Dennis L Hartmann

List of Publications by Year
in descending order

124 papers	14,817 citations	14614 66 h-index	18606 119 g-index
125 all docs	125 docs citations	125 times ranked	8290 citing authors

#	Article	IF	Citations
1	The Seasonal Cycle of Low Stratiform Clouds. Journal of Climate, 1993, 6, 1587-1606.	1.2	1,289
2	The Effect of Cloud Type on Earth's Energy Balance: Global Analysis. Journal of Climate, 1992, 5, 1281-1304.	1.2	588
3	Modulation of Eastern North Pacific Hurricanes by the Maddenâ€“Julian Oscillation. Journal of Climate, 2000, 13, 1451-1460.	1.2	429
4	The Life Cycle of the Northern Hemisphere Sudden Stratospheric Warmings. Journal of Climate, 2004, 17, 2584-2596.	1.2	409
5	Eddyâ€“Zonal Flow Feedback in the Southern Hemisphere. Journals of the Atmospheric Sciences, 2001, 58, 3312-3327.	0.6	356
6	Modulation of Hurricane Activity in the Gulf of Mexico by the Madden-Julian Oscillation. Science, 2000, 287, 2002-2004.	6.0	340
7	An important constraint on tropical cloud - climate feedback. Geophysical Research Letters, 2002, 29, 12-1-12-4.	1.5	337
8	Connections Between Clouds, Radiation, and Midlatitude Dynamics: a Review. Current Climate Change Reports, 2015, 1, 94-102.	2.8	337
9	Wave-Maintained Annular Modes of Climate Variability*. Journal of Climate, 2000, 13, 4414-4429.	1.2	336
10	Frictional Moisture Convergence in a Composite Life Cycle of the Maddenâ€“Julian Oscillation. Journal of Climate, 1998, 11, 2387-2403.	1.2	315
11	Spatial Variability of Liquid Water Path in Marine Low Cloud: The Importance of Mesoscale Cellular Convection. Journal of Climate, 2006, 19, 1748-1764.	1.2	306
12	Eddies and the annular modes of climate variability. Geophysical Research Letters, 1999, 26, 3133-3136.	1.5	301
13	Eddyâ€“Zonal Flow Feedback in the Northern Hemisphere Winter. Journal of Climate, 2003, 16, 1212-1227.	1.2	261
14	The Maddenâ€“Julian Oscillation, Barotropic Dynamics, and North Pacific Tropical Cyclone Formation. Part I: Observations. Journals of the Atmospheric Sciences, 2001, 58, 2545-2558.	0.6	259
15	Wave-Driven Zonal Flow Vacillation in the Southern Hemisphere. Journals of the Atmospheric Sciences, 1998, 55, 1303-1315.	0.6	257
16	Pacific sea surface temperature and the winter of 2014. Geophysical Research Letters, 2015, 42, 1894-1902.	1.5	252
17	Tropospheric Precursors of Anomalous Northern Hemisphere Stratospheric Polar Vortices. Journal of Climate, 2010, 23, 3282-3299.	1.2	246
18	The heat balance of the tropical tropopause, cirrus, and stratospheric dehydration. Geophysical Research Letters, 2001, 28, 1969-1972.	1.5	227

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19	Why is longwave cloud feedback positive?. Journal of Geophysical Research, 2010, 115, .	3.3	223
20	Tropical Intraseasonal Oscillations in a Simple Nonlinear Model. Journals of the Atmospheric Sciences, 1993, 50, 2922-2939.	0.6	219
21	Tropical Convection and the Energy Balance at the Top of the Atmosphere. Journal of Climate, 2001, 14, 4495-4511.	1.2	210
22	Changes in the Distribution of Rain Frequency and Intensity in Response to Global Warming*. Journal of Climate, 2014, 27, 8372-8383.	1.2	204
23	Computing and Partitioning Cloud Feedbacks Using Cloud Property Histograms. Part I: Cloud Radiative Kernels. Journal of Climate, 2012, 25, 3715-3735.	1.2	195
24	On the Use of Earth Radiation Budget Statistics for Studies of Clouds and Climate. Journals of the Atmospheric Sciences, 1980, 37, 1233-1250.	0.6	192
25	Computing and Partitioning Cloud Feedbacks Using Cloud Property Histograms. Part II: Attribution to Changes in Cloud Amount, Altitude, and Optical Depth. Journal of Climate, 2012, 25, 3736-3754.	1.2	192
26	The Atmospheric Energy Constraint on Global-Mean Precipitation Change. Journal of Climate, 2014, 27, 757-768.	1.2	187
27	Increased Occurrence of Stratospheric Sudden Warmings during El NiÃ±o as Simulated by WACCM. Journal of Climate, 2006, 19, 324-332.	1.2	181
28	Evidence for Equatorial Kelvin Modes in Nimbus-7 LIMS. Journals of the Atmospheric Sciences, 1984, 41, 220-235.	0.6	180
29	On the Relationships among Low-Cloud Structure, Sea Surface Temperature, and Atmospheric Circulation in the Summertime Northeast Pacific. Journal of Climate, 1995, 8, 1140-1155.	1.2	175
30	The Sensitivity of Intraseasonal Variability in the NCAR CCM3 to Changes in Convective Parameterization. Journal of Climate, 2001, 14, 2015-2034.	1.2	160
31	Intraseasonal Periodicities in Indian Rainfall. Journals of the Atmospheric Sciences, 1989, 46, 2838-2862.	0.6	157
32	Stratosphere-troposphere evolution during polar vortex intensification. Journal of Geophysical Research, 2005, 110, .	3.3	156
33	Cloud feedback mechanisms and their representation in global climate models. Wiley Interdisciplinary Reviews: Climate Change, 2017, 8, e465.	3.6	154
34	Large-Scale Effects on the Regulation of Tropical Sea Surface Temperature. Journal of Climate, 1993, 6, 2049-2062.	1.2	153
35	Natural aerosols explain seasonal and spatial patterns of Southern Ocean cloud albedo. Science Advances, 2015, 1, e1500157.	4.7	144
36	Does the Holtonâ€“Tan Mechanism Explain How the Quasi-Biennial Oscillation Modulates the Arctic Polar Vortex?. Journals of the Atmospheric Sciences, 2012, 69, 1713-1733.	0.6	135

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37	Zonal Jet Structure and the Leading Mode of Variability. Journal of Climate, 2007, 20, 5149-5163.	1.2	128
38	Climate Feedbacks and Their Implications for Poleward Energy Flux Changes in a Warming Climate. Journal of Climate, 2012, 25, 608-624.	1.2	128
39	Mixedâ€phase cloud physics and Southern Ocean cloud feedback in climate models. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9539-9554.	1.2	120
40	On the relationships among cloud cover, mixedâ€phase partitioning, and planetary albedo in GCMs. Journal of Advances in Modeling Earth Systems, 2016, 8, 650-668.	1.3	120
41	Understanding the Importance of Microphysics and Macrophysics for Warm Rain in Marine Low Clouds. Part I: Satellite Observations. Journals of the Atmospheric Sciences, 2009, 66, 2953-2972.	0.6	118
42	Understanding the Importance of Microphysics and Macrophysics for Warm Rain in Marine Low Clouds. Part II: Heuristic Models of Rain Formation. Journals of the Atmospheric Sciences, 2009, 66, 2973-2990.	0.6	116
43	Disentangling Global Warming, Multidecadal Variability, and El NiÃ±o in Pacific Temperatures. Geophysical Research Letters, 2018, 45, 2487-2496.	1.5	114
44	Zonal Flow Vacillation and Eddy Forcing in a Simple GCM of the Atmosphere. Journals of the Atmospheric Sciences, 1993, 50, 3244-3259.	0.6	113
45	Influence of tropical cloud systems on the relative humidity in the upper troposphere. Journal of Geophysical Research, 1995, 100, 7423-7440.	3.3	105
46	The relationship between the ITCZ and the Southern Hemispheric eddyâ€driven jet. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5136-5146.	1.2	104
47	The Effect of the MJO on the North American Monsoon*. Journal of Climate, 2006, 19, 333-343.	1.2	103
48	Southern Hemisphere jet latitude biases in CMIP5 models linked to shortwave cloud forcing. Geophysical Research Letters, 2012, 39, .	1.5	99
49	The response of the Southern Hemispheric eddy-driven jet to future changes in shortwave radiation in CMIP5. Geophysical Research Letters, 2014, 41, 3244-3250.	1.5	98
50	A Trajectory Analysis of Tropical Upper-Tropospheric Moisture and Convection. Journal of Climate, 1997, 10, 2533-2547.	1.2	95
51	Seasonal Variations of Tropical Intraseasonal Oscillations: A 20â€“25-Day Oscillation in the Western Pacific. Journals of the Atmospheric Sciences, 1992, 49, 1277-1289.	0.6	94
52	The Influence of the Quasi-Biennial Oscillation on the Troposphere in Winter in a Hierarchy of Models. Part I: Simplified Dry GCMs. Journals of the Atmospheric Sciences, 2011, 68, 1273-1289.	0.6	94
53	Clouds and the Atmospheric Circulation Response to Warming. Journal of Climate, 2016, 29, 783-799.	1.2	94
54	Dynamical Feedbacks and the Persistence of the NAO. Journals of the Atmospheric Sciences, 2010, 67, 851-865.	0.6	89

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55	La NiÃ±aâ€“like Mean-State Response to Global Warming and Potential Oceanic Roles. Journal of Climate, 2017, 30, 4207-4225.	1.2	88
56	The Role of Clouds, Water Vapor, Circulation, and Boundary Layer Structure in the Sensitivity of the Tropical Climate. Journal of Climate, 1999, 12, 2359-2374.	1.2	87
57	No Evidence for Iris. Bulletin of the American Meteorological Society, 2002, 83, 249-254.	1.7	86
58	The observed sensitivity of high clouds to mean surface temperature anomalies in the tropics. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	85
59	On the net radiative effectiveness of clouds. Journal of Geophysical Research, 1991, 96, 869-891.	3.3	82
60	Mechanisms of the Negative Shortwave Cloud Feedback in Middle to High Latitudes. Journal of Climate, 2016, 29, 139-157.	1.2	81
61	Testing the Fixed Anvil Temperature Hypothesis in a Cloud-Resolving Model. Journal of Climate, 2007, 20, 2051-2057.	1.2	79
62	Detection of Rossby wave breaking and its response to shifts of the midlatitude jet with climate change. Journal of Geophysical Research, 2012, 117, .	3.3	76
63	Two Modes of Change of the Distribution of Rain*. Journal of Climate, 2014, 27, 8357-8371.	1.2	76
64	Rossby Wave Scales, Propagation, and the Variability of Eddy-Driven Jets. Journals of the Atmospheric Sciences, 2011, 68, 2893-2908.	0.6	75
65	Oceanâ€“Atmosphere Dynamical Coupling Fundamental to the Atlantic Multidecadal Oscillation. Journal of Climate, 2019, 32, 251-272.	1.2	74
66	Radiative and Convective Driving of Tropical High Clouds. Journal of Climate, 2007, 20, 5510-5526.	1.2	69
67	The Effect of Cloud Type on Earth's Energy Balance: Results for Selected Regions. Journal of Climate, 1992, 5, 1157-1171.	1.2	68
68	The Influence of the Quasi-Biennial Oscillation on the Troposphere in Winter in a Hierarchy of Models. Part II: Perpetual Winter WACCM Runs. Journals of the Atmospheric Sciences, 2011, 68, 2026-2041.	0.6	67
69	Observations of Wave-Mean Flow Interaction in the Southern Hemisphere. Journals of the Atmospheric Sciences, 1984, 41, 351-362.	0.6	63
70	The Atmospheric General Circulation and Its Variability. Journal of the Meteorological Society of Japan, 2007, 85B, 123-143.	0.7	61
71	On the Speed of the Eddy-Driven Jet and the Width of the Hadley Cell in the Southern Hemisphere. Journal of Climate, 2013, 26, 3450-3465.	1.2	61
72	Observed Southern Ocean Cloud Properties and Shortwave Reflection. Part II: Phase Changes and Low Cloud Feedback*. Journal of Climate, 2014, 27, 8858-8868.	1.2	61

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73	Observational evidence for a negative shortwave cloud feedback in middle to high latitudes. Geophysical Research Letters, 2016, 43, 1331-1339.	1.5	60
74	Response of Baroclinic Life Cycles to Barotropic Shear. Journals of the Atmospheric Sciences, 1998, 55, 297-313.	0.6	59
75	A PV View of Zonal Flow Vacillation. Journals of the Atmospheric Sciences, 1995, 52, 2561-2576.	0.6	56
76	The Change in Low Cloud Cover in a Warmed Climate Inferred from AIRS, MODIS, and ERA-Interim. Journal of Climate, 2017, 30, 3609-3620.	1.2	56
77	Antarctic Sea Ice Response to Weather and Climate Modes of Variability*. Journal of Climate, 2016, 29, 721-741.	1.2	52
78	Response of Humidity and Clouds to Tropical Deep Convection. Journal of Climate, 2009, 22, 2389-2404.	1.2	49
79	Influence of eddyâ€driven jet latitude on North Atlantic jet persistence and blocking frequency in CMIP3 integrations. Geophysical Research Letters, 2010, 37, .	1.5	49
80	The Maddenâ€“Julian Oscillation, Barotropic Dynamics, and North Pacific Tropical Cyclone Formation. Part II: Stochastic Barotropic Modeling. Journals of the Atmospheric Sciences, 2001, 58, 2559-2570.	0.6	48
81	Observed Southern Ocean Cloud Properties and Shortwave Reflection. Part I: Calculation of SW Flux from Observed Cloud Properties*. Journal of Climate, 2014, 27, 8836-8857.	1.2	47
82	The Role of Cloud Radiative Heating in Determining the Location of the ITCZ in Aquaplanet Simulations. Journal of Climate, 2016, 29, 2741-2763.	1.2	47
83	The balanced radiative effect of tropical anvil clouds. Journal of Geophysical Research D: Atmospheres, 2017, 122, 5003-5020.	1.2	47
84	Predicting decadal trends in cloud droplet number concentration using reanalysis and satellite data. Atmospheric Chemistry and Physics, 2018, 18, 2035-2047.	1.9	44
85	Effect of latitude on the persistence of eddyâ€driven jets. Geophysical Research Letters, 2010, 37, .	1.5	42
86	What Drives the Life Cycle of Tropical Anvil Clouds?. Journal of Advances in Modeling Earth Systems, 2019, 11, 2586-2605.	1.3	42
87	Dynamical Feedbacks of the Southern Annular Mode in Winter and Summer. Journals of the Atmospheric Sciences, 2010, 67, 2320-2330.	0.6	41
88	Testing a theory for the effect of latitude on the persistence of eddyâ€driven jets using CMIP3 simulations. Geophysical Research Letters, 2010, 37, .	1.5	41
89	Trends in the CERES Dataset, 2000â€“13: The Effects of Sea Ice and Jet Shifts and Comparison to Climate Models. Journal of Climate, 2014, 27, 2444-2456.	1.2	40
90	Testing the Role of Radiation in Determining Tropical Cloud-Top Temperature. Journal of Climate, 2012, 25, 5731-5747.	1.2	37

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91	Impact of Tropical SST on Stratospheric Planetary Waves in the Southern Hemisphere. Journal of Climate, 2012, 25, 5030-5046.	1.2	36
92	Interactions among Cloud, Water Vapor, Radiation, and Large-Scale Circulation in the Tropical Climate. Part I: Sensitivity to Uniform Sea Surface Temperature Changes. Journal of Climate, 2003, 16, 1425-1440.	1.2	35
93	Observations of a substantial cloudâ€aerosol indirect effect during the 2014â€“2015 BÃ¡rÃ°arbungaâ€VeiÃ°ivÃ¶tn fissure eruption in Iceland. Geophysical Research Letters, 2015, 42, 10,409.	1.5	34
94	Instantaneous Linkages between Clouds and Large-Scale Meteorology over the Southern Ocean in Observations and a Climate Model. Journal of Climate, 2017, 30, 9455-9474.	1.2	33
95	The Life Cycle and Net Radiative Effect of Tropical Anvil Clouds. Journal of Advances in Modeling Earth Systems, 2018, 10, 3012-3029.	1.3	32
96	CLIMATE CHANGE: Tropical Surprises. Science, 2002, 295, 811-812.	6.0	31
97	Classifying the tropospheric precursor patterns of sudden stratospheric warmings. Geophysical Research Letters, 2017, 44, 8011-8016.	1.5	28
98	The Life Cycle of Anvil Clouds and the Top-of-Atmosphere Radiation Balance over the Tropical West Pacific. Journal of Climate, 2018, 31, 10059-10080.	1.2	28
99	Tropical anvil clouds and climate sensitivity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8897-8899.	3.3	27
100	Dynamic Effects on the Tropical Cloud Radiative Forcing and Radiation Budget. Journal of Climate, 2008, 21, 2337-2351.	1.2	25
101	Vertical structure of tropical oceanic convective clouds and its relation to precipitation. Geophysical Research Letters, 2008, 35, .	1.5	24
102	On the influence of poleward jet shift on shortwave cloud feedback in global climate models. Journal of Advances in Modeling Earth Systems, 2015, 7, 2044-2059.	1.3	23
103	The Key Role of Lower-Level Meridional Shear in Baroclinic Wave Life Cycles. Journals of the Atmospheric Sciences, 2000, 57, 389-401.	0.6	22
104	The role of cloud radiative heating within the atmosphere on the high cloud amount and topâ€ofâ€atmosphere cloud radiative effect. Journal of Advances in Modeling Earth Systems, 2016, 8, 1391-1410.	1.3	20
105	Tropical Anvil Clouds: Radiative Driving Toward a Preferred State. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033107.	1.2	20
106	Ocean Circulation Signatures of North Pacific Decadal Variability. Geophysical Research Letters, 2019, 46, 1690-1701.	1.5	19
107	Interactions among Cloud, Water Vapor, Radiation, and Large-Scale Circulation in the Tropical Climate. Part II: Sensitivity to Spatial Gradients of Sea Surface Temperature. Journal of Climate, 2003, 16, 1441-1455.	1.2	17
108	Resolving an Atmospheric Enigma. Science, 2007, 318, 1731-1732.	6.0	16

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109	A Test of the Simulation of Tropical Convective Cloudiness by a Cloud-Resolving Model. Journal of Climate, 2009, 22, 2834-2849.	1.2	16
110	Spatial and temporal dependence of clouds and their radiative impacts on the largeâ€scale vertical velocity profile. Journal of Geophysical Research, 2008, 113, .	3.3	15
111	A Lagrangian Perspective on Tropical Anvil Cloud Lifecycle in Present and Future Climate. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033487.	1.2	14
112	The Global Distribution of Atmospheric Eddy Length Scales. Journal of Climate, 2012, 25, 3409-3416.	1.2	13
113	Balanced Cloud Radiative Effects Across a Range of Dynamical Conditions Over the Tropical West Pacific. Geophysical Research Letters, 2018, 45, 11,490.	1.5	13
114	Convection and Climate: What Have We Learned from Simple Models and Simplified Settings?. Current Climate Change Reports, 2019, 5, 196-206.	2.8	13
115	Subsidence and Upper-Tropospheric Drying along Trajectories in a General Circulation Model. Journal of Climate, 2000, 13, 257-263.	1.2	12
116	Is the Net Cloud Radiative Effect Constrained to be Uniform Over the Tropical Warm Pools?. Geophysical Research Letters, 2019, 46, 12495-12503.	1.5	11
117	Interference of extratropical surface climate anomalies induced by El NiÃ±o and stratospheric sudden warmings. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	9
118	The Relationship between Atmospheric Convective Radiative Effect and Net Energy Transport in the Tropical Warm Pool. Journal of Climate, 2015, 28, 8620-8633.	1.2	9
119	Some Aspects of Stratospheric Dynamics. Advances in Geophysics, 1985, 28, 219-247.	1.1	8
120	Mixed-Phase Cloud Feedbacks. , 2018, , 215-236.		7
121	The Role of Synoptic Waves in the Formation and Maintenance of the Western Hemisphere Circulation Pattern. Journal of Climate, 2017, 30, 10259-10274.	1.2	6
122	Radiative Cooling, Latent Heating, and Cloud Ice in the Tropical Upper Troposphere. Journal of Climate, 2022, 35, 1643-1654.	1.2	3
123	On Wind, Convection, and SST Variations in the Northeastern Tropical Pacific Associated with the Maddenâ€“Julian Oscillation*. Journal of Climate, 2004, 17, 4080-4088.	1.2	2
124	Global Radiative Convective Equilibrium With a Slab Ocean: SST Contrast, Sensitivity and Circulation. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	1