

**David W. Pierce, Ph. D.**

Programmer/Analyst

Division of Climate, Atmospheric Sciences, and Physical Oceanography

Scripps Institution of Oceanography

La Jolla, CA 92093-0224

dpierce@ucsd.edu 858 534-8276

**Education**

B.A. in Physics, with honors: University of California, Santa Cruz, 1984. Thesis topic: Paraelectric resonance in KI:OH<sup>-</sup> under hydrostatic pressure.

M.S., Physical Oceanography: University of Washington, Seattle, WA, 1989. Thesis topic: The effect of North Atlantic Deep Water of Weddell Sea ice formation.

Ph.D., Physical Oceanography: University of Washington, Seattle, WA, 1993. Thesis topic: Numerical and Lab Studies of Rotating Convection. Advisor: Peter Rhines

**Publications**

DeFlorio, M. J., I. D. Goodwin, D. R. Cayan, A. J. Miller, S. J. Ghan, D. W. Pierce, L. M. Russell, and B. Singh, 2016: **Interannual modulation of subtropical Atlantic boreal summer dust variability by ENSO**. *Climate Dynamics*, v. 46, p. 585-599, DOI: 10.1007/s00382-015-2600-7.

Pierce, D. W. and D. R. Cayan, 2015: **Downscaling humidity with Localized Constructed Analogs (LOCA) over the conterminous United States**. *Climate Dynamics*, DOI 10.1007/s00382-015-2845-1.

Pierce, D. W., D. R. Cayan, E. P. Maurer, J. T. Abatzoglou, K. C. Hegewisch, 2015: **Improved bias correction techniques for hydrological simulations of climate change**. *J. Hydromet.*, v. 16, p. 2421-2442. DOI: <http://dx.doi.org/10.1175/JHM-D-14-0236.1>.

Livneh, B., T. J. Bohn, D. W. Pierce, F. Munoz-Arriola, B. Nijssen, R. Vose, D. R. Cayan, and L. Brekke, 2015: **A spatially comprehensive, hydrometeorological data set for Mexico, the U.S., and Southern Canada 1950-2013**. *Scientific Data*, v. 2, article 150042 (2015). doi:10.1038/sdata.2015.42.

Xu, L., D. W. Pierce, L. M. Russell, A. J. Miller, R. C. J. Somerville, C. H. Twohy, S. J. Ghan, B. Singh, J-H Yoon, P. J. Rasch, 2015: **Interannual to decadal climate variability of sea salt aerosols in the coupled climate model CESM1.0**. *J. Geophys. Res. Atmos.*, DOI: 10.1002/2014JD022888.I

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Das, T., E. P. Maurer, D. W. Pierce, M. D. Dettinger, and D. R. Cayan, 2013: **Increases in Flood Magnitudes in California Under Warming Climates**. *J. Hydrology*, v. 501, 101-110.

Pierce, D. W., D. R. Cayan, T. Das, E. P. Maurer, N. L. Miller, Y. Bao, M. Kanamitsu, K. Yoshimura, M. A. Snyder, L. C. Sloan, G. Franco, and M. Tyree, 2013: **The key role of heavy precipitation events in climate model disagreements of future annual precipitation changes in California**. *J. Climate*, v. 26, p. 5879-96.

Pierce, D. W., A. L. Westerling, and J. Oyler, 2013: **Future humidity trends over the western United States in the CMIP5 global climate models and variable infiltration capacity hydrological modeling system**. *Hydrol. Earth Syst. Sci.*, v. 17, p. 1833-50.

Pierce, D. W., T. Das, D. R. Cayan, E. P. Maurer, N. L. Miller, Y. Bao, M. Kanamitsu, K. Yoshimura, M. A. Snyder, L. C. Sloan, G. Franco, M. Tyree, 2013: **Probabilistic estimates of future changes in California temperature and precipitation using statistical and dynamical downscaling**. *Climate Dynamics*, v. 40, 839-856. doi 10.1007/s00382-012-1337-9.

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Pierce, D. W., P. J. Gleckler, T. P. Barnett, B. D. Santer, and P. J. Durack, 2012: **The fingerprint of human-induced changes in the ocean's salinity and temperature fields**. *Geophys. Res. Lett.*, v. 39, L21704, doi:10.1029/2012GL053389.

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Pierce, D. W., Ed., 2012: **California Climate Extremes Workshop Report**. Scripps Institution of Oceanography, La Jolla, CA. 32 pp. Available at [http://meteora.ucsd.edu/~pierce/papers/CA\\_climate\\_extremes\\_report\\_SIO\\_Dec2011.pdf](http://meteora.ucsd.edu/~pierce/papers/CA_climate_extremes_report_SIO_Dec2011.pdf)

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Pierce, D. W., T. P. Barnett, E. J. Fetzer, and P. J. Gleckler, 2006: **Three-dimensional tropospheric water vapor in coupled climate models compared with observations from the AIRS satellite system**. Geophys. Res. Lett., v. 33, L21701, doi:10.1029/2006GL027060.

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AchutaRao, K. M., Gleckler, P. J., Santer, B. D., Taylor, K. E., Pierce, D. W., and Barnett, T. P., 2006: **Variability of Ocean Heat Uptake: Reconciling Observations and Models**. JGR Oceans, v. 111, C05019, doi 10.1029/2005JC003136.

Miller, A. J., A. J. Gabric, J. R. Moisan, F. Chai, D. J. Neilsno, D. W. Pierce, and E. Di Lorenzo, 2006: **Global change and ocean primary productivity: Effects of Ocean-Atmosphere-Biological feedbacks**. In *Global climate change and response of carbon cycle in the Equatorial Pacific and Indian Oceans and adjacent landmasses*, H. Kawahata and Y. Awaya eds. Elsevier oceanography series 73.

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Alfaro, E. J., Pierce, D. W., Steinemann, A. C., and Gershunov, A., 2005: **Relationships Between the Irrigation Pumping Electrical Loads and the Local Climate in Climate Division 9, Idaho**. J. Appl. Meteorol., v. 44, p. 1972-1978.

Voisin, N., Hamlet, A. F., Graham, L. P., Pierce, D. W., Barnett, T. P., and Lettenmaier, D. P., 2005: **The role of climate forecasts in western U.S. power planning**. J. Appl. Meteorol., v. 45, p. 653-673.

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Yulaeva, E., Schneider, N., Pierce, D. W., and Barnett, T. P., 2001: **Modeling of North Pacific climate variability forced by oceanic heat fluxes anomalies.** J. Climate , v. 14, p. 4027-4046

Pierce, D. W., Barnett, T. P., and Latif, M., 2000: **Connections between the Pacific Ocean tropics and midlatitudes on decadal time scales.** J. Climate , v. 13, p. 1173-1194

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Pierce, D. W., Barnett, T. P., and Mikolajewicz, U., 1995: **Competing Roles of Heat and Fresh Water Fluxes in Forcing Thermohaline Oscillations**, J. Phys. Oceanogr. , v. 25, p. 2046-2064.

Pierce, D. W., and Stephens, B. K., 1995: **Visualizing Geophysical Data: Teasing Meaning from Models**. IEEE Computational Science & Engineering December, 1995

### **Recent Invited Presentations to Stakeholders, Community Outreach Efforts, Media Interviews, Etc:**

2017/01/26 Invited to present to California Climate Change Symposium, topic: Physical Scenarios for California's Fourth Climate Change Assessment

2017/01/23 Media interview with Aaron Mendelson, Southern California Public Radio, on the status of winter to date precipitation in the Los Angeles region and California in general

2017/01/19 Media interview with Mary Beth Griggs, Popular Science, re snowpack and drought

2017/01/09: Media interview with David Wagner, KPBS, winter climate status update

2016/12/20 Media interview with Wendy Zukerman, Gimlet Media, for "Science Vs" podcast on climate change

2016/10/27 Presentation to Rear Admiral Timothy C. Galludet, Oceanographer and Navigator of the Navy, on climate model downscaling for improved local-scale climate projections

2016/10/25 Presentation to Barbara Bry, San Diego City Council representative for district 1, on regional climate change impacts

2016/08/24: CNAP/NIDIS webinar presentation on outlook for upcoming winter

2016/03/30: Interview with Aaron Mendelson, Southern California Public Radio, on the winter of 2015/2016

2016/03/21: Interview with Al Stahler, KVMR-FM, on El Nino, climate downscaling, and various other climate topics

2016/03/14: Presentation to Dave Roberts, San Diego county Board of Supervisors, on CNAP climate research applicable to local decision-makers

2016/03/03 Media interview with Robinson Meyer, The Atlantic, on El Nino prediction efforts

2016/2/23: Presentation to Pauma Valley community association: El Nino and the winter of 2015/2016

2016/2/11: Presentation to California delegation to U.S. House of Representatives: Update on El Nino conditions

2016/01/29: Al Jazeera America, The El Nino winter of 2015/2016

2016/01/29: Julia Ostmann, Harvard Crimson, Effect of El Nino on California

2016/01/22: NIDIS workshop: ENSO update

2016/01/21: David Wagner, KPBS, winter outlook update

2016/01/15: Henry Fountain, New York Times, El Nino modeling and forecasting

2016/01/08: David Wagner KPBS, winter outlook update

2015/12/29:: Media interview with David Wagner of KPBS, update on California's precipitation and snowpack so far this winter

2015/12/08: Presentation to US Navy Rear Admiral Markham Rich, on high tides in San Diego region forced by El Nino, East Pacific Hurricanes, and Climate Change

2015/12/04: La Jolla Kiwanis Club, El Nino: What it means for San Diego

2015/12/03: San Diego Chamber of Commerce on the El Nino of 2015/2016

2015/11/03: Presentation to the California delegation to the U.S. House of Representatives on the developing El Nino

2015/11/05: La Jolla Community Center, "El Nino and what it means to California"

2015/11/10: KPBS interview on effect of El Nino on California's precipitation

2015/11/12: Public outreach event with U.S. Representative Susan Davis on understanding El Nino and the upcoming winter

2015/11/17: Presentation to California Dept. of Boating and Waterways on future prospects for drought in a warming world

2015/11/19: Scripps Institution of Oceanography public outreach event on El Nino; "The El Nino of 2015"

2015/10-16-2015 David Downey, Riverside Press-Enterprise, El Nino impact on Southern California

2015/10/22: Archana Ram, San Diego magazine, San Diego impacts of El Nino

2015/10/23: Jacqueline Bennett, San Diego Channel 6 weather, El Nino current update

2015/10/23: Dave Schwab | Reporter | San Diego Community Newspaper Group, El Nino coastal impacts

2015/10/29: Monte Morin, LA Times, Background and History of El Nino processes and forecasting

2015/09/17: Presentation to Good Neighbor Environmental Board (GNEB) of U.S. EPA on climate change in San Diego/Tijuana boarder region

2015/09/14 Media interview with Dagmar Midcap, NBC7 San Diego, on unusual sea temperatures