



Poster X3.193

Vienna, Austria, April 2016  
Monday, 18 Apr 2016  
author in attendance: 17:30-19:00

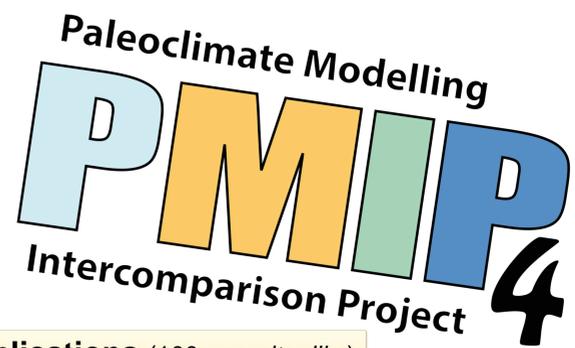


# The PMIP4-CMIP6 database and the PMIP 4 community

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Feel free to update your group information directly on this panel ! And also send a mail to Jean-Yves later...

## Abstract

EGU2016-7590

The Paleoclimate Modelling Intercomparison Project (PMIP) is a long standing initiative that has provided an efficient mechanism for coordinating paleoclimate modelling activities that provide valuable information on the mechanisms of climate change, the identification of key feedbacks operating in the climate system and, through model evaluation, the capability of climate models to reproduce climates different from today. The third phase of PMIP (aka "PMIP 3") started in 2009 and the fourth phase ("PMIP 4") started in 2015.

PMIP has been following the CMIP (Coupled Model Intercomparison Project) requirements since PMIP3-CMIP5, when three PMIP experiments were included in CMIP (Last Millennium, Mid-Holocene and Last Glacial Maximum). This has made it possible to share and access PMIP model data with the same ESGF (Earth System Grid Federation) tools and infrastructure used for the distributed CMIP database.

This poster will give an overview of the PMIP4 participants and which experiments they intend to run. The experiments endorsed by CMIP will be distributed as "CMIP6 data" (Last Millennium, Mid-Holocene, Last Glacial Maximum, Last Interglacial and Mid Pliocene), while other experiments will be distributed as "PMIP4 data" (transient simulations and sensitivity experiments). We will also outline some of the CMIP6-related constraints the PMIP4 participants will have to deal with: deadlines, standard distributed variables, standard data format, quality control, model documentation...

This poster will also present the tools that PMIP participants use to work together: PMIP web site, wiki and publications' list, PMIP mailing lists and PMIP Working Groups.

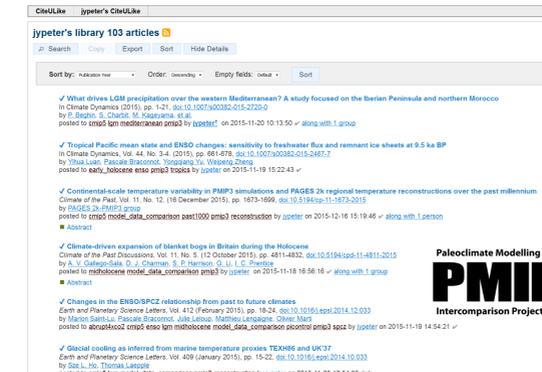
## The PMIP4 participants !

Information as of April 13<sup>th</sup> 2016

	Institute	Country	0k piControl	LM past1000 (1000 years)	6k midHolocene	21k lgm	Last Interglacial	Mid Pliocene warm period	Atm		Model id
									i_lon x j_lat x lev	i_lon x j_lat x lev	
1	AWI	Germany	Yes	No	Yes	Yes	Yes	Yes	192x96 x L47	256x220 x L40 variable resolution	MPI-ESM-1.2 AWI-CM
2	BCCR	Norway	Yes	Yes	Yes	Yes	Yes	Yes	1.9°x2.5° x L32	360x180 x L53	NorESM2-LM
3	CAU-GEOMAR	Germany	Yes	No	Yes	No	Yes	No	96x48 x L19	182x149 x L31	KCM2
4	IAP	China	Yes	Yes	Yes	Yes	Yes	Yes	180x90 x L26	360x180 x L50	FGOALS3
5	INM	Russia	Yes	No	Yes	Yes	Yes	Yes	180x120 x L21	360x318 x L40	INMCM48
6	IPSL	France	Yes	Yes	Yes	Yes	Yes	Yes	144x142 x L79	144x142 x L79	IPSL-CM6-LR
7	MPI-M	Germany	Yes	Yes	Yes	Yes	No	No	192x96 x L47	256x220 x L40	MPI-ESM-1.2
8	MRI	Japan	Yes	Yes	Yes	Yes	Yes	Yes	320x160 x L80	360x364 x L61	MRI-ESM2
9	NASA GISS	USA	Yes	Yes	Yes	Yes	Yes	Yes	144x90 x L40 Cube90 x L96	360x180 x L32 360x180 x L56	GISS-E2-1-R GISS-E3-R
10	NCAR	USA	Yes	Yes	Yes	Yes	Yes	Yes	288x192 x L32	320x384 x L60	CESM2
11	NUIST	China	Yes	Yes	Yes	Yes	Yes	Yes	192x96 x L47	362x292 x L46	NUIST-CSM
12	Stockholm University	Sweden	Yes	Yes	Yes	Yes	Yes	Yes	320x160 x L62	362x292 x L75	EC-EARTH3-LR EC-EARTH3-CC-LR
13	UK Met Office	UK	Yes	Yes	Yes	Yes	Yes	Yes	N96 = 192x145	ORCA1.0	UKESM-1.0 and/or HadGEM3
14	University of Tokyo	Japan	Yes	Yes	Yes	Yes	Yes	Yes	2.8°x2.8° x L40 ?	0.5-1°x1° x L43	MIROC-ESM for CMIP6
15	University of Tasmania	Australia	Yes	Yes	Yes	No	Yes	No	64x56 x L18	128x112 x L31	CSIRO-Mk3L-1-3
16	VUAmsterdam	The Netherlands	Yes	No	Yes	Yes	Yes	No	64x32 x L3	122x65 x L20	iLOVECLIM1.2

Citeulike

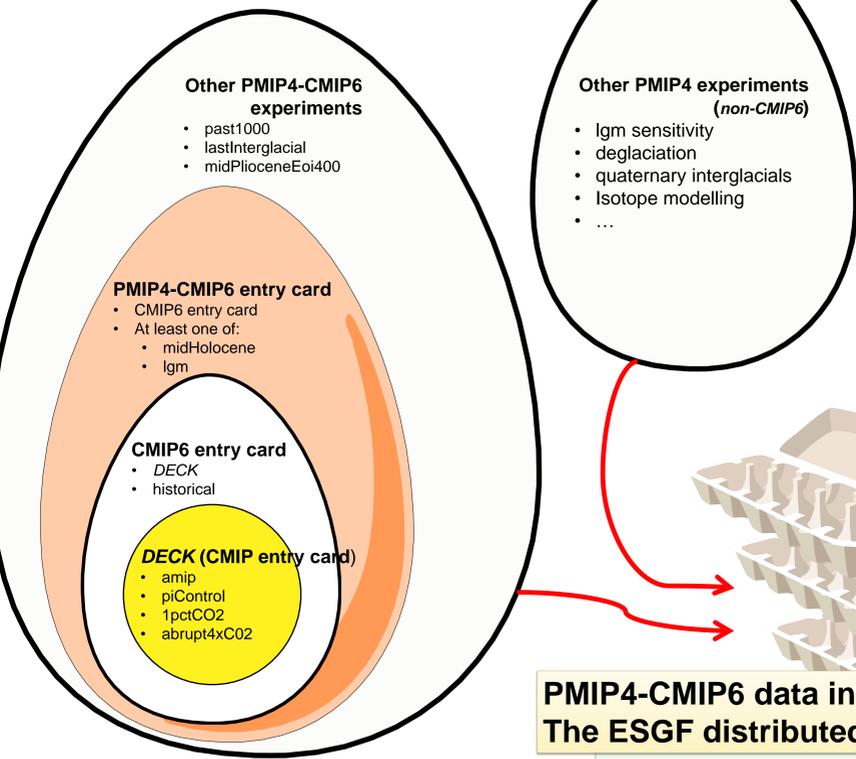
## PMIP3 Publications (100+ on citeulike)



Let Jean-Yves know about your publications!

## The PMIP4-CMIP6 experiments...

...contribute to the CMIP6 question:  
*How does the Earth System respond to forcing?*



## PMIP4-CMIP6 data in The ESGF distributed DB

Data will be classified in:  
`project == 'cmip6'`  
or  
`project == 'pmip4'`

## Key points about the PMIP4-CMIP6 database

- Modelling groups have to run the experiments of the CMIP6 entry card in order to have their data stored in the CMIP6 ESGF (Earth System Grid Federation) distributed DB as a '**cmip6**' experiment
- PMIP4-CMIP6 participants have to run at least one of the entry cards of PMIP4-CMIP6 (*lgm* or *midHolocene*)
- PMIP4 participants have to be careful to **run all the experiments with the same model!**
- Non-CMIP6 experiments, or groups who will not run the required experiments of the PMIP4-CMIP6 entry card will be stored in the ESG Federation distributed DB as a '**pmip4**' experiments
- The models and experiments will have to be carefully documented, using the *es-doc* (Earth System Documentation) tools
  - <https://earthsystemcog.org/projects/es-doc-models/>
  - <http://es-doc.org/>
- All the data (*cmip6* and *pmip4*) will have to follow the CMIP6 standards: netCDF files created with the CMOR library, the data and meta-data must follow the CMIP6 DRS (Data Reference Structure and Syntax)
- The data will have to pass the QC (data and meta-data Quality Control) tests before being distributed from the ESGF distributed DB
- The actual variables and output frequencies stored in the DB are defined in the CMIP6 Data request (in progress)
  - <https://www.earthsystemcog.org/projects/wip/CMIP6DataRequest>

Detailed technical information and white papers:  
<https://www.earthsystemcog.org/projects/wip/resources/>  
Check the *Papers* section at the bottom of the page



## PMIP mailing lists

- The main list, where everybody using or providing PMIP data should be [pmip-announce@lists.lsce.ipsl.fr](mailto:pmip-announce@lists.lsce.ipsl.fr)
- Working groups mailing lists (check the *Working Groups* panel for the full list)
  - pliomip, pmip-wg-head, pmip-wg-deglacial, pmip-wg-p2f-lgmsens, pmip-wg-past2future, pmip-wg-past2k, pmip-wg-ppc, pmip-wg-var
- PMIP model data providers
  - pmip3-contacts, pmip4-contacts
- Steering Committee
  - pmip-st

## PMIP Working Groups

- PMIP data distribution
  - M. Kageyama
- Past to Future
  - J. Hargreaves
- Past2K
  - J. Jungclaus
- Benchmarking
  - P. Bartlein, S. Harrison
- Data assimilation
  - M. Crucifix
- PliomIP
  - A. Haywood, H. Dowsett
- Quaternary Interglacials
  - B. Otto-Bliesner, D. Lunt
- Pre-Pliocene climates
  - D. Lunt, B. Otto-Bliesner
- PaleoVAR (Variability and Mean State)
  - C. Brierley, P. Braconnot
- Ice sheet uncertainties
  - A. Abe-Ouchi
- COMPARE (Comparing Ocean Models to Paleo-ARchivEs)
  - M. Kucera, A. Paul, S. Mulitza
- Isotope modelling
  - A. LeGrande
- Last Deglaciation
  - R. Ivanovic, L. Gregoire, D. Roche



CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE



LABORATOIRE DES SCIENCES DU CLIMAT & DE L'ENVIRONNEMENT



## References

- PMIP4 <http://pmip4.lsce.ipsl.fr/>
- PMIP3 <http://pmip3.lsce.ipsl.fr/>
- PMIP3 publications <http://www.citeulike.org/user/jypeter>
- CMIP Phase 6 <http://www.wcrp-climate.org/wgcm-cmip/wgcm-cmip6>
- CMIP6 experiments <http://search.es-doc.org/?project=cmip6-draft>



DECK = Diagnosis, Evaluation, and Characterization of Klima Experiments