

References for Climate Change Lecture

ARCCSS Winter School (June/2016)

Past Climate

Petit, J.R., et al. (1999). Climate and Atmospheric History of the Past 420,000 Years from the Vostok Ice Core, Antarctica. *Nature* **399**: 429-36, doi:10.1038/20859.

Parrenin, F., Masson Delmotte, V., Köhler, P., Raynaud, D., Paillard, D., Schwander, J., et al. (2013). Synchronous Change of Atmospheric CO₂ and Antarctic Temperature During the Last Deglacial Warming. *Science*, *339*(6123), 1060–1063.

Keeling Curve (all about it, history, data, figures, movies)

<https://scripps.ucsd.edu/programs/keelingcurve/>

CO₂ Animation (NASA)

<http://co2.digitalcartography.org>

Reproducing observed global temperature timeseries

<http://www.bloomberg.com/graphics/2015-whats-warming-the-world/>

Solar Forcing on Climate

Gray, L. J., Beer, J., Geller, M., Haigh, J. D., Lockwood, M., Matthes, K., et al. (2010). Solar Influences on Climate. *Reviews of Geophysics*, *48*(4), RG4001, doi:10.1029/2009RG000282.

Radiative Forcing

Myhre et al. (1998) New estimates of radiative forcing due to well mixed greenhouse gases, *Geophysical Research Letters*, Vol 25, No. 14, pp 2715–2718.

Soden, B. J., Held, I. M., Colman, R., Shell, K. M., Kiehl, J. T., & Shields, C. A. (2008). Quantifying Climate Feedbacks Using Radiative Kernels. *Journal of Climate*, *21*(14), 3504–3520.

Sherwood, S. C., Bony, S., Boucher, O., Bretherton, C., Forster, P. M., Gregory, J. M., et al. (2014). Adjustments in the Forcing-Feedback Framework for Understanding Climate Change. *Bulletin of the American Meteorological Society*.

Climate Feedbacks

Bony, S., Colman, R., Kattsov, V. M., Allan, R. P., Bretherton, C. S., Dufresne, J.-L., et al. (2006). How Well Do We Understand and Evaluate Climate Change Feedback Processes? *Journal of Climate*, *19*(15), 3445–3482.

Changes in Precipitation Patterns

Allan, R. P., & Soden, B. J. (2008). Atmospheric Warming and the Amplification of Precipitation Extremes. *Science*, 1–7, doi:10.1126/science.1160787,

Changes in Hydrological Cycle

Allen, M. R., & Ingram, W. J. (2002). Constraints on future changes in climate and the hydrologic cycle. *Nature*, *419*(6903), 224–232.

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Sherwood, S. C., Ingram, W., Tsushima, Y., Satoh, M., Roberts, M., Vidale, P. L., & O'gorman, P. A. (7AD). Relative humidity changes in a warmer climate. *Journal of Geophysical Research*, 115(D9), D09104.

Changes in Hadley Circulation

Lu, J., Vecchi, G. A., & Reichler, T. (2007). Expansion of the Hadley cell under global warming. *Geophysical Research Letters*, 34(6), L06805.

Seidel, D. J., Fu, Q., Randel, W. J., & Reichler, T. J. (2008). Widening of the tropical belt in a changing climate. *Nature Geoscience*, 1(1), 21–24.

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Seo, K.-H., Frierson, D. M. W., & Son, J.-H. (2014). A mechanism for future changes in Hadley circulation strength in CMIP5 climate change simulations. *Geophysical Research Letters*, n/a–n/a. <http://doi.org/10.1002/2014GL060868>

Kushner, P. J., Held, I. M. & Delworth, T. L. (2001). Southern Hemisphere atmospheric circulation response to global warming. *J. Climate* 14, 2238–2249.

Polvani, L. M. & Kushner, P. J. Tropospheric response to stratospheric perturbations in a relatively simple general circulation model. *Geophys. Res. Lett.* 29 (2002).

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18. Lorenz, D. J. & DeWeaver, E. T. (2007) Tropopause height and zonal wind response to global warming in the IPCC scenario integrations. *J. Geophys. Res.* **112**, D10119.

Walker Circulation and ENSO Changes

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