

Our Clouded Hills

Andy Russell's weather and climate blog

Papers based on CMIP5 data

I happened to ask over on [Ed Hawkin's blog](http://www.climate-lab-book.ac.uk/2012/01/21/2012-01-21-comparing-models-and-observations/) (<http://www.climate-lab-book.ac.uk/2012/01/21/2012-01-21-comparing-models-and-observations/>) whether he knew of any list of publications based on CMIP5 data (i.e. the suite of climate projections being produced for the IPCC AR5). He pointed me to the [PCMDI page](http://cmip-pcmdi.llnl.gov/cmip5/publications.html) (<http://cmip-pcmdi.llnl.gov/cmip5/publications.html>), which at the time was blank. So, here is my list of papers based on CMIP5 that I'll try and keep up to date:

Individual papers

[Andrews et al. \(2012\)](http://www.agu.org/pubs/crossref/2012/2012GL051607.shtml) (<http://www.agu.org/pubs/crossref/2012/2012GL051607.shtml>) "Forcing, Feedbacks and Climate Sensitivity in CMIP5 Coupled Atmosphere-Ocean Climate Models" *Geophys. Res. Lett.*, doi:10.1029/2012GL051607

[Arora et al. \(2011\)](http://www.agu.org/pubs/crossref/2011/2010GL046270.shtml) (<http://www.agu.org/pubs/crossref/2011/2010GL046270.shtml>) "Carbon emission limits required to satisfy future representative concentration pathways of greenhouse gases" *Geophys. Res. Lett.*, 38, L05805.

[Bellouin et al. \(2011\)](http://www.agu.org/pubs/crossref/2011/2011JD016074.shtml) (<http://www.agu.org/pubs/crossref/2011/2011JD016074.shtml>) "Aerosol forcing in the Climate Model Intercomparison Project (CMIP5) simulations by HadGEM2-ES and the role of ammonium nitrate" *J. Geophys. Res.*, 116, D20206.

[Branstator and Teng \(2012\)](http://www.agu.org/pubs/crossref/2012/2012GL051974.shtml) (<http://www.agu.org/pubs/crossref/2012/2012GL051974.shtml>) "Potential Impact of Initialization on Decadal Predictions as Assessed for CMIP5" *Geophys. Res. Lett.*, doi:10.1029/2012GL051974, in press.

[Good et al. \(2011\)](http://www.agu.org/pubs/crossref/2011/2010GL045208.shtml) (<http://www.agu.org/pubs/crossref/2011/2010GL045208.shtml>) "A step-response simple climate model to reconstruct and interpret AOGCM projections" *Geophys. Res. Lett.*, 38, L01703.

[Guilyardi et al. \(2012\)](http://www.gfdl.noaa.gov/~atw/yr/2012/guilyardi_etal_2012_clivex.pdf) (http://www.gfdl.noaa.gov/~atw/yr/2012/guilyardi_etal_2012_clivex.pdf) "A first look at ENSO in CMIP5" *CLIVAR Exchanges*, 17, 29-32.

[Haywood et al. \(2011\)](http://www.agu.org/pubs/crossref/2011/2011JD016000.shtml) (<http://www.agu.org/pubs/crossref/2011/2011JD016000.shtml>) "The

roles of aerosol, water vapor and cloud in future global dimming/brightening" *J. Geophys. Res.*, 116, D20203.

Jiang et al. (2012) (<http://www.agu.org/pubs/crossref/pip/2011JD017237.shtml>) "Evaluation of Cloud and Water Vapor Simulations in CMIP5 Climate Models Using NASA "A-Train" Satellite Observations" *J. Geophys. Res.*, doi:10.1029/2011JD017237

Jones et al. (2011) (<http://www.geosci-model-dev.net/4/543/2011/gmd-4-543-2011.html>) "The HadGEM2-ES implementation of CMIP5 centennial simulations" *Geosci. Model Dev.*, 4, 543–570.

Kawase et al. (2011) (<http://www.agu.org/pubs/crossref/2011/2010GL046402.shtml>) "Future changes in tropospheric ozone under Representative Concentration Pathways (RCPs)" *Geophys. Res. Lett.*, 38, L05801.

Kim and Yu (2012) (<http://www.agu.org/pubs/crossref/pip/2012GL052006.shtml>) "The Two Types of ENSO in CMIP5 Models" *Geophys. Res. Lett.*, doi:10.1029/2012GL052006. [paper pdf here (<http://www.ess.uci.edu/~yu/PDF/Paper.CMIP5.EPCP.5-2012.GRL.revised.pdf>)]

Kim et al. (2012) (<http://www.agu.org/pubs/crossref/pip/2012GL051644.shtml>) "Evaluation of short-term climate change prediction in multi-model CMIP5 decadal hindcasts" *Geophys. Res. Lett.*, doi:10.1029/2012GL051644.

Liu et al. (2012) (<http://www.agu.org/pubs/crossref/pip/2012GL052093.shtml>) "Co-variation of temperature and precipitation in CMIP5 models and satellite observations" *Geophys. Res. Lett.*, doi:10.1029/2012GL052093, in press.

Oleson (2012) (<http://journals.ametsoc.org/doi/abs/10.1175/JCLI-D-11-00098.1>) "Contrasts between Urban and Rural Climate in CCSM4 CMIP5 Climate Change Scenarios" *J. Climate*, 25, 1390–1412.

Rotstayn et al. (2012) (<http://www.atmos-chem-phys-discuss.net/12/5107/2012/acpd-12-5107-2012.html>) "Aerosol-induced changes in summer rainfall and circulation in the Australasian region: a study using single-forcing climate simulations" *Atmos. Chem. Phys. Discuss.*, 12, 5107–5188.

Stevenson et al. (2012) (<http://journals.ametsoc.org/doi/abs/10.1175/JCLI-D-11-00252.1>) "Will There Be a Significant Change to El Niño in the Twenty-First Century?" *J. Climate*, 25, 2129–2145.

Taylor et al. (2011) (<http://journals.ametsoc.org/doi/abs/10.1175/BAMS-D-11-00094.1>) "An Overview of CMIP5 and the Experiment Design" *Bull. Am. Meteorol. Soc.*

Villarini and Vecchi (2012) (<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate1530.html>) "Twenty-first-century projections of North Atlantic tropical storms from CMIP5 models" *Nature Climate Change*, doi:10.1038/nclimate1530.

Watanabe et al. (2011) (<http://www.geosci-model-dev.net/4/845/2011/gmd-4-845-2011.html>) "MIROC-ESM 2010: model description and basic results of CMIP5-20c3m experiments" *Geosci.*

Model Dev., 4, 845-872.

Special Issues/Collections (some of the above papers may be in these Special Issues)

[Climatic Change special issue on the Representative Concentration Pathways](http://www.springerlink.com/content/0165-0009/109/1-2/)
(<http://www.springerlink.com/content/0165-0009/109/1-2/>)

[Climate Dynamics IPSL and CNRM CMIP5 Special Issue](http://icmc.ipsl.fr/research/international-projects/cmip5/special-issue-cmip5)
(<http://icmc.ipsl.fr/research/international-projects/cmip5/special-issue-cmip5>) (mostly submitted papers as of 15/03/2012)

Geoscientific Model Development Special Issue on Community software to support the delivery of CMIP5 (no papers linked to it (http://www.geoscientific-model-development.net/submission/scheduled_special_issues.html#5)) as of 15/03/2012)

[Journal of Climate Special Collection on CCSM4 and CESM1](http://journals.ametsoc.org/page/CCSM4/CESM1)
(<http://journals.ametsoc.org/page/CCSM4/CESM1>)

Books

[Dong et al. \(2012\)](http://www.springer.com/earth+sciences+and+geography/earth+system+sciences/book/978-3-642-31772-9)
(<http://www.springer.com/earth+sciences+and+geography/earth+system+sciences/book/978-3-642-31772-9>) *The Atlas of Climate Change — Based on SEAP-CMIP5*. Springer. 200pp.

Tags: [Climate change](http://andyrussell.wordpress.com/tag/climate-change/) (<http://andyrussell.wordpress.com/tag/climate-change/>), [Climatology](http://andyrussell.wordpress.com/tag/climatology/) (<http://andyrussell.wordpress.com/tag/climatology/>), [CMIP5](http://andyrussell.wordpress.com/tag/cmip5/) (<http://andyrussell.wordpress.com/tag/cmip5/>), [IPCC](http://andyrussell.wordpress.com/tag/ipcc/) (<http://andyrussell.wordpress.com/tag/ipcc/>)

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4 Responses to “Papers based on CMIP5 data”

1. *ob* Says:

[March 14, 2012 at 8:16 pm](#) | [Reply](#)

Not yet finally published, but ...

Driscoll, Simon, Alessio Bozzo, Lesley J. Gray, Alan Robock, and Georgiy Stenchikov, 2012: Coupled Model Intercomparison Project 5 (CMIP5) simulations of climate following volcanic eruptions. Submitted to *J. Geophys. Res.*, doi:10.1029/2012JD017607

A web-search points to a free version

◦ [andyrussell](#) Says:

[March 14, 2012 at 8:20 pm](#) | [Reply](#)

Thanks for the heads up. I'll add it to the list when there's a JGR page to link to.

2. [andyrussell](#) Says:

[April 25, 2012 at 9:03 am](#) | [Reply](#)

...and here's another submitted one:

[Brands et al. \(2012\)](#) "How well do CMIP5 Earth System Models simulate present climate conditions? A performance comparison for the downscaling community" *Clim. Dyn.*, submitted.

3. [Climate Models At Their Limit: Limitless Possibilities : CLIMATE HIMALAYA](#) Says:

[June 14, 2012 at 3:52 am](#) | [Reply](#)

[...] "Climate models at their limit?". This builds on the emerging evidence that the latest, greatest climate predictions, which will be summarised in the next assessment report of the Intergovernmental Panel on Climate [...]

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