

## Brian Jon Soden

### Education:

June 1993	Ph. D. Geophysical Sciences University of Chicago
March 1990	M.S. Geophysical Sciences University of Chicago
May 1988	B.S. Geology (Applied Math Minor) Jay F.W. Pearson Scholarship (1984-1988), Magna Cum Laude (1988) University of Miami

### Research Experience:

6/94 -	Physical Scientist, Geophysical Fluid Dynamics Laboratory, National Oceanic and Atmospheric Administration, Princeton, NJ.
7/93 - 5/94	Visiting Scientist, Atmospheric and Oceanic Sciences Program, Princeton University.
1/91 - 6/93	Honorary Fellow, Space Science and Engineering Center, University of Wisconsin - Madison.
9/90 - 6/93	NASA Global Change Fellow, Dept. of the Geophysical Sciences, University of Chicago.

### Teaching Experience:

Lecturer, Atmospheric & Oceanic Sciences Program, Princeton University  
Atmospheric Radiation (AOS 527), Climate Dynamics (AOS 577)

### Professional Activities:

Member, USGCRP Global Water Cycle Scientific Steering Group (2002-).  
Chairman, GEWEX Water Vapor Project: GVAP (2001-).  
Contributing Author, Intergovernmental Panel on Climate Change.  
Chairman, AMS 10th Conference on Atmospheric Radiation.  
Chairman, AMS Committee on Atmospheric Radiation (1998-2000).  
Associate Editor, Journal of Geophysical Research (1999-).

### Professional Awards:

- NSC David S. Johnson Award (2001).  
*“For outstanding and innovative use of Earth satellite observations”.*
- AMS Henry G. Houghton Award (2001).  
*“For creative use of multiple satellite observations to better characterize the climate system’s radiative and hydrological balances”.*
- NASA Langley Reid Award for Outstanding Paper (2002).  
NOAA Outstanding Review Paper Award (2002).  
NOAA Outstanding Scientific Paper Award (2000).

**Selected Publications:**

- Soden, BJ, RT Wetherald, GL Stenchikov, and A Robock, 2002: Global cooling following the eruption of Mt. Pinatubo: A test of climate feedback by water vapor, *Science*, **296**, 727-730.
- Penner, JE and co-authors, 2002: A comparison of model- and satellite-derived aerosol optical depth and reflectivity, *J. Atmos. Sci.*, **59**, 441-460.
- Wielicki, BA and co-authors, 2002: Evidence for large decadal variability in the tropical-mean radiative energy budget, *Science*, **295**, 841-844.
- Harrison, M, A Rosati, B Soden, E Galanti, and E Tziperman, 2002: An evaluation of air-sea flux products for ENSO simulation and prediction, *Mon. Weath. Rev.*, **130**, 723-732.
- Soden, BJ, CS Velden, and RE Tuleya, 2001: The impact of satellite winds on GFDL hurricane model forecasts, *Mon. Weath. Rev.* **129**, 835-852.
- Soden, BJ, 2001: Water vapor observations, *Frontiers in the Science of Climate Modeling*, Cambridge Univ. Press., in press.
- Soden, BJ and SR Schroeder, 2000: Decadal variations in tropical water vapor: A comparison of observations and a model simulation, *J. Climate*, **13**, 3337-3341.
- Soden, BJ, 2000: Enlightening water vapour, *Nature*, **406**, 247-248.
- Held, IM and BJ Soden, 2000: Water vapor feedback and global warming, *Annu. Rev. Energy Env.*, **25**, 441-475.
- Soden, BJ, 2000: The diurnal cycle of convection, clouds and water vapor in the tropical upper troposphere, *Geophys. Res. Lett.*, **27**, 2173-2176.
- Soden, BJ, 2000: The sensitivity of the tropical hydrological cycle to ENSO, *J.Climate*, **13**, 538-549.
- Soden, BJ and co-authors, 2000: A comparison of radiation codes for retrieving upper tropospheric humidity in the 6.3  $\mu\text{m}$  band: Results from the first GVAP workshop, *Bull. Amer. Meteor. Soc.*, **81**, 797-808.
- Haywood, JM, V Ramaswamy and BJ Soden, 1999: Aerosol climate forcing signatures in clear-sky satellite observations over oceans, *Science*, **283**, 1299-1303.
- Soden, BJ, 1999: How well can we monitor and predict an intensification of the hydrological cycle?, *GEWEX News*, **9**, 4-5.
- Klein, SA, BJ Soden, and NC Lau, 1999: Remote variations in SST during ENSO: Evidence for a tropical atmospheric bridge, *J. Climate*, **12**, 917-932.

- Soden, BJ, 1998: Tracking upper tropospheric water vapor: A satellite perspective, *J. Geophys. Res.*, **103**, 17069-17081.
- Soden, BJ and V Ramaswamy, 1998: Variations in atmosphere-ocean solar absorption under clear-skies: A comparison of observations and model simulations, *Geophys. Res. Lett.*, **25**, 2149-2152.
- Donner, L, C Seaman, B Soden, R Hemler and K Liou, 1997: Simulations of large-scale ice clouds in the GFDL SKYHI GCM, *J. Geophys. Res.*, **102**, 21745-21768.
- Soden, BJ, 1997: Variations in the tropical greenhouse effect during ENSO, *J. Climate*, **10**, 1050-1055.
- Spangenberg, DA, GG Mace, T P Ackerman and B J Soden, 1997: Evaluation of model-simulated upper troposphere humidity using 6.7  $\mu\text{m}$  satellite observations, *J. Geophys. Res.*, **102**, 25737-25749.
- Soden, BJ and FP Bretherton, 1996: Interpretation of TOVS water vapor radiances in terms of layer-average relative humidities: Method and climatology for the upper, middle and lower troposphere, *J. Geophys. Res.*, **101**, 9333-9343.
- Chen, C-T, E Roeckner, and BJ Soden, 1996: A comparison of satellite observations and model simulations of column-integrated moisture and upper-tropospheric humidity, *J. Climate*, **9**, 1561-1585.
- Soden, BJ and JR Lanzante, 1996: An assessment of satellite and radiosonde climatologies of upper tropospheric water vapor, *J. Climate*, **9**, 1235-1250.
- Frey, RA, SA Ackerman, and BJ Soden, 1996: Climate parameters from satellite spectral radiances: Part I, *J. Climate*, **9**, 327-344.
- Soden, BJ and R Fu, 1995: A satellite analysis of deep convection, upper tropospheric humidity and the greenhouse effect, *J. Climate*, **8**, 2333-2351.
- Soden, BJ and LJ Donner, 1994: Evaluation of a GCM cirrus parameterization using satellite observations, *J. Geophys. Res.*, **99**, 14401-14413.
- Soden, BJ, SA Ackerman, D O'C. Starr, SH Melfi, and RA Ferrare, 1994: Comparison of upper tropospheric water vapor from GOES, Raman lidar, and CLASS measurements, *J. Geophys. Res.*, **99**, 21005-21016.
- Soden, BJ and FP Bretherton, 1994: Evaluation of the water vapor distribution in general circulation models using satellite observations, *J. Geophys. Res.*, **99**, 1187-1210.
- Soden, BJ and FP Bretherton, 1993: Upper tropospheric relative humidity from the GOES 6.7  $\mu\text{m}$  channel: method and climatology for July 1987, *J. Geophys. Res.*, **98**, 16669 -16688.

Soden, BJ, 1992: Evaluation of cloud radiative forcing from the NCAR CCM  
and ERBE observations, *J. Geophys. Res.*, **97**, 18137-18159.