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Research Interests

Aerosols, Clouds, and Climate Modeling
Radiative Forcing of Aerosols and Clouds
Remote Sensing and Satellite Retrievals
Aerosol and Environmental Impacts
Air Quality

Education

Ph.D., in progress, **Atmospheric and Oceanic Sciences**, University of Colorado at Boulder,
Aug. 2005 to present.

M.S., **Atmospheric Physics and Environment**, Institute of Atmospheric Physics, Chinese
Academy of Sciences, Beijing, China, July 2000.

B.S., **Meteorology**, Nanjing Institute of Meteorology (NIM), Nanjing, China, June 1997.

Professional Experience

Graduate Research Assistant, Laboratory for Atmospheric and Space Physics (LASP),
University of Colorado at Boulder, U.S.A, January 2006 to Present.

Tutor for student-athletes, *Weather and the Atmosphere*, and *Weather and the Atmosphere
Laboratory*, University of Colorado at Boulder, January 2008 to May 2008.

Teaching Assistant, Department of Atmospheric and Oceanic Sciences (ATOC), University of
Colorado at Boulder, U.S.A, August 2005 to May 2006.

Intensive International Graduate Teacher Workshops, University of Colorado at Boulder,
U.S.A, August 2005.

Graduate Research Assistant, Institute of Atmospheric Physics, Chinese Academy of
Sciences, Beijing, China. September 1998 to January 2002.

Synoptic Practices in the Meteorological Observatory of NIM, Nanjing, China. Summer 1994.

Computer Skills

Linux/Unix and Windows Operating Systems

Computer Languages: Fortran77, Fortran90, C, NCL, IDL, MATLAB, EXCEL, HTML
-Experience in designing and implementing functions in FORTRAN77/FORTRAN90 and C
with Linux/Unix system.
-Working knowledge of graphical and statistical package such as NCL, IDL, and MATLAB.
-Knowledge of web design development.

Selected Publications

Su, L., and O. B. Toon (2011), Long-term trends and climate effects by Asian dust aerosols
using an integrated microphysical-climate-radiation model, *in preparation for the Journal of
Atmos. Chem. Phys.*

Su, L., and O. B. Toon (2011), Saharan and Asian dust: similarities and differences
determined by CALIPSO, AERONET, and a coupled climate-aerosol microphysical model,
Atmos. Chem. Phys., 11, 3263-3280, doi:10.5194/acp-11-3263-2011.

- Su, L.**, and O. B. Toon (2010), Modeling the Effect of Asian Dust Aerosols on Precipitation and Radiation Budget over Asia and the Pacific using a Climate/Microphysical Sectional Model, *in preparation for the Journal of Geophysical Research-Atmospheres*.
- Su, L.**, and O. B. Toon (2009), Numerical Simulations of Asian Dust Storms Using a Coupled Climate-Aerosol Microphysical Model, *J. Geophys. Res.*, 114, D14202, doi:10.1029/2008JD010956.
- Tao Zhang, Guoxiong Wu, Yufu Guo, and **Lin Su** (2006), A Comparison between Two Versions of the GOALS Model in an Atmospheric Energy Cycle Diagnosis, *Chinese J. Atmos. Sci.*, Vol. 30, No.2, 195-216.
- Lin Su** and Fei Hu (2000), The Flux-Variance Relations of Temperature and Humidity Determined by Eddy Correlation, *Collection of Papers Presented at the Sixth Chinese Youth's Conference on Atmospheric Sciences*, Zhang Jiajie, China.
- Shaohou Qu, Fei Hu, Yaqiu Li, and **Lin Su** (2000), Some Characteristics of Air-Sea Exchange for the SCS Summer Monsoon during the SCSMEX in 1998, *Climatic and Environmental Research*, 5, 434-445.

Selected Conferences

- Su, L** and O. B. Toon (December 2010), Similarities and differences between Asian and Saharan dust from models, satellite- and ground-based data, *to be presented at the American Geophysical Union fall meeting*, San Francisco, California, USA.
- Su, L** and O. B. Toon (October 2010), A Satellite View of the Optical Properties of Asian Dust and its Comparison to the Climate/Microphysical Sectional Model, *presented at the International A-Train Science Symposium*, New Orleans, Louisiana, USA.
- Su, L.**, and O. B. Toon (December 2009), New Discoveries and Insights from Comparisons between Saharan and Asian Dust Using Satellites and a Coupled Climate/Microphysical Model, *poster presented at the American Geophysical Union fall meeting*, San Francisco, California, USA.
- Su, L.**, and O. B. Toon (June 2009), Comparison of Asian Dust Optical Properties between Satellite Observations and the CAM/CARMA Simulations, *be presenting at 14th Annual Workshop of Community Climate System Model (CCSM)*, Breckenridge, Colorado, USA.
- Su, L.**, and O. B. Toon (December 2008), Comparison of the Optical Properties of Asian Dust between Satellites and the CAM/CARMA Sectional Model, *poster presented at the American Geophysical Union fall meeting*, San Francisco, California, USA.
- Su.**, and O. B. Toon (June 2008), Numerical Simulations of Asian Dust Storms Using a Coupled Climate/Microphysical Model, *poster presented at 13th Annual Workshop of Community Climate System Model (CCSM)*, Breckenridge, Colorado, USA.
- Su, L.**, and O. B. Toon (February 2008), Modeling the Emission, Transport and Optical Properties of Asian Dust Storms Using Coupled CAM/CARMA Dust Model, *talk presented at the National Center for Atmospheric Research (NCAR) CCSM Atmospheric Model Working Group Meeting*, Boulder, Colorado, USA.
- Su, L.**, and O. B. Toon (December 2007), impact of Asian Dust Storms on Downwind Regions as Simulated by the CAM/CARMA Dust Model, *poster presented at the American Geophysical Union fall meeting*, San Francisco, California, USA.
- Su, L.**, and O. B. Toon (October 2007), Asian Dust Storm Simulations by the CAM/CARMA Dust Model, *Atmospheric and Oceanic Sciences student poster conference*, University of Colorado at Boulder, Colorado, USA.

Field Experience

Field campaign: the Turbulent Characteristic in the Surface Layer over Dune at Naiman in Inner Mongolia, China, summer 2000.

Honors and Awards

Sigma Xi, University of Colorado Chapter, Feb. 2011 - Present

NASA Earth and Space Science Fellowship (NESSF) Awards, Sept. 2009- May 2012

Invitation to attend CCSM-AMWG Climate Modeling Tutorial, July 2009

Travel Award, NCAR 14th Annual CCSM Workshop, Breckenridge, CO, June 2009.

Selected for Advanced Study Program Summer Colloquium on Numerical techniques for global atmospheric models, NCAR, Boulder, CO, 2008.

Travel Award, NCAR 13th Annual CCSM Workshop, Breckenridge, CO, June 2008.

Nominated by Dean of Graduate School at CU Boulder (Feb. 2008) sponsored AAAS/Science membership for Excellence in Science.

Travel Award, NCAR 12th Annual CCSM Workshop, Breckenridge, CO, June 2007.

Outstanding Student Institute Scholarship, Nanjing Institute of Meteorology (NIM), Nanjing, China, 1993-1997.

Academic Excellence Awards, Nanjing Institute of Meteorology (NIM), Nanjing, China, 1993-1997.

Research Proposals

2009 *“Modeling of Asian Dust Aerosols using a Coupled Microphysical/Climate Model”*
NASA Earth and Space Science Fellowship (NESSF) Program

2010 *Progress report for “Modeling of Asian Dust Aerosols using a Coupled Microphysical/Climate Model”*
NASA Earth and Space Science Fellowship (NESSF)

Professional Affiliations

American Association for the Advancement of Science (AAAS), February 2008 to present

American Meteorological Society (AMS), January 2008 to Present

American Geophysical Union (AGU), 2006 to Present

Chinese-American Oceanic and Atmospheric Association (COAA), 2002 to 2003

Professional Volunteer Service

Reviews & Referees

Peer review of manuscripts for scientific journals:

Science of the Total Environment (STOTEN), Nov., 2009

Theoretical and Applied Climatology (TAAC), Aug. & Nov., 2010

Geoscientific Model Development (GMD), Dec., 2010

Atmospheric Chemistry and Physics (ACP), May & June 2011

Volunteer Service

Environment Colorado Membership, 2008 to present

ATOC Poster Conference Volunteer, University of Colorado at Boulder, CO, 2008

ATOC Poster Conference Volunteer, University of Colorado at Boulder, CO, 2007

Graduate Representative, Space Committee, Department of Atmospheric and Oceanic Sciences, University of Colorado at Boulder, CO, 2006.

7th International Carbon Dioxide Conference Volunteer, Broomfield & Boulder, CO, 2005.