

Latest news about the PMIP3 database and community

<http://pmip3.lsce.ipsl.fr>

Theory...



Practice ?

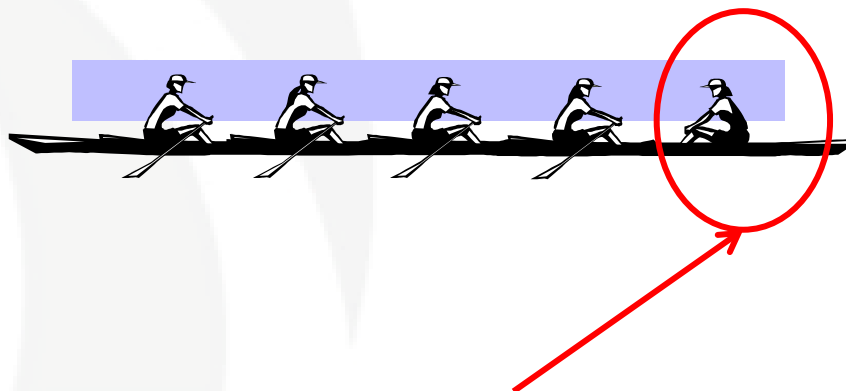


Now ? !



Waking up on Monday with PMIP3 !

- ESGF and PMIP3
- New Stuff
- Doing science together (aka *The Community Stuff*)



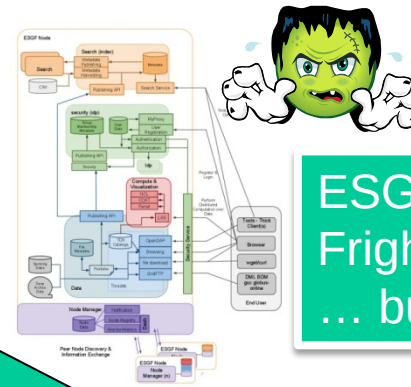
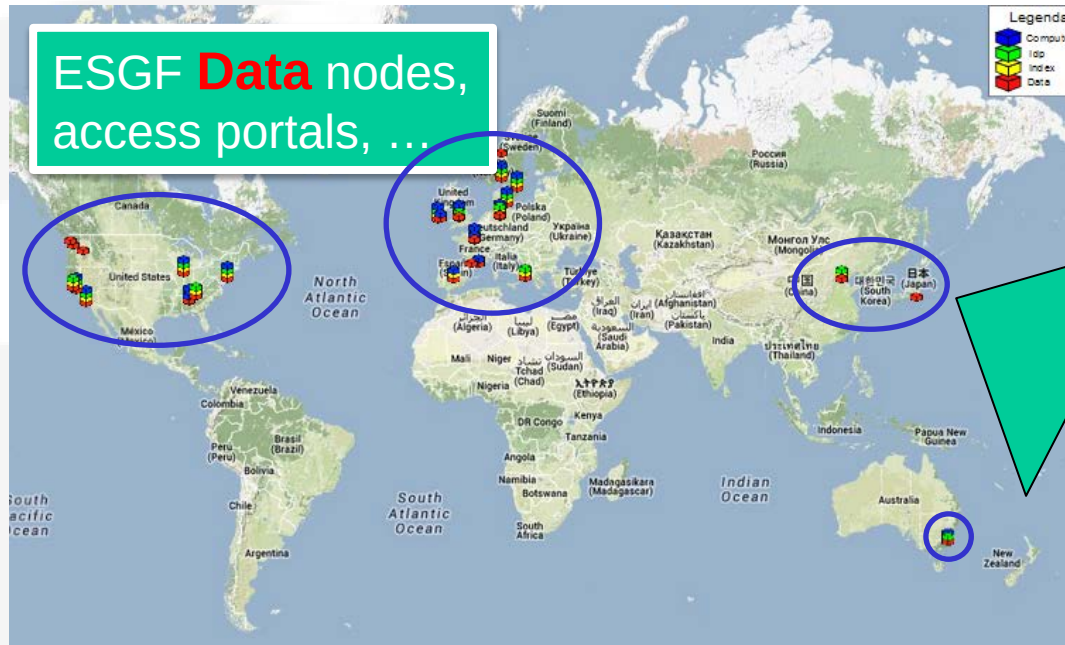
PMIP Steering committee

- Questions?? → you have 5 days for questions and comments ☺

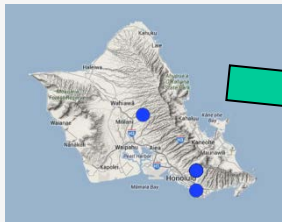


Where is my data? → the ESGF network

ESGF **Data** nodes,
access portals, ...



ESGF machinery
Frightening...
... but efficient!



<http://esgf-node.ipsl.fr/esgf-desktop>

ESGF **users**, searching and downloading data



LABORATOIRE DES SCIENCES DU CLIMAT & DE L'ENVIRONNEMENT

Jean-Yves Peterschmitt – PMIP3 Namur meeting – May 26-30 2014



The PMIP3 participants (as of May 24th 2014)

	Institute	Country	0k <i>piControl</i>	6k <i>midHolocene</i>	21k <i>lgm</i>	LM <i>past1000</i> (1000 years)	1 % CO ₂ <i>1pctCO2</i> (140 years)	CMIP5	PlioMIP	Last Interglacial	Holocene
1	AWI	Germany	Completed	Completed	Completed			No	Yes	Yes	No
2	BCC	China	CMIP5 (500)	CMIP5 (100)		CMIP5	CMIP5	Yes	No	No	No
3	BCCR	Norway	Completed	Running Summer 2013	Completed	Running Summer 2013	Running Summer 2013	No	Yes	Yes	No
4	CAU-GEOMAR	Germany	PMIP3	PMIP3	Starting		PMIP3	No	Yes	Yes	Yes
5	CNRM-CERFACS	France	CMIP5 (850)	CMIP5 (200)	CMIP5 (200)		CMIP5	Yes	No	No	No
6	FUB	Germany	PMIP3 (400)		PMIP3 (600)			No	No	No	No
7	NOAA-GFDL	USA	CMIP5 (470)		Not Successful		CMIP5	Yes	No	No	No
8	NASA-GISS	USA	CMIP5 (7 x)	CMIP5 (100)	CMIP5 (2 x 100)	CMIP5 (8 x 1000)	CMIP5 (151)	Yes	Yes	?	Yes
9	IPSL	France	CMIP5 (1000)	CMIP5 (500)	CMIP5 (200)	CMIP5	CMIP5	Yes	Yes	Yes	Yes
10	ICHEC (KNMI)	Netherlands	PMIP3 (40)	PMIP3 (40)				No	Yes	No	No
11a	LASG-CES	China	CMIP5 (900)	CMIP5 (100)	CMIP5 (100)		CMIP5	Yes	Yes	No	No
11b	LASG-IAP		CMIP5 (501)	CMIP5 (100)		CMIP5	CMIP5		No	No	No
11c			Completed			CMIP5			No	No	No
12	LOVECLIM	Belgium France Netherlands	Completed	Completed	Completed	Completed		No	No	Yes	Yes
13	MIROC	Japan	CMIP5 (531)	CMIP5 (100)	CMIP5 (100)	CMIP5	CMIP5	Yes	Yes	?	?
14	MPI-M	Germany	CMIP5 (1156)	CMIP5 (2x100)	CMIP5 (2 x 100)	CMIP5	CMIP5	Yes	No	No	No
15	MRI	Japan	CMIP5 (500)	CMIP5 (100)	CMIP5 (100)	CMIP5	CMIP5	Yes	Yes	No	No
16	NCAR	USA	CMIP5 (501)	CMIP5 (1x301 + 1x30)	CMIP5 (1x101 + 1x31)	CMIP5	CMIP5	Yes	Yes	No	No
17	OSUVic	USA	Completed	Completed (400)	Completed		Completed	No	No	No	No
18	CSIRO-QCCCE	Australia	CMIP5 (500)	CMIP5 (100)			CMIP5	Yes	No	No	No
19a	MOHC (UK groups)	UK	CMIP5 (497)	CMIP5 (102)	Starting	Running Spring 2013	CMIP5	Yes	Yes	Yes	Yes
19b			CMIP5 (240)	CMIP5 (35)				Yes	No	No	No
19c	UOED		PMIP3 (1200)				PMIP3	CMIP3	Yes	Yes	Yes
20	UNSW	Australia	PMIP3 (1000)	PMIP3 (500)	Not Successful	PMIP3	PMIP3	No	No	Yes	Yes
21	UoT	Canada	Completed	Completed	Completed	Completed	Completed	No	No	No	No

- Full table available on the wiki
<https://wiki.lsce.ipsl.fr/pmip3/doku.php/pmip3:database:status>
- Distributed experiments:
 - midHolocene: 16
 - lgm: 9
 - past1000: 11
- Some experiments not converted with CMOR ☹
→ not distributed
- Some models can't run the lgm experiment

→ Need to make a more technical documentation for lgm ?!



New! The climatological monthly means

- The goals:
 - Make it easier to download data for common/simple analysis
 - Add some extra value to the PMIP3 data
 - Experiments: piControl, midHolocene, lgm
- The means: data reduction
 - Lots of data (possibly in several files) → 1 file
N years x 12 months → 12 months
DRS frequency names: *Xmon* data → PMIP3 *monClim* data
 - Shell scripts + **cdo** operators + python/**UV-CDAT**
 - cdo cat → concatenate along the time axis
 - cdo ymonmean → multi-year monthly mean
 - cdo ymonvar → multi-year monthly variance (divisor is n)
- The results
 - Generated 4661 files (115 Gb)
 - The variance has been added to each file
 - Generated datasets have the **v20140428** version name



Accessing the monClim data

Visit any node (IPSL → <http://esgf-node.ipsl.fr/>) + **Search** menu

2. Check search categories, or remove all or some categories

3. The content of the categories depend on the filters selected previously!

1. Select categories

The screenshot shows the monClim search interface. The 'Search' menu is circled in red. The 'Current Selections' section shows 'remove all', '(x) time frequency: monClim', and '(x) experiment: lgm'. The 'Search Categories' section shows a list of categories: Project, Institute, Model, Instrument, Experiment Family, Experiment, Time Frequency, and monClim. The 'Experiment' and 'Time Frequency' categories are circled in red. The search results section shows 'displaying 1 to 10 of 60 search results' and a list of results. A blue box with white text says: 'Hint! When you have selected the filters, display ALL the found datasets before adding them to the Datacart!'. Red arrows point from the hint box to the 'Add' button and the '60' in the search results count.

Home **Search** Tools Login Help

Current Selections

[remove all](#)
(x) time frequency: monClim
(x) experiment: lgm

Search Categories

Project

Institute

Model

CCSM4 (10)
CNRM-CM5 (5)
COSMOS-ASO (1)
FGOALS-g2 (5)
GISS-E2-R (10)
IPSL-CM5A-LR (5)
MIROC-ESM (7)
MPI-ESM-P (12)
MRI-CGCM3 (5)

Instrument

Experiment Family

Experiment

lgm (60)

Time Frequency

monClim (60)

Search

Examples: temperature, "surface temperature", climate AND project:CMIP5 AND variable:hus.
To download data: add datasets to your Data Cart, then click on Expand or wget.

☒ Search All Sites ☐ Show All Replicas ☐ Show All Versions

< 1 2 3 4 5 6 > displaying 1 to 10 of 60 search results

Display 10 datasets per page
Add 5 datasets to Datacart Remove All Displayed from Datacart

Results

project=PMIP3, model=NCAR, National Center for Atmospheric Research, USA, experiment=last glacial maximum, time frequency=monClim, version=20140428
Data Node: esgf-node.ipsl.fr
Version: 20140428
Description: CCSM4 model output prepared for CMIP5 last glacial maximum
Further options: [Add To Cart](#) [Visualize and Analyze](#)

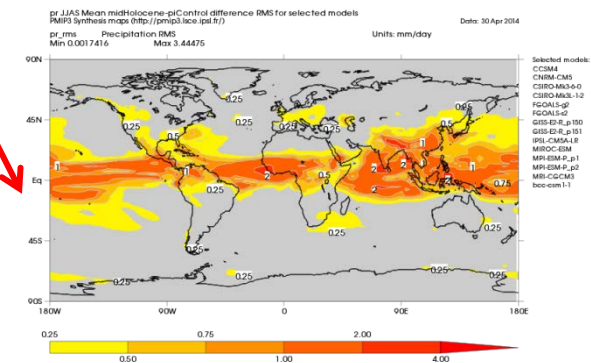
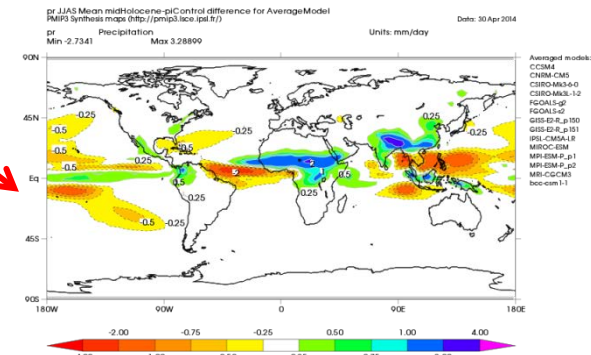
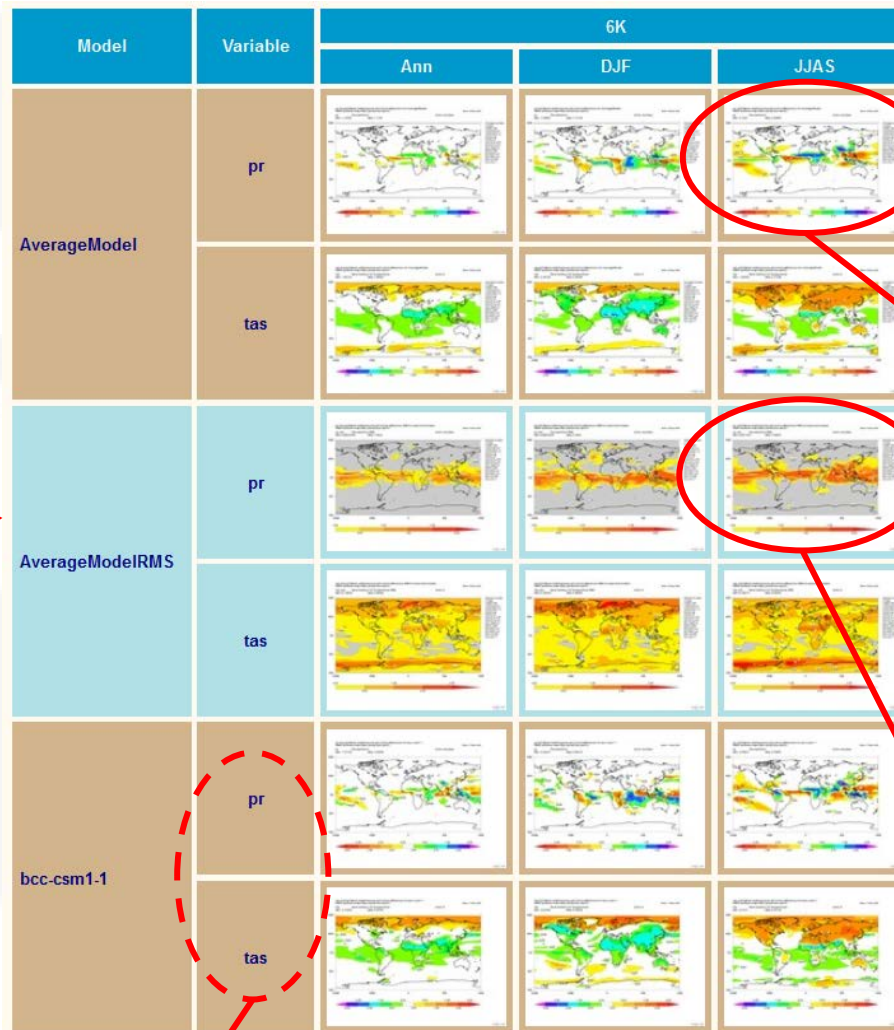
project=PMIP3, model=NCAR, National Center for Atmospheric Research, USA, experiment=last glacial maximum, time frequency=monClim, cmor_table=Aclim, modeling realm=atmos, ensemble=r2i1p1, version=20140428
Data Node: esgf-node.ipsl.fr
Version: 20140428
Description: CCSM4 model output prepared for CMIP5 last glacial maximum
Further options: [Add To Cart](#) [Visualize and Analyze](#)

project=PMIP3, model=NCAR, National Center for Atmospheric Research, USA, experiment=last glacial maximum, time frequency=monClim, cmor_table=Lclim, modeling realm=land, ensemble=r1i1p1, version=20140428
Data Node: esgf-node.ipsl.fr
Version: 20140428
Description: CCSM4 model output prepared for CMIP5 last glacial maximum
Further options: [Add To Cart](#) [Visualize and Analyze](#)

[Temporal Search](#)
[Clear search constraints and datacart](#)
[Search Help](#)
[Search Controlled Vocabulary](#)



New! Selected monClim data → Synthesis maps



Model Output Database

Synthesis Maps

Paleo-data Syntheses

More variables soon → which ones?

<https://pmip3.lscce.ipsl.fr/database/maps/>

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~New! Paleo-data sets

PMIP 3 Paleo-data Syntheses

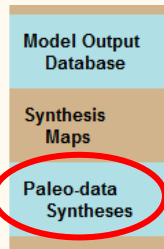
Since its start, PMIP has fostered paleo-data syntheses for model-data comparison, hence promoting discussions between the paleo-data community and the scientists simulating paleoclimates. This has resulted in improvements of both the paleoclimate simulations and the paleoclimate reconstructions. You will find below the latest data syntheses for the time periods of interest in PMIP.

Continental climate reconstructions for mid-Holocene and Last Glacial Maximum
(Bartlein et al, 2011)

Multiproxy Approach for the Reconstruction of the Glacial Ocean surface
(MARGO)

Indo-Pacific Last Glacial Maximum hydroclimate proxy synthesis
(DiNezio and Tierney, 2013)

What else should we add for easy model-data comparison ?



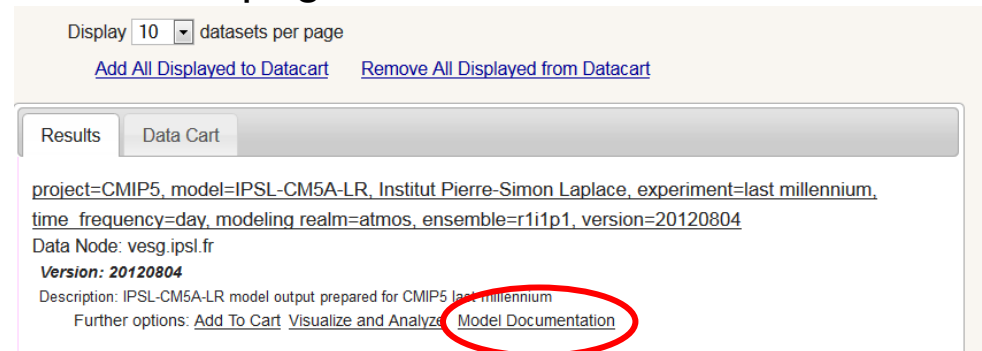
Getting help 😊 and dealing with errors ☹️

- **Heeeelp!!**
 - Get in touch with Jean-Yves for PMIP3 problems
 - We can add more Howto manuals on the wiki
 - For ESGF-CMIP5 help
 - **Help** menu on the ESGF nodes
 - ESGF askbot → <http://askbot.esgf.org/>
~**stackoverflow** for ESGF
- **Errors??? Where?**
 - <https://wiki.lsce.ipsl.fr/pmip3/doku.php/pmip3:database:errors>
 - PMIP3 known errors and links to the CMIP5 errata page
 - When finding new errors
 - Get in touch with the appropriate model contacts...
 - ... **and** get in touch with Jean-Yves to list the error on the wiki



Where is the model documentation?

- Have YOU documented YOUR model and experiments?
 - CMIP5 → Fill the CMIP5 Metadata Questionnaire
<http://q.cmip5.ceda.ac.uk/>
 - PMIP3 → Need to agree with the documentation people on a way to deal with non-CMIP5 models and experiments
- Accessing the documentation
 - <http://search.es-doc.org/> ← The easiest
 - <http://q.cmip5.ceda.ac.uk/> then *Published CIM Documents*
 - In the results of the ESGF Search page



- Comparing the models!
 - <http://compare.es-doc.org/>



PMIP3 community tools: THE web site and wiki ...

Determine what you need in order to work together and share your results



Overview

What's New?

Events

Working Groups

PMIP3-CMIP5 Experiments

Model Output Database

Synthesis Maps

Paleo-data Syntheses

Publications

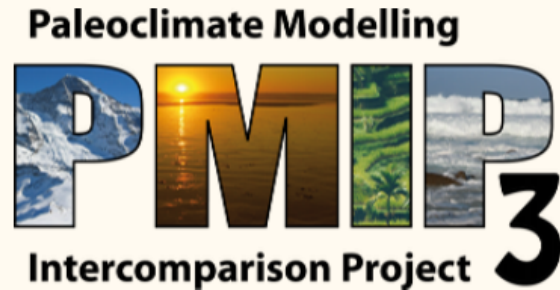
PMIP3 wiki

Contacts

PMIP 1 - PMIP 2

Paleoclimate Modelling Intercomparison Project Phase III

NEW! The third PMIP3 meeting will take place in Namur, Belgium, Sunday, May 25th to Friday, May 30th 2014



The Palaeoclimate Modelling Intercomparison Project (PMIP) began in the early 1990s to provide an efficient mechanism for coordinating palaeoclimate modelling activities. The key aims of the project are to:

- Understand the mechanisms
- Identify the different climate states
- Evaluate the capability of models

This is achieved through:

- Coordinated model experiments
- Paleo-data syntheses
- Model-data comparisons

Learn more about PMIP3 in the [Overview](#) section.

New colors thanks to Pascale and Masa 😊



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... Working groups → PMIP3 wiki

PMIP data distribution
Contact: Masa Kageyama

Past to Future
Contact: Julia Hargreaves

Past2K
Contact: Johann Jungclaus

Benchmarking
Contact: Pat Bartlein, Sandy Harrison

Data assimilation
Contact: Michel Crucifix

PlioMIP
Contact: Alan Haywood

Quaternary Interglacials
Contact: Bette Otto-Bliesner, Dan Lunt

Pre-Pliocene climates
Contact: Dan Lunt, Bette Otto-Bliesner

PaleoVAR (Variability and Mean State)
Contact: Chris Brierley, Pascale Braconnot

Ice sheet uncertainties
Contact: Ayako Abe-Ouchi

COMPARE (Comparing Ocean Models to Paleo-ARchivEs)
Contact: Michal Kucera, André Paul, Stefan Mulitza

Isotope modelling
Contact: Allegra LeGrande

Transient climate change
Contact: Ruza Ivanovic, Lauren Gregoire, Didier Roche

- 13 working groups
- With or without
 - Wiki pages
 - A mailing list



... All the mailing lists

- ~10 PMIP related lists
 - pmip-st 14 subscribers
 - pmip-announce 619
 - pliomip 54
 - pmip3-contacts 89
 - pmip-**wg**-past2k 61
 - pmip-**wg**-transient 54
 - pmip-**wg**-past2future 42
 - pmip-**wg**-head 20
 - pmip-**wg**-ppc & pmip-**wg**-var: not active yet
- Do not forget the list server help page on the PMIP2 web site!
<https://sympa.lsce.ipsl.fr/www/admin/pmip-announce>
e.g. The pmip-wg-past2future owner can add a new user with
Mail to: `sympa@lists.lsce.ipsl.fr`
Subject or body: ADD pmip-wg-past2future user@host Last_Name, First_Name



New! Dealing with PMIP3 publications

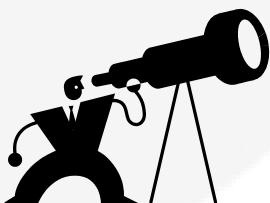
- Official CMIP5 publications' page
<http://cmip.llnl.gov/cmip5/publications/allpublications>
 - Not convenient for non-CMIP5 publications ☹
→ A new version seems to be *under development*
- PMIP3 publications can be managed through the **citeulike** site
<https://wiki.lsce.ipsl.fr/pmip3/doku.php/pmip3:publications:citeulike>
PMIP3 test → <http://www.citeulike.org/user/jypeter>
 - Free
 - Not tied to CMIP5
 - Easy to add new references and keywords
 - Can export to different formats
 - ...
- Drawback → it's free but run by an unknown 3rd party



TODO: the future of the past



- Database
 - Distribute **ALL** the finished runs
 - pliomip!
 - CMORize and find data nodes
 - Document the models and experiments with es-doc
 - Get some data usage statistics
 - Quality control of the models
- Next PMIP3 experiments
 - CMOR tables for the Last Interglacial and Holocene experiments
- Web site & wiki
 - Get all the PMIP3 publications
 - Put more graphics online
 - Find an easy way to bring the data to non-modellers
- Probably more things to do



Questions ?



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