

Selected Publications, Syukuro Manabe

A. Original Contributions

| | |
|------|--|
| (1) | Stouffer, R. J., and S. Manabe , Equilibrium Response of Thermohaline Circulation to large Changes in Atmospheric CO ₂ concentration, <u>Climate Dynamics</u> , (20): 759-773, 2003. |
| (2) | Wetherald, R. T., and S. Manabe , Simulation of Hydrologic Change Associated with Global Warming, <u>Journal of Geophysical Research</u> (107, D19): 4379-4393, 2002. |
| (3) | Hall, A., and S. Manabe , Suppression of ENSO in a coupled model without water vapor feedback, <u>Climate Dynamics</u> , (16,5), 393 - 403, 2000 |
| (4) | Hall, A., and S. Manabe , Effect of vapor feedback on internal and anthropogenic variations of the global hydrologic cycle, <u>Journal of Geophysical Research-Atmosphere</u> , (105, D5): 6935 - 6945, 2000. |
| (5) | Knutson T.R., and S. Manabe , Model Assessment of Decadal Variability and Trends in the Tropical Pacific Ocean, <u>Journal of Climate</u> , 11 (9): 2273-2296, 1998. |
| (6) | Sarmiento, J. L., T. M. C. Hughes, R. J. Stouffer, and S. Manabe , Simulated Response of the Ocean Carbon Cycle to Anthropogenic Climate Warming, <u>Nature</u> , 393, 245-249, 1998. |
| (7) | Hall, A., and S. Manabe , Can Stochastic Theory Explain Sea Surface Temperature and Salinity Variability? <u>Climate Dynamics</u> , 13:167-180, 1997. |
| (8) | Manabe, S., and R.J. Stouffer , Coupled Ocean-Atmosphere Model Response to Freshwater Input: Comparison to Younger Dryas Event, <u>Paleoceanography</u> , 12(2):321-336, 1997. |
| (9) | Knutson, T.R., S. Manabe, and D. Gu , Simulated ENSO in a Global Coupled Ocean-Atmosphere Model: Multi-Decadal Amplitude Modulation and CO ₂ Sensitivity, <u>Journal of Climate</u> , 10(1):138-161, 1997. |
| (10) | Delworth, T.L., S. Manabe, and R.J. Stouffer , Multidecadal Climate Variability in the Greenland Sea and Surrounding Regions: A Coupled Model Simulation, <u>Geophysical Research Letters</u> , 24(3):257-260, 1997. |
| (11) | Manabe, S., and R.J. Stouffer , Low Frequency Variation of Surface Air Temperature in a 1,000 Year Integration of a Coupled Ocean-Atmosphere Model, <u>Journal of Climate</u> , 9(2):376-393, 1996. |
| (12) | Wetherald, R.T., and S. Manabe , The Mechanisms of Summer Dryness Induced by Greenhouse Warming, <u>Journal of Climate</u> , 8(12):3096-3108, 1995. |
| (13) | Knutson, T.R., and S. Manabe , Time-mean Response Over the Tropical Pacific to Increased CO ₂ in a Coupled Ocean-Atmosphere Model, <u>Journal of Climate</u> , 8(9):2181-2199, 1995. |
| (14) | Manabe, S., and R.J. Stouffer , Simulation of Abrupt Climate Change Induced by Freshwater Input to the North Atlantic Ocean, <u>Nature</u> , 378:165-167, 1995. |
| (15) | Stouffer, R.J., S. Manabe, and K. Ya. Vinnikov , Model Assessment of the Role of Natural Variability in Recent Global Warming, <u>Nature</u> , 367:634-636, 1994. |

| | |
|------|--|
| (16) | Manabe, S., and R.J. Stouffer , Multiple Century Response of a Coupled Ocean-Atmosphere Model to an Increase of Atmospheric Carbon Dioxide, <u>Journal of Climate</u> , 7(1):5-23, 1994. |
| (17) | Manabe, S., and R. Stouffer , Century-Scale Effects of Increased Atmospheric CO ₂ on the Ocean-Atmosphere System, <u>Nature</u> , (364) 215-217, 1993. |
| (18) | Delworth, T., S. Manabe, and R.J. Stouffer , Interdecadal Variations of the Thermohaline Circulation in a Coupled Ocean-Atmosphere Model, <u>Journal of Climate</u> , 6(11):1993-2011, 1993. |
| (19) | Broccoli, A.J., and S. Manabe , The Effects of Orography on Midlatitude Northern Hemisphere Dry Climates, <u>Journal of Climate</u> , 5(11):1181-1201, 1992. |
| (20) | Manabe, S., M.J. Spelman, and R.J. Stouffer , Transient Responses of a Coupled Ocean-Atmosphere Model to Gradual Changes of Atmospheric CO ₂ Part II: Seasonal Response, <u>Journal of Climate</u> , 5(2):105-126, 1992. |
| (21) | Manabe, S., R.J. Stouffer, M.J. Spelman, and K. Bryan . Transient Responses of a Coupled Ocean-Atmosphere Model to Gradual Changes of Atmospheric CO ₂ , Part I: Annual Mean Response, <u>Journal of Climate</u> , 4(8):785-818, 1991. |
| (22) | Broccoli, A.J. and S. Manabe , Can Existing Climate Models be Used to Study Anthropogenic Changes in Tropical Cyclone Climate? <u>Geophysical Research Letters</u> 17(11):1917-1920, 1990. |
| (23) | Stouffer, R.J., S. Manabe, and K. Bryan , Interhemispheric Asymmetry in Climate Response to a Gradual Increase of Atmospheric Carbon Dioxide, <u>Nature</u> , 342:660-662, 1989. |
| (24) | Delworth, T., and S. Manabe , The Influence of Soil Wetness on Atmospheric Variability, <u>Journal of Climate</u> , 2(12):1447-1462, 1989. |
| (25) | Manabe, S., and R.J. Stouffer , Two Stable Equilibria of a Coupled Ocean-Atmosphere Model, <u>Journal of Climate</u> , 1(9):841-866, (1988). |
| (26) | Bryan, K., S. Manabe, and M.J. Spelman , Interhemispheric Asymmetry in the Transient Response of a Coupled Ocean-Atmosphere Model to a CO ₂ Forcing, <u>Journal of Physical Oceanography</u> , 18(6):851-867, 1988. |
| (27) | Wetherald, R.T., and S. Manabe , 1988: Cloud feedback process in a general circulation model. <u>Journal of Atmospheric Sciences</u> , 45 , 1397-1415. |
| (28) | Delworth, T., and S. Manabe , The Influence of Potential Evaporation on the Variabilities of Soil Wetness and Climate, <u>Journal of Climate</u> , 1(5):523-547, 1988. |
| (29) | Manabe, S., and R. Wetherald , Large Scale Changes of Soil Wetness Induced by an Increase in Atmospheric Carbon Dioxide, <u>Journal of the Atmospheric Sciences</u> , 44:1211-1235, 1987. |
| (30) | Broccoli, A.J., and S. Manabe , The Influence of Continental Ice, Atmospheric CO ₂ , and Land Albedo on the Climate of the Last Glacial Maximum, <u>Climate Dynamics</u> , 1:87-99, Springer-Verlag, 1987. |
| (31) | Wetherald, R.T., and S. Manabe , An Investigation of Cloud Cover Change in Response to Thermal Forcing, <u>Climatic Change</u> , (8):5-23, 1986. |
| (32) | Manabe, S., and K. Bryan, Jr. , CO ₂ -Induced Change in a Coupled Ocean-Atmosphere Model and Its Paleoclimatic Implications, <u>Journal of Geophysical Research</u> , 90(C11) 11,689-11707, 1985. |
| (33) | Manabe, S., and A.J. Broccoli , A Comparison of Climate Model Sensitivity with |

| | |
|------|---|
| | Data from the Last Glacial Maximum, <u>Journal of Atmospheric Sciences</u> , 42:2643-2651, 1985. |
| (34) | Manabe, S., and A.J. Broccoli , The Influence of Continental Ice Sheets on the Climate of an Ice Age, <u>Journal of Geophysical Research</u> , 90(C2):2167-2190, 1985. |
| (35) | Bryan, K., F.G. Komro, S. Manabe, and M.J. Spelman , Transient Climate Response to Increasing Atmospheric Carbon Dioxide, <u>Science</u> , 215:56-58, 1982. |
| (36) | Manabe, S., R.T. Wetherald, and R.J. Stouffer , Summer Dryness Due to an Increase of Atmospheric CO ₂ Concentration, <u>Climate Change</u> , 3(4):336-376, 1981. |
| (37) | Manabe, S., and R. Stouffer , Sensitivity of a Global Climate Model to an Increase of CO ₂ Concentration in the Atmosphere, <u>Journal of Geophysical Research</u> , 85(C10): 5529-5554, 1980. |
| (38) | Manabe, S., and D.G. Hahn , Simulation of the Tropical Climate of an Ice Age, <u>Journal of Geophysical Research</u> , 82(27):3889-3911, 1977. |
| (39) | Hahn, D.G., and S. Manabe , The Role of Mountains in the South Asian Monsoon Circulation, <u>Journal of the Atmospheric Sciences</u> , 32(8):1515-1541, 1975. |
| (40) | Manabe, S., and J.L. Holloway, Jr. , The Seasonal Variation of the Hydrologic Cycle as Simulated by a Global Model of the Atmosphere, <u>Journal of Geophysical Research</u> , 80(12):1617-1649, 1975. |
| (41) | Wetherald, R.T., and S. Manabe , The Effects of Changing the Solar Constant on the Climate of a General Circulation Model, <u>Journal of the Atmospheric Sciences</u> , 32(11): 2044-2059, 1975. |
| (42) | Manabe, S., and R.T. Wetherald , The Effects of Doubling the CO ₂ Concentration on the Climate of a General Circulation Model, <u>Journal of the Atmospheric Sciences</u> , 32(1): 3-15, 1975. |
| (43) | Manabe, S., D.G. Hahn, and J.L. Holloway, Jr. , The Seasonal Variation of the Tropical Circulation as Simulated by a Global Model of the Atmosphere, <u>Journal of the Atmospheric Sciences</u> , 31(1):43-83, 1974. |
| (44) | Manabe, S., and T.B. Terpstra , The Effects of Mountains on the General Circulation of the Atmosphere as Identified by Numerical Experiments, <u>Journal of the Atmospheric Sciences</u> , 31(1):3-42, 1974. |
| (45) | Holloway, J.L. Jr., and S. Manabe , Simulation of Climate by a Global General Circulation Model: I. Hydrologic Cycle and Heat Balance, <u>Monthly Weather Review</u> , 99(5): 335-370, 1971. |
| (46) | Manabe, S., J.L. Holloway, Jr., and H.M. Stone , Tropical Circulation in a Time-Integration of a Global Model of the Atmosphere, <u>Journal of the Atmospheric Sciences</u> , 27(4): 580-613, 1970. |
| (47) | Manabe, S. , Climate and the Ocean Circulation: I. The Atmospheric Circulation and the Hydrology of the Earth's Surface, <u>Monthly Weather Review</u> , 97(11):739-774, 1969. |
| (48) | Manabe, S., and K. Bryan , Climate Calculations with a Combined Ocean-Atmosphere Model, <u>Journal of the Atmospheric Sciences</u> , 26(4):786-789, 1969. |
| (49) | Manabe, S., and R.T. Wetherald , Thermal Equilibrium of the Atmosphere with a Given Distribution of Relative Humidity, <u>Journal of the Atmospheric Sciences</u> , 24(3): 241-259, 1967. |
| (50) | Hunt, B.G., and S. Manabe . Experiments with a Stratospheric General Circulation Model: II. Large-Scale Diffusion of Tracers in the Stratosphere, |

| | |
|------|--|
| | <u>Monthly Weather Review</u> , 96(8): 503-539, 1968. |
| (51) | Manabe, S., and B.G. Hunt , Experiments with a Stratospheric General Circulation Model: I. Radiative and Dynamic Aspects, <u>Monthly Weather Review</u> , 96(8):477-502, 1968. |
| (52) | Manabe, S., J. Smagorinsky, and R.F. Strickler , Simulated Climatology of a General Circulation Model with a Hydrologic Cycle, <u>Monthly Weather Review</u> , 93(12):769-798, 1965. |
| (53) | Smagorinsky, J., S. Manabe, and J.L. Holloway, Jr. , Numerical Results from a Nine-Level General Circulation Model of the Atmosphere, <u>Monthly Weather Review</u> , 93(12):227-768, 1965. |
| (54) | Manabe, S., and R.F. Strickler , Thermal Equilibrium of the Atmosphere with a Convective Adjustment, <u>Journal of the Atmospheric Sciences</u> , 21(4):361-385, 1964. |

B. Overviews and Essays

| | |
|------|--|
| (1) | Manabe, S, and R.J. Stouffer , Role of ocean in global warming. <u>Journal of Meteorological Society of Japan</u> , 85B, 385-403, 2007. (125 th Anniversary Issue of MSJ) |
| (2) | Manabe, S, P.C.D. Milly, and R. T. Wetherald , Simulated, Long-Term Change in River Discharge and Soil Moisture due to Global Warming, <u>Hydrological Science Journal</u> , 49(4), 625-642, 2004. |
| (3) | Manabe, S., J. R. Knutson, R. J. Stouffer, and T. L. Delworth , Exploring Natural and Anthropogenic Variation of Climate, <u>Quarterly Journal of Royal Meteorological Society</u> , (127, 571): 1-24, 2001. (Symons Memorial Lecture) |
| (4) | Manabe, S., and R. Stouffer , Study of Abrupt Climate Change by a Coupled Ocean-Atmosphere Model, <u>Quaternary Science Reviews</u> , (19): 285-299, 2000 |
| (5) | Manabe, S. and R. J. Stouffer , The Role of Thermohaline Circulation in Climate, <u>Tellus</u> , 51 A-B(1), 91-109, 1999. (Lecture presented at Rossby 100 Symposium) |
| (6) | Manabe, S. , Early Development in the Study of Greenhouse Warming: The Emergence of Climate Models, <u>Ambio</u> , 26(1):47-51, 1997. (<i>100th anniversary volume of the publication of "Arrhenius" paper on Greenhouse Warming</i>), |
| (7) | Manabe, S., R.J. Stouffer, and M.J. Spelman , Response of a Coupled Ocean-Atmosphere Model to Increasing Atmospheric Carbon Dioxide, <u>AMBIO</u> , 23(1):45-49, 1994. |
| (8) | Delworth, T., and S. Manabe , Climate Variability and Land Surface Processes, <u>Advances in Water Resources</u> , 16:3-20, 1993. |
| (9) | Manabe, S. and R.T. Wetherald , CO ₂ and Hydrology, In <u>Advances in Geophysics</u> , (28), A. Climate Dynamics, B. Saltzman (ed.), Academic Press, New York, 131-156, 1985. |
| (10) | Manabe, S. , Carbon Dioxide and Climate Change, <u>Advances in Geophysics</u> , 25, Theory of Climate, Barry Saltzman (ed.), Academic Press, NY, 39-84, 1983. |
| (11) | Manabe, S. , Simulation of Climate by General Circulation Models with Hydrologic Cycles, In <u>Land Surface Processes in Atmospheric General Circulation Models</u> , P.S. Eagleson (ed.), Cambridge University Press, 19-66, 1982. |
| (12) | Manabe, S. , The Use of Comprehensive General Circulation Modelling for Studies of the Climate and Climate Variation, The Physical Basis of Climate and Climate Modelling Report of the International Study Conference in Stockholm, GARP Publication Series 16, 148-162, 1975. |

See www.gfdl.noaa.gov/reference/bibliography/authors/manabe.html for pdf