Overview CCMI-1 Model Groups

Date: 13 March 2014

Table 1. List of model groups participating in CCMI-1 along with model contacts and main reference(s). Additional model groups are welcome to participate. Please contact the CCMI co-chairs.

	Model Name	Modeling Center	Model Contact	References
1	**ACCESS**	University of Melbourne, CAWCR, AAD, Australia, NIWA, NZ	David Karoly, Roger Dargaville, Andrew Klekociuk, Olaf Morgenstern, Robyn Schofield, Kane Stone, Peter Vohralik, Scott Wales	**Bi et al. AMOJ (2013)**
2	**CCSM4**	NCAR, ESL, USA	Simone Tilmes, Jean-Francois Lamarque	**Lamarque et al. GMD (2012)**
3	**CCSRNIES-MIROC3.2**	NIES, Tsukuba, Japan	Hideharu Akiyoshi, Yousuke Yamashita	**Akiyoshi et al. (2009), Sakazaki et al. (2013)**
4	**CESM-Superfast**	LLNL, USA	Philip Cameron-Smith, Dan Bergmann	**Lamarque et al, 2013**
5	**CICERO-OsloCTM3**	CICERO, Norway	Stig Dalsøren, Ragnhild Skeie, Amund Søvde	**Skeie et al, 2011, Søvde et al. (2012)**
6	**CMAM**	EC (Environment Canada), Canada	David Plummer, John Scinocca	**Scinocca et al. (2008); deGrandpre et al. (2000)**
7	**CNRM-CCM**	Meteo-France; France	Martine Michou, David-Saint-Martin	**Michou et al. (2011); Voldoire et al. (2011)**
8	**EMAC**	MESSy-Consortium*, Germany	Patrick Jöckel, Gebhard Günther, Ole Kirner, Ulrike Langematz, Andrea Pozzer, Thomas Reddmann, Holger Tost	**Jöckel et al. (2006, 2010)**
9	**GEOSCCM**	NASA/GSFC, USA	Luke Oman, Sarah Strode, Stacey Frith, Anne Douglass, Bryan Duncan, Steven Pawson	**Molod et al. (2012); Oman et al. (2011)**
10	**GEOS-Chem**	LAGEO, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China	Qian Li, Daren Lv, Yinan Wang	Li et al., 2009.
11	**GFDL-AM3**	UCAR/NOAA, GFDL, USA	Larry Horowitz, Meiyun Lin, Vaishali Naik	**Donner et al. (2011)**
12	**GISS-E2-R**	NASA-GISS,USA	Drew Shindell, Greg Faluvegi,	**Koch et al, 2006 ; Shindell et al, 2013**
13	**HadGEM3-ES**	Hadley Centre, Met Office, United Kingdom	Fiona O'Connor, Neal Butchart, Steven Hardiman, Steven Rumbold	**Walters et al. (2013), Morgenstern et al. (2013)**
14	**LMDZrepro**	IPSL, France	Slimane Bekki, Marion Marchand, Sophie Szopa	**Marchand et al, 2012**
15	**MIROC-ESM-CHEM**	NIES, Nagoya Univ., JAMSTEC, Japan	Tatsuya Nagashima, Kengo Sudo, Shingo Watanabe	**Watanabe et al, 2011**
16	**MOCAGE**	GAME/CNRM, MéteoFrance, France	Béatrice Josse	**Josse et al, 2004, Teyssèdre et al, 2007**
17	**MRI**	MRI, Japan	Makoto Deushi, Taichu Tanaka, Takashi Maki, Kiyotaka Shibata	**Shibata and Deushi (2008a;b)** **Deushi and Shibata (2011)**

18	**NIWA-UKCA**	NIWA, NZ	Olaf Morgenstern, Guang Zeng	**Morgenstern et al. (2009, 2013), Zeng et al. (2008, 2010)**
19	**SOCOL**	PMOD/WRC and IAC ETHZ, Switzerland	Eugene Rozanov, Andrea Stenke, Laura Revell	**Stenke et al. (2012); Schraner et al. (2008)**
20	**ULAQ**	University of L'Aquila, Italy	Giovanni Pitari, Eva Mancini, Glauco Di Genova	**Pitari et al. (2002); Eyring et al. (2006; 2007)**
21	**UMSLIMCAT**	University of Leeds, UK	Martyn Chipperfield, Sandip Dhomse	**Tian and Chipperfield (2005); Tian et al. (2006)**
22	**UMUKCA**	University of Cambridge, UK	Luke Abraham, John Pyle	**Morgenstern et al. (2008, 2009), Telford et al., 2013**
23	**WACCM4**	NCAR, USA	Rolando Garcia, Andrew Gettelman, Doug Kinnison, Dan Marsh	**Marsh et al. (2013)**

* Modular Earth Submodel System (MESSy) - Consortium: Institute of Atmospheric Physics, Deutsches Zentrum für Luft- und Raumfahrt, Oberpfaffenhofen (DLR-IPA); Karlsruhe Institute of Technology, Institute for Meteorology and Climate Research - Atmospheric Trace Gases and Remote Sensing (KIT-IMK-ASF); Steinbuch Centre for Computing - Simulation Lab Climate and Environment (KIT-SCC-SLC); Institute for Energy and Climate Research – Stratosphere, Forschungszentrum Jülich (FZJ-IEK-7); Institute of Meteorology, Freie Universität Berlin (FUB); Institute of Atmospheric Physics, Johannes-Gutenberg Universität Mainz (UMZ-IPA); Max-Planck Institute for Chemistry, Mainz (MPIC)

Table 2. Main characteristics CCMI-1 models.

	Model Name	Model Type	Resolution	Uppermost computational level	Chemistry	ODS/LLGHG Emissions	Ocean (C2)	QBO
1	**ACCESS**	CCM	N48: 2.5/3.75/L60	84 km	Strat-Trop	Mixing Ratio	Fixed	Internal
2	**CCSM4**	CCM	1.9/2.5	3.5hPa	Strat-Trop	Mixing Ratio	Coupled	Forced
3	**CCSRNIES-MIROC3.2**	CCM	T42/L34	0.012 hPa				
4	**CESM-Superfast**	CCM	1.875/2.5/L30,	3.5 hPa	Strat(Linoz)-Trop	Fluxes,Mixing Ratio	Coupled	Forced (?)
5	**CICERO-OsloCTM2**	CTM	2.8/2.8/L60	0.11 hPa				
6	**CMAM**	CCM	T47	0.00081hPa	Strat-Trop		Fixed	
7	**CNRM-CCM**	CCM	T63/L60/L89	0.07 hPa	Strat		Fixed	Internal (L89)
8	**EMAC**	CCM	T42L90MA	0.01 hPa	Strat-Trop	Mixing Ratio	Optional: Coupled	internal (weakly nudged in hind-cast simulations for correct phase)
9	**GEOS CCM**	CCM	2/2.5	0.015 hPa	Strat-Trop	Fluxes (ODS)	Fixed	Internal
10	**GEOS-Chem**	CTM	2/2.5/L72	0.01hPa	Strat-Trop			
11	**GFDL-AM3**	CCM	2/2.5/L48	0.017 hPa				
12	**GISS-E2-R**	CCM	2/2.5/L40	0.14hPa	Strat-Trop		Coupled	
13	**HadGEM3-ES**	CCM	N96L85 i.e. 1.25/1.875/L85	84 km	Strat-Trop		Coupled	
14	**LMDZrepro**	CCM	1.9*3.75/L39	0.04 hPa			Coupled	Forced
15	**MIROC-ESM-CHEM**	CCM	T42/L80 (or L56)	0.003hPa (or 0.01 hPa)	Strat-Trop?			Internal (L80)
16	**MOCAGE**	CTM	2.0/2.0/L47	6.9 hpa	Strat-Trop		Fixed/Snapshot	
17	**MRI**	CCM	T42	0.01 hPa	Strat-Trop		Coupled	
18	**NIWA-UKCA**	CCM	2.5/3.75/L60	84 km	Strat-Trop	Mixing ratio (ODS, LLGHGs)	Coupled	Internal
19	**SOCOL**	CCM	T42	0.01 hPa	?		?	
20	**ULAQ**	CCM	T21	0.04 hPa	Strat-Trop	Mixing Ratio	Fixed	Forced
21	**UMSLIMCAT / SLIMCAT**	CCM /CTM	2.5/3.75	0.01 hPa	Strat		Fixed?	
22	**UMUKCA**	CCM	N48: 2.5/3.75/L60	84 km	Strat-simple Trop	Mixing Ratio	Prescribed/Coupled (for GeoMIP only)	Internal
23	**WACCM4**	CCM	1.9/2.5	10^{-6} hPa	Strat-Trop	Mixing Ratio	Coupled	Internal

Table 3. Estimated finalization of CCMI-1 model simulations. If you are not planning / do not know yet where you will run the simulation, please insert NO / MAYBE, respectively.

	Model Name	REF-C1	REF-C1SD	REF-C2	SEN-C1-Emis	SEN-C1SD-Emis	SEN-C1-fEmis	SEN-C1SD-fEmis	SEN-C1-SSI	SEN-C2-RCP2.6	SEN-C2-RCP4.5	SEN-C2-RCP8.5	SEN-C2-fODS 1960	SEN-C2-fODS 2000	SEN-C2-fGHG	SEN-C2-fEmis	SEN-C2-Solartrend
1	**ACCESS**	Oct-13	MAYBE	Mar-14	NO	NO	NO	NO	NO	NO	NO	NO	MAYBE	MAYBE	MAYBE	MAYBE	NO
2	**CCSM4**	Jun-13	Aug-13	Jul-13													
3	**CCSRNIES-MIROC3.2**	Oct-03	Nov-13	Nov-13													
4	**CESM-Superfast**	Yes	Maybe	Yes													
5	**CICERO-OsloCTM2**																
6	**CMAM**	Sep-13	Sep-13	Oct-13													
7	**CNRM-CCM**	Jun-13 (1 member)/Sep-13 (3 mem)	Jun-13	Jul-13 (1 mem)/Sep-13 (3 mem)	No	No	Maybe 2015	Maybe 2015	No	No	No	Maybe Sep-13	No	Sep-13	No	No	No
8	**EMAC**	?	?	?													
9	**GEOS CCM**	Sep-13	Jul-13	Dec-13													
10	**GEOS-Chem**		Dec-13			2014		2014									
11	**GFDL-AM3**	Done	Done														
12	**GISS-E2-R**	Oct-13	Jun-13	Done (CMIP5)													
13	**HadGEM3-ES**	Jan-14	Jan-14	Mar-14													
14	**LMDZrepro**	Oct-13	Jan-14	Oct-13													
15	**MIROC-ESM-CHEM**	Oct-13	Oct-13	Jan-14													
16	**MOCAGE**	Dec-13	Dec-13	Mar-14													
17	**MRI**	?	?	?													
18	**NIWA-UKCA**	Jul-13	No	Nov-13	NO	NO	NO	NO	NO	MAYBE	MAYBE	MAYBE	Nov-13	MAYBE	Nov-13	NO	NO
19	**SOCOL**		No														
20	**ULAQ**	Sep-13	Dec-13	Sep-13													
21	**UMSLIMCAT**	Oct-13	Oct-13	Oct-13													
22	**UMUKCA**	Sep-13	Oct-13	Nov-13													
23	**WACCM4**	Aug-13	Jun-13	Oct-13													