

SLOAN COATS

Curriculum Vitae

CIRES
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PROFESSIONAL APPOINTMENTS

University of Colorado, Boulder, CO
CIRES Research Associate 2015-

EDUCATION

Columbia University, New York, NY
Ph.D., Atmospheric Science, Department of Earth and Environmental Sciences* 2015
M.A., Atmospheric Science, Department of Earth and Environmental Sciences 2012
**Dissertation awarded the Science for Society Prize*

University of California at Berkeley, Berkeley, CA
B.A., *High Honors*, Environmental Economics and Policy 2009
B.S., *High Honors*, Geography 2009

TEACHING EXPERIENCE

University of Colorado, Dept. of Atmospheric and Oceanic Sciences, Boulder, CO
Lecturer: Atmospheric and Oceanic Sciences 1060: Our Changing Environment Spring 2016

Columbia University, Dept. of Earth & Environmental Sciences, New York, NY
Teaching Assistant: Earth and Environmental Science 2100: The Climate System Fall 2012
Teaching Assistant: Earth and Environmental Science 2100: The Climate System Fall 2011

PUBLICATIONS

Published and In Press

9. **Coats, S.**, J.E. Smerdon, K.B. Karnauskas and R. Seager, The improbable but unexceptional occurrence of North American megadrought clustering during the Medieval Climate Anomaly, *Environmental Research Letters*, in press.
8. Cook, B.I., E.R. Cook, J.E. Smerdon, R. Seager, A.P. Williams, **S. Coats**, D.W. Stahle and J.V. Diaz, North American megadroughts in the Common Era: Reconstructions and simulations, *WIRES Climate Change*, 2016. DOI: 10.1002/wcc.394
7. **Coats, S.**, D. Griffin, R. Seager, J.E. Smerdon and B.I. Cook, Winter-to-summer precipitation phasing in southwestern North America: A multi-century perspective from paleoclimatic model-data comparisons, *Journal of Geophysical Research: Atmospheres*, 2015. DOI: 10.1002/2015JD023085
6. Smerdon, J.E., **S. Coats** and T.R. Ault, Model-dependent spatial skill in pseudoproxy experiments testing

climate field reconstruction methods for the Common Era, *Climate Dynamics*, 2015. DOI: 10.1007/s00382-015-2684-0

5. **Coats, S.**, B.I. Cook, J.E. Smerdon and R. Seager, North American pan-continental droughts in model simulations of the last millennium, *Journal of Climate*, 2015. DOI: 10.1175/JCLI-D-14-00634.1
4. **Coats, S.**, J.E. Smerdon, B.I. Cook and R. Seager, Are simulated megadroughts in the North American southwest forced?, *Journal of Climate*, 2015. DOI: 10.1175/JCLI-D-14-00071.1
3. Cook, B.I., J.E. Smerdon, R. Seager and **S. Coats**, Global warming and 21st century drying, *Climate Dynamics*, 2014. DOI: 10.1007/s00382-014-2075-y
2. **Coats, S.**, J.E. Smerdon, B.I. Cook and R. Seager, Stationarity of the tropical Pacific teleconnection to North America in the CMIP5/PMIP3 model simulations, *Geophysical Research Letters*, 2013. DOI: 10.1002/grl.50938
1. **Coats, S.**, J.E. Smerdon, R. Seager, B.I. Cook and J.F. González-Rouco, Megadroughts in southwestern North America in millennium-length ECHO-G simulations and their comparison to proxy drought reconstructions, *Journal of Climate*, 2013. DOI: 10.1175/JCLI-D-12-00603.1

Submitted or In Review

3. **Coats, S.** and K.B. Karnauskas, An ocean dynamical thermostat: dominant in observations, absent in climate models, *Science*, resubmitting.
2. **Coats, S.** and J.S. Mankin, How large is a large ensemble? A case study of North American megadroughts, *Geophysical Research Letters*, in review.
1. **Coats, S.**, J.E. Smerdon, B.I. Cook, R. Seager, E.R. Cook and K.J. Anchukaitis, Internal ocean-atmosphere variability drives megadroughts in Western North America, *Geophysical Research Letters*, in review.

In Preparation

1. Baek, S.H., J.E. Smerdon, **S. Coats**, B.I. Cook, R. Seager and A.P. Williams, Seasonality and teleconnection signals across the North American, Monsoon Asia, and Old World Drought Atlas, *The Holocene*, in prep.

SELECTED PRESENTATIONS

6. **Coats, S.**, J.E. Smerdon, B.I. Cook, R. Seager, E.R. Cook and K.J. Anchukaitis, Internal ocean-atmosphere variability drives megadroughts in Western North America, CLIVAR Workshop on Decadal Variability and Predictability, 2015 (Oral) and AGU Fall Meeting, 2015 (Oral).
5. **Coats, S.**, B.I. Cook, J.E. Smerdon and R. Seager, North American pan-continental droughts in model simulations of the last millennium, AGU Fall Meeting, 2014 (Oral).
4. **Coats, S.**, J.E. Smerdon, B.I. Cook and R. Seager, Are simulated megadroughts in the North American southwest forced?, AGU Fall Meeting, 2013 (Poster).
3. **Coats, S.**, J.E. Smerdon, B.I. Cook and R. Seager, Stationarity of the tropical Pacific teleconnection to North America in the CMIP5/PMIP3 model simulations, Third International Workshop on Climate Informatics, 2013 (Poster).
2. **Coats, S.**, J.E. Smerdon, R. Seager, B.I. Cook and J.F. González-Rouco, Megadroughts in southwestern North America in millennium-length ECHO-G simulations and their comparison to proxy drought reconstructions, AGU Fall Meeting, 2012 (Poster).

1. **Coats, S.**, Q. Fu, J.E. Smerdon, A. Banerjee and R. Seager, Model-data comparisons of hydroclimate variability in the North American southwest using Markov Random Field methods for drought detection, Second International Workshop on Climate Informatics, 2012 (Oral + Poster).

FELLOWSHIPS AND AWARDS

DEES Science for Society Prize	2015
AGU Fall Meeting Outstanding Student Presentation Award	2013
Phi Beta Kappa	2009

SERVICE AND OUTREACH

LDEO Division of Ocean and Climate Physics Seminar Organizer	2014-2015
Earth Institute Student Advisory Council	2012-2013
Reviewer: Journal of Climate, Geophysical Research Letters, Environmental Research Letters, Nature Climate Change	2013-