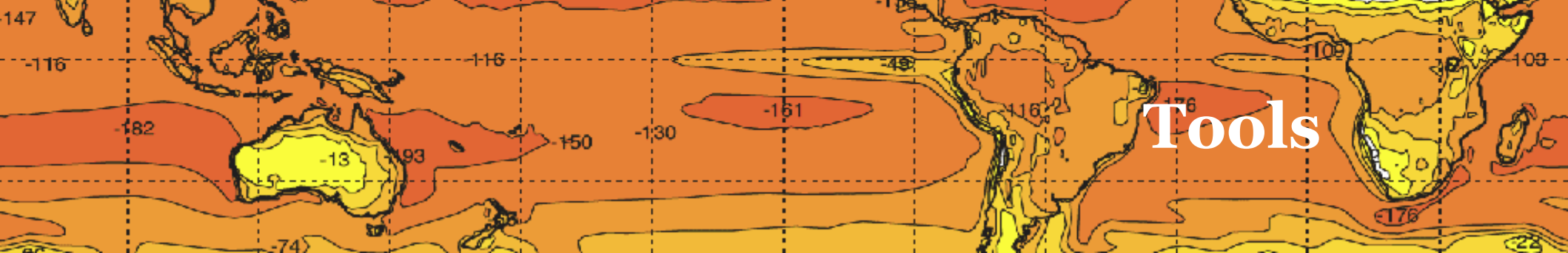
Loading the environment :

```
source /home/cercache/tools/environments/scientific_toolbox_cloudphys_precise/bin/activate.csh
```

Do some work in python

Rapatriate result

```
scp <user>@<server address>:<full directory to output>/*.nc .
```



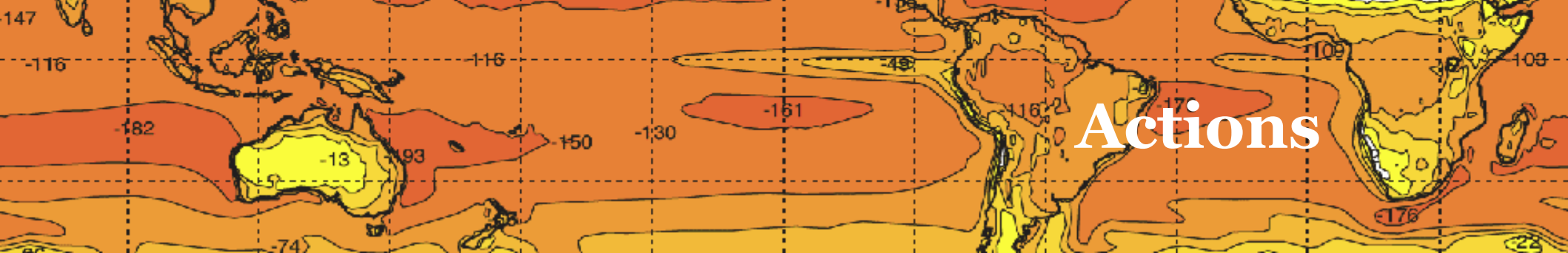
- Currently available on the platform (Ifremer)
  - Scientific python packages
  - Ifremer Cerbere library
  - Code for homogenization (no docs yet)
  - Code for colocation with buoys (needs more doc)
  - Code for selection of buoys suitable for flux calculation
- Tools to be collected and made available
  - Resampling from Sergey (got fortran code) (+resampling from cerbere library)
  - Flux calculation toolbox (ongoing transcoding into python) - Ifremer
  - Cage calculation (MIO)
  - Pdf calculation (to be provided by Sergey)
  - Triplet colocation analysis (NERSC)
  - Ensemble analysis (Ifremer)



## More advanced tools

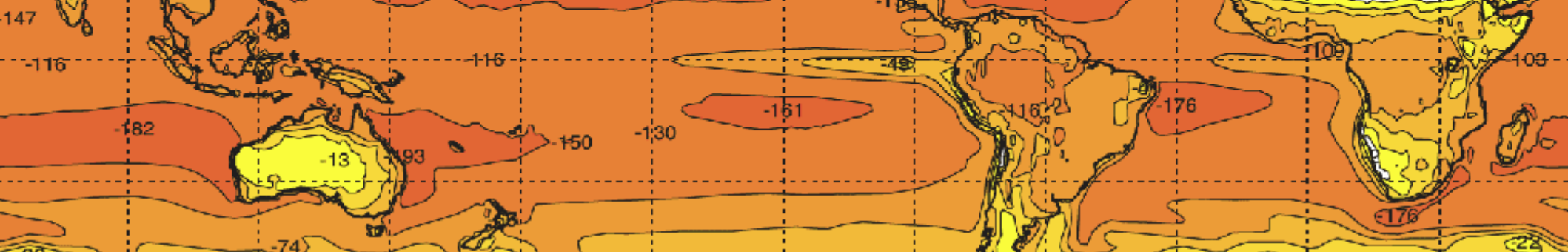
- « Flux cooking » interface (Ifremer) => based on OceanFlux experience
- Felyx (Ifremer) => 1st release just completed. Usage for OHF to be investigated in coming weeks.
- Visualization (ODL/Syntool and Ifremer/Calypso merge)





# Actions

ID	RESPONSIBLE	DESCRIPTION	OPEN	DUE DATE	STATUS	COMMENT
1	IFREMER/AB	Provide MoM from Paris meeting PM1	26/01/15		Open	Done
2	IFREMER/JFP	Workpackage to be renamed conforming to IT ESA SoW tasks	26/01/15		Open	Done in updated PMP
3	IFREMER/AG	Add MERRA reanalyzes to reference dataset	26/01/15		Open	Done
5	IFREMER/AB	Double check the product rights and especially ERA Interim	26/01/15		Open	Done (data are transformed)
6	IFREMER/AG	Double check the version of each product and the associated DOI (if exists)	26/01/15		Open	Done
7	IFREMER/AB	Provide the accuracy requirements for LHF and SHF. The latter would be derived from peer review publications and from scientific project reports (e.g. <a href="http://lists-ioc-goos.org/goos-strategic-mapping-graphic/">http://lists-ioc-goos.org/goos-strategic-mapping-graphic/</a> )	26/01/15		Open	Done
8	IFREMER/AG	Circulate the methods aiming at the homogenization of the flux products	26/01/15		Open	Done
9	IFREMER/AG	Foster interaction between NERSC and IFREMER aiming at comprehensive use of data and procedures including cloud procedure, Felyx, collocation, statistics	26/01/15		Open	Done



10	IFREMER/AB	Contact Dr Lisan YU for the updated OAF flux	26/01/15		Open	Requested but these data are still under validation and can not be distributed
11	MIO/KVS	Provide report summarizing the main tasks relied on D1.1 (services, methods, ..)	26/01/15		Open	Done
12	NERSC/RD	Provide a note aiming at the clarification of work performing by NERSC in collaboration with IFREMER	26/01/15		Open	Done in updated PMP
13	IFREMER/AG	Assessment of variable names (see CF convention)	26/01/15		Open	Done
14	IFREMER/AG	Check the use of zenodo	26/01/15		Open	DOI Ifremer available
15	IORAS/SG	Provide method and algorithms for PDF flux analysis	26/01/15		Open	Ongoing
16	IFREMER/AB	Contact Dr Shawn Smith from FSU for SAMOS data	26/01/15		Open	Done
17	IFREMER/JFP	Change project acronym from TIE-OHF to OHF	26/01/15		Open	Done in updated PMP
18	IFREMER/AB	Provide justification for flux datasets made available for OHF project	26/01/15		Open	Done