PMIP4 Groups and Experiments

PMIP4 experiments summary

CMIP6 entry card

Reminder: the *DECK* experiments (*Diagnosis, Evaluation, and Characterization of Klima Experiments*) are the *entry card* for CMIP, and **the *DECK* and *historical* experiments are the entry card for CMIP6**. The list below is only meant as shortcut to help PMIP4 users locate basic CMIP6 information

Short name	Standard name	Design
0k	piControl (DECK)	*Pre-industrial control*, see GMD reference below this table
	amip (DECK)	*Historical AMIP*, see GMD reference below this table
	abrupt4xCO2 (DECK)	*Quadruple CO2 abruptly, then hold fixed*, see GMD reference below this table
	1pctCO2 (DECK)	*1% per year CO2 increase*, see GMD reference below this table
	historical	*Past ~1.5 centuries*, see GMD reference below this table

Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization, Veronika Eyring et al., GMD

PMIP4 subset of CMIP6 experiments

PMIP4 participants have to run at least one of the PMIP4 entry cards: **midHolocene** or **lgm**

Short name	Standard name	Design page
6k	midHolocene	Mid-Holocene
21k	lgm	Last Glacial Maximum
LM	past1000	Last Millennium
LI	lig127k	Last Interglacial
Plio	midPliocene-eoi400	Mid Pliocene Warm Period

Non-CMIP6 experiments

Short name	Standard name	Design page
LD		Last Deglaciation
		More experiments to come

Participating groups

AWI

Details: Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Germany

Data license: Non-Commercial

Experiments and contacts

- Gerrit Lohmann (Gerrit.Lohmann@awi.de): main contact, 6k, 21k, LI, Plio

Model_1 information

CMIP6				
LM	**6k**	**21k**	**LI**	**Plio**
N	🙂	🙂	🙂	🙂

- Model id: AWI-ESM-1-1-LR
- Model information:
- Atmospheric grid: 192×96 (spectral T63) x L47
  - top level = 80 km
- Ocean grid: unstructured 126859 x L46
  - variable resolution, highest at coastal regions, 20 km near Greenland coast

Model_2 information

CMIP6				
LM	**6k**	**21k**	**LI**	**Plio**
N	🙂	🙂	🙂	🙂

- Model id: MPI-ESM1-2-LR
- Model information:
- Atmospheric grid: 192×96 x L47
  - top level = 0.01 hPa
- Ocean grid: 256×220 x L40

Model_3 information

Possible use of AWI-ESM-2-1-LR (to be confirmed later)

CAS

Details: Chinese Academy of Sciences, China

CAS-ESM group

Details: Chinese Academy of Sciences, China

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	N	N	🙂

- Xunqiang Bi (bixq@mail.iap.ac.cn): main contact, LM, 6k, Plio
- Minghua Zhang (mhzhang@mail.iap.ac.cn):

Model information

- Model id: CAS-ESM2-0
- Model information:
- Atmospheric grid: 256×128 x L35
  - top level = 2.2 hPa
- Ocean grid: 362×196 x L30

CAS-FGOALS group

Details: Institute of Atmospheric Physics, State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysical Fluid Dynamics (LASG), China

Experiments and contacts

- Tianjun Zhou (zhoutj@lasg.iap.ac.cn): main contact
- Wenmin Man (manwenmin@mail.iap.ac.cn): LM
- Weipeng Zheng (zhengwp@mail.iap.ac.cn): 6k, 21k, LI, Plio
- Yong Sun (sunyong@mail.iap.ac.cn: Plio

Model_1 information

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Model id: FGOALS-g3
- Model information:
- Atmospheric grid: 180×90 x L26
  - top level = 2.16 hPa
- Ocean grid: 360×218 x L30

Model_2 information

CMIP6				
LM	6k	21k	LI	Plio
	🙂		🙂	

- Model id: FGOALS-f3-L
- Model information:
- Atmospheric grid: Cube96 x L32
    - top level = 2.19 hPa
- Ocean grid: 360×218 x L30

CNRM-CERFACS

Details: Centre National de Recherches Météorologiques (CNRM), Centre Europeen de Recherche et de Formation Avancee en Calcul Scientifique (CERFACS), France

Experiments and contacts

CMIP6				
LM	**6k**	**21k**	**LI**	**Plio**
N	N	N	🙂	N

- David Salas (david.salas@meteo.fr): LI

Model information

- Model id: CNRM-CM6-1
- Model information:
- Atmospheric grid: [256 to 20]x128 x L91
    - top level = 🔧Fix Me! hPa (78.4 km)
- Ocean grid: 362×294 x L75

CSIR-Wits-CSIRO

Details: Global Change Institute (GCI), the University of the Witwatersrand, South Africa

Previously *CSIR-CSIRO* (Council for Scientific and Industrial Research - Natural Resources and the Environment, South Africa)

Experiments and contacts

CMIP6				
LM	**6k**	**21k**	**LI**	**Plio**
?	?	?	?	?

- Francois Engelbrecht (Francois.Engelbrecht@wits.ac.za): main contact

Model information

- Model id: VRESM-1-0
- Model information:

- Atmospheric grid: Cube192 x L35
  - top level = Fix Me! hPa (35 km)
- Ocean grid: Cube384 x L35

EC-Earth-Consortium

Details: Stockholm University, Sweden

Experiments and contacts

- Qiong Zhang (qiong.zhang@natgeo.su.se): main contact, LM, 6k, 21k, LGM, LI, Plio
- Qiang Li (qiang.li@natgeo.su.se): LM, 21k, Plio

Model_1 information

CMIP6				
LM	6k	21k	LI	Plio
	🙂	🙂	🙂	🙂

- Model id: EC-Earth3
- Model information: *with coupled dynamic vegetation*
- Atmospheric grid: 512×256 x L91
  - top level = 0.01 hPa
- Ocean grid: 362×292 x L75

Model_2 information

CMIP6				
LM	6k	21k	LI	Plio
🙂				

- Model id: EC-Earth3-Veg-LR
- Model information:
- Atmospheric grid: 320×160 x L62
  - top level = 5 hPa
- Ocean grid: 362×292 x L75

Model_3 information

CMIP6				
LM	6k	21k	LI	Plio
	🙂	🙂	🙂	🙂

- Model id: EC-Earth3-Veg
- Model information:
- Atmospheric grid: 512×256 x L91
  - top level = 0.01 hPa
- Ocean grid: 362×292 x L75

INM

Details: Institute of Numerical Mathematics , Russia

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
N	🙂	🙂	🙂	🙂

- Evgeny Volodin (volodinev@gmail.com, volodin@inm.ras.ru): main contact, 6k, 21k, LI, Plio

Model information

- Model id: INM-CM4-8
- Model information:
- Atmospheric grid: 180×120 x L21
  - top level = Fix Me! hPa (top level sigma = 0.01)
- Ocean grid: 360×318 x L40

IPSL

Details: Institut Pierre Simon Laplace, France

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Pascale Braconnot (Pascale.Braconnot@lsce.ipsl.fr): main contact, 6k, LI
- Myriam Khodri (mkhodri@gmail.com): LM
- Masa Kageyama (Masa.Kageyama@lsce.ipsl.fr): 21k
- Gilles Ramstein (Gilles.Ramstein@lsce.ipsl.fr): Plio
- Camille Contoux (camille.contoux@lsce.ipsl.fr): Plio
- Jean-Yves Peterschmitt (Jean-Yves.Peterschmitt@lsce.ipsl.fr): Misc…

Model information

- Model id: IPSL-CM6A-LR
- Model information:
- Atmospheric grid: 144×143 x L79
  - top level = 40000 m
- Ocean grid: 362×332 x L75

KIOST

Details: Korea Institute of Ocean Science & Technology, Korea

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
N	🙂	N	N	N

- YoungHo Kim (yhkim@kiost.ac.kr): main contact, 6k

Model information

- Model id: KIOST-ESM
- Model information:
- Atmospheric grid: Cube48 x L32
    - top level = 2 hPa
- Ocean grid: 360×200 x L52

MIROC

Details: JAMSTEC (Japan Agency for Marine-Earth Science and Technology), AORI (Atmosphere and Ocean Research Institute, The University of Tokyo), Japan

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Ayako Abe-Ouchi (abeouchi@aori.u-tokyo.ac.jp): main contact, 6k, 21k, LI, Plio
- Rumi Ohgaito (ohgaito@jamstec.go.jp): LM, 6k, 21k
- Masakazu Yoshimori (masakazu@aori.u-tokyo.ac.jp): LM

Model information

- Model id: MIROC-ES2L
- Model information:
- Atmospheric 128×64 xL40
    - top level = 3 hPa
- Ocean grid: 360×256 x L63

MPI-M

Details: Max Planck Institute for Meteorology, Germany

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	N	N

- Matthias Bittner (matthias.bittner@mpimet.mpg.de): main contact (DECK, historical, ...)
- Johann Jungclaus (johann.jungclaus@mpimet.mpg.de): main contact, LM, 6k
- Eduardo Zorita (eduardo.zorita@hzg.de): LM
- Uwe Mikolajewicz (uwe.mikolajewicz@mpimet.mpg.de): 21k

Model information

- Model id: MPI-ESM1-2-LR
- Model information:
- Atmospheric grid: 192×96 x L47
    - top level = 0.01 hPa
- Ocean grid: 256×220 x L40

MRI

Details: Meteorological Research Institute, Japan

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Seiji Yukimoto (yukimoto@mri-jma.go.jp): main contact, LM, 6k, 21k, LI, Plio
- Kohei Yoshida (kyoshida@mri-jma.go.jp): LM, 6k, 21k, LI, Plio
- Shigenori Murakami (smurakami@mc-jma.go.jp): LM, 6k, 21k, LI, Plio

Model information

- Model id: MRI-ESM2-0
- Model information:
- Atmospheric grid: 320×160 x L80
    - top level = 0.01 hPa
- Ocean grid: 360×364 x L61

NASA-GISS

Details: NASA Goddard Institute for Space Studies, New York, NY, USA

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Gavin Schmidt (gavin.a.schmidt@nasa.gov): main contact, Plio
- Allegra LeGrande (allegra.n.legrande@nasa.gov): LM, 6k, 21k, LI, DeepMIP
- Mark Chandler (mac59@columbia.edu): Plio

Model_1 information

- Model id: GISS-E2-1-G
- Model information:
- Atmospheric grid: 144×90 x L40
    - top level = 0.1 hPa
- Ocean grid: 360×180 x L32

Model_2 information

- Model id: GISS-E3-G
- Model information:
- Atmospheric grid: Cubed sphere C90 (~1degx1deg) x L102
    - top level = 0.002 hPa
- Ocean grid: 360×180 x L32

NCAR

Details: National Center for Atmospheric Research, USA

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Bette Otto-Bliesner (ottobli@ucar.edu): main contact, LM, 6k, 21k, LI, Plio

Model information

- Model id: CESM2
- Model information:
- Atmospheric grid: 288×192 x L32
    - top level = 2.25 hPa
- Ocean grid: 320×384 x L60

NCC

Details: BCCR (Bjerknes Centre for Climate Research) is a member of *NorESM Climate modeling Consortium*, Norway

Note: was previously referenced as *BCCR* in previous MIPs

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Zhongshi Zhang (zhzh@norceresearch.no): main contact, LM, Plio
- Kerim Nisancioglu(Kerim@uib.no): 6k, 21k, LI
- Chuncheng Guo(chgu@norceresearch.no): 6k, 21k, LI

Model_1 information

- Model id: NorESM2-LM
- Model information:
- Atmospheric grid: 144×96 x L32
    - top level = 3 hPa
- Ocean grid: 360 x 384 (tripolar) x L70

Model_2 information

- Model id: NorESM1-F
- Model information:
- Atmospheric grid: 144×96 x L26
    - top level = 3 hPa
- Ocean grid: 360 x 384 (tripolar) x L70

NUIST

Details: Nanjing University of Information Science and Technology, China

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Bo Sun (sunb@nuist.edu.cn): main contact
- Jian Cao (jiancao@hawaii.edu, jianc@nuist.edu.cn): LM, 6k, 21k, LI, Plio
- Xiao Zhang (xzhang3@hawaii.edu): 6k, 21k

Model information

- Model id: NESM3
- Model information:
- Atmospheric grid: 192×96 x L47
    - top level = 1 hPa
- Ocean grid: 384×362 x L46

UK Academic Community

Details: UBRIS/LEEDS/EDINBURGH/READING, UK

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	🙂	🙂	🙂

- Dan Lunt (d.j.lunt@bristol.ac.uk): main contact, LM, 6k, 21k, LI, Plio
- Maria Vittoria Guarino (marino@bas.ac.uk): LI
- Alan Haywood (A.M.Haywood@leeds.ac.uk): main contact, LM, 6k, 21k, LI, Plio
- Gabi Hegerl (gabi.hegerl@ed.ac.uk): LM
- Peter Hopcroft (P.Hopcroft@bham.ac.uk): 21k
- Andrew Schurer (aschurer@staffmail.ed.ac.uk): LM
- Joy Singarayer (Joy.Singarayer@bristol.ac.uk): 6k, 21k, LI
- Paul Valdes (p.j.valdes@bristol.ac.uk): 6k, 21k, LI
- Charlie Williams (c.j.r.williams@reading.ac.uk): 6k, LI

Model_1 information

- Model id: UKESM1-0-LL
- Model information:
- Atmospheric grid: 192×144 (N96) x L85
    - top level = 85 km
- Ocean grid: 360×330 (eORCA1) x L75

Model_1 information

- Model id: HadGEM3-GC31-LL
- Model information:
- Atmospheric grid: 192×144 (N96) x L85
    - top level = 85 km
- Ocean grid: 360×330 (eORCA1) x L75

UTAS

Details: University of Tasmania, Australia

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
🙂	🙂	N	🙂	N

- Steven Phipps (Steven.Phipps@utas.edu.au): main contact, LM, 6k, LI

Model information

- Model id: CSIRO-Mk3L-1-3
- Model information:
- Atmospheric grid: 64 x 56 x L18
    - top level = 36355 m
- Ocean grid: 128×112 x L31

UofT

Details: Department of Physics, University of Toronto, Canada

Experiments and contacts

CMIP6				
LM	6k	21k	LI	Plio
N	🙂	🙂	N	🙂

- Deepak Chandan (dchandan@atmosp.physics.utoronto.ca): main contact, 21k, Plio

Model information

- Model id: UofT-CCSM4
- Model information:
- Atmospheric grid: 288×192 x L26
    - top level = ~2 hPa
- Ocean grid: 384×320 x L60

VUAmsterdam

Details: Department of Earth Sciences, Vrije Universiteit Amsterdam, The Netherlands

Experiments and contacts

CMIP6				
LM	**6k**	**21k**	**LI**	**Plio**
N	🙂	🙂	🙂	N

- Hans Renssen (h.renssen@vu.nl): 6k, LI
- Didier Roche (didier.roche@vu.nl): main contact, 21k

Model information

- Model id: iLOVECLIM1.2
- Model information:
- Atmospheric grid: 64×32 x L3 (T21)
  - top level = 🔧Fix Me! hPa
- Ocean grid: 122×65 x L20

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Last update: **2021/01/08 14:54**