

- 1 REFERENCES:
- 2
- 3 **AchutaRao**, K.M., B.D. Santer, P.J. Gleckler, K.E. Taylor, D.W. Pierce, T.P. Barnett, and T.M.L.
- 4 Wigley, 2006: Variability of ocean heat uptake: Reconciling observations and models. *J.*
- 5 *Geophys. Res.*, **111**, doi:10.1029/2005JC003136.
- 6 **AchutaRao**, K. and K.R. Sperber, 2006: ENSO simulation in coupled ocean-atmosphere models:
- 7 Are the current models better? *Climate Dynamics*, doi:10.1007/s00382-006-0119-7.
- 8 **Ackerman**, A.S., M.P. Kirkpatrick, D.E. Stevens, and O.B. Toon, 2004: The impact of humidity
- 9 above stratiform clouds on indirect aerosol climate forcing. *Nature*, **432**, 1014–1017.
- 10 **Adams**, R.M., B.A. McCarl, L.O. Mearns, 2003: The effects of spatial scale Climate scenarios on
- 11 economic assessments: An example from U.S. agriculture. *Climate Change*, **60**, 131–148.
- 12 **Albrecht**, B.A., 1989: Aerosols, cloud microphysics, and fractional cloudiness. *Science*, **245**, 1227–
- 13 1230.
- 14 **Alexander**, M., J. Yin, G. Branstator, A. Capotondi, C. Cassou, R. Cullather, Y.-O. Kwon, J.
- 15 Norris, J. Scott, and I. Wainer, 2006: Extratropical atmosphere-ocean variability in CCSM3.
- 16 *J. Climate*, **19**, 2496–2525.
- 17 **Alley**, R.B., R.U. Clark, P. Huybrechts, and I. Joughin, 2005: Ice-sheet and sea-level changes.
- 18 *Science*, **310**, 456–460.
- 19 **Ammann**, C.M., G.A. Meehl, W.M. Washington, and C.S. Zender, 2003: A Mon. and latitudinally
- 20 varying volcanic forcing dataset in simulations of 20th century climate. *Geophys. Res. Letts.*,
- 21 **30**(12), 1657.
- 22 **Anderson**, B.T., J.O. Roads, S.C. Chen, and H.M.H. Juang, 2001: Model dynamics of summertime
- 23 low-level jets over northwestern Mexico. *J. Geophys. Res.*, **106**(D4), 3401–3413.
- 24 **Anderson**, C.J., R.W. Arritt, and J.S. Kain, 2007: An alternative mass flux profile in the Kain-
- 25 Fritsch Convective Parameterization and its effects in seasonal precipitation. *J.*
- 26 *Hydrometeorology*, in press.
- 27 **Anderson**, C.J., R.W. Arritt, E.S. Takle, Z. Pan, W.J. Gutowski, R. da Silva, and PIRCS modelers,
- 28 2003: Hydrologic processes in regional climate model simulations of the central United
- 29 States flood of June–July 1993. *J. Hydrometeorology*, **4**, 584–598.
- 30 **Anderson**, T.L., R.J. Charlson, S. Schwartz, R. Knutti, O. Boucher, H. Rodhe, and J. Heintzenberg,
- 31 2003: Climate forcing by aerosols—a hazy picture. *Science*, **300**, 1103–1104.

- 1   **Andersson**, L., J.J. Wilk, M.C. Todd, D.A. Hughes, A. Earle, D. Kniverton, R. Layberry, and  
2       H.H.G. Savenije, 2006: Impact Climate change and development scenarios on flow patterns  
3       in the Okavango River. *J. Hydrology*, **331**, 43–57.
- 4   **Annamalai**, H., K. Hamilton, and K.R. Sperber, 2007: South Asian summer monsoon and its  
5       relationship with ENSO in the IPCC AR4 simulations. *J. Climate*, in press.
- 6   **Antic**, S., R. Laprise, B. Denis, and R. de Elia, 2006: Testing the downscaling ability of a one-way  
7       nested regional climate model in regions of complex topography. *Climate Dynamics*, **26**,  
8       305–325.
- 9   **Antonov**, J.I., S. Levitus, and T.P. Boyer, 2005: Thermosteric sea level rise, 1955–2003.  
10       *Geophys. Res. Lett.*, **32**, L12602.
- 11   **Arakawa**, A. and W.H. Schubert, 1974: Interaction of a cumulus cloud ensemble with the large-  
12       scale environment. Part I. *J. Atmos. Sci.*, **31**, 674–701.
- 13   **Arblaster** J.M., and G.A. Meehl, 2006: Contribution of various external forcings to trends in the  
14       Southern Annular Mode. *J. Climate*, **19**, 2896–2905.
- 15   **Arendt**, A.A., K.A. Echelmeyer, W.D. Harrison, C.S. Lingle, and V.B. Valentine, 2002: Rapid  
16       wastage of Alaska glaciers and their contribution to rising sea level. *Science*, **297**, 382–386.
- 17   **Arora**, V.K. and G.J. Boer, 2003: A representation of variable root distribution in dynamic  
18       vegetation models. *Earth Interactions*, **7**, 1–19.
- 19   **Arzel**, O., T. Fichefet and H. Goosse, 2006: Sea ice evolution over the 20th and 21st centuries as  
20       simulated by current AOGCMs. *Ocean Modelling*, **12**, 401–415.
- 21   **Aurela**, M., T. Laurila, and J.P. Tuovinen, 2004: The timing of snow melt controls the annual CO<sub>2</sub>  
22       balance in a subarctic fen. *Geophys. Res. Lett.*, **31**, L16119.
- 23   **Avissar**, R. and R.A. Pielke, 1989: A parameterization of heterogeneous land-surface for Atmos.  
24       numerical models and its impact on regional meteorology. *Mon. Weather Rev.*, **117**, 2113–  
25       2136.
- 26   **Baldocchi**, D. and P. Harley, 1995: Scaling carbon dioxide and water vapour exchange from leaf to  
27       canopy in a deciduous forest. I. Leaf model parameterization. *Plant, Cell and Environment*,  
28       **18**, 1146–1156.
- 29   **Bard**, E., B. Hamelin, and R.G. Fairbanks, 1990: U-Th ages obtained by mass spectrometry in  
30       corals from Barbados: sea level during the past 130,000 years. *Nature*, **346**, 456–458.

- 1    **Barnett**, T., R. Malone, W. Pennell, D. Stammer, B. Semtner, and W. Washington, 2004: The  
2        effects of climate change on water resources in the west: Introduction and overview.  
3        *Climatic Change*, **62**, 1–11.
- 4    **Barnett**, T.P., D.W. Pierce, K.M. AchutaRao, P.J. Gleckler, B.D.Santer, J.M. Gregory, and W.M.  
5        Washington, 2005: Penetration of human-induced warming into the world's oceans. *Science*,  
6        **309**, 284.
- 7    **Beckman**, A. and R. Doscher, 1997: A method for improved representation of dense water  
8        spreading over topography in geopotential-coordinate models. *J. Phys. Oceanography*, **27**,  
9        581–591.
- 10   **Bell**, J.L., L.C. Sloan, and M.A. Snyder, 2004: Regional changes in extreme climatic events: a  
11        future climate scenario. *J. Climate*, **17**(1), 81–87.
- 12   **Bellouin**, N., O. Boucher, J. Haywood, and M.S. Reddy, 2005: Global estimate of aerosol direct  
13        radiative forcing from satellite measurements. *Nature*, **438**, 1138–1141.
- 14   **Beringer**, J., A.H. Lynch, F.S. Chapin, M. Mack, and G.B. Bonan, 2001: The representation of  
15        arctic soils in the land surface model: The importance of mosses. *J. Climate*, **14**, 3324–3335.
- 16   **Betts**, A.K. and J.H. Ball, 1997: Albedo over the boreal forest. *J. Geophys. Research-*  
17        *Atmospheres*, **102**, 28901–28909.
- 18   **Biasutti**, M. and A. Giannini, 2006: Robust Sahel drying in response to late 20th century forcings.  
19        *Geophys. Res. Lett.*, **33**, L11706.
- 20   **Bierbaum**, R.M., M.J. Prather, E.M. Rasmusson and A.J. Weaver, 2003: *Estimating Climate*  
21        *Sensitivity: Report of a Workshop*. Ntl. Academy of Sci., Washington, D.C.  
22        (<http://books.nap.edu/catalog/10787.html>).
- 23   **Bitz**, C.M. and W.H. Lipscomb, 1999: An energy-conserving thermodynamic model of sea ice. *J.*  
24        *Geophys. Res.*, **104**, 15 669–15 677.
- 25   **Bjerknes**, Jacob, 1969: Atmos. teleconnections from the equatorial Pacific. *Mon. Weather Rev.*, **97**,  
26        163172.
- 27   **Bleck**, R., 2002: An oceanic general circulation model framed in hybrid isopycnic-Cartesian  
28        coordinates. *Ocean Modelling*, **4**, 55–88.
- 29   **Boisserie**, M., D.W. Shin, T.E. Larow, and S. Cocke, 2006: Evaluation of soil moisture in the  
30        Florida State University climate model: Ntl. Center for Atmos. Research community land

- 1 model (FSU-CLM) using two reanalyses (R2 and ERA40) and *in situ* observations. *J.*  
2 *Geophys. Res.*, **111**(D8), Art. No. D08103.
- 3 **Bonan**, G.B., D. Pollard, and S.L. Thompson, 1992: Effects of Boreal Forest Vegetation on Global  
4 Climate. *Nature*, **359**, 716–718.
- 5 **Bonan**, G.B., 1995: Sensitivity of a GCM simulation to inclusion of inland water surfaces. *J.*  
6 *Climate*, **8**, 2691–2704.
- 7 **Bony**, S., R. Colman, V.M. Kattsov, R.P. Allan, C.S. Bretherton, J.-L. Dufresne, A. Hall, S.  
8 Hallegatte, M.M. Holland, W. Ingram, D.A. Randall, B.J. Soden, G.Tselioudis and M. J.  
9 Webb, 2006: How well do we understand and evaluate climate change feedback  
10 processes? *J. Climate*, **19**, 3445–3482.
- 11 **Bony**, S., and J.-L. Dufresne, 2005: Marine boundary layer clouds at the heart of tropical cloud  
12 feedback uncertainties in climate models. *Geophys. Res. Lett.*, **32**, L20806.
- 13 **Bony**, S., J.-L. Dufresne, H. LeTreut, J.-J. Morcrette, and C. Senior, 2004: On dynamic and  
14 thermodynamic components of cloud changes. *Climate Dynamics*, **22**, 71–86.
- 15 Bony, S., and K.A. Emanuel, 2001: A parameterization of the cloudiness associated with cumulus  
16 convection: Evaluation using TOGA COARE data, *J. Atmos. Sci.*, **58**, 3158–3183.
- 17 **Boone**, A., V. Masson, T. Meyers, and J. Noilhan, 2000: The influence of the inclusion of soil  
18 freezing on simulations by a soil-vegetation-atmosphere transfer scheme. *J. Ap.*  
19 *Meteorology*, **39**, 1544–1569.
- 20 **Boyle**, J.S., 1993: Sensitivity of dynamical quantities to horizontal resolution for a climate  
21 simulation using the ECMWF (cycle 33) model. *J. Climate*, **6**, 796–815.
- 22 **Braithwaite**, R.J. and S.C.B. Raper, 2002: Glaciers and their contribution to sea level change.  
23 *Physics and Chemistry of the Earth.*, **27**, 1445–1454.
- 24 **Brankovic**, T. and D. Gregory, 2001: Impact of horizontal resolution on seasonal integrations.  
25 *Climate Dynamics*, **18**, 123–143.
- 26 **Breugem**, W.-P., W. Hazeleger, and R.J. Haarsma, 2006: Multi-model study of tropical Atlantic  
27 variability and change. *Geophys. Res. Lett.*, submitted.
- 28 **Briegleb**, B.P., E.C. Hunke, C.M. Bitz, W.H. Lipscomb, and J.L. Schramm, 2002: *Description of*  
29 *the Community Climate System Model Version 2 Sea Ice Model*, 60 pp. (available at  
30 <http://www.ccsm.ucar.edu/models/ccsm2.0/csims/>).

- 1    **Brinkop**, S. and Roeckner, E., 1995: Sensitivity of a general circulation model to parameterizations  
2        of cloud-turbulence interactions in the Atmos. boundary layer. *Tellus*, **47A**, 197–220.
- 3    **Brown**, T.J., B.L. Hall, and A.L. Westerling, 2004: The impact of twenty-first century climate  
4        change on wildland fire danger in the western United States: An applications perspective.  
5        *Climatic Change*, **62**, 365–388.
- 6    **Bryan**, F. O., G. Danabasoglu, P. R. Gent, K. Lindsay, 2006: Changes in ocean ventilation  
7        during the 21st Century in the CCSM3. *Ocean Modelling*, **15**, 141–156.
- 8    **Bryan**, K., 1969a: A numerical method for the study of the circulation of the world ocean. *J. Comp.*  
9        *Phys.*, **4**, 347–376.
- 10    **Bryan**, K., 1969b: Climate and the ocean circulation. III: The ocean model, *Mon. Weather Rev.*, **97**,  
11        806–824.
- 12    **Bryan**, K. and Cox, M. D., 1967: A numerical investigation of the oceanic general circulation.  
13        *Tellus*, **19**, 54–80.
- 14    Bryden and Imawaki, 2000 p. 109
- 15    **Burke**, E. J., S.J. Brown, and N. Christidis, 2006: Modelling the recent evolution of global drought  
16        and projections for the 21<sup>st</sup> century with the Hadley Centre climate model. *J.*  
17        *Hydrometeorology*, **7**, 1113–1125.
- 18    **Byerle**, L.A. and J. Paegle, 2003: Modulation of the Great Plains low-level jet and moisture  
19        transports by orography and large-scale circulations. *J. Geophys. Res.*, **108(D16)**, Art. No.  
20        8611.
- 21    **Cai**, W.J., P.H. Whetton, and D.J. Karoly, 2003: The response of the Antarctic Oscillation to  
22        increasing and stabilized Atmos. CO<sub>2</sub>. *J. Climate*, **16**, 1525–1538.
- 23    **Callaghan**, T.V., *et al.*, 2004: Responses to projected changes in climate and UV-B at the species  
24        level. *Ambio*, **33**, 418–435.
- 25    **Cameron**, D., 2006: An application of the UKCIP02 climate change scenarios to flood estimation  
26        by continuous simulation for a gauged catchment in the northeast of Scotland, UK (with  
27        uncertainty). *J. Hydrology*, **328**, 212–226
- 28    **Cane**, M.A., A.C. Clement, A. Kaplan, Y. Kushnir, R. Murtugudde, D. Pozdnyakov, R. Seager, and  
29        S.E. Zebiak, 1997: Twentieth century sea surface temperature trends. *Science*, **275**, 957–960.
- 30    **Capotondi**, et al, 1987 p. 139

- 1   **Capotondi**, A., A. Wittenber, S. Masina, 2006: Spatial and temporal structure of ENSO in 20th  
2         century coupled simulations. *Ocean Modelling*, **15**, 274–298.
- 3   **Carril**, A.F., C.G. Menéndez, and A. Navarra, 2005: Climate response associated with the Southern  
4         Annular Mode in the surroundings of Antarctic Peninsula: A multimodel ensemble analysis.  
5         *Geophys. Res. Lett.*, **32**.
- 6   **Cassano**, J.J., P. Uotila, A.H. Lynch, and E.N. Cassano, 2007: Predicted changes in synoptic  
7         forcing of net precipitation in large Arctic river basins during the 21<sup>st</sup> century. *J. Geophys.*  
8         *Res.*, in press.
- 9   **Cassano**, J.J., P. Uotila, and A.H. Lynch, 2006: Changes in synoptic weather patterns in the polar  
10         regions in the 20th and 21st centuries, Part 1: Arctic. *Intl. J. Climatology*, in press.
- 11   **Cazenave**, A. and R.S. Nerem, 2004: Present-day sea level change: observations and causes. *Rev. of*  
12         *Geophysics*, **42**(3), RG3001.
- 13   Cess, R. D., and G. L. Potter, 1988: Exploratory studies of cloud radiative forcing with a general  
14         circulation model. *Tellus*, **39A**, 460–473.
- 15   **Cess**, R.D., *et al.*, 1990: Intercomparison and interpretation Climate feedback processes in 19  
16         Atmos. general circulation models. *J. Geophys. Res.*, **95**, 16 601–16 615.
- 17   **Charney**, J.G., 1979: *Carbon Dioxide and Climate: A Scientific Assessment*. Ntl. Academy of Sci.,  
18         Washington, D.C., 22 pp.
- 19   **Chen**, F. and J. Dudhia, 2001: Coupling an advanced land surface–hydrology model with the Penn  
20         State–NCAR MM5 modeling system. Part I: Model implementation and sensitivity. *Mon.*  
21         *Weather Rev.*, **129**, 569–585.
- 22   **Cheng**, A. and K.-M. Xu, 2006: Simulation of shallow cumuli and their transition to deep  
23         convective clouds by cloud-resolving models with different third-order turbulence closures.  
24         *Quarterly J. of the Royal Meteorological Soc.*, **132**, 359–382.
- 25   **Cheng**, Y., V.M. Canuto, and A.M. Howard, 2002: An improved model for the turbulent PBL. *J.*  
26         *Atmos. Sci.*, **59**, 1550–1565.
- 27   **Chiacchio**, M., J. Francis, and P. Stackhouse, Jr., 2002: Evaluation of methods to estimate the  
28         surface downwelling longwave flux during Arctic winter. *J. Ap. Meteorology*, **41**, 306–318.
- 29   **Choi**, H.I., P. Kumar, and X.-Z. Liang, 2007: 3-D volume averaged soil-moisture transport model  
30         with a scalable parameterization of subgrid topographic variability. *Water Resources*  
31         *Research*, in press.

- 1   **Christensen**, J.H., T. Carter, and F. Giorgi, 2002: PRUDENCE employs new methods to assess  
2       European climate change. *Eos*, **83**, 147.
- 3   **Christensen**, N.S., A.W. Wood, N. Voisin, D.P. Lettenmaier, and R.N. Palmer, 2004: The effects  
4       of climate change on the hydrology and water resources of the Colorado River basin.  
5       *Climatic Change*, **62**, 337–363.
- 6   **Christensen**, O.B, 1999: Relaxation of soil variables in a regional climate model. *Tellus*, **51A**, 674–  
7       685.
- 8   **Christidis**, N., P.A. Stott, S. Brown, G.C. Hegerl, 2005: Detection of changes in temperature  
9       extremes during the second half of the 20<sup>th</sup> century. *Geophys. Res. Lett.*, **32**, L20716.
- 10   **Chung**, C.E., V. Ramanathan, D. Kim, and I. Podgorny, 2005: Global anthropogenic aerosol direct  
11       forcing derived from satellite and ground-based observations. *J. Geophys. Res.*, **110**,  
12       D24207.
- 13   **Church**, J.A. and N.J. White, 2006: A 20th century acceleration in global sea-level rise. *Geophys.*  
14       *Res. Lett.*, **33**, L01602.
- 15   **Clement**, A.C., R. Seager, M.A. Cane, and S.E. Zebiak, 1996: An ocean dynamical thermostat. *J.*  
16       *Climate*, **9**, 2190–2196.
- 17   **Clement**, A.C. and B. Soden, 2005: The sensitivity of the tropical-mean radiation budget. *J.*  
18       *Climate*, **18**, 3189–3203.
- 19   **Collins**, M., B.B.B. Booth, G. Harris, J.M. Murphy, D.M.H. Sexton, M. Webb, 2006: Towards  
20       quantifying uncertainty in transient climate change. *Climate Dynamics*, in press.
- 21   **Collins**, W., *et al.*, 2004, Description of the NCAR Community Atmos. Model (CAM3). *NCAR*  
22       *Technical Report*. Ntl. Center for Atmos. Research, P.O. Box 3000, Boulder, CO, USA  
23       80305, in preparation.
- 24   **Collins**, W.D., C.M. Bitz, M.L. Blackmon, G.B. Bonan, C.S. Bretherton, J.A. Carton, P. Chang,  
25       S.C. Doney, J.J. Hack, T.B. Henderson, J.T. Kiehl, W.G. Large, D.S. McKenna, B.D.  
26       Santer, and R.D. Smith, 2006: The community climate system model: CCSM3. *J. Climate*,  
27       in press.
- 28   **Collins**, W.D., *et al.*, 2006: Radiative forcing by well-mixed greenhouse gases: Estimates from  
29       climate models in the Intergovernmental Panel on Climate Change (IPCC) Fourth  
30       Assessment Report (AR4), *J. Geophys. Res.*, **111**, D14317.

- 1   **Collins**, W.D., C.M. Bitz, M.L. Blackmon, G.B. Bonan, C.S. Bretherton, J.A. Carton, P. Chang,  
2       S.C. Doney, J.J. Hack, T.B. Henderson, J.T. Kiehl, W.G. Large, D.S. McKenna, B.D.  
3       Santer, and R.D. Smith, 2005: The Community Climate System Model: CCSM3. *J. Climate*,  
4       **18**.
- 5   **Colman**, R., 2003: A comparison Climate feedbacks in general circulation models. *Climate*  
6       *Dynamics*, **20**, 865–873.
- 7   **Conkright**, M.E., *et al.*, 2002: *World Ocean Atlas 2001: Objective Analyses, Data Statistics, and*  
8       *Figures*, CD-ROM documentation. NOAA, Silver Spring, MD. 17 pp.
- 9   **Cook**, K.H. and E.K. Vizy, 2006: Coupled model simulations of the West African monsoon system:  
10       20th century simulations and 21st century predictions. *J. Climate*, **19**, 3681–3703.
- 11   **Cotton**, W.R., 2003: Cloud modeling from days of EML to the present—Have we made progress?  
12       In: *AMS Meteorological Monographs—Symposium on Cloud Systems, Hurricanes and*  
13       *TRMM*, 95–106.
- 14   **Covey**, C., L.C. Sloan, and M.I. Hoffert, 1996: Paleoclimate data constraints on climate sensitivity:  
15       The paleocalibration method. *Climatic Change*, **32**, 165–184.
- 16   **Cox**, P. M., R.A. Betts, C.D Jones, S.A. Spall, and I.J. Totterdell, 2000: Acceleration of global  
17       warming due to carbon-cycle feedbacks in a coupled model. *Nature*, **408**, 184–187.
- 18   **Cramer**, W., A. Bondeau, F.I. Woodward, *et al.*, 2001: Global response of terrestrial ecosystem  
19       and function to CO<sub>2</sub> and climate change: Results from six dynamic global vegetation  
20       models. *Global Change Biology*, **7**, 357373.
- 21   **Crane**, R.G. and B.C. Hewitson, 1998: Doubled CO<sub>2</sub> precipitation changes for the Susquehanna  
22       basin: Down-scaling from the GENESIS general circulation model. *Intl. J. Climatology*, **18**,  
23       65–76.
- 24   **Cubasch**, U., G.A. Meehl, G. Boer, R.J. Stouffer, M. Dix, A. Noda, C.A. Senior, S. Raper, and K.S.  
25       Yap, 2001: Projections of future climate change. In: *Climate Change 2001: The Scientific*  
26       *Basis*. [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K.  
27       Maskell, and C.A. Johnson (eds.)], Cambridge University Press, Cambridge, UK, 525–582.
- 28   **Curry**, J.A. and A.H. Lynch, 2002: Comparing Arctic regional climate models. *Eos*, **83**, 87.
- 29   **Curry**, J.A., J. Schramm, and E.E. Ebert, 1995: On the sea ice albedo climate feedback mechanism.  
30       *J. Climate*, **8**, 240–247.

- 1    **Curry**, J.A., W.B. Rossow, D. Randall, and J.L. Schramm, 1996: Overview of Arctic cloud and  
2       radiation characteristics. *J. Climate*, **9**, 1731–1764.
- 3    **Cusack**, S., J.M. Edwards, and R. Kershaw, 1999: Estimating subgrid variance of saturation and its  
4       parametrization for use in a GCM cloud scheme. *Quarterly J. Royal Meteorological Soc.*,  
5       **125**, 3057–3076.
- 6    **Dai**, A., 2006: Precipitation characteristics in eighteen coupled climate models. *J. Climate*, in press.
- 7    **Dai**, A., W.M. Washington, G.A. Meehl, T.W. Bettge, and W.G. Strand, 2004: The ACPI climate  
8       change simulations. *Climatic Change*, **62**, 29–43.
- 9    **Dai**, A., K.E. Trenberth, and T. Qian, 2004: A global data set of Palmer Drought Severity Index for  
10      1870–2002: Relationship with soil moisture and effects of surface warming. *J.  
11       Hydrometeorology*, **5**, 1117–1130.
- 12   **Danabasoglu**, G., W.G. Large, J.J. Tribbia, P.R. Gent, and B.P. Briegleb, 2006: Diurnal ocean-  
13       atmosphere coupling. *J. Climate*, doi: 10.1175/JCLI3739.1.
- 14   **Davies**, H.C., 1976: Lateral boundary formulation for multilevel prediction models. *Quarterly J. of  
15       the Royal Meteorological Soc.*, **102**, 405–418.
- 16   **Davies**, H.C. and R.E. Turner, 1977: Updating prediction models by dynamical relaxation: An  
17       examination of the technique. *Intl. J. Climatology*, **103**, 225–245.
- 18   **Davis**, R.E., P.C. Knappenberger, W.M. Novicoff, and P.J. Michaels, 2002: Decadal changes in  
19       heat-related human mortality in the eastern United States. *Climate Research*, **22**, 175–184.
- 20   **DeCaria**, A.J., K.E. Pickering, G.L. Stenchikov, and L.E. Ott, 2005: Lightning-generated NO<sub>x</sub> and  
21       its impact on tropospheric ozone production: A three-dimensional modeling study of a  
22       Stratosphere–Troposphere Experiment: Radiation, Aerosols and Ozone (STERAO-A)  
23       thunderstorm. *J. Geophys. Res.*, **110**, D14303.
- 24   **de Elía**, R., R. Laprise, and B. Denis, 2002: Forcasting skill limits of nested, limited-area  
25       models: A perfect-model approach. *Mon. Weather Rev.*, **130**, 2006–2023.
- 26   **Dehloff**, K. *et al.*, 2006: A dynamical link between the Arctic and the global climate system.  
27       *Geophys. Res. Lett.*, **33**, L03703.
- 28   **Del Genio**, A.D. and M.-S. Yao, 1993: Efficient cumulus parameterization for long-term climate  
29       studies: The GISS scheme. *The Representation of Cumulus Convection in Numeric Models.*  
30       *Meteorological Monograph*, No. 46, Am. Meteorological Soc., 181–184.

- 1   **Del Genio**, A.D., W. Kovari, M.-S. Yao, and J. Jonas, 2004: Cumulus microphysics and climate  
2         sensitivity. *J. Climate*.
- 3   **Del Genio**, A.D., A. Wolf, and M.-S. Yao, 2005b: Evaluation of regional cloud feedbacks using  
4         single-column models. *J. Geophys. Res.*, **110**.
- 5   **Del Genio**, A.D., M.-S. Yao, W. Kovari, and K.-W. Lo, 1996: A prognostic cloud water  
6         parameterization for global climate models. *J. Climate*, **9**, 270–304.
- 7   **Delworth**, T.L., *et al.*, 2006: GFDL's CM2 global coupled climate models—Part 1: Formulation  
8         and simulation characteristics. *J. Climate*, **19**, 643–674.
- 9   **Denis**, B., R. Laprise, D. Caya, and J. Cote, 2002: Downscaling ability of one-way , nested regional  
10         climate models: The big-brother experiments. *Climate Dynamics*, **18**, 627–646.
- 11   **Denis**, B., R. Laprise, and D. Caya, 2003: Sensitivity of a regional climate model to the resolution  
12         of the lateral boundary conditions. *Climate Dynamics*, **20**, 107–126.
- 13   **Déqué**, M. and J.P. Piedelievre, 1995: High-resolution climate simulation over Europe. *Climate  
14         Dynamics*, **11**, 321–339.
- 15   **Déqué**, M., R.G. Jones, M. Wild, F. Giorgi, J.H. Christensen, D.C. Hassell, P.L. Vidale, B. Rockel,  
16         D. Jacob, E. Kjellström, M. de Castro, F. Kucharski, and B. van den Hurk, 2005: Global  
17         high resolution versus Limited Area Model climate change projections over Europe:  
18         quantifying confidence level from PRUDENCE results. *Climate Dynamics*, **25**, 653–670.
- 19   **Dettinger**, M.D., D.R. Cayan, M.K. Meyer, and A.E. Jeton, 2004: Simulated hydrologic responses  
20         to climate variations and change in the Merced, Carson, and American River basins, Sierra  
21         Nevada, California, 1900–2099. *Climatic Change*, **62**, 283–317.
- 22   **Dickinson**, R.E., A. Henderson-Sellers, and P.J. Kennedy, 1993: Biosphere-Atmosphere Transfer  
23         Scheme (BATS) version 1e as coupled to the NCAR Community Climate Model. *NCAR  
24         Technical Note*, NCAR/TN-387+STR, Ntl. Center for Atmos. Research, Boulder, CO, USA,  
25         72 pp. [Available from Ntl. Center for Atmos. Research, P.O. Box 3000, Boulder, CO, USA  
26         80305.]
- 27   **Diffenbaugh**, N.S., M.A. Snyder, L.C. Sloan, 2004: Could CO<sub>2</sub>-induced land-cover feedbacks alter  
28         near-shore upwelling regimes? *Proc. Ntl. Academy Sci.*, **101**, 27–32.
- 29   **Dimotakis**, P.E., 2005: *Turbulent mixing. Annual Rev. of Fluid Mechanics.* Volume 37:, pp. 329–  
30         356.

- 1    **Doney**, S.C., R. Anderson, J. Bishop, K. Caldeira, C. Carlson, M.-E. Carr, R. Feely, M. Hood, C.  
2       Hopkinson, R. Jahnke, D. Karl, J. Kleypas, C. Lee, R. Letelier, C. McClain, C. Sabine, J.  
3       Sarmiento, B. Stephens, and R. Weller, 2004: *Ocean Carbon and Climate Change (OCCC): An implementation strategy for U.S. ocean carbon cycle Science..* University Corporation  
4       for Atmos. Research, Boulder, CO, 108 pp.  
5  
6    **Ducharne**, A., C. Golaz, E. Leblois, K. Laval, J. Polcher, E. Ledoux, and G. de Marsily, 2003:  
7       Development of a high resolution runoff routing model, calibration and application to assess  
8       runoff from the LMD GCM. *J. Hydrology*, **280**, 207–228.  
9  
10   **Duffy**, P.B., B. Govindasamy, J.P. Iorio, J. Milovich, K.R. Sperber, K.E. Taylor, M.F. Wehner, and  
11       S.L. Thompson, 2003: High-resolution simulations of global climate, Part 1: Present  
12       climate. *Climate Dynamics*, **21**, 371–390.  
13  
14   **Duynkerke**, P.G. and S.R. de Roode, 2001: Surface energy balance and turbulence characteristics  
15       observed at the SHEBA Ice Camp during FIRE III. *J. Geophys. Res.*, **106**, 15 313–15 322.  
16  
17   **Easterling**, D.R., 2002: Recent changes in frost days and the frost-free season in the United States.  
18       *Bulletin of the Am. Meteorological Soc.*, **83**, 1327–1332.  
19  
20   **Ebert**, E.E., J.L. Schramm, and J.A. Curry, 1995: Disposition of solar radiation in sea ice and the  
21       upper ocean. *J. Geophys. Res.*, **100**, 15 965–15 975.  
22  
23   **Emanuel**, K.A., 1991: A scheme for representing cumulus convection in large-scale models. *J.*  
24       *Atmos. Science*, **48**, 2313–2335.  
25  
26   **Emanuel**, K.A., 1994: *Atmos. Convection*. Oxford University Press, Oxford, UK, 580 pp.  
27  
28   **Emori**, S. and S.J. Brown, 2005: Dynamic and thermodynamic changes in mean and extreme  
29       precipitation under changed climate. *Geophys. Res. Lett.*, **32**, L17706.  
30  
31   **Enfield**, D.B., A.M. Mestas-Nuñez, and P.J. Trimble, 2001: The Atlantic Multidecadal Oscillation  
32       and its relationship to rainfall and river flows in the continental U.S., *Geophys. Res. Lett.*,  
33       **28**, 2077–2080.  
34  
35   **Essery**, R. and J. Pomeroy, 2004: Implications of spatial distributions of snow mass and melt rate  
36       for snow-cover depletion: theoretical considerations. *Annals of Glaciology*, **38**, 261–265.  
37  
38   **Fedorov**, A. and S.G. Philander, 2000: Is El Niño changing? *Science*, **288**, 1997–2002.  
39  
40   **Field**, C., R. Jackson, and H. Mooney, 1995: Stomatal responses to increased CO<sub>2</sub>: Implications  
41       from the plant to the global scale. *Plant, Cell and Environment*, **18**, 1214–1225.

- 1   **Forest**, C.E., P.H. Stone, and A.P. Sokolov , 2006: Estimated PDFs of climate system properties  
2         including natural and anthropogenic forcings, *Geophys. Res. Lett.*, **33**, L01705,  
3         doi:10.1029/2005GL023977.
- 4   **Foukal**, P. and C. Fröhlich, H. Spruit and T.M.L. Wigley, 2006: Variations in solar luminosity and  
5         their effect on the Earth's climate. *Nature*, **443**, 161–166.
- 6   **Fox-Rabinovitz**, M.S. and R.S. Lindzen, 1993: Numerical experiments on consistent horizontal and  
7         vertical resolution for Atmos. models and observing systems. *Mon. Weather Rev.*, **121**, 264–  
8         271.
- 9   **Fox-Rabinovitz**, M.S., L. Takacs, R.C. Govindaraju, and M.J. Suarez, 2001: A variable-resolution  
10         stretched-grid general circulation model: Regional climate simulation. *Mon. Weather  
11         Rev.*, **129**, 453–469.
- 12   **Fox-Rabinovitz**, M.S., L.L. Takacs, and R.C. Govindaraju, 2002: A variable-resolution stretched-  
13         grid general circulation model and data assimilation system with multiple areas of interest:  
14         Studying the anomalous regional climate events of 1998. *J. Geophys. Res.*, **107**(D24), Art.  
15         No. 4768.
- 16   **Fox-Rabinovitz**, M.S., J. Cote, B. Dugas, M. Deque, and J.L. McGregor, 2006: Variable resolution  
17         general circulation models: Stretched-grid model intercomparison project (SGMIP). *J.  
18         Geophys. Res.*, **111**(D16), Art. No. D16104.
- 19   **Frei**, C., R. Schöll, S. Fukutome, J. Schmidli, and P.L. Vidale, 2006: Future change of precipitation  
20         extremes in Europe: An intercomparison of scenarios from regional climate models. *J.  
21         Geophys. Res.*, **111**(D6), Art. No. D06105.
- 22   **Frich**, P., *et al.*, 2002: Observed coherent changes in climatic extremes during the second half of  
23         the twentieth century. *Climate Research*, **19**, 193–212.
- 24   **Fridlind**, A.M., *et al.*, 2004: Evidence for the predominance of mid-tropospheric aerosols as  
25         subtropical anvil cloud nuclei. *Science*, **304**, 718–722.
- 26   **Friedlingstein**, P., L. Bopp, P. Clais, *et al.*, 2001: Positive feedback between future climate change  
27         and the carbon cycle. *Geophys. Res. Lett.*, **28**, 1543–1546.
- 28   **Friedlingstein**, P., P. Cox, R. Betts, *et al.*, 2006: Climate-carbon cycle feedback analysis: Results  
29         from the C<sup>4</sup>MIP model intercomparison. *J. Climate*, **19**, 3337–3353.

- 1   **Fu**, C.B., S. Wang, Z. Xiong, W.J. Gutowski, D.-K. Lee, J.L. McGregor, Y. Sato, H. Kato, J.-W.  
2                   Kim, and M.-S. Su, 2005: Regional climate model intercomparison project for Asia. *Bulletin  
3                   Am. Meteorological Soc.*, **86**, 257–266.
- 4   **Fyfe**, J.C., G.J. Boer, and G.M. Flato, 1999: The Arctic and Antarctic oscillations and their  
5                   projected changes under global warming. *Geophys. Res. Lett.*, **11**, 1601–1604.
- 6   **Ganachaud**, A., 2003: Large-scale mass transports, water mass formation, and diffusivities  
7                   estimated from World Ocean Circulation Experiment (WOCE) hydrographic data, *J.  
8                   Geophys. Res.*, **108**(C7), 3213.
- 9   **Ganachaud**, A. and C. Wunsch, 2000: Improved estimates of global ocean circulation, heat  
10                  transport and mixing from hydrographic data. *Nature*, **408**, 453–457.
- 11   **Gao**, S., L. Ran, and X. Li, 2006: Impacts of ice microphysics on rainfall and thermodynamic  
12                  processes in the tropical deep convective regime: A 2D cloud-resolving modeling study.  
13                  *Mon. Weather Rev.*, in press.
- 14   **Gates**, W.L., A. Henderson-Sellers, G.J. Boer, C.K. Folland, A. Kitoh, B.J. McAvaney, F. Semazzi,  
15                  N. Smith, A.J. Weaver and Q.-C. Zeng, 1996: Climate models—Evaluation. In: *Climate  
16                  Change 1995: The Science. Climate Change. Contribution of Working Group I to the  
17                  Second Assessment Report of the Intergovernmental Panel on Climate Change* [Houghton,  
18                  J.T., L.G. Meira Filho, B.A. Callander, N. Harris, A. Kattenberg, and K. Maskell (eds.)].  
19                  Cambridge University Press, Cambridge, UK, and New York, NY, USA, 228–284.
- 20   **Gent**, P. and J.C. McWilliams, 1990: Isopycnal mixing in ocean circulation models. *J. Phys.  
21                  Oceanography*, **20**, 150–155.
- 22   **GFDL** Global Atmos. Model Development Team (GAMDT), 2004: The new GFDL global  
23                  atmosphere and land model AM2/LM2: evaluation with prescribed SST conditions. *J.  
24                  Climate*, submitted.
- 25   **Ghan**, S. J., *et al.*, 2000: An intercomparison of single column model simulations of summertime  
26                  midlatitude continental convection. *J. Geophys. Res.*, **105**, 2091–2124.
- 27   **Giorgi**, F. and X. Bi, 2000: A study of internal variability of a regional climate model. *J. Geophys.  
28                  Res.*, **105**, 29503–29521.
- 29   **Giorgi**, F., B. Hewitson, J. Christensen, M. Hulme, H. Von Storch, P. Whetton, R. Jones, L.  
30                  Mearns, and C. Fu, 2001: Chapter 10. Regional climate change information—Evaluation  
31                  and projections. In: *Climate Change 2001: The Scientific Basis*. [Houghton, J.T., Y. Ding,

- 1 D.J. Griggs, M. Noguer, P.J. vad der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)].  
2 Cambridge University Press, Cambridge, UK, 583–638.
- 3 **Giorgi**, F., M.R. Marinucci, and G.T. Bates, 1993: Development of a second-generation regional  
4 climate model (RegCM2). Part II: Convective processes and assimilation of lateral boundary  
5 conditions. *Mon. Weather Rev.*, **121**, 2814–2832.
- 6 **Giorgi**, F. and L.O. Mearns, 1991: Approaches to the simulation of regional climate change—A  
7 *Rev. of Geophysics*, **29**, 191–216.
- 8 **Giorgi**, F. and L.O. Mearns, 1999: Introduction to special section: Regional climate modeling  
9 revisited. *J. Geophys. Res.*, **104**(D6), 6335–6352.
- 10 **Giorgi**, F. and L.O. Mearns, 2003: Probability of regional climate change based on the Reliability  
11 Ensemble Averaging (REA) method. *Geophys. Res. Lett.*, **30**, Art. No. 1629.
- 12 **Giorgi**, F., L.O. Mearns, C. Shields, and L. Mayer, 1996: A regional model study of the importance  
13 of local versus remote controls of the 1988 drought and the 1993 flood over the central  
14 United States. *J. Climate*, **9**, 1150–1162.
- 15 **Gleckler**, P.J., K.R. Sperber, and K. AchutaRao, 2006: Annual cycle of global ocean heat content:  
16 Observed and simulated. *J. Geophys. Res.*, **111**, C06008.
- 17 **Gnanadesikan**, A., K.W. Dixon, S.M. Griffies, V. Balaji, M. Barreiro, J.A. Beesley, W.F. Cooke,  
18 T.L. Delworth, R. Gerdes, M.J. Harrison, I.M. Held, W.J. Hurlin, H.-C. Lee, Z. Liang, G.  
19 Nong, R.C. Pacanowski, A. Rosati, J. Russell, B.L. Samuels, Q. Song, M.J. Spelman, R.J.  
20 Stouffer, C.O. Sweeney, G. Vecchi, M. Winton, A.T. Wittenberg, F. Zeng, R. Zhang, and  
21 J.P. Dunne, 2006: GFDL’s CM2 global coupled climate models. Part II: The baseline ocean  
22 simulation. *J. Climate*, **19**, 675–697.
- 23 **Gorham**, E., 1991: Northern peatlands—role in the carbon-cycle and probable responses to climatic  
24 warming. *Ecological Applications*, **1**, 182–195.
- 25 **Govindasamy**, B., S. Thompson, A. Mirin, M. Wickett, K. Caldeira, and C. Delire, 2005: Increase  
26 of carbon cycle feedback with climate sensitivity: Results from a coupled climate and  
27 carbon cycle model. *Tellus*, **57B**, 153–163.
- 28 **Grabowski**, W.W. and M. W. Moncrieff, 2001: Large-scale organization of tropical convection in  
29 two-dimensional explicit numerical simulations. *Intl. J. Climatology*, **127**, 445–468.
- 30 **Grabowski**, W.W., 2003: MJO-like coherent structures: Sensitivity simulations using the cloud-  
31 resolving convection parameterization (CRCP). *J. Atmos. Sci.*, **60**, 847–864.

- 1      **Gregory**, D. and S. Allen, 1991: The effect of convective scale downdrafts upon NWP and climate  
2                simulations. *9th Conf. Numerical Weather Prediction*. Am. Meteorological Soc., Denver,  
3                CO, 122–123.
- 4      **Gregory**, D. and P.R. Rountree, 1990: A mass flux convection scheme with representation of cloud  
5                ensemble characteristics and stability dependent closure. *Mon. Weather Rev.*, **118**, 1483–  
6                1506.
- 7      **Gregory**, J.M., 1999: Representation of the radiative effect of convective anvils. *Hadley Centre  
8                Technical Note 7*, Hadley Centre for Climate Prediction and Research, Met Office, Fitzroy  
9                Road, Exeter, EX1 3BP, UK.
- 10     **Gregory**, J.M., H.T. Banks, P.A. Stott, J.A. Lowe, and M.D. Palmer, 2004: Simulated and observed  
11                decadal variability in ocean heat content. *Geophys. Res. Lett.*, **31**(15), L15312.
- 12     **Gregory**, J.M., J.A. Lowe, and S.F.B. Tett, 2006: simulated global-mean sea level changes over the  
13                last half-millennium. *J. Climate*, **19**, 4576–4592.
- 14     **Gregory**, J.M. and J.F.B. Mitchell, 1997: The climate response to CO<sub>2</sub> of the Hadley Centre  
15                coupled AOGCM with and without flux adjustment. *Geophys. Res. Lett.*, **24**, 1943–1946.
- 16     **Grell**, G.A., 1993: Prognostic evaluation of assumptions used by cumulus parameterizations. *Mon.  
17                Weather Rev.*, **121**, 764–787.
- 18     **Grell**, G.A., H. Dudhia, and D. S. Stanfler, 1994: A description of the fifth generation Penn State–  
19                NCAR Mesoscale Model (MM5). *NCAR Technical Note*. NCAR/TN-3981STR, Ntl. Center  
20                for Atmos. Research, Boulder, CO, 122 pp. [Available from Ntl. Center for Atmos.  
21                Research, P.O. Box 3000, Boulder, CO 80305.]
- 22     **Grell**, G.A., L. Schade, R. Knoche, A. Pfeiffer, and J. Egger, 2000: Nonhydrostatic climate  
23                simulations of precipitation over complex terrain. *J. Geophys. Res.*, **105** (D24), 29595–  
24                29608.
- 25     **Griffies**, S.M., 1998: The Gent-McWilliams skew-flux. *J. Phys. Oceanography*, **28**, 831–841.
- 26     **Griffies**, S.M., A. Gnanadesikan, K.W. Dixon, J.P. Dunne1, R. Gerdes, M.J. Harrison, A. Rosati1,  
27                J.L. Russell, B.L. Samuels, M.J. Spelman, M. Winton, and R. Zhang, 2005: Formulation of  
28                an ocean model for global climate simulations, *Ocean Science*, **1**, 45–79.
- 29     **Griffies**, S.M., Pacanowski, R. Schmidt, and V. Balaji, 2001: Tracer conservation with an explicit  
30                free surface method for z coordinate ocean models. *Mon. Weather Rev.*, **129**, 1081–1098.

- 1   **Gu**, L., H. Shugart, J. Fuentes, T. Black, and S. Shewchuk, 1999: Micrometeorology,  
2       bioPhys.exchanges and NEE decomposition in a two-storey boreal forest—development and  
3       test of an integrated model. *Agricultural and Forest Meteorology*, **94**, 123–148.
- 4   **Guilyardi**, E., 2006: El Niño—mean state—seasonal cycle interactions in a multi-model ensemble.  
5       *Climate Dynamics*, **26**, 329–348.
- 6   **Guo**, Z., D.H. Bromwich, and J.J. Cassano, 2003: Evaluation of polar MM5 simulations of  
7       Antarctic Atmos. circulation. *Mon. Weather Rev.*, **131**, 384–411.
- 8   **Gutowski**, W.J., S.G. Decker, R.A. Donavon, Z. Pan, R.W. Arritt, and E.S. Takle, 2003: Temporal-  
9       spatial scales of observed and simulated precipitation in central U.S. climate. *J. Climate*, **16**,  
10       3841–3847.
- 11   **Gutowski**, W.J., K.A. Kozak, R.W. Arritt, J.H. Christensen, J. Patton, and S. Takle, 2007: A  
12       possible constraint on regional precipitation intensity changes under global warming. *J.*  
13       *Hydrometeorology*, submitted.
- 14   **Gutowski**, W.J., Z. Ötles, and Y. Chen, 1998: Effect of ocean-surface heterogeneity on climate  
15       simulation. *Mon. Weather Rev.*, **126**, 1419–1429.
- 16   **Gutowski**, W., C. Vörösmarty, M. Person, Z. Ötles, B. Fekete, and J. York, 2002: A Coupled  
17       Land–Atmosphere Simulation Program (CLASP). *J. Geophys. Res.*, **107**(D16), 4283.
- 18   **Gutowski**, W.J., H. Wei, C.J. Vörösmarty, and B.M. Fekete, 2007: Influence of Arctic wetlands on  
19       Arctic Atmos. circulation. *J. Climate*, in press.
- 20   **Hack**, J. J., 1994: Parameterization of moist convection in the Ntl. Center for Atmos. Research  
21       Community Climate Model (CCM2). *J. Geophys. Res.*, **99**, 5551–5568.
- 22   **Hagemann**, S. and L. Dümenil, 1998: A parameterization of the lateral water flow for the global  
23       scale. *Climate Dynamics*, **14**, 17–31.
- 24   **Hall**, A., 2004: The role of surface albedo feedback in climate. *J. Climate*, **17**, 1550–1568.
- 25   **Han**, J. and J.O. Roads, 2004: U.S. climate sensitivity simulated with the NCEP regional spectral  
26       model. *Climate Change*, **62**, 115–154.
- 27   **Hansen**, J., *et al.*, 1984: Climate sensitivity: analysis of feedback mechanisms. In: *Climate*  
28       *Processes and Climate Sensitivity*, Maurice Ewing Series, 5 [Hansen, J.E. and T. Takahashi  
29       (eds.)]. Am. Geophys. Union, Washington, DC, pp. 130–163.
- 30   **Hansen**, J., D. Johnson, A. Lacis, S. Lebedeff, P. Lee, D. Rind, and G. Russell, 1981: Climate  
31       impact of increasing Atmos. carbon dioxide. *Science*, **213**, 957–966.

- 1   **Hansen**, J., A. Lacis, R. Ruedy, M. Sato, and W. Wilson, 1993: How sensitive is the world's  
2       climate? *Ntl. Geographic Research and Exploration*, **9**, 42–158.
- 3   **Hansen**, J., L. Nazarenko, R. Ruedy, M. Sato, J. Willis, A. Del Genio, D. Koch, A. Lacis, K. Lo, S.  
4       Menon, T. Novakov, J. Perlitz, G. Russell, G.A. Schmidt, and N. Tausnev, 2005: Earth's  
5       energy imbalance: Confirmation and implications. *Science*, **308**, 1431–1435.
- 6   **Hansen**, J., G. Russell, A. Lacis, I. Fung, D. Rind, and P. Stone, 1985: Climate response times:  
7       Dependence on climate sensitivity and ocean mixing. *Science*, **229**, 857–859.
- 8   **Hansen**, J., M. Sato, R. Ruedy, P. Kharecha, A. Lacis, R. Miller, L. Nazarenko, K. Lo, G.A.  
9       Schmidt, G. Russell, I. Aleinov, S. Bauer, E. Baum, B. Cairns, V. Canuto, M. Chandler, Y.  
10      Cheng, A. Cohen, A. Del Genio, G. Faluvegi, E. Fleming, A. Friend, T. Hall, C. Jackman, J.  
11      Jonas, M. Kelley, N.Y. Kiang, D. Koch, G. Labow, J. Lerner, S. Menon, T. Novakov, V.  
12      Oinas, Ja. Perlitz, Ju. Perlitz, D. Rind, A. Romanou, R. Schmunk, D. Shindell, P. Stone,  
13      S. Sun, D. Streets, N. Tausnev, D. Thresher, N. Unger, M. Yao, and S. Zhang, 2006:  
14       Climate simulations for 1880–2003 with GISS modelE.  
15      <http://arxiv.org/abs/physics/0610109> ; also submitted to *Climate Dynamics*.
- 16   **Hansen**, J., M. Sato, R. Ruedy, L. Nazarenko, A. Lacis, G.A. Schmidt, G. Russell, I. Aleinov, M.  
17      Bauer, S. Bauer, N. Bell, B. Cairns, V. Canuto, M. Chandler, Y. Cheng, A. Del Genio, G.  
18      Faluvegi, E. Fleming, A. Friend, T. Hall, C. Jackman, M. Kelley, N.Y. Kiang, D. Koch, J.  
19      Lean, J. Lerner, K. Lo, S. Menon, R.L. Miller, P. Minnis, T. Novakov, V. Oinas, Ja.  
20      Perlitz, Ju. Perlitz, D. Rind, A. Romanou, D. Shindell, P. Stone, S. Sun, N. Tausnev, D.  
21      Thresher, B. Wielicki, T. Wong, M. Yao, and S. Zhang, 2005: Efficacy Climate Forcings. *J.  
22      Geophys. Res.*, **110**, D18104.
- 23   **Harries**, J.E., H.E. Brindley, P.J. Sagoo, and R.J. Bantges, 2001: Increases in greenhouse forcing  
24       inferred from the outgoing longwave radiation spectra of the Earth in 1970 and 1997.  
25      *Nature*, **410**, 355–357.
- 26   **Hartmann**, D.L. and M.L. Michelsen, 2002: No evidence for iris. *Bulletin Am. Meteorological  
27      Soc.*, **83**:
- 28   **Hay**, L.E., M.P. Clark, M. Pagowski, G.H. Leavesley, G.A. Grell, and W.J. Gutowski, Jr., 2006:  
29       One-way coupling of an atmospheric and a hydrologic model in Colorado. *J.  
30      Hydrometeorology*, **7**, 569–589.

- 1 **Haylock**, M.R., G.C. Cawley, C. Harpham, R.L. Wilby, and C.M. Goodess, 2006: Downscaling  
2 heavy precipitation over the UK: A comparison of dynamical and statistical methods and  
3 their future scenarios. *Intl. J. of Climatology*, **26**, 1397–1415.
- 4 **Hegerl**, G.C., T.J. Crowley, W.T. Hyde and D.J. Frame, 2006: Climate sensitivity constrained by  
5 temperature reconstructions over the past seven centuries. *Nature*, **440**, 1029–1032.
- 6 **Hegerl**, G.C., F.W. Zwiers, P.A. Stott, and V.V. Kharin, 2004: Detectability of anthropogenic  
7 changes in annual temperature and precipitation extremes. *J. Climate*, **17**(19), 3683–3700.
- 8 **Held**, I and M.J. Suarez, 1994: A proposal for the intercomparison of the dynamical cores of  
9 Atmos. general circulation models. *Bulletin of the Am. Meteorological Soc.*, **75**(10), 1825–  
10 1830.
- 11 **Held**, I.M. and B.J. Soden, 2006: Robust Responses of the Hydrological Cycle to Global Warming.  
12 *J. Climate*, **19**, 5686–5699.
- 13 **Held**, I.M., S.W. Lyons, and S. Nigam, 1989: Transients and the extratropical response to El Niño.  
14 *J. of the Atmos. Sci.*, **46**(1), 163–174.
- 15 **Held**, I.M., R.S. Hemler, and V. Ramaswamy, 1993: Radiative-convective equilibrium with explicit  
16 two-dimensional moist convection. *J. Atmos. Sci.*, **50**, 3909–3927.
- 17 **Held**, I.M., T.L. Delworth, J. Lu, K.L. Findell, and T.R. Knutson, 2005: *Simulation of Sahel  
18 drought in the 20th and 21st centuries*. Proc. Ntl. Academy Sci., **102**, 17,891–17,896.
- 19 **Helfand**, H.M. and J.C. Labraga, 1988: Design of a non-singular level 2.5 second order closure  
20 model for the prediction of Atmos. turbulence. *J. Atmos. Sci.*, **45**, 113–132.
- 21 **Hellstrom**, C., D.L. Chen, C. Achberger, and J. Raisanen, 2001: Comparison Climate change  
22 scenarios for Sweden based on statistical and dynamical downscaling of Mon. precipitation.  
23 *Climate Research*, **19**, 45–55.
- 24 **Henderson-Sellers**, A., 2006: Improving land-surface parameterization schemes using stable water  
25 isotopes: Introducing the “iPILPS” initiative. *Global and Planetary Change*, **51**, 3–24.
- 26 **Henderson-Sellers**, A., P. Irannejad, K. McGuffie, and A.J. Pitman, 2003: Predicting land-surface  
27 climates—Better skill or moving targets? *Geophys. Res. Letts.*, **30**, 1777.
- 28 **Henderson-Sellers**, A., A.J. Pitman, P.K. Love, P. Irannejad, and T.H. Chen, 1995: The project for  
29 Intercomparison of Land-Surface Parameterization Schemes (PILPS) —Phase-2 and Phase-  
30 3. *Bulletin Am. Meteorological Soc.*, **76**, 489–503.

- 1    **Hewitson**, B.C. and R.G. Crane, 1996: Climate downscaling: Techniques and application. *Climate  
2       Research*, **7**, 85–95.
- 3    **Hewitt**, C.D and D.J. Griggs, 2004: Ensembles-based predictions Climate changes and their  
4       impacts. *Eos*, **85**, 566.
- 5    **Heyen**, H., H. Fock, and W. Greve, 1998: Detecting relationships between the interannual  
6       variability in ecological time series and climate using a multivariate statistical approach—A  
7       case study on Helgoland Roads zooplankton. *Climate Research*, **10**, 179–191.
- 8    **Hibler**, W.D., 1979: A dynamic thermodynamic sea ice model. *J. Phys. Oceanography*, **9**, 815–846.
- 9    **Hines**, K.M., R.W. Grumbine, D.H. Bromwich, and R.I. Cullather, 1999: Surface energy balance of  
10       the NCEP MRF and NCEP-NCAR reanalysis in Antarctic latitudes during FROST. *Weather  
11       Forecasting*, **14**, 851–866.
- 12    **Hirano**, A., R. Welch, and H. Lang, 2003: Mapping from ASTER stereo image data: DEM  
13       validation and accuracy assessment. *ISPRS J. of Photogrammetry and Remote Sensing*, **57**,  
14       356–370.
- 15    **Hoerling**, M., J. Hurrell, J. Eischeid, and A. Phillips, 2006: Detection and attribution of 20th  
16       century northern and southern African rainfall change. *J. Climate*, **19**, 3989–4008.
- 17    **Hoffert**, M.I. and C. Covey, 1992: Deriving global climate sensitivity from paleoclimate  
18       reconstructions. *Nature*, **360**, 573–576.
- 19    **Holland**, M.M. and C.M. Bitz, 2003: Polar amplification Climate change in coupled models.  
20       *Climate Dynamics*, **21**, 221–232.
- 21    **Holland**, M.M. and M.N. Raphael, 2006: Twentieth century simulation of the southern hemisphere  
22       climate in coupled models. Part II: Sea ice conditions and variability. *Climate Dynamics*, **26**,  
23       229–245.
- 24    **Holtslag**, A.A.M. and B.A. Boville, 1993: Local versus nonlocal boundary-layer diffusion in a  
25       global climate model, *J. Climate*, **6**, 1825–1842.
- 26    **Hong**, S.-Y. and H.-M.H. Juang, 1998: Orography blending in the lateral boundary of a regional  
27       model. *Mon. Weather Rev.*, **126**, 1714–1718.
- 28    **Hoogenboom**, G., J.W. Jones, and K.J. Boote, 1992: Modeling growth, development, and yield of  
29       grain legumes using SOYGRO, PNUTGRO, and BEANGRO—A Rev.. *Trans. ASAE*, **35**,  
30       2043–2056.

- 1    **Hood**, R.R., E.A. Laws, R.A. Armstrong, N.R. Bates, C.W. Brown, C.A. Carlson, F. Chai, S.C.  
2       Doney, P.G. Falkowski, R.A. Feely, M.A.M. Friedrichs, M.R. Landry, J.K. Moore, D.M.  
3       Nelson, T. Richardson, B. Salihoglu, M. Schartau, D.A. Toole, and J.D. Wiggert, 2006:  
4       Pelagic functional group modeling: Progress, challenges and prospects. *Deep-Sea Research  
II*, **53**, 459–512.
- 5    **Hope**, P.K., N. Nicholls, and J.L. McGregor, 2004: The rainfall response to permanent inland water  
6       in Australia. *Australian Meteorological Magazine*, **53**, 251–262.
- 7    **Horel**, J.D. and J.M. Wallace, 1981: Planetary-scale atmospheric phenomena associated with the  
8       Southern Oscillation. *Mon. Weather Rev.*, **109**, 813–829.
- 9    **Hori**, M.E. and H. Ueda, 2006: Impact of global warming on the East Asian winter monsoon as  
10      revealed by nine coupled atmosphere–ocean GCMs. *Geophys. Res. Letts.*, **33**,  
11      doi:10.1029/2005GL024961.
- 12    **Horowitz**, L.W., *et al.*, 2003: A global simulation of tropospheric ozone and related tracers:  
13       Description and evaluation of MOZART, version 2. *J. Geophys. Res.*, **108**(D24), 4784.
- 14    **Houghton**, R., 2003: Revised estimates of the annual net flux of carbon to the atmosphere from  
15      changes in land use and land management 1850–2000. *Tellus*, **55B**, 378–390.
- 16    **Huang**, B., P.H. Stone, and C. Hill, 2003: Sensitivities of deep-ocean heat uptake and heat content  
17      to surface fluxes and subgrid-scale parameters in an ocean general circulation model with  
18      idealized geometry, *J. Geophys. Res.*, **108**(C1), 3015, doi:10.1029/2001JC001218.
- 19    **Hungate**, B.A., J.S. Dukes, M.R. Shaw, Y. Luo, and C.B. Field, 2003: Nitrogen and climate  
20      change. *Science*, **302**, 1512–1513.
- 21    **Hunke**, E.C. and J.K. Dukowicz, 1997: An elastic-viscous-plastic model for sea ice dynamics. *J.  
22       Phys. Oceanography*, **27**, 1849–1867.
- 23    **Hunke**, E.C. and Y. Zhang, 1999: A comparison of sea ice dynamics models at high resolution.  
24       *Mon. Weather Rev.*, **127**, 396–408.
- 25    **Hurrell**, J.W., 1995: Decadal trends in the North Atlantic Oscillation and relationships to regional  
26      temperature and precipitation. *Science*, **269**, 676–679.
- 27    **Iorio**, J.P., P.B. Duffy, B. Govindasamy, S.L. Thompson, M. Khairoutdinov, and D. Randall, 2004:  
28       Effects of model resolution and subgrid-scale physics on the simulation of precipitation in  
29      the continental United States. *Climate Dynamics*, **23**, 243–258.
- 30

- 1    **IPCC**, Intergovernmental Panel on Climate Change, 2007: Working Group 1 *Fourth Assessment*  
2         *Report Summary for Policymakers*, [www.ipcc.ch](http://www.ipcc.ch).
- 3    **Irannejad**, P., A. Henderson-Sellers, and S. Sharmin, 2003: Importance of land-surface  
4         parameterization for latent heat simulation. *Geophys. Res. Letts.*, **30**, 1904.
- 5    **Jakob**, C. and G. Tselioudis, 2003: Objective identification of cloud regimes in the tropical western  
6         Pacific. *Geophys. Res. Letts.*, **30**, 2082.
- 7    **Janowiak**, J. E., 1988: An investigation of interannual rainfall variability in Africa. *J. Climate*, **1**,  
8         240–255.
- 9    **Jones**, C.A. and J.R. Kiniry, 1986: *CERES-Maize: A simulation model of maize growth and*  
10         *development*. Texas A&M University Press, College Station, TX.
- 11    **Jones**, P.D., T. Jónsson, and D. Wheeler, 1997: Extension to the North Atlantic Oscillation using  
12         early instrumental pressure observations from Gibraltar and South-West Iceland. *Int. J.*  
13         *Climatol.* **17**, 1433–1450.
- 14    **Jones**, R.G., J.M. Murphy, and M. Noguer, 1995: Simulation Climate change over Europe using a  
15         nested regional climate model. I: Assessment of control climate, including sensitivity to  
16         location of lateral boundaries. *Intl. J. Climatology*, **121**, 1413–1449.
- 17    **Joseph**, R. and S. Nigam, 2006: ENSO evolution and teleconnections in IPCC's 20<sup>th</sup> century  
18         climate simulations: Realistic representation? *J. Climate*. Accepted.
- 19    **Kain**, J.S. and J. M. Fritsch, 1993: Convective parameterization in mesoscale models: The Kain-  
20         Fritsch scheme. In: *The Representation of Cumulus Convection in Numerical Models*,  
21         *Meteorological Monographs*, Am. Meteorological Soc., **46**, 165–170.
- 22    **Kalkstein**, L.S. and J.S. Greene, 1997: An evaluation Climate/mortality relationships in larger U.S.  
23         cities and the possible impacts of a climate change. *Environmental Health Perspectives*, **105**,  
24         84–93.
- 25    **Kanamitsu**, M., W. Ebisuzaki, J. Woollen, S.-K. Yang, J.J. Hnilo, M. Fiorino, and  
26         G.L. Potter, 2002: NCEP-DOE AMIP-II Reanalysis (R-2). *Bulletin Am. Meteorological*  
27         *Soc.*, **83**, 1631–1643.
- 28    **Kattenberg**, A., F. Giorgi, H. Grassl, G A. Meehl, J.F.B. Mitchell, R.J. Stouffer, Tokioka, A.J.  
29         Weaver, T.M.L. Wigley, 1996: Chapter 6. Climate Models Projections of Future Climate.  
30         In: *Climate Change 1995—The Science. Climate Change*. [Houghton, J.T., L.G. Miera Filho,

- 1                   B.A. Chandler, N. Harris, A. Kattenberg, and K. Maskell (eds.)]. Cambridge University  
2                   Press, Cambridge, UK, 285–358.
- 3                   **Kattsov**, V.M., J.E. Walsh, A. Rinke, K. Dethloff, 2000: Atmos. climate models: simulation of the  
4                   Arctic Ocean fresh water budget components. In: *The Freshwater Budget of the Arctic  
5                   Ocean*. [Lewis, E.L. (ed.)]. Kluwer Academic Publishers, Dordrecht, The Netherlands, 209–  
6                   247.
- 7                   **Kattsov**, V. and E. Källén, 2005: Future changes Climate: Modelling and scenarios for the Arctic  
8                   Region. In: *Arctic Climate Impact Assessment (ACIA)*. Cambridge University Press,  
9                   Cambridge, UK, 1042 pp.
- 10                  **Khain**, A. and A. Pokrovsky, 2004: Simulation of effects of Atmos. aerosols on deep turbulent  
11                  convective clouds using a spectral microphysics mixed-phase cumulus cloud model. Part II:  
12                  Sensitivity study. *J. of Atmos. Sci.*, **61**, 2963–2982.
- 13                  **Kidson**, J.W. and C.S. Thompson, 1998: Comparison of statistical and model-based downscaling  
14                  techniques for estimating local climate variations. *J. Climate*, **11**, 35–753.
- 15                  **Kiehl**, J.T., J. Hack, G. Bonan, B. Boville, B. Briegleb, D. Williamson, and P. Rasch, 1996:  
16                  *Description of the NCAR Community Climate Model (CCM3)*. NCAR Technical Note.  
17                  NCAR/TN-420+STR, Ntl. Center for Atmos. Research, Boulder, CO, 152 pp. [Available  
18                  Ntl. Cen. Atmos. Res., P.O. Box 3000, Boulder, CO, 80305.]
- 19                  **Kiehl**, J.T., C.A. Shields, J.J. Hack, and W.D. Collins, 2006: The climate sensitivity of the  
20                  Community Climate System Model: CCSM3. *J. Climate*, **19**, 2584–2596.
- 21                  **Kiktev**, D., D.M.H. Sexton, L. Alexander, and C.K. Folland, 2003: Comparison of modeled and  
22                  observed trends in indices of daily climate extremes. *J. Climate*, **16**, 3560–3571.
- 23                  **Kim**, J., J. Kim, J.D. Farrara, and J.O. Roads, 2005: The effects of the Gulf of California SSTs on  
24                  warm-season rainfall in the southwestern United States and northwestern Mexico: A  
25                  regional model study. *J. Climate*, **18**, 4970–4992.
- 26                  **Kim**, J. and J.E. Lee, 2003: A multiyear regional climate hindcast for the western United States  
27                  using the mesoscale Atmos. simulation model. *J. Hydrometeorology*, **4**(5), 878–890.
- 28                  **Kimoto**, M., 2005: Simulated change of the east Asian circulation under global warming scenario.  
29                  *Geophys. Res. Letts.*, **32**, L16701.
- 30                  **King**, J.C. and J. Turner, 1997: *Antarctic Meteorology and Climatology*. Cambridge University  
31                  Press, Cambridge, UK, 256 pp.

- 1    **Kirschbaum**, M.U.F., 2000: Will changes in soil organic carbon act as a positive or negative  
2       feedback on global warming? *Biogeochemistry*, **48**, 21–51.
- 3    **Kitoh**, A. and T. Uchiyama, 2006: Changes in onset and withdrawal of the East Asian summer  
4       rainy season by multi-model global warming experiments. *J. Meteorological Soc. of Japan*,  
5       **84**, 247–258.
- 6    **Kleidon**, A., 2004: Global datasets of rooting zone depth inferred from inverse methods. *J. Climate*,  
7       **17**, 2714–2722.
- 8    **Klein**, S.A. and C. Jakob, 1999: Validation and sensitivities of frontal clouds simulated by the  
9       ECMWF model. *Mon. Weather Rev.*, **127**, 2514–2531.
- 10   **Klemp**, J.B. and R. Wilhelmson, 1978: The simulation of three-dimensional convective storm  
11       dynamics. *J. Atmos. Sci.*, **35**, 1070–1096.
- 12   **Knowles**, N. and D.R. Cayan, 2004: Elevational dependence of projected hydrologic changes in the  
13       San Francisco estuary and watershed. *Climatic Change*, **62**, 319–336.
- 14   **Knutson**, T.R., T.L. Delworth, K.W. Dixon, I.M. Held, J. Lu, V. Ramaswamy, M.D. Schwarzkopf,  
15       G. Stenchikov, and R J. Stouffer, 2006: Assessment of twentieth-century regional surface  
16       temperature trends using the GFDL CM2 coupled models. *J. Climate*, **19**(9), 1624–1651.
- 17   **Knutson**, T. and S. Manabe, 1998: Model assessment of decadal variability and trends in the  
18       tropical Pacific Ocean. *J. Climate*, **11**, 2273– 2296.
- 19   **Knutson**, T.R., J.J. Sirutis, S.T. Garner, I.M. Held, and R.E. Tuleya, 2007: Simulation of recent  
20       multi-decadal increase of Atlantic hurricane activity using an 18km regional model. *Bulletin  
21       Am. Meteorological Soc.*, in press.
- 22   **Knutti**, R., G.A. Meehl, M.R. Allen, and D.A. Stainforth, 2006: Constraining climate sensitivity  
23       from the seasonal cycle in surface temperature. *J. Climate*, in press.
- 24   **Koren**, V., J. Schaake, K. Mitchell, Q.Y. Duan, F. Chen, and J.M. Baker, 1999: A parameterization  
25       of snowpack and frozen ground intended for NCEP weather and climate models. *J.  
26       Geophys. Res.*, **104**(D16), 19569–19585.
- 27   **Kraus**, E.B. and J.S. Turner, 1967: A one-dimensional model of the seasonal thermocline. II, The  
28       general theory and its consequences. *Tellus*, **19**, 98–105.
- 29   **Kravtsov**, S.V., and C. Spannagle, 2007: Multi-decadal climate variability in observed and  
30       modeled surface temperatures. *J. Climate*, submitted.

- 1 Krinner, G., 2003: Impact of lakes and wetlands on boreal climate. *J. Geophys. Res.*, **108**(D16),  
2 4520.
- 3 Kripalani, R.H., J.H. Oh, and H.S. Chaudhari, 2007: Response of the East  
4 Asian summer monsoon to doubled Atmos. CO<sub>2</sub>: Coupled climate  
5 models simulations and projections under IPCC AR4. *Theoretical and*  
6 *Applied Climatology*, **87**, 1–28.
- 7 Kripalani, R.H., J.H. Oh, Ashwini Kulkarni, S.S. Sabade, and H.S. Chaudhari, 2006: South Asian  
8 summer monsoon precipitation variability: Coupled climate simulations and projections  
9 under IPCC AR4. *Theoretical and Applied Climatology*, in press.
- 10 Krueger, S.K., 1988: Numerical simulation of tropical cumulus clouds and their interaction with  
11 the subcloud layer. *J. of Atmos. Sci.*, **45**, 2221–2250.
- 12 Kunkel, K.E., K. Andsager, X.-Z. Liang, R.W. Arritt, E.S. Takle, W.J. Gutowski, Jr., and Z. Pan,  
13 2002: Observations and regional climate model simulations of heavy precipitation events  
14 and seasonal anomalies: A comparison. *J. Hydrometeorology*, **3**, 322–334.
- 15 Kunkel, K.E., S.A. Changnon, B.C. Reinke, and R.W. Arritt, 1996: The July 1995 heat wave in the  
16 Midwest: A climatic perspective and critical weather factors. *Bulletin Am. Meteorological*  
17 *Soc.*, **77**, 1507–1518.
- 18 Kunkel, K.E., D.R. Easterling, K. Hubbard, and K. Redmond, 2004: Temporal variations in frost-  
19 free season in the United States: 1895–2000. *Geophys. Res. Letts.*, **31**, L03201.
- 20 Kunkel, K.E., X.-Z. Liang, J. Zhu, and Y. Lin, 2007: Can CGCMs simulate the Twentieth Century  
21 “warming hole” in the central United States? *J. Climate*, in press.
- 22 Kuo, H.L., 1974: Further studies of the parameterization of the influence of cumulus convection on  
23 large-scale flow. *J. of Atmos. Sci.*, **31**, 1232–1240.
- 24 Laprise, R., 2003: Resolved scales and nonlinear interactions in limited-area models. *J. of Atmos.*  
25 *Sci.*, **60**, 768–779.
- 26 Large, W., J.C. McWilliams, and S.C. Doney, 1994: Oceanic vertical mixing: A Rev. and a model  
27 with a nonlocal boundary mixing parameterization. *Rev. Geophysics*, **32**, 363–403.
- 28 Latif, M., *et al.*, 2001: ENSIP: The El Nino simulation intercomparison project. *Climate Dynamics*,  
29 **18**, 255–272.

- 1   **Lau**, K.-M., S. Shen, K.-M. Kim, and H. Wang, 2006: A multi-model study of the 20th century  
2       simulations of Sahel drought from the 1970s to 1990s. *J. Geophys. Res.*, **111**(D0711), **need**  
3       **inclusive page numbers**.
- 4   **Lawrence**, D.M. and A.G. Slater, 2005: A projection of severe near-surface permafrost degradation  
5       during the 21st century. *Geophys. Res. Letts.*, **32**, L24401.
- 6   **Le Treut**, H. and Z.X. Li, 1991: Sensitivity of an Atmos. general circulation model to prescribed  
7       SST changes: Feedback effects associated with the simulation of cloud optical properties.  
8       *Climate Dynamics*, **5**, 175–187.
- 9   **Le Treut**, H., Z.X. Li, and M. Forichon, 1994: Sensitivity of the LMD general circulation model to  
10       greenhouse forcing associated with two different cloud water parametrizations. *J. Climate*,  
11       **7**, 1827–1841.
- 12   **Leung**, L.R., Y. Qian, X. Bian, W.M. Washington, J. Han, and J.O. Roads, 2004: Mid-century  
13       ensemble regional climate change scenarios for the western United States. *Climatic Change*,  
14       **62**, 75–113.
- 15   **Leaman**, K., R. Molinari, and P. Vertes, 1987: Structure and variability of the Florida Current at  
16       27N: April 1982–July 1984. *J. of Phys. Oceanography*, **17**, 565–583.
- 17   **Lean**, J., J. Beer, and R. Bradley, 1995: Reconstruction of solar irradiance since 1610: Implications  
18       for climate change. *Geophys. Res. Letts.*, **22**, 3195–3198.
- 19   **Lee**, H.-C., A. Rosati, M. Spelman, and T. Delworth, 2006: Barotropic tidal mixing effects in a  
20       coupled climate model: Ocean conditions in the northern Atlantic. *Ocean Modelling*, **11**,  
21       464–477.
- 22   **Leung**, L.R. and Y. Qian, 2003: The sensitivity of precipitation and snowpack simulations to model  
23       resolution via nesting in regions of complex terrain. *J. Hydrometeorology*, **4**, 1025–1043.
- 24   **Leung**, L.R., Y. Qian, and X. Bian, 2003: Hydroclimate of the western United States based on  
25       observations and regional climate simulation of 1981–2000. Part I: Seasonal statistics. *J.*  
26       *Climate*, **16**(12), 1892–1911.
- 27   **Leung**, L.R., Y. Qian, X. Bian, W.M. Washington, J. Han, and J.O. Roads, 2004: Mid-century  
28       ensemble regional climate change scenarios for the western United States. *Climate Change*,  
29       **62**, 75–113.
- 30   **Leung** L.R. and M.S. Wigmosta, 1999: Potential climate chance impacts on mountain watersheds in  
31       the Pacific Northwest. *J. Am. Water Resources Assn.*, **35**, 1463–1471.

- 1   **Levitus**, S., J.I. Antonov, J. Wang, T.L. Delworth, K.W. Dixon, and A.J. Broccoli, 2001:  
2                 Anthropogenic warming of Earth's climate system. *Science*, **292**, 267–270.
- 3   **Li**, K.Y., R. De Jong, M.T. Coe, and N. Ramankutty, 2006: Root-water-uptake based upon a new  
4                 water stress reduction and an asymptotic root distribution function. *Earth Interactions*, **10**,  
5                 Art. No. 14.
- 6   **Li**, W., R. Fu, and R.E. Dickinson, 2006: Rainfall and its seasonality over the Amazon in the 21st  
7                 century as assessed by the coupled models for the IPCC AR4. *J. Geophys. Res.*, **11**, D02111.
- 8   **Li**, X., Y. Chao, J. McWilliams, and L-L. Fu, 2001: A comparison of two vertical-mixing schemes  
9                 in a Pacific Ocean General Circulation Model. *J. Climate*, **14**, 1377–1398.
- 10   **Li**, X. and T. Koike, 2003: Frozen soil parameterization in SiB2 and its validation with GAME-  
11                 Tibet observations. *Cold Regions Science. and Technology*, **36**, 165–182.
- 12   **Li**, Z.X., 1999: Ensemble Atmos. GCM simulation Climate interannual variability from 1979 to  
13                 1994. *J. Climate*, **12**, 986–1001.
- 14   **Liang**, X.-Z., K.E. Kunkel, and A.N. Samel, 2001: Development of a regional climate model for  
15                 U.S. Midwest applications. Part 1: Sensitivity to buffer zone treatment. *J. Climate*, **14**,  
16                 4363–4378.
- 17   **Liang**, X.-Z., L. Li, A. Dai, and K.E. Kunkel, 2004: Regional climate model simulation of summer  
18                 precipitation diurnal cycle over the United States. *Geophys. Res. Letts.*, **31**, L24208.
- 19   **Liang**, X.-Z., J. Pan, J. Zhu, K.E. Kunkel, J.X.L. Wang, and A. Dai, 2006: Regional climate model  
20                 downscaling of the U.S. summer climate and future change. *J. Geophys. Res.*, **111**, D10108.
- 21   **Liang**, X., Z. Xie, and M. Huang, 2003: A new parameterization for surface and groundwater  
22                 interactions and its impact on water budgets with the variable infiltration capacity (VIC)  
23                 land surface model. *J. Geophys. Res.*, **108**, 8613.
- 24   **Libes**, S.M., 1992: *An Introduction to Marine Biogeochemistry*. Wiley, New York, New York, 734  
25                 pp.
- 26   **Lin**, J.L., B. Mapes, M.H. Zhang, and M. Newman, 2004: Stratiform precipitation, vertical heating  
27                 profiles, and the Madden–Julian Oscillation. *J. Atmos. Sci.*, **61**, 296–309.
- 28   **Lin**, J.L., G.N. Kiladis, B.E. Mapes, K.M. Weickmann, K.R. Sperber, W.Y. Lin, M. Wheeler, S.D.  
29                 Schubert, A. Del Genio, L.J. Donner, S. Emori, J.-F. Gueremy, F. Hourdin, P.J. Rasch, E.  
30                 Roeckner, and J.F. Scinocca, 2006: Tropical intraseasonal variability in 14 IPCC AR4  
31                 climate models. Part I: Convective signals. *J. Climate*, in press.

- 1    **Lin**, S.J. and R.B. Rood, 1996: Multidimensional flux-form semi-lagrangian transport schemes.  
2                          *Mon. Weather Rev.*, **124**, 2046–2070.
- 3    **Lin**, W.Y. and M.H. Zhang, 2004: Evaluation of clouds and their radiative effects simulated by the  
4                          NCAR Community Atmos. Model CAM2 against satellite observations. *J. Climate*, **17**,  
5                          3302–3318.
- 6    **Lindzen**, R.S., M.-D. Chou, and A. Y. Hou, 2001: Does Earth have an adaptive infrared iris?  
7                          *Bulletin Am. Meteorological Soc.*, **82**, 417–432.
- 8    **Lindzen**, R.S. and M.S. Fox-Rabinovitz, 1989: Consistent vertical and horizontal resolution. *Mon.*  
9                          *Weather Rev.*, **117**, 2575–2583.
- 10   **Liston**, G.E., 2004: Representing subgrid snow cover heterogeneities in regional and global models.  
11                          *J. Climate*, **17**, 1381–1397.
- 12   **Liu**, Z., 1998: On the role of ocean in the transient response of tropical climatology to global  
13                          warming. *J. Climate*, **11**, 864–875.
- 14   **Lock**, A., 1998: The parametrization of entrainment in cloudy boundary layers. *Quarterly J. Royal*  
15                          *Meteorological Soc.*, **124**, 2729–2753.
- 16   **Lock**, A.P., A.R. Brown, M.R. Bush, G.M. Martin, and R.N.B. Smith, 2000: A new boundary layer  
17                          mixing scheme. Part I: Scheme description and single-column model tests. *Mon. Weather*  
18                          *Rev.*, **128**, 3187–3199.
- 19   **Lofgren**, B.M., 2004: A model for simulation of the climate and hydrology of the Great Lakes  
20                          basin. *J. Geophys. Res.*, **109(D18)**, Art. No. D18108.
- 21   **Lohmann**, U. and E. Roeckner, 1996: Design and performance of a new cloud microphysics  
22                          scheme developed for the ECHAM4 general circulation model. *Climate Dynamics*, **12**, 557–  
23                          572.
- 24   **Lorenz**, P., D. Jacob, 2005: Influence of regional scale information on the global circulation: A  
25                          two-way nesting climate simulation. *Geophys. Res. Lett.*, **32**, Art. No. L18706.
- 26   **Lucarini**, V., S. Calmanti, A. dell'Aquila, P.M. Ruti, and A. Speranza, 2006: Intercomparison of  
27                          the northern hemisphere winter mid-latitude Atmos. variability of the IPCC models. *Climate*  
28                          *Dynamics*.
- 29   **Lumpkin**, R. and K. Speer, 2003: Large-scale vertical and horizontal circulation in the North  
30                          Atlantic Ocean. *J. of Phys. Oceanography*, **33**, 1902–1920.

- 1    **Luo**, L.F., *et al.*, 2003: Effects of frozen soil on soil temperature, spring infiltration, and runoff:  
2         Results from the PILPS 2(d) experiment at Valdai, Russia. *J. Hydrometeorology*, **4**, 334–  
3              351.
- 4    **Lynch**, A.H., W.L. Chapman, J.E. Walsh, and G. Weller, 1995: Development of a regional climate  
5         model of the western Arctic. *J. Climate*, **8**, 1555–1570.
- 6    **Lynch**, A.H., J.A. Maslanik, and W.L. Wu, 2001: Mechanisms in the development of anomalous  
7         sea ice extent in the western Arctic: A case study. *J. Geophys. Res.*, **106**(D22), 28097–  
8              28105.
- 9    **Lynn**, B.H., A. Khain, J. Dudhia, D. Rosenfeld, A. Pokrovsky, and A. Seifert, 2005: Spectral (bin)  
10         microphysics coupled with a mesoscale model (MM5). Part II: Simulation of a CaPE rain  
11         event with a squall line. *Mon. Weather Rev.*, **133**, 59–71.
- 12   **Maak**, K. and H. von Storch, 1997: Statistical downscaling of Mon. mean temperature to the  
13         beginning of flowering of *Galanthus nivalis L.* in Northern Germany. *Intl. J. of  
14         Biometeorology*, **41**, 5–12.
- 15   **Malevsky-Malevich**, S.P., E.D. Nadyozhina, V.V. Simonov, O.B. Shklyarevich, and E.K.  
16         Molkentin, 1999: The evaluation Climate change influence on the permafrost season soil  
17         thawing regime. *Contemporary Investigation at Main GeoPhysical Observatory*, **1**, 33–50  
18         (in Russian).
- 19   **Manabe**, S., 1969: Climate and the ocean circulation. The Atmos. circulation and hydrology of the  
20         Earth's surface. *Mon. Weather Rev.*, **97**, 739–774.
- 21   **Manabe**, S., J. Smagorinsky, and R.F. Strickler, 1965: Simulated climatology of a general  
22         circulation model with a hydrological cycle. *Mon. Weather Rev.*, **93**, 769–798.
- 23   **Manabe**, S., R J. Stouffer, M.J. Spelman, and K. Bryan, 1991: Transient responses of a coupled  
24         ocean-atmosphere model to gradual changes of Atmos. CO<sub>2</sub>. Part I: Annual mean response.  
25         *J. Climate*, **4**, 785–818.
- 26   **Martin**, G.M., M.R. Bush, A.R. Brown, A.P. Lock, and R.N.B. Smith, 2000: A new boundary layer  
27         mixing scheme. Part II: Tests in climate and mesoscale models. *Mon. Weather Rev.*, **128**,  
28              3200–3217.
- 29   **Maxwell**, R.M. and N.L. Miller, 2005: Development of a coupled land surface and groundwater  
30         model. *J. Hydrometeorology*, **6**, 233–247.

- 1 McCrea, J. and P. Lu, 1994: Interaction between the subtropical and equatorial ocean  
2 circulation—the subtropical cell. *J. of Phys. Oceanography*, **24**, 466–497.
- 3 McCulloch, M.T. and T. Ezat, 2000: The coral record of the last interglacial sea levels and sea  
4 surface temperatures. *Chem. Geol.*, **169**, 107–129.
- 5 McGregor, J.L., 1997: Regional climate modelling. *Meteorology and Atmos. Physics*, **63**, 105–117.
- 6 McGregor, J.L., 1999: Regional modelling at CAR: Recent developments. In *Parallel Computing*  
7 in *Meteorology and Oceanography*, BMRC Research Report No. 75, Bureau of  
8 Meteorology, Melbourne, Australia, 43–48.
- 9 McPhaden, M.J., A.J. Busalacchi, R. Cheney, J.R. Donguy, K.S. Gage, D. Halpern, M. Ji, P.  
10 Julian, G. Meyers, G.T. Mitchum, P.P. Niiler, J. Picaut, R.W. Reynolds, N. Smith, and K.  
11 Takeuchi, 1998: The Tropical Ocean Global Atmosphere (TOGA) observing system: A  
12 decade of progress. *J. Geophys. Res.*, **103**, 14 169–14 240.
- 13 Mearns, L.O., 2003: Issues in the impacts Climate variability and change on agriculture—  
14 Applications to the southeastern United States. *Climate Change*, **60**, 1–6.
- 15 Mearns, L.O., I. Bogardi, F. Giorgi, I. Matyasovszky, and M. Palecki, 1999: Comparison Climate  
16 change scenarios generated daily temperature and precipitation from regional climate model  
17 experiments and statistical downscaling. *J. Geophys. Res.*, **104**, 6603–6621.
- 18 Mearns, L.O., F. Giorgi, L. McDaniel, and C. Shields, 2003: Climate scenarios for the southeastern  
19 US based on GCM and regional model simulations. *Climate Change*, **60**, 7–35.
- 20 Mechoso, C.R., A.W. Robertson, N. Barth, M.K. Davey, P. Delecluse, P.R. Gent, S. Ineson, B.  
21 Kirtman, M. Latif, H. Le Treut, T. Nagai, J.D. Neelin, S.G.H. Philander, J. Polcher, P.S.  
22 Schopf, T. Stockdale, M.J. Suarez, L. Terray, O. Thual, and J.J. Tribbia, 1995: The seasonal  
23 cycle over the tropical Pacific in coupled ocean-atmosphere general circulation models.  
24 *Mon. Weather Rev.*, **123**, 2825–2838.
- 25 Meehl, G. and C. Tebaldi, 2004: More intense, more frequent, and longer lasting heat waves in the  
26 21st Century. *Sci.*, **305**, 994–997.
- 27 Meehl, G.A., C. Tebaldi, and D. Nychka, 2004: Changes in frost days in simulations of twenty-first  
28 century climate. *Climate Dynamics*, **23**, 495–511.
- 29 Meehl, G.A., W.M. Washington, B.D. Santer, W.D. Collins, J.M. Arblaster, A. Hu, D.M.  
30 Lawrence, H. Teng, L.E. Buja, and W.G. Strand, 2006: Climate change projections for the

- 1 twenty-first century and climate change commitment in the CCSM3. *J. Climate*, **19**, 2597–  
2 2616.
- 3 **Mellor**, G.L. and T. Yamada, 1974: A hierarchy of turbulent closure models for planetary boundary  
4 layers. *J. of Atmos. Sci.*, **31**, 1791–1806.
- 5 **Mellor**, G.L. and T. Yamada, 1982: Development of a turbulence closure model for geoPhys.fluid  
6 problems. *Rev.s of Geophysics and Space Physics*, **20**, 851–875.
- 7 **Merryfield**, W.J., 2006: Changes to ENSO under CO<sub>2</sub> doubling in a multi-model ensemble. *J.  
8 Climate*, **19**, 4009–4027.
- 9 **Miguez-Macho**, G., G.L. Stenchikov, and A. Robock, 2005: Regional climate simulations over  
10 North America: Interaction of local processes with improved large-scale flow. *J. Climate*,  
11 **18**, 1227–1246.
- 12 **Miller**, D.A., and R.A. White, 1998: A conterminous United States multilayer soil characteristics  
13 dataset for regional climate and hydrology modeling. *Earth Interactions*, **2**, 1–26.
- 14 **Miller**, R.L., G.A. Schmidt, and D.T. Shindell, 2006: Forced variations of annular modes in the 20<sup>th</sup>  
15 century IPCC AR4 simulations. *J. Geophys. Res.*, in press.
- 16 **Min**, S.-K. and A. Hense, 2006: A Bayesian assessment Climate change using multi-model  
17 ensembles. Part I: Global mean surface temperature. *J. Climate*, **19**, 3237–3256.
- 18 **Min**, S.-K. and A. Hense, 2006: A Bayesian assessment Climate change using multi-model  
19 ensembles. Part II: Regional and seasonal mean surface temperature. *J. Climate*, in press.
- 20 **Mirocha**, J.D., B. Kosovic, and J.A. Curry, 2005: Vertical heat transfer in the lower atmosphere  
21 over the Arctic Ocean during clear-sky periods. *Boundary-Layer Meterology*, **117**, 37–71.
- 22 **Mitchell**, J. F. B., C.A. Senior, and W. J. Ingram, 1989: CO<sub>2</sub> and climate: A missing feedback?  
23 *Nature*, **341**, 132–134.
- 24 **Miura**, H., H. Tomita, T. Nasuno, S. Iga, M. Satoh, and T. Matsuno, 2005: A climate sensitivity  
25 test using a global cloud resolving model under an aqua planet condition. *Geophys. Res.  
26 Letts.*, **32**, L19717.
- 27 **Mo**, K.C., J.E. Schemm, H.M.H. Juang, R.W. Higgins, and Y. Song, 2005: Impact of model  
28 resolution on the prediction of summer precipitation over the United States and Mexico. *J.  
29 Climate*, **18**, 3910–3927.
- 30 **Moorthi**, S. and M.J. Suarez, 1992: Relaxed Arakawa-Schubert: A parameterization of moist  
31 convection for general circulation models. *Mon. Weather Rev.*, **120**, 978–1002.

- 1   **Morel**, A. and D. Antoine, 1994: Heating rate within the upper ocean in relation to its bio-optical  
2       state. *J. Phys. Oceanography*, **24**, 1652–1665.
- 3   **Morrison**, H. and J.O. Pinto, 2005: Mesoscale modeling of springtime Arctic mixed-phase  
4       stratiform clouds using two-moment bulk microphysics scheme. *J. Atmos. Sci.*, **62**, 3683–  
5       3704.
- 6   **Murray**, R.J., 1996: Explicit generation of orthogonal grids for ocean models. *J. Comp. Physics*,  
7       **126**, 251–273.
- 8   **NARCCAP**, cited as 2007: <http://www.narccap.ucar.edu>.
- 9   **Nadelhoffer**, K. J., B.A. Emmett, P. Gundersen, *et al.*, 1999: Nitrogen makes a minor contribution  
10      to carbon sequestration in temperate forests. *Nature*, **398**, 145–148.
- 11   **Najjar**, R.G., X. Jin, F. Louanchi, O. Aumont, K. Caldeira, S.C. Doney, J.-C. Dutay, M. Follows,  
12       N. Gruber, F. Joos, K. Lindsay, E. Maier-Reimer, R.J. Matear, K. Matsumoto, A. Mouchet,  
13       J.C. Orr, G.-K. Plattner, J.L. Sarmiento, R. Schlitzer, M.F. Weirig, Y. Yamanaka, and A.  
14       Yool, 2006: Impact of circulation on export production, dissolved organic matter and  
15       dissolved oxygen in the ocean: Results from OCMIP-2. *Global Biogeochemistry Cycles*,  
16       submitted.
- 17   **Neelin**, J.D., M. Latif, M.A.F. Allaart, M.A. Cane, U. Cubasch, W.L. Gates, P.R. Gent, M. Ghil, C.  
18       Gordon, N.C. Lau, C.R. Mechoso, G.A. Meehl, J.M. Oberhuber, S.G.H. Philander, P.S.  
19       Schopf, K.R. Sperber, A. Sterl, T. Tokioka, J. Tribbia, and S.E. Zebiak, 1992: Tropical air–  
20       sea interaction in general circulation models. *Climate Dynamics*, **7**, 73–104.
- 21   **Niu**, G.Y., and Z.L. Yang, 2006: Effects of frozen soil on snowmelt runoff and soil water storage at  
22       a continental scale. *J. Hydrometeorology*, **7**, 937–952.
- 23   **Nordeng**, T.E., 1994: Extended versions of the convective parameterization scheme at ECMWF  
24       and their impact on the mean and transient activity of the model in the tropics. *Technical  
25       Memorandum 206, European Center for Medium range Weather Forecasting (ECMWF)*,  
26       Reading, UK.
- 27   **Norris**, J. and C.P. Weaver, 2001: Improved techniques for evaluating GCM cloudiness applied to  
28       the NCAR CCM3. *J. Climate*, **14**, 2540–2550.
- 29   **Nowak**, R.S., D.S. Ellsworth, and S.D. Smith, 2004: Tansley Rev.: Functional responses of plants  
30       to elevated Atmos. CO<sub>2</sub>—Do photosynthetic and productivity data from FACE experiments  
31       support early predictions? *New Phytologist*, **162**, 253–280.



- 1   **Paulson**, C.A. and J.J. Simpson, 1977: Irradiance measurements in the upper ocean. *J. Ap.*  
2         *Oceanography*, **7**, 952–956.
- 3   **Pavolonis**, M., J.R. Key, and J.J. Cassano, 2004: Study of the Antarctic surface energy budget using  
4         a polar regional Atmos. model forced with satellite-derived cloud properties. *Mon. Weather*  
5         *Rev.*, **132**, 654–661.
- 6   **Payne**, A.J., A. Vieli, A.P. Shepherd, D.J. Wingham, and E. Rignot, 2004: Recent dramatic  
7         thinning of largest West Antarctic ice stream triggered by oceans. *Geophys. Res. Letts.*, **31**,  
8         L23401.
- 9   **Payne**, J.T., A.W. Wood, A.F. Hamlet, R.N. Palmer, and D.P. Lettenmaier, 2004: Mitigating the  
10         effects of climate change on the water resources of the Columbia River basin. *Climatic*  
11         *Change*, **62**, 233–256.
- 12   **Peltier**, W.R., 2004: Global glacial isostasy and the surface of the ice-age earth: The ice-5G (VM2)  
13         model and GRACE. *Annual Rev. of Earth Planetary Sci.*, **32**, 111–149.
- 14   **Philander**, S.G.H., 1990: *El Niño, La Niña, and the Southern Oscillation*. Academic Press, San  
15         Diego, CA, 293 pp.
- 16   **Philander**, S.G.H. and R.C. Pacanowski, 1981: The oceanic response to cross-equatorial winds  
17         (with application to coastal upwelling in low latitudes). *Tellus*, **33**, 201–210.
- 18   **Philip**, S.Y. and G.J. Van Oldenborgh, 2006: Shifts in ENSO coupling processes under global  
19         warming. *Geophys. Res. Letts.*, **33**, L11704.
- 20   **Piani**, C., D.J. Frame, D.A. Stainforth, and M.R. Allen, 2005: Constraints on climate change from a  
21         multi-thousand member ensemble of simulations. *Geophys. Res. Letts.*, **32**, L23825.
- 22   **Pierce**, D.W., 2004: Future change in biological activity in the north Pacific due to anthropogenic  
23         forcing of the physical environment. *Climatic Change*, **62**, 389–418.
- 24   **Pierce**, D.W., T.P. Barnett, E.J. Fetzer, P.J. Gleckler, 2006: Three-dimensional tropospheric water  
25         vapor in coupled climate models compared with observations from the AIRS satellite  
26         system, *Geophys. Res. Letts.*, **33**, L21701
- 27   **Pincus**, R., H.W. Barker, and J.J. Morcrette, 2003 : A fast, flexible, approximate technique for  
28         computing radiative transfer in inhomogeneous cloud fields. *J. Geophys. Res.*,  
29         doi:10.1209/2002JD003322,2003.
- 30   **Pinto**, J.O., J.A. Curry, and J.M. Intrieri, 2001: Cloud-aerosol interactions during autumn over  
31         Beaufort Sea. *J. Geophys. Res.*, **106**, 15077–15097.

- 1   **Pitman**, A.J., A.G. Slater, C.E. Desborough, and M. Zhao, 1999: Uncertainty in the simulation of  
2       runoff due to the parameterization of frozen soil moisture using the GSWP methodology. *J.  
3       Geophys. Res.*, **104**, 16879–16888.
- 4   **Plummer**, D.A., D. Caya, A. Frigon, H. Côté, M. Giguère, D. Paquin, S. Biner, R. Harvey, and R.  
5       de Elía, 2006: Climate and climate change over North America as simulated by the  
6       Canadian Regional Climate Model. *J. Climate*, **19**, 3112–3132.
- 7   **Pope**, V.D., M. Gallani, P.R. Rowntree, and R.A. Stratton, 2000: The impact of new  
8       Phys.parametrizations in the Hadley Centre climate model—HadAM3. *Climate Dynamics*,  
9       **16**, 123–146.
- 10   **Prentice**, I.C., *et al.*, 2001: [IPCC 3rd Assessment Report, Working Group I, Chapter 3
- 11   **Prive**, N.C., and R.A. Plumb, 2007: Monsoon dynamics with interactive forcing. Part I:  
12       Axisymmetric studies. *J. Atmos. Sci.*, in press.
- 13   **Qian**, J., F. Giorgi, and M.S. Fox–Rabinovitz, 1999: Regional stretched grid generation and its  
14       application to the NCAR RegCM. *J. Geophys. Res.*, **104**(D6), 6501–6514.
- 15   **Qian**, J.H., W.K. Tao, and K.M. Lau, 2004: Mechanisms for torrential rain associated with the mei-  
16       yu development during SCSMEX 1998. *Mon. Weather Rev.*, **132**, 3–27.
- 17   **Raisanen**, J., 2002: CO<sub>2</sub>-Induced Changes in Interannual Temperature and Precipitation  
18       Variability in 19 CMIP Experiments, *J. Climate*, **15**, 2395–2411.
- 19   **Raisanen**, J. and T.N. Palmer, 2001: A probability and decision-model analysis of amultimodel  
20       ensemble Climate change simulations. *J. Climate*, **14**, 3212–3226.
- 21   **Rajagopalan**, B., U. Lall, and M.A. Cane, 1997: Anomalous ENSO occurrences: An alternate  
22       view. *J. Climate*, **10**(9), 2351–2357.
- 23   **Ramankutty**, N., J.A. Foley, J. Norman, and K. McSweeney, 2002: The global distribution of  
24       cultivable lands: current patterns and sensitivity to possible climate change. *Global Ecology  
25       and Biogeography*, **11**, 377–392.
- 26   **Ramaswamy**, V., D. Boucher, J. Haigh, D. Hauglustaine, J. Haywood, G. Myhre, T. Nakajima,  
27       G.Y. Shi, and S. Solomon, 2001: Radiative forcing Climate change. In: *Climate Change  
28       2001: The Scientific Basis*, [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der  
29       Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press,  
30       Cambridge, UK, pp. 349–416.

- 1   **Randall**, D., M. Khairoutdinov, A. Arakawa, and W. Grabowski, 2003: Breaking the cloud  
2       parameterization deadlock. *Bulletin Am. Meteorological Soc.*, **84**, 1547–1564.
- 3   **Randall**, D., M. Khairoutdinov, A. Arakawa, and W. Grabowski, 2005: Breaking the Cloud  
4       Parameterization Deadlock, *Bulletin Am. Meteorological Soc.*, **84**, 1547–1564 , doi:  
5       10.1175/BAMS-84-11-1547.
- 6   **Randall**, D.A., M.E. Schlesinger, V. Galin, V. Meleshko, J.-J. Morcrette, and R. Wetherald, 2000:  
7       Cloud feedbacks. In: *Frontiers in the Science. Climate Modeling* [Kiehl, J.T. and V.  
8       Ramanathan (eds.)]. Proceedings of a symposium in honor of Robert D. Cess..
- 9   **Randall**, D., R. A. Wood, S. Bony, R. Colman, T. Fichefet, J. Fyfe, V. Kattsov, A. Pitman, J.  
10      Shukla, J. Srinivasan, R. J. Stouffer, A. Sumi, K. Taylor, 2007: Chapter 8: Climate Models  
11      and Their Evaluation. In: *Climate Change 2007. The Fourth Scientific Assessment*, S.  
12      Solomon et al. (ed.), Intergovernmental Panel on Climate Change (IPCC), [www.ipcc.ch](http://www.ipcc.ch).
- 13   **Raphael**, M.N. and M.M. Holland, 2006: Twentieth century simulation of the Southern Hemisphere  
14      climate in coupled models. Part 1: Large-scale Circulation Variability. *Climate Dynamics*,  
15      **26**, 217–228.
- 16   **Raper**, S.C.B., J.M. Gregory, and R.J. Stouffer, 2002: The role of climate sensitivity and ocean heat  
17      uptake on AOGCM transient temperature response, *J. Climate*, **15**, 124–130.
- 18   **Rasch**, P.J. and J.E. Kristjánsson, 1998: A comparison of the CCM3 model climate using diagnosed  
19      and predicted condensate parameterizations. *J. Climate*, **11**, 1587–1614.
- 20   **Rasmusson**, E.M. and J.M. Wallace, 1983: Meteorological aspects of the El Nino/Southern  
21      Oscillation. *Science*, **222**, 1195–2002.
- 22   **Rawlins**, M.A., R.B. Lammers, S. Frolking, B.M. Fekete, and C.J. Vorosmarty, 2003: Simulating  
23      pan-Arctic runoff with a macro-scale terrestrial water balance model. *Hydrology  
24      Proceedings*, **17**, 2521–2539.
- 25   **Rayner**, N.A., D.E. Parker, E.B. Horton, C.K. Folland, L.V. Alexander, D.P. Rowell, E.C. Kent,  
26      and A. Kaplan, 2003: Global analyses of sea surface temperature, sea ice, and night marine  
27      air temperature since the late nineteenth century. *J. Geophys. Res.*, **108**(D14), 4407.
- 28   **Rignot**, E. and P. Kanagaratnam, 2006: Changes in the velocity structure of the Greenland ice  
29      sheet. *Science*, **311**, 986–990.
- 30   **Ringer**, M.A. and R.P. Allan, 2004: Evaluating climate model simulations of tropical clouds.  
31      *Tellus*, **56A**, 308–327.

- 1    **Rinke**, A., K. Dethloff, J. Cassano, J.H. Christensen, J.A. Curry, P. Du, E. Girard, J.-E. Haugen, D.  
2       Jacob, C.G. Jones, M. Koltzow, R. Laprise, A.H. Lynch, S. Pfeifer, M.C. Serreze, M.J.  
3       Shaw, M. Tjernstrom, K. Wyser, and M. Zagar, 2006: Evaluation of an ensemble of Arctic  
4       regional climate models: Spatiotemporal fields during the SHEBA year. *Climate Dynamics*.  
5       doi 10.1007/s00382-005-0095-3.
- 6    **Roads**, J.O., S.-C. Chen, M. Kanamitsu, and H. Juang, 1999: Surface water  
7       characteristics in the NCEP Global Spectral Model and reanalysis. *J. Geophys. Res.*, **4**(D16),  
8       19307–19327.
- 9    **Roads**, J., S.C. Chen, and M. Kanamitsu, 2003: U.S. regional climate simulations and seasonal  
10      forecasts. *J. Geophys. Res.*, **108**(D16), Art. No. 8606.
- 11    **Roberts**, M.J. and R. Wood, 1997: Topographic sensitivity studies with a Bryan-Cox-type ocean  
12      model. *J. of Phys. Oceanography*, **27**, 823–836.
- 13    **Roeckner**, E., *et al.*, 1987: Cloud optical depth feedbacks and climate modelling. *Nature*, **329**, 138–  
14       140.
- 15    **Roeckner**, E. *et al.*, 1996: The Atmos. general circulation model ECHAM-4: Model description and  
16      simulation of present-day climate. Report 128, Max-Planck-Institut für Meteorologie,  
17      Hamburg, Germany.
- 18    **Roeckner** E., R. Brokopf, M. Esch, M. Giorgetta, S. Hagemann, L. Kornblueh, E. Manzini, U.  
19       Schlese, and U. Schulzweida, 2006: Sensitivity of simulated climate to horizontal and  
20       vertical resolution in the ECHAM5 atmosphere model. *J. Climate*, **19**, 3771–3791.
- 21    **Root**, T.L. and S.H. Schneider, 1993: Can large scale climatic models be linked with multiscale  
22      ecological studies? *Conservation Biology*, **7**(2), 256–270.
- 23    **Ropelewski**, C.F. and M.S. Halpert, 1987: Global and regional scale precipitation patterns  
24      associated with the El Nino Southern Oscillation. *Mon. Weather Rev.*, **115**, 1606–1626.
- 25    **Rothstein**, L.M., J.J. Cullen, M. Abbott, E.P. Chassignet, K. Denman, S.C. Doney, H. Ducklow, K.  
26       Fennel, M. Follows, D. Haidvogel, E. Hoffman, D.M. Karl, J. Kindle, I. Lima, M. Maltrud,  
27       C. McClain, D. McGillicuddy, M.J. Olascoaga, Y. Spitz, J. Wiggert, and J. Yoder, 2006:  
28       Modeling ocean ecosystems: The PARADIGM Program. *Oceanography*, **19**, 22–51.
- 29    **Rotstayn**, L.D., 1997: A physically based scheme for the treatment of stratiform clouds and  
30      precipitation in large-scale models. I: Description and evaluation of microPhys. processes.  
31       *Quarterly J.Royal Meterological Soc.*, **123**, 1227–1282.

- 1    **Ruiz-Barradas**, A. and S. Nigam, 2006: IPCC's twentieth-century climate simulations: Varied  
2       representations of North Am. hydroclimate variability. *J. Climate*, **19**, 4041–4058.
- 3    **Rummukainen** M., S. Bergstrom, G. Persson, J. Rodhe, and M. Tjernstrom, 2004: The Swedish  
4       Regional Climate Modelling Programme, SWECLIM: A Rev. *Ambio*, **33**, 176–182.
- 5    **Russell**, G.L., J.R. Miller, and D. Rind, 1995. A coupled atmosphere-ocean model for transient  
6       climate change studies. *Atmosphere-Ocean*, **33**(4), 683–730.
- 7    **Russell**, G.L., J.R. Miller, L.-C. Tsang, R.A. Ruedy, G.A. Schmidt, and S. Sheth, 2000:  
8       Comparison of model and observed regional temperature changes during the past 40 years.  
9       *J. Geophys. Res.*, **105**, 14 891–14 898.
- 10   **Russell**, J.L., R.J. Stouffer, and K.W. Dixon, 2006: Intercomparison of the southern ocean  
11       circulations control simulations. *J. Climate*, **19**, 4560–4575.
- 12   **Ryan**, B.F., J.J. Katzfey, D.J. Abbs, C. Jakob, U. Lohmann, B. Rockel, L.D. Rotstayn, R.E. Stewart,  
13       K.K. Szeto, G. Tselioudis, and M.K. Yau, 2000: Simulations of a cold front by cloud-  
14       resolving, limited-area, and large-scale models, and a model evaluation using *in situ* and  
15       satellite observations. *Mon. Weather Rev.*, **128**, 3218–3235.
- 16   **Saji**, N.H., S.-P. Xie, and T. Yamagata, 2005: Tropical Indian Ocean Variability in the IPCC  
17       Twentieth-Century Climate Simulations. *J. Climate*, **19**(17), 4397.
- 18   **Saji**, N.H., B.N. Goswami, P.N. Vinayachandran, and T. Yamagata, 1999: A dipole mode in the  
19       tropical Indian Ocean. *Nature*, **401**, 360–363.
- 20   **Saraf**, A.K., B.P. Mishra, S. Choudhury, and P. Ghosh, 2005: Digital Elevation Model (DEM)  
21       generation from NOAA-AVHRR night-time data and its comparison with USGS-DEM. *Intl.  
22       J. of Remote Sensing*, **26**, 3879–3887.
- 23   **Sardeshmukh**, P.D. and B.J. Hoskins, 1988: The generation of global rotational flow by steady  
24       idealized tropical divergence. *J. Atmos. Science*, **45**, 1228–1251.
- 25   **Sato**, M., J. Hansen, M.P. McCormick, and J. Pollack, 1993: Stratospheric aerosol optical depth,  
26       1850–1990. *J. Geophys. Res.*, **98**, 22987–2299
- 27   **Sausen**, R., S. Schubert, and L. Dumenil, 1994: A model of the river-runoff for use in coupled  
28       atmosphere-ocean models. *J. of Hydrology*, **155**, 337352.
- 29   **Schimel**, D.S., 1998: The carbon equation. *Nature*, **393**, 208–209.
- 30   **Schmidt**, G.A., R. Ruedy, J.E. Hansen, I. Aleinov, N. Bell, M. Bauer, S. Bauer, B. Cairns, V.  
31       Canuto, Y. Cheng, A. Del Genio, G. Faluvegi, A.D. Friend, T.M. Hall, Y. Hu, M. Kelley,

- 1 N.Y. Kiang, D. Koch, A.A. Lacis, J. Lerner, K.K. Lo, R.L. Miller, L. Nazarenko, V. Oinas,  
2 J. Perlitz, D. Rind, A. Romanou, G.L. Russell, M. Sato, D.T. Shindell, P.H. Stone, S. Sun,  
3 N. Tausnev, D. Thresher, and M.S. Yao, 2006: Present day Atmos. simulations using GISS  
4 ModelE: Comparison to *in-situ*, satellite and reanalysis data. **J. Clim.**, **19**, 153–192,  
5 doi:10.1175/JCLI3612.1.
- 6 **Schmittner**, A., M. Latif, and B. Schneider, 2005: Model projections of the North Atlantic  
7 thermohaline circulation for the 21st century assessed by observations. *Geophys. Res. Letts.*,  
8 **32**, doi:10.1029/2005GL024368.
- 9 **Schneider**, S.H. and C. Mass, 1975: Volcanic dust, sunspots, and temperature trends. *Science*, **190**,  
10 741–746
- 11 **Schneider**, S.H. and S.L. Thompson, 1981: Atmos. CO<sub>2</sub> and climate: Importance of the transient  
12 response. *J. Geophys. Res.*, **86**, 3135–3147.
- 13 **Schopf**, P., M. Gregg, R. Ferrari, D. Haidvogel, R. Hallberg, W. Large, J. Ledwell, J. Marshall, J.  
14 McWilliams, R. Schmitt, E. Skyllingstad, K. Speer, K. Winters, 2003: *Coupling Process and*  
15 *Model Studies of Ocean Mixing to Improve Climate Models—A Pilot Climate Process*  
16 *Modeling and Science Team*.
- 17 **Schramm**, J.L., J.A. Curry, M.M. Holland, and E.E. Ebert, 1997: Modeling the thermodynamics of  
18 a sea ice thickness distribution. 1. Sensitivity to ice thickness resolution. *J. Geophys. Res.*,  
19 **102**, 23 079–23 091.
- 20 **Schweitzer**, L., 2006: Environmental justice and hazmat transport: A spatial analysis in southern  
21 California. *Transportation Research Part D–Transp. Environ.*, **11**, 408–421.
- 22 **Segal**, M. and R.W. Arritt, 1992: Nonclassical mesoscale circulations caused by surface sensible  
23 heat-flux gradients. *Bulletin Am. Meteorological Soc.*, **73**, 1593–1604.
- 24 **Segal**, M., M. Leuthold, R.W. Arritt, C. Anderson, and J. Shen, 1997: Small lake daytime breezes:  
25 Some observational and conceptual evaluations. *Bulletin Am. Meteorological Soc.*, **78**,  
26 1135–1147.
- 27 **Sellers**, P.J., Y. Mintz, Y.C. Sud, and A. Dalcher, 1986: A Simple Biosphere Model (SiB) for use  
28 within general-circulation models. *J. of Atmos. Sci.*, **43**, 503–531.
- 29 **Sellers**, P.J., D.A. Randall, C.J. Collatz, J.A. Berry, C.B. Field, D.A. Dazlich, C. Zhang, G. Collelo,  
30 and L. Bounoua, 1996: A revised landsurface parameterization (SiB2) for Atmos. GCMs.  
31 Part 1: Model formulation. *J. Climate*, **9**, 676–705.

- 1   **Semtner**, A.J., 1976: A model for the thermodynamic growth of sea ice in numerical investigations  
2         Climate. *J. of Phys. Oceanography*, **6**, 27–37.
- 3   **Seneviratne**, S.I., D. Lüthi, M. Litschi, and C. Schär, 2006: Land-atmosphere coupling and climate  
4         change in Europe. *Nature*, **443**, 205–209.
- 5   **Senior**, C.A. and J.F.B. Mitchell, 1993: Carbon dioxide and climate: the impact of cloud  
6         parameterization. *J. Climate*, **6**, 5–21.
- 7   **Senior**, C.A. and J.F.B. Mitchell, 1996: Cloud feedbacks in the unified UKMO GCM. In: *Climate*  
8         *Sensitivity to Radiative Perturbations, Phys. Mechanism and Their Validation*. [Le Treut, H.  
9         (ed.)], Springer, 331pp.
- 10   **Shaw**, M.R., *et al.*, 2002: Grassland responses to global environmental changes suppressed by  
11         elevated CO<sub>2</sub>. *Science*, **298**, 1987–1990.
- 12   **Shepherd**, A. and D. Wingham, 2007: Recent sea-level contributions of the Antarctica and  
13         Greenland ice sheets. *Science*, **315**, 1529–1532.
- 14   **Shindell**, D.T., R.L. Miller, G.A. Schmidt, and L. Pandolfo, 1999: Simulation of recent northern  
15         winter climate trends by greenhouse-gas forcing. *Nature*, **399**, 452–455.
- 16   **Siddall**, M., E.J. Rohling, A. Almogi-Labin, Ch. Hemleben, D. Meischner, I. Schmelzer, and D.A.  
17         Smeed, 2003: Sea-level fluctuations during the last glacial cycle. *Nature*, **423**, 853–858.
- 18   **Skamarock**, W.C., J.B. Klemp, J. Dudhia, D.O. Gill, D.M. Barker, W. Wang, and J.G. Powers,  
19         2005: A description of the advanced research WRF Version 2. *NCAR Technical Note*.  
20         NCAR/TN-468+STR, Ntl. Center for Atmos. Research, Boulder, CO, USA, 88 pp.  
21         [Available from Ntl. Cen. for Atmos. Res., P.O. Box 3000, Boulder, CO, 80305.]
- 22   **Slater**, A.G., *et al.*, 2001: The representation of snow in land surface schemes: Results from PILPS  
23         2(d). *J. Hydrometeorology*, **2**, 7–25.
- 24   **Small**, C., V. Gornitz, and J.E. Cohen, 2000. Coastal hazards and the global distribution of  
25         population. *Environmental Geoscience*, **7**, 3–12.
- 26   **Smethie**, W.M., Jr., and R.A. Fine, 2001: Rates of North Atlantic Deep Water formation calculated  
27         from chlorofluorocarbon inventories. *Deep Sea Research, Part I*, **48**, 189–215.
- 28   **Smith**, R.D. and P.R. Gent, 2002: *Reference manual for the Parallel Ocean Program (POP), ocean*  
29         *component of the Community Climate System Model (CCSM2.0 and 3.0)*. Technical Report  
30         LA-UR-02-2484. Los Alamos Ntl. Laboratory, Los Alamos, NM. Available online at  
31         <http://www.ccsm.ucar.edu/models/ccsm3.0/pop>.

- 1   **Smith**, R.N.B., 1990: A scheme for predicting layer clouds and their water content in a general  
2         circulation model. *Quarterly J.Royal Meterological Soc.*, **116**, 435–460.
- 3   **Soden**, B.J., A.J. Broccoli, and R.S. Hemler, 2004: On the use of cloud forcing to estimate cloud  
4         feedback. *J. Climate*, **17**, 3661–3665.
- 5   **Soden**, B.J. and I.M. Held, 2006: An assessment Climate feedbacks in coupled ocean–atmosphere  
6         models. *J. Climate*, **19**, 3354–3360.
- 7   **Sokolov**, A.P., and P.H. Stone, 1998: A flexible climate model for use in integrated assessments,  
8         *Climate Dynamics*, **14**, 291–303.
- 9   **Solman**, S.A., M.N. Nunez, and P.R. Rountree, 2003: On the evaluation of the representation of  
10         mid-latitude transients in the Southern Hemisphere by HadAM2B GCM and the impact of  
11         horizontal resolution. *Atmosfera*, **16**, 245–272.
- 12   **Somerville**, R.C.J. and L.A. Remer, 1984: Cloud optical thickness feedbacks in the CO<sub>2</sub> climate  
13         problem. *J. Geophys. Res.*, **89**, 9668–9672.
- 14   **Stephens**, G.L., 2005: Cloud feedbacks in the climate system: a critical review. *J. Climate*, **18**, 237–  
15         273.
- 16   **Stewart**, I.T., D.R. Cayan, and M.D. Dettinger, 2004: Changes in snowmelt runoff timing in  
17         western North America under a ‘Business as Usual’ climate change scenario. *Climatic  
18         Change*, **62**, 217–232.
- 19   **Stouffer**, R.J., A.J. Broccoli, T.L. Delworth, K.W. Dixon, R. Gudgel, I. Held, R. Hemler, T.  
20         Knutson, Hyun-Chul Lee, M.D. Schwarzkopf, B. Soden, M.J. Spelman, M. Winton, and  
21         Fanrong Zeng, 2006: GFDL’s CM2 global coupled climate models. Part IV: Idealized  
22         climate response. *J. Climate*, **19**, 723–740.
- 23   **Stouffer**, R.J., J. Russell, and M.J. Spelman, 2006: Importance of oceanic heat uptake in transient  
24         climate change. *Geophys. Res. Lett.*, **33**(17), L17704, doi:10.1029/2006GL027242.
- 25   **Strack**, J.E., R.A. Pielke, and J. Adegoke, 2003: Sensitivity of model-generated daytime surface  
26         heat fluxes over snow to land-cover changes. *J. Hydrometeorology*, **4**, 24–42.
- 27   **Stratton**, R.A., 1999: A high resolution AMIP integration using the Hadley Centre model  
28         HadAM2b. *Climate Dynamics*, **15**, 9–28.
- 29   **Sturm**, M., J.P. McFadden, G.E. Liston, F.S. Chapin, C.H. Racine, J. Holmgren, 2001: Snow-shrub  
30         interactions in Arctic tundra: A hypothesis with climatic implications. *J. Climate*, **14**, 336–  
31         344.

- 1    **Sturm**, M., T. Douglas, C. Racine, G.E. Liston, 2005: Changing snow and shrub conditions affect  
2        albedo with global implications. *J. Geophys. Res.-Biogeosciences*, **110**, Art. No. G01004.
- 3    **Sud**, Y.C. and G.K. Walker, 1999: Microphysics of clouds with the Relaxed Arakawa–Schubert  
4        Scheme (McRAS). Part II: Implementation and Performance in GEOS II GCM. *J. Atmos.  
5        Sci.*, **56(18)**, 3221–3240.
- 6    **Sui**, C.-H., X. Li, and K.-M. Lau, 1998: Radiative-convective processes in simulated diurnal  
7        variations of tropical oceanic convection. *J. Atmos. Sci.*, **55**, 2345–2359.
- 8    **Sun**, S. and R. Bleck, 2001: Atlantic thermohaline circulation and its response to increasing CO<sub>2</sub> in  
9        a coupled atmosphere-ocean model. *Geophys. Res. Letts.*, **28**, 4223–4226.
- 10    **Sun**, S. and J. Hansen, 2003: Climate simulations for 1951–2050 with a coupled atmosphere–ocean  
11        model. *J. Climate*, **16**, 2807–2826, doi:10.1175/1520-0442.
- 12    **Sun**, Y., S. Solomon, A. Dai, and R.W. Portmann, 2006: How often does it rain? *J. Climate*, **19**,  
13        916–934.
- 14    **Takle**, E.S., W.J. Gutowski, R.A. Arritt, Z. Pan, C.J. Anderson, R.R. da Silva, D. Caya, S.-C. Chen,  
15        J.H. Christensen, S.-Y. Hong, H.-M.H. Juang, J. Katzfey, W.M. Lapenta, R. Laprise, P.  
16        Lopez, J. McGregor, and J.O. Roads, 1999: Project to Intercompare Regional Climate  
17        Simulations (PIRCS): Description and initial results. *J. Geophys. Res.*, **104**, 19,443–19,461.
- 18    **Talley**, L.D., J.L. Raid, and P.E. Robbins, 2003: Data-based meridional overturning  
19        streamfunctions for the global ocean. *J. Climate*, **16**, 3213–3226.
- 20    **Tao**, W., 2007: Cloud-resolving modeling. *J. Meteorological Soc. of Japan*. 125th Anniversary  
21        Special Issue, submitted.
- 22    **Tao**, W.-K., 2003: Goddard Cumulus Ensemble (GCE) model: Application for understanding  
23        precipitation processes. Cloud systems, hurricanes, and the Tropical Rainfall Measuring  
24        Mission (TRMM): A Tribute to Dr. Joanne Simpson, Meteorological Monograph. *Bulletin  
25        Am. Meteorological Soc.*, **51**, 107–138.
- 26    **Tao**, W.-K., D. Johnson, C.-L. Shie, and J. Simpson, 2004: Atmos. energy budget and large-scale  
27        precipitation efficiency of convective systems during TOGA COARE, GATE, SCSMEX  
28        and ARM: Cloud-resolving model simulations. *J. Atmos. Sci.*, **61**, 2405–2423.
- 29    **Tao**, W.-K., J. Simpson, C.-H. Sui, C.-L. Shie, B. Zhou, K. M. Lau, and M. Moncrieff, 1999: On  
30        equilibrium states simulated by Cloud-Resolving Models. *J. Atmos. Sci.*, **56**, 3128–3139.

- 1   **Tebaldi**, C., K. Hayhoe, J.M. Arblaster, and G.A. Meehl, 2006: Going to the extremes; An  
2       intercomparison of model-simulated historical and future changes in extreme events. *Climate  
3       Change*. In press.
- 4   **Tebaldi** C., R.L. Smith, D. Nychka, and L.O. Mearns, 2005: Quantifying uncertainty in projections  
5       of regional climate change: A Bayesian approach to the analysis of multimodel ensembles.  
6       *J. Climate*, **18**, 1524–1540.
- 7   **Tenhunen**, J.D., R. Geyer, R. Valentini, W. Mauser, and A. Cernusca, 1999: Eco-system studies,  
8       land-use and resource management. In: *Integrating Hydrology, Ecosystems Dynamics and  
9       Biochemistry in Complex Landscapes*. [Tenhunen, J. D. and P. Kabat (eds.)]. Wiley,  
10       Chichester, 1–19.
- 11   **Thompson**, D.W.J. and J.M. Wallace, 1998: The Arctic Oscillation signature in the wintertime  
12       geopotential height and temperature fields. *Geophys. Res. Letts.*, **25**, 1297–1300.
- 13   **Thompson**, D.W.J. and J.M. Wallace, 2000: Annual modes in the extratropical circulation. Part I:  
14       Month-to-month variability. *J. Climate*, **13**, 1000–1016.
- 15   **Thompson**, S., B. Govindasamy, A. Mirin, K. Caldeira, C. Delire, J. Milovich, M. Wickett, and D.  
16       Erickson, 2004: Quantifying the effects of CO<sub>2</sub>-fertilized vegetation on future global climate  
17       and carbon dynamics. *Geophys. Res. Letts.*, **31**(23), L23211.
- 18   **Tiedtke**, M., 1989: A comprehensive mass flux scheme for cumulus parameterization in large scale  
19       models. *Mon. Weather Rev.*, **117**, 1779–1800.
- 20   **Tiedtke**, M., 1993: Representation of clouds in large-scale models. *Mon. Weather Rev.*, **121**, 3040–  
21       3061.
- 22   **Tjernström**, M., M. Zagar, and G. Svensson, 2004: Model simulations of the Arctic Atmos.  
23       boundary layer from the SHEBA year. *Ambio*, **33**, 221–227.
- 24   **Tjernstrom**, M., M. Zagar, G. Svensson, J.J. Cassano, S. Pfeifer, A. Rinke, K. Wyser, K. Dethloff,  
25       C. Jones, T. Semmler, and M. Shaw, 2005: Modelling the Arctic boundary layer: An  
26       evaluation of six ARCMIP regional-scale models with data from the SHEBA project.  
27       *Boundary-Layer Meteorology*, **117**, 337–381.
- 28   **Tjoelker**, M.G., J. Oleksyn, and P.B. Reich, 2001: Modelling respiration of vegetation: Evidence  
29       for a general temperature-dependent Q(10). *Global Change Biology*, **7**, 223–230.

- 1   **Tompkins**, A., 2002: A prognostic parameterization for the subgrid-scale variability of water vapor  
2       and clouds in large-scale models and its use to diagnose cloud cover. *J. of Atmos. Sci.*, **59**,  
3       1917–1942.
- 4   **Trenberth**, K.E. and J. Hurrell, 1994: Decadal atmosphere-ocean variations in the Pacific. *Climate  
5       Dynamics*, **9**, 303–319.
- 6   **Trenberth** K.E. and T.J. Hoar, 1997: El Niño and climate change. *Geophys. Res. Letts.*, **24**, 3057–  
7       3060.
- 8   **Trenberth**, K.E., G.W. Branstator, D. Karoly, A. Kumar, N.-C. Lau, and C. Ropelewski, 1998:  
9       Progress during TOGA in understanding and modeling global teleconnections associated  
10      with tropical sea surface temperatures. *J. Geophys. Res.*, **103** (special TOGA issue), 14291–  
11      14324.
- 12   **Trenberth**, K.E., J. Fasullo, and L. Smith, 2005: need article title. *Climate Dynamics*,  
13       doi:10.1007/s00382-005-0017-4.
- 14   **Trier**, S. B., W.C. Skamarock, M.A. LeMone, and D.B. Parsons, 1996: Structure and evolution of  
15      the 22 February 1993 TOGA COARE squall line: Numerical simulations. *J. of Atmos. Sci.*,  
16      **53**, 2861–2886.
- 17   **Tripoli**, G.J., 1992: A nonhydrostatic mesoscale model designed to simulate scale interaction. *Mon.  
18       Weather Rev.*, **120**, 1342–1359
- 19   **Tripoli**, G.J. and W.R. Cotton, 1989: Numerical study of an observed orogenic mesoscale  
20      convective system. Part 2: Analysis of governing dynamics. *Mon. Weather Rev.*, **117**, 305–  
21      328.
- 22   **Tselioudis**, G. and C. Jakob, 2002: Evaluation of midlatitude cloud properties in a weather and a  
23      climate model: Dependence on dynamic regime and spatial resolution. *J. Geophys. Res.*,  
24      **107**, 4781.
- 25   Tselioudis, G., Y.-C. Zhang, and W.R. Rossow, 2000: Cloud and radiation variations associated  
26      with northern midlatitude low and high sea level pressure regimes. *J. Climate*, **13**, 312–327,  
27      doi:10.1175/1520-0442(2000).
- 28   **Tsushima**, Y., A. Abe-Ouchi, and S. Manabe, 2005: Radiative damping of annual variation in  
29      global mean surface temperature: Comparison between observed and simulated feedback.  
30      *Climate Dynamics*, **24**, 591–597.

- 1      **Twomey**, S., 1977: The influence of pollution on the short wave albedo of clouds. *J. Atmos. Sci.*,  
2                   **34**, 1149–1152.
- 3      **Ueda**, H., A. Iwai, K. Kuwako, and M.E. Hori, 2006: Impact of anthropogenic forcing on the Asian  
4                   summer monsoon as simulated by 8 GCMs. *Geophys. Res. Letts.*, **33**,  
5                   doi:10.1029/2005GL025336.
- 6      **Uotila**, P., A.H. Lynch, J.J. Cassano, and R.I. Cullather, 2007: Changes in Antarctic net  
7                   precipitation in the 21<sup>st</sup> century based on IPCC model scenarios. *J. Geophys. Res.*, accepted  
8                   pending revisions.
- 9      **Uppala**, S.M., *et al.*, 2005: The ERA-40 re-analysis. *Intl. J. of Climatology*, **131**, 2961–3012.
- 10     **van Oldenborgh**, G.J., S.Y. Philip, and M. Collins, 2005: El Niño in a changing climate: A multi-  
11                   model study. *Ocean Science*, **1**, 81–95.
- 12     **VanRheenen**, N.T., A.W. Wood, R.N. Palmer, and D.P. Lettenmaier, 2004: Potential implications  
13                   of PCM climate change scenarios for Sacramento-San Joaquin River basin hydrology and  
14                   water resources. *Climatic Change*, **62**, 257–281.
- 15     **van Ulden**, A.P. and G.J. van Oldenborgh, 2006: Large-scale Atmos. circulation biases and changes  
16                   in global climate model simulations and their importance for climate change in Central  
17                   Europe. In: *Atmospheric Chemistry and Physics*, **6**(4), 863–881.
- 18     **Vavrus**, S., J.E. Walsh, W.L. Chapman, and D. Portis, 2006: The behavior of extreme cold air  
19                   outbreaks under greenhouse warming. *Intl. J.Climatology*, **26**, 1133–1147.
- 20     **Velicogna**, I. and J. Wahr, 2006: Acceleration of Greenland ice mass loss in spring 2004. *Nature*,  
21                   **443**(7109), 329–331.
- 22     **Vidale**, P.L., D. Lüthi, C. Frei, S.I. Seneviratne, and C. Schär, 2003: Predictability and uncertainty  
23                   in a regional climate model. *J. Geophys. Res.*, **108**(D18), 4586.
- 24     **Vinnikov**, K.Y., D.J. Cavalieri, and C.L. Parkinson, 2006: A model assessment of satellite observed  
25                   trends in polar sea ice extents. *Geophys. Res. Letts.*, **33**, L05704.
- 26     **Vitart**, F. and Anderson, J.L., 2001: Sensitivity of Atlantic Tropical Storm Frequency to ENSO and  
27                   Interdecadal Variability of SSTs in an Ensemble of AGCM Integrations. *J. Climate*, **14**(4),  
28                   533–545.
- 29     **Völker**, C., D.W.R. Wallace, and D.A. Wolf-Gladrow, 2002: On the role of heat fluxes in the  
30                   uptake of anthropogenic carbon in the North Atlantic, *Global Biogeochem. Cycles*, **16**(4),  
31                   1138, doi:10.1029/2002GB001897.

- 1    **Von Storch**, H., E. Zorita, and U. Cubasch, 1993: Downscaling of global climate change estimates  
2        to regional scales: An application to Iberian rainfall in wintertime. *J. Climate*, **6**, 1161–1171.
- 3    **Wang**, B., 1995: Interdecadal changes in El Niño onset in the last four decades. *J. Climate*, **8**, 267–  
4        284.
- 5    **Wang**, C., 2005: A model study of the response of tropical deep convection to the increase of CCN  
6        concentration. 1. Dynamics and microphysics. *J. Geophys. Res.*, **110**, D21211.
- 7    **Wang**, H. and K.-M. Lau, 2006: Atmos. hydrological cycle in the tropics in twentieth century  
8        coupled climate simulations. *J. Climate*, **26**, 655–678.
- 9    **Wang**, M., J.E. Overland, V. Kattsov, and J.E. Walsh, 2007: Intrinsic versus Forced Variation in  
10        Coupled Climate Model Simulations over the Arctic during the Twentieth Century, *J.*  
11        *Climate* **20**, 1093–1095 and 1097–1107.
- 12    **Wang**, M., J.E. Overland, V. Kattsov, J.E. Walsh, X. Zhang, and T. Pavlova, 2006: Intrinsic versus  
13        forced variation in coupled climate model simulations over the Arctic during the 20th  
14        Century. *J. Climate*, submitted.
- 15    **Wang**, W. and M.E. Schlesinger, 1999: The dependence on convection parameterization of the  
16        tropical intraseasonal oscillation simulated by the UIUC 11-Layer Atmos. GCM. *J. Climate*,  
17        **12**(5), 1423–1457.
- 18    **Warrach**, K., H.T. Mengelkamp, and E. Raschke, 2001: Treatment of frozen soil and snow cover in  
19        the land surface model SEWAB. *Theoretical and Applied Climatology*, **69**, 23–37.
- 20    **Webb**, M., C. Senior, S. Bony, and J.J. Morcrette, 2001: Combining ERBE and ISCCP data to  
21        assess clouds in the Hadley Centre, ECMWF and LMD Atmos. climate models. *Climate*  
22        *Dynamics*, **17**, 905–922.
- 23    **Webb**, M.J., C.A. Senior, D.M.H. Sexton, W.J. Ingram, K.D. Williams, M.A. Ringer, B.J.  
24        McAvaney, R. Colman, B.J. Soden, R. Gudgel, T. Knutson, S. Emori, T. Ogura, Y.  
25        Tsushima, N. Andronova, B. Li, I. Musat, S. Bony and K. E. Taylor, 2006: On the  
26        contribution of local feedback mechanisms to the range of climate sensitivity in two GCM  
27        ensembles, *Climate Dynamics*, **27**, (1/July 2006), doi:10.1007/s00382-006-0111-2.
- 28    **Webster**, P.J., V.O. Maga, T.N. Palmer, J. Shukla, R.A. Thomas, M. Yanai, and T. Yasunari, 1998:  
29        Monsoons: Processes, predictability, and the prospects for  
30        prediction, *J. Geophys. Res.*, **103**(C7), 14451–14510, 10.1029/97JC02719.

- 1    **Wei**, H., W.J. Gutowski Jr., C.J. Vorosmarty, and B.M. Fekete, 2002: Calibration and validation of  
2        a regional climate model for pan-Arctic hydrologic simulation. *J. Climate*, **15**, 3222–3236.
- 3    **Wetherald**, R.T. and S. Manabe, 1988: Cloud feedback processes in general circulation models. *J.*  
4        *Atmos. Sci.*, **45**, 1397–1415.
- 5    **Whitman**, S., G. Good, E.R. Donoghue, N. Benbow, W. Shou, and S. Mou, 1997: Mortality in  
6        Chicago attributed to the July 1995 heat wave. *Am. J. Public Health*, **87**, 1515–1518.
- 7    **Wigley**, T.M.L., and M.E. Schlesinger, 1985: Analytical solution for the effect of increasing CO<sub>2</sub>  
8        on global mean temperature. *Nature*, **315**, 649–652.
- 9    **Wilby**, R.L., L.E. Hay, W.J. Gutowski, Jr., R.W. Arritt, E.S. Takle, G.H. Leavesley, and M. Clark,  
10        2000: Hydrological responses to dynamically and statistically downscaled general  
11        circulation model output. *Geophys. Res. Letts.*, **27**, 1199–1202.
- 12    **Wilby**, R.L., S.P. Charles, E. Zorita, B. Timbal, P. Whetton, and L.O. Mearns, 2004: *Guidelines for*  
13        *Use Climate Scenarios Developed from Statistical Downscaling Methods*. The IPCC Data  
14        Distribution Centre, University of East Anglia, UK, 27 pp. [Available online at <http://ipcc-ddc.cru.uea.ac.uk/guidelines>.]
- 16    **Williams**, K.D., M.A. Ringer, and C.A. Senior, 2003: Evaluating the cloud response to climate  
17        change and current climate variability. *Climate Dynamics*, **20**, 705–721.
- 18    **Williams**, K.D., *et al.*, 2006: Evaluation of a component of the cloud response to climate change in  
19        an intercomparison Climate models. *Climate Dynamics*, **145**, 145–165.
- 20    **Wilks**, D.S. and R.L. Wilby, 1999: The weather generation game: A Rev. of stochastic weather  
21        models. *Progress in Phys. Georaphy*, **23**, 329–357.
- 22    **Wilson**, D.R. and S.P. Ballard, 1999: A microphysics-based precipitation scheme for the UK  
23        Meteorological Office Numerical Weather Prediction Model. *Intl. J. Climatology*, **125**,  
24        1607–1636.
- 25    **Wilson**, M.F., A. Henderson-Sellers, R.E. Dickinson, and P.J. Kennedy, 1987: Sensitivity of the  
26        Biosphere Atmosphere Transfer Scheme (BATS) to the inclusion of variable soil  
27        characteristics. *J. Climate and Applied Meteorology*, **26**, 341–362.
- 28    **Wilson**, T.B., J.M. Norman, W.L. Bland, and C.J. Kucharik, 2003: Evaluation of the importance of  
29        Lagrangian canopy turbulence formulations in a soil-plant-atmosphere model. *Agricultural*  
30        *and Forest Meteorology*, **115**, 51–69.

- 1      **Winton**, M., 2000: A reformulated three-layer sea ice model. *J. Atmos. and Oceanic Tech.*, **17**, 525  
2                        531.
- 3      **Wittenberg**, A.T., A. Rosati, N.-C. Lau, and J.J. Poshay, 2006: GFDL's CM2 Global Coupled  
4                        Climate Models, Part III: Tropical Pacific Climate and ENSO. *J. Climate*, **19**, 698–722.
- 5      **Wood**, A.W., L.R. Leung, V. Sridhar, and D.P. Lettenmaier, 2004: Hydrological implications of  
6                        dynamical and statistical approaches to downscaling climate model outputs. *Climate  
7                        Change*, **62**, 189–216.
- 8      **Wu**, X. and M.W. Moncrieff, 2001: Long-term behavior of cloud systems in TOGA COARE and  
9                        their interactions with radiative and surface processes. Part III: Effects on the energy budget  
10                        and SST. *J. Atmos. Sci.*, **58**, 1155–1168.
- 11     **Wu**, X., L. Deng, X. Song, and G.-J. Zhang, 2006: Coupling of convective momentum transport  
12                        with convective heating in global climate simulations. *J. Atmos. Sci.*, in press.
- 13     **Wyant**, M.C., C.S. Bretherton, J.T. Bacmeister, J.T. Kiehl, I.M. Held, M.Z. Zhao, S.A. Klein, and  
14                        B.J. Soden, 2006: A comparison of tropical cloud properties and responses in GCMs using  
15                        mid-tropospheric vertical velocity. *Climate Dynamics*, **27**, 261–279.
- 16     **Wyant**, M.C., M. Khairoutdinov, and C.S. Bretherton, 2006: Climate sensitivity and cloud response  
17                        of a GCM with a superparameterization, *Geophys. Res. Letts.*, **33**, L06714.
- 18     **Wyrtki**, K., 1975: El Niño—The dynamic response of the equatorial Pacific Ocean to Atmospheric  
19                        Forcing. *J. Phys. Oceanography*, **5**, 572–584.
- 20     **Xie** and Arkin, 1997: Global precipitation: A 17-year Mon. analysis based on gauge observations,  
21                        satellite estimates, and numerical model outputs. *Bulletin of the Am. Meteorological Soc.*,  
22                        **78**, 2539–2558.
- 23     **Xie**, S.C., *et al.*, 2005: Simulations of midlatitude frontal clouds by single-column and cloud-  
24                        resolving models during the Atmos. Radiation Measurement March 2000 cloud intensive  
25                        operational period. *J. Geophys. Res.*, **110**, D15S03.
- 26     **Xu**, K.-M. and D.A. Randall, 1998: Influence of large-scale advective cooling and moistening  
27                        effects on the quasi-equilibrium behavior of explicitly simulated cumulus ensembles. *J. of  
28                        Atmos. Sci.*, **55**, 896–909.
- 29     **Xu**, K., M.H. Zhang, *et al.*, 2005: Modeling springtime shallow frontal clouds with cloud-resolving  
30                        and single-column models. *J. Geophys. Res.*, **110**, D15S04, doi:10.1029/2004JD005153.

- 1    **Xue**, Y., F.J. Zeng, K.E. Mitchell, Z. Janjic, and E. Rogers, 2001: The impact of land surface  
2        processes on simulations of the U.S. hydrological cycle: A case study of the 1993 flood  
3        using the SSiB land surface model in the NCEP ETA regional model.
- 4    **Yamaguchi**, K., A. Noda, and A. Kitoh, 2005: The changes in permafrost induced by greenhouse  
5        warming: A numerical study applying multiple-layer ground model. *J. Meteorological Soc.*  
6        *of Japan*, **83**, 799–815.
- 7    **Yang** Z.W. and R. . Arritt, 2002: Tests of a perturbed physics ensemble approach for regional  
8        climate modeling. *J. Climate*, **15**, 2881–2896.
- 9    **Yao**, M.-S. and A.D. Del Genio, 2002: Effects of cloud parameterization on the simulation Climate  
10        changes in the GISS GCM. Part II: Sea surface temperature and cloud feedbacks. *J. Climate*,  
11        **15**, 2491–2503.
- 12    **Yeh**, P.J.-F. and E.A.B. Eltahir, 2005: Representation of water table dynamics in a land surface  
13        scheme. Part 1: Model development. *J. Climate*, **18**, 1861–1880.
- 14    **Yokohata**, T., S. Emori, T. Nozawa, Y. Tsushima, T. Ogura, and M. Kimoto, 2005: Climate  
15        response to volcanic forcing: Validation Climate sensitivity of a coupled atmosphere-ocean  
16        general circulation model. *Geophys. Res. Letts.*, **32**, L21710.
- 17    **York**, J.P., M. Person, W.J. Gutowski, and T.C. Winter, 2002: Putting aquifers into Atmos.  
18        simulation models: An example from the Mill Creek Watershed, northeastern Kansas.  
19        *Advances in Water Resources*, **25**, 221–238.
- 20    **Yu**, H., Y.J. Kaufman, M. Chin, G. Feingold, L.A. Remer, T.L. Anderson, Y. Balkanski, N.  
21        Bellouin, O. Boucher, S. Christopher, P. DeCola, R. Kahn, D. Koch, N. Loeb, M.S. Reddy,  
22        M. Schulz, T. Takemura, and M. Zhou, 2006: A Rev. of measurement-based assessment of  
23        aerosol direct radiative effect and forcing. *Atmos. Chemistry and Physics*, **6**, 613–666.
- 24    **Yu**, X. and M.J. McPhaden, 1999: Seasonal variability in the equatorial Pacific. *J. of*  
25        *Phys. Oceanography*, **29**, 925–947.
- 26    **Zebiak**, S.E. and M.A. Cane, 1987: A model El Nino-Southern Oscillation. *Mon. Weather Rev.*,  
27        **115**, 2262–2278.
- 28    **Zhang**, C., M. Dong, H.H. Hendon, E.D. Maloney, and A. Marshall, 2006: Simulations of the  
29        Madden-Julian Oscillation by Global Weather Forecast and Climate Models. *Climate*  
30        *Dynamics*.

- 1   **Zhang**, D. and M.J. McPhaden, 2006: Decadal variability of the shallow Pacific meridional  
2       overturning circulation: Relation to tropical sea surface temperatures in observations and  
3       climate change models. *Ocean Modelling*, **15**, 250–273.
- 4   **Zhang**, G.J. and N.A. McFarlane, 1995: Sensitivity Climate simulations to the Parameterization of  
5       cumulus convection in the Canadian Climate Centre general circulation model.  
6       *Atmosphere–Ocean*, **33**, 407–446.
- 7   **Zhang**, J. and D. Rothrock, 2000: Modeling Arctic sea ice with an efficient plastic solution, *J.*  
8       *Geophys. Res.*, **105**, 3325–3338.
- 9   **Zhang**, M.H., J.J. Hack, J.T. Kiehl, and R.D. Cess, 1994: Diagnostic study Climate feedback  
10      processes in Atmos. general circulation models. *J. Geophys. Res.*, **99**, 5525–5537.
- 11   **Zhang**, M., 2004: Cloud-climate feedback: How much do we know? In: *Observation, Theory, and*  
12      *Modeling of Atmos. Variability. World Scientific Series on Meteorology of East Asia*, Vol. 3  
13      [Zhu, et al. (eds.)]. World Scientific Publishing Co., Singapore, 632 pp.
- 14   **Zhang**, M.H., et al., 2005: Comparing clouds and their seasonal variations in 10 Atmos. general  
15      circulation models with satellite measurements. *J. Geophys. Res.*, **110**, D15S02,  
16      doi:10.1029/2004JD005021.
- 17   **Zhang**, M.H., J.L. Lin, R.T. Cederwall, J.J. Yio, and S.C. Xie, 2001: Objective analysis of the  
18      ARM IOP data: method and sensitivity. *Mon. Weather Rev.*, **129**, 295–311.
- 19   **Zhang**, X. and J.E. Walsh, 2006: Toward a seasonally ice-covered Arctic Ocean: Scenarios from  
20      the IPCC AR4 model simulations. *J. Climate*, **19**, 1730–1747.
- 21   **Zhang**, X.-C., 2005: Spatial downscaling of global climate model output for site-specific  
22      assessment of crop production and soil erosion. *Agricultural and Forest Meteorology*, **135**,  
23      215–229.
- 24   **Zhang**, Y.C., A.N. Huang, and X.S. Zhu, 2006: Parameterization of the thermal impacts of sub-grid  
25      orography on numerical modeling of the surface energy budget over East Asia. *Theoretical*  
26      *and Applied Climatology*, **86**, 201–214.
- 27   **Zhu**, J. and X.-Z. Liang, 2007: Regional climate model simulations of U.S. precipitation and  
28      surface air temperature during 1982–2002: Interannual variation. *J. Climate*, in press.
- 29
- 30
- 31

