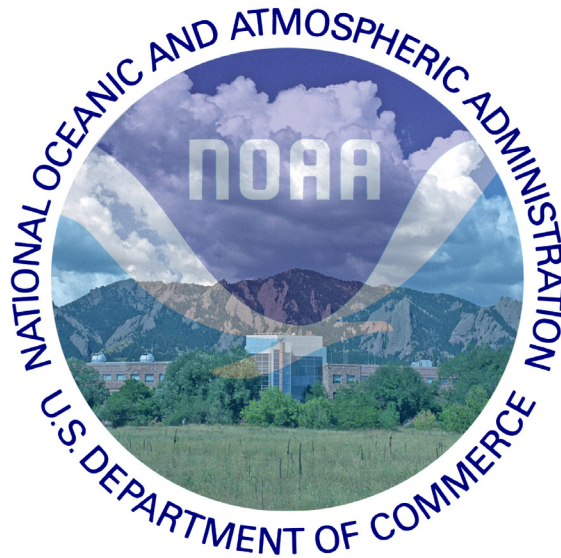


Publications and Citations



**ESRL Physical Sciences Division
Science Review
May 12-14, 2015**

PSD Publications and Citations

Publications

PSD authors publish approximately 120 peer-reviewed papers per year. The table below illustrates the number of papers published for the five calendar years 2010-2014 normalized by the number of PSD publishing scientists (approximately 80). The PSD publication database can be accessed at (<http://www.esrl.noaa.gov/psd/pubs/view/year/2014.html>).

Year	# Publications	Papers/Scientist
2010	106	1.3
2011	115	1.4
2012	118	1.5
2013	137	1.7
2014	117	1.4
Average	119	1.5

Citations

Shown below are the lifetime publication and citation counts, and Hirsch-index¹ or H-index values for current PSD scientists. This list reflect those who have an H-index of 10 or greater (55 scientists). Web of Science[®], which includes only peer-reviewed works, was used to generate the data below.

PSD Author	Total Publications	Total Citations	H-Index
Christopher Fairall	238	8087	44
Henry Diaz	138	6346	42
George Kiladis	113	5795	40
Martin Hoerling	91	4608	37
Michael Alexander	87	4358	36
Prashant Sardeshmukh	70	4010	33
Thomas Hamill	69	3965	29
Sergey Matrosov	109	2140	29
Ola Persson	56	2217	28
Matthew Shupe	75	2394	28
Paul Neiman	79	2135	27
Judith Perlwitz	61	2984	27
Allen White	68	2048	27
Brant Liebmann	54	3186	25

PSD Author	Total Publications	Total Citations	H-Index
Cécile Penland	44	1831	23
Robert Pincus	40	2198	23
Jeffrey Whitaker	49	3325	23
James Wilczak	58	2057	23
William Neff	72	2140	23
Christopher Williams	60	1398	23
Byron Blomquist	50	1320	22
Robert Cifelli	46	1253	22
Matthew Newman	39	2034	22
Edward Walsh	61	1324	21
David Kingsmill	37	1004	20
David Carter	43	1127	19
Randall Dole	36	1248	19
Philip Pegion	31	1954	19
Ryan Spackman	55	1388	19
Robert Webb	36	1801	19
Gary Bates	28	3061	18
Gary Wick	58	1535	18
Gilbert Compo	32	5796	17
Lisa Darby	30	981	17
David Reynolds	51	832	17
Oleg Godin	129	870	16
Janet Intrieri	22	1109	16
Darren Jackson	28	918	15
Paul Johnston	34	546	15
De-Zheng Sun	31	738	15
Alexander Voronovich	65	899	15
Robert Zamora	37	632	15
Valery Zavorotny	52	815	15
Antonietta Capotondi	32	909	14
Vladimir Ostashev	87	633	14
Richard Lataitis	35	488	13
James Scott	27	1188	13
Laura Bianco	23	282	12
Irina Djalalova	16	360	12
Alfred Bedard	61	429	11
Klaus Wolter	18	713	11
Joseph Barsugli	22	671	10

PSD Author	Total Publications	Total Citations	H-Index
Ben Livneh	20	380	10
Lesley Smith	13	675	10
Amy Solomon	26	526	10

¹ Hirsch, J. E., 2005: An index to quantify an individual's scientific research output. *Proceedings of the National Academy of Sciences*, **102** (46), 16569-16572, doi:10.1073/pnas.0507655102

HIGHLY CITED (> 100 CITATIONS)

A number of PSD scientists have publications that have been cited over 100 times. Examples include:

Deser, C., M. A. Alexander, S.-P. Xie, and A. S. Phillips, 2010: Sea surface temperature variability: Patterns and mechanisms. *Annual Review of Marine Sciences*, **2**, 115-143.

Fairall, C.W., E.F. Bradley, D.P. Rogers, J.B. Edson, and G.S. Young, 1996: Bulk parameterization of air-sea fluxes for TOGA COARE. *J. Geophys. Res.*, **101**, 3747-3767.

Fairall, C. W., J. E. Hare, J. B. Edson, and W. McGillis, 2000: Parameterization and micrometeorological measurement of air-sea gas transfer. *Bound.-Layer Meteorol.*, **96**, 63-105.

Intrieri, J. M. C. W. Fairall, M. D. Shupe, P. O. G. Persson, E. L. Andreas, P. S. Guest, and R. E. Moritz, 2002: Annual cycle of cloud forcing at SHEBA. *J. Geophys. Res.*, **107**, 8039.

Fairall, C.W., J. Kepert, and G.J. Holland, 1995: The effect of sea spray on surface energy transports over the ocean. *The Global Atmospheric Ocean System*, **2**, 121-142.

Kiladis, G. N., M. C. Wheeler, P. T. Haertel, K. H. Straub, and P. E. Roundy, 2009: Convectively coupled equatorial waves. *Rev. Geophys.*, **47**, RG2003.

Kiladis, G. N., K. H. Straub, and P. T. Haertel, 2005: Zonal and vertical structure of the Madden-Julian Oscillation. *J. Atmos. Sci.*, **62**, 2790-2809.

Lin, J. -L, G. N. Kiladis, et al., 2006: Tropical intraseasonal variability in 14 IPCC AR4 climate models: Part I: Convective signals. *J. Climate*, **19**, 2665-2690.

Matrosov, S.Y., K.A. Clark, B.E. Martner, and A. Tokay, 2002: X-band polarimetric radar measurements of rainfall. *J. Appl. Meteor.*, **41**, 941-952.

Neiman, P.J., F.M. Ralph, A.B. White, D.E. Kingsmill, and P.O.G. Persson, 2002: The statistical relationship between upslope flow and rainfall in California's coastal mountains: Observations during CALJET. *Mon. Wea. Rev.*, **130**, 1468-1492.

Newman, M., G. P. Compo, M. A. Alexander, 2003: ENSO-forced variability of the Pacific Decadal Oscillation. *J. Climate*, **16**, 3853-3857.

Penland, C. and P. D. Sardeshmukh, 1995: The optimal growth of tropical sea-surface temperature anomalies. *J. Climate*, 8, 1999-2024.

Perlwitz, J., and H.-F. Graf 1995. The statistical connection between tropospheric and stratospheric circulation of the Northern Hemisphere in winter. *J. Climate* 8, 2281-2295.

Perlwitz, J., and N. Harnik, 2003: Observational evidence of a stratospheric influence on the troposphere by planetary wave reflection. *J. Climate* 16, 3011-3026.

Perlwitz, J., S. Pawson, R. L. Fogt, J.E. Nielsen, and W. D. Neff, 2008: Impact of stratospheric ozone hole recovery on Antarctic climate, *Geophys. Res. Lett.*, 35, L08714.

Persson, P. Ola G., C. W. Fairall, E. L. Andreas, P. S. Guest, and D. K. Perovich, 2002: Measurements near the Atmospheric Surface Flux Group tower at SHEBA: Near-surface conditions and surface energy budget. *J. Geophys. Res.* 107(C10).

Ralph, F.M., P.J. Neiman, and G.A. Wick, 2004: Satellite and CALJET aircraft observations of atmospheric rivers over the eastern North-Pacific Ocean during the winter of 1997/98. *Mon. Wea. Rev.*, 132, 1721-1745.

Sardeshmukh P.D., and B.J. Hoskins, 1988: The generation of global rotational flow by steady idealized tropical divergence. *J. Atmos. Sci.*, 45, 1228-1251.

Thomas, C. R., M. Alexander, and D. Lawrence, 2010: The seasonal atmospheric response to projected Arctic sea ice loss in the late 21st Century. *J. Climate*, 23, 333-351.

Whitaker, J. S., T. M. Hamill, X. Wei, Y. Song, and Z. Toth, 2008: Ensemble data assimilation with the NCEP Global Forecast System. *Mon. Wea. Rev.*, 136, 463–482.

Wilczak, J. M., S. P. Oncley, S.A. Stage (2001): Sonic anemometer tilt correction algorithms. *Boundary-Layer Meteorology*, 99, 127-150.

Zavorotny, V. U. and A. G. Voronovich, 2000: *IEEE Trans Geosci. Remote Sens.*, 38, 951-964.

HIGHLY CITED (WEB-OF-SCIENCE TOP 1% IN FIELD FOR GIVEN YEAR)

A number of PSD scientists have publications with a Web of Science Highly cited designation for receiving “enough citations to place the publication in the top 1% of its academic field based on a highly cited threshold for the field and publication year.” Examples include:

Alexander M. A., K. H. Kilbourne, J. A. Nye, 2014: Climate variability during warm and cold phases of the Atlantic Multidecadal Oscillation (AMO) 1871-2008. *Journal of Marine Systems*, 133, 14-26.

Bennartz, R., M. D. Shupe, D. D. Turner, V. P. Walden, K. Steffen, C. J. Cox, M. S. Kulie, N. B. Miller, and C. Pettersen, 2013: July 2012 Greenland melt extent enhanced by low-level liquid clouds. *Nature*, 496, 83-86. Compo, G. P., J. S Whitaker, P. D. Sardeshmukh, et al. (2011): The Twentieth Century Reanalysis Project. *Q.J.R. Meteorol. Soc.*, 137: 1–28.

Deser, C., A. S. Phillips, M. A. Alexander, and B. V. Smoliak, 2014: Projecting North American Climate over the next 50 years: Uncertainty due to internal variability. *J. Climate*, 27, 2271-2296.

Dole, R. M., Hoerling, J. Perlwitz, et al., 2011: Was there a basis for anticipating the 2010 Russian heat wave? *Geophys. Res. Lett.*, 38, L06702.

Hoerling, M. J. Eischeid, A. Kumar, et al., 2014: Causes and predictability of the 2012 Great Plains Drought. *Bull. Am. Meteorol. Soc.*, 95, 269-282.

Hoerling, M., J. Hurrell, J. Eischeid; et al., 2006: Detection and attribution of twentieth-century northern and southern African rainfall change. *J. Climate*, 19, 3989-4008.

Hoerling, M., J. Eischeid, J. Perlwitz, et al., 2012: On the increased frequency of Mediterranean drought. *J. Climate*, 25, 2146-2161.

Morrison, H., G. de Boer, G. Feingold, J. Harrington, M. D. Shupe, and K. Sulia, 2012: Resilience of persistent Arctic mixed-phase clouds. *Nature Geoscience*, 5, 11-17,

Peterson, T. C., M. P. Hoerling, P. A. Stott and S. C. Herring et al., 2013: Explaining Extreme Events of 2012 from a climate perspective. *Bull. Amer. Meteorol. Soc.*, 94, S1-S74.

Stock, C. A., M. A. Alexander, et al., 2010: On the use of IPCC-class models to assess the impact of climate on living marine resources. *Progress in Oceanography*, 88, 1-27.

Vano, J., ... M. P. Hoerling, ..., R. S. Webb, et al., 2014: Understanding uncertainties in future Colorado River streamflow. *Bull. Amer. Meteorol. Soc.*, 1, 59-78.

Wolter, K., and M.S. Timlin (2011): El Niño/Southern Oscillation behaviour since 1871 as diagnosed in an extended multivariate ENSO index (MEI.ext). *Int. J. Climatology*, 31, 1074-1087.

Assessments

PSD generates a number of assessments that utilize observational data and experiments with climate and hydrological models of different complexity to determine the physical factors that cause observed regional and seasonal climate trends and high-impact weather events. These assessments provide the best available science regarding factors causing high-impact weather and climate related extremes to allow policy makers to make informed decisions on how society should invest in critical infrastructure in risk-prone areas while ensuring resiliency. Some of these assessments are captured in peer-reviewed publications, but others are often summarized in reports or fact sheets. Below is a list of recent PSD assessment topics. More information can be found at <http://www.esrl.noaa.gov/psd/csi/>.

- 2013 Colorado Precipitation (Extreme Event)
- 2010 Russian Heat Wave (Extreme Event)
- 2009-10 Mid-Atlantic Snowstorms (Extreme Event)
- 2011 US Tornado Season (Extreme Event)
- 2012 Spring Warmth (Extreme Event)

- 2012 June Heat (Extreme Event)
- 2012 Hurricane Sandy (Extreme Event)
- 2011 Missouri Basin Flooding (Extreme Event)
- 2012 Central Great Plains Drought (Extreme Event)
- 2011-15 California Drought (Extreme Event)
- 2010 Pakistan Floods (Extreme Event)
- 2011 Texas Drought and Heatwave (Extreme Event)
- 2011 Extreme NAO (Extreme Event)
- 2013-4 Cold Winter (Extreme Event)
- Horn of Africa Rainfall Variability and Trends (Trend)
- Devil's Lake Hydroclimate Assessment (Trend)
- Mediterranean Drought (Trend)
- Great Plains Drought Trends (Trend)
- Sahel Precipitation Trends (Trend)
- Southeastern Australia Rainfall Trends (Trend)
- SW US and NW Mexico Precipitation Trends (Trend)
- Arctic Tropospheric Warming (Trend)
- Southern Africa Precipitation (Trend)
- Indian Monsoon Temperature and Precipitation Trends (Trend)