

Biographical Sketch
CHARLES S. (CHARLIE) ZENDER

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i. PROFESSIONAL PREPARATION

Harvard University, Cambridge MA	Physics	B.A.	1990
University of Colorado at Boulder	Astrophys., Planetary, & Atmospheric Sci.	M.S.	1993
University of Colorado at Boulder	Astrophys., Planetary, & Atmospheric Sci.	Ph.D.	1996

ii. APPOINTMENTS

7/05– Associate Professor of Earth System Science, University of California, Irvine
8/07–8/08 Visiting Researcher, Laboratoire de Glaciologie Géophysique de l'Environnement (LGGE), Grenoble, France
3/00–2/06 Affiliate Scientist of the Climate and Global Dynamics (CGD) Division, National Center for Atmospheric Research (NCAR), Boulder, CO
7/99–6/05 Assistant Professor of Earth System Science, University of California, Irvine
7/98–6/99 Visiting Scientist in Atmospheric Chemistry and CGD Divisions, NCAR
7/96–6/98 Postdoctoral Fellow, Advanced Studies Program, NCAR
8/91–6/96 Graduate Research Assistant, University of Colorado at Boulder
1/91–6/91 Visiting Faculty in Physical Sciences, College of the Atlantic, Bar Harbor, ME

iii. (a). FIVE PUBLICATIONS RELATED TO PROPOSED TOPIC

Capps, S. B., and C. S. Zender (2009), Global Ocean Wind Power Sensitivity to Surface Layer Stability, *Geophys. Res. Lett.*, **36**, L09801, doi:10.1029/2008GL037063. ([PDF](#))
Capps, S. B., and C. S. Zender (2008), Observed and CAM3 GCM Sea Surface Wind Speed Distributions: Characterization, Comparison, and Bias Reduction, *J. Climate*, **21**(24), 6569–6585, doi:10.1175/2008JCLI2374.1. ([PDF](#))
Flanner, M. G., C. S. Zender, P. G. Hess, N. M. Mahowald, T. H. Painter, V. Ramanathan, and P. J. Rasch (2009), Springtime Warming and Reduced Snow Cover from Carbonaceous Particles, *Atmos. Chem. Phys.*, **9**(7), 2481–2497, <http://www.atmos-chem-phys.net/9/2481/2009>. ([PDF](#))
Zender, C. S., and H. J. Mangalam (2007), Scaling Properties of Common Statistical Operators for Gridded Datasets, *Int. J. High Perform. Comput. Appl.*, **21**(4), 485–498, doi:10.1177/1094342007083802. ([PDF](#))
Zender, C. S., H. Bian, and D. Newman (2003), Mineral Dust Entrainment And Deposition (DEAD) model: Description and 1990s dust climatology, *J. Geophys. Res.*, **108**(D14), 4416, doi:10.1029/2002JD002775. ([PDF](#))

iii. (b). FIVE ADDITIONAL PUBLICATIONS

Han, Q., J. K. Moore, **C. S. Zender**, C. Measures, and D. Hydes (2008), Constraining Oceanic Dust Deposition Using Surface Ocean Dissolved Al, *Global Biogeochem. Cycles*, **22**, GB2003, doi:10.1029/2007GB002975. ([PDF](#))

Flanner, M. G., **C. S. Zender**, J. T. Randerson, and P. J. Rasch (2006), Present-Day Climate Forcing and Response from Black Carbon in Snow, *J. Geophys. Res.*, **112**(D11), D11202, doi: 10.1029/2006JD008003. ([PDF](#))

McConnell, J. R., P. R. Edwards, G. L. Kok, M. G. Flanner, **C. S. Zender**, E. S. Saltzman, J. R. Banta, D. R. Pasteris, M. M. Carter, and J. D. W. Kahl (2007), 20th-Century Industrial Black Carbon Emissions Altered Arctic Climate Forcing, *Science*, **317**(5843), 1381–1384, doi:10.1126/science.1144856. ([PDF](#))

Zender, C. S., and J. Talamantes (2006), Solar Absorption by Mie Resonances in Cloud Droplets, *J. Quant. Spectrosc. Radiat. Transfer*, **98**(1), 122–129, doi:10.1016/j.jqsrt.2005.05.084. ([PDF](#))

Zender, C. S. and E. Y. Kwon (2005), Regional Contrasts in Dust Emission Responses to Climate, *J. Geophys. Res.*, **110**, D13201, doi:10.1029/2004JD005501. ([PDF](#))

iv. SYNERGISTIC ACTIVITIES

1. Author/maintainer: Freely Available Community Texts ([FACTs](#)) on [Radiative Transfer in the Earth System](#) and [Natural Aerosols in the Climate System](#). 1999–present.
2. Author and maintainer, Dust Entrainment and Deposition ([DEAD](#)) Model
3. Author and maintainer, netCDF Operators ([NCO](#))
4. Director, UCI Earth System Modeling Facility ([ESMF](#))
5. PI: NASA [IPY06 NNX07AR23G](#): “Black Carbon Impacts on Cryospheric Climate Sensitivity and Surface Hydrology”, 8/2/2007–8/1/2010.

v. (a) COLLABORATORS (past 48 months) & CO-EDITORS (past 24 months)

S. Behseta (CSUB), P. Chýlek (LANL), F. Dominé (LGGE), M. Dubey (LANL), P. R. Edwards (DRI), J. Famiglietti (UCI), M. G. Flanner (UM), C. Folland (Hadley Centre), S. J. S. Khalsa (NSIDC), S. Jenks (UCI), N. M. Mahowald (NCAR), C. Measures (U. Hawaii), J. McConnell (DRI), J. K. Moore (UCI), D. Muhs (USGS), T. Painter (NSIDC), J. Randerson (NCAR), P. J. Rasch (NCAR), J. Talamantes (CSUB), I. Tegen (LITR)

v. (b) GRADUATE AND POSTDOCTORAL ADVISORS

G. T. Thomas (CU), J. T. Kiehl (NCAR), W. A. Cooper (NCAR)

v. (c) THESIS ADVISOR AND POSTGRADUATE SCHOLAR SPONSOR

Chair or co-Chair of Thesis committee: Scott Capps (UCI), Dr. Mark Flanner (UCI), Dr. Alf Grini (U. Oslo), Qin Han (UCI), Mike Tosca (UCI), Dr. Daniel Wang (UCI)

Member of Thesis committee: Ray Anderson (UCI), Dr. Aaron Berg (UCI), Dr. Huisheng Bian (UCI), Rick Hansell (UCLA), Dr. Brian Kahn (UCLA), Aparna Krishnamurthy (UCI), MinHui Lo (UCI), Dr. Marco Rodriguez (UCI)

Postdoctoral scholars supervised: Dr. Robert Allen (current), Dr. Huisheng Bian (UMBC GEST/NASA GSFC), Dr. Xianwei Wang (current)

Total number of graduate students supervised: 6.

Total number of postgraduate scholars sponsored: 3.