Dennis L Hartmann

List of Publications by Year
in descending order

124 papers	14,817 citations	14655 66 h-index	18647 119 g-index
125 all docs	125 docs citations	125 times ranked	8290 citing authors

#	Article	IF	Citations
1	Radiative Cooling, Latent Heating, and Cloud Ice in the Tropical Upper Troposphere. Journal of Climate, 2022, 35, 1643-1654.	3.2	3
2	Global Radiative Convective Equilibrium With a Slab Ocean: SST Contrast, Sensitivity and Circulation. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	1
3	A Lagrangian Perspective on Tropical Anvil Cloud Lifecycle in Present and Future Climate. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033487.	3.3	14
4	Tropical Anvil Clouds: Radiative Driving Toward a Preferred State. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033107.	3.3	20
5	What Drives the Life Cycle of Tropical Anvil Clouds?. Journal of Advances in Modeling Earth Systems, 2019, 11, 2586-2605.	3.8	42
6	Convection and Climate: What Have We Learned from Simple Models and Simplified Settings?. Current Climate Change Reports, 2019, 5, 196-206.	8.6	13
7	Ocean Circulation Signatures of North Pacific Decadal Variability. Geophysical Research Letters, 2019, 46, 1690-1701.	4.0	19
8	Is the Net Cloud Radiative Effect Constrained to be Uniform Over the Tropical Warm Pools?. Geophysical Research Letters, 2019, 46, 12495-12503.	4.0	11
9	Oceanâ€“Atmosphere Dynamical Coupling Fundamental to the Atlantic Multidecadal Oscillation. Journal of Climate, 2019, 32, 251-272.	3.2	74
10	Predicting decadal trends in cloud droplet number concentration using reanalysis and satellite data. Atmospheric Chemistry and Physics, 2018, 18, 2035-2047.	4.9	44
11	Disentangling Global Warming, Multidecadal Variability, and El NiÃ±o in Pacific Temperatures. Geophysical Research Letters, 2018, 45, 2487-2496.	4.0	114
12	The Life Cycle and Net Radiative Effect of Tropical Anvil Clouds. Journal of Advances in Modeling Earth Systems, 2018, 10, 3012-3029.	3.8	32
13	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.	3.2	28
14	Balanced Cloud Radiative Effects Across a Range of Dynamical Conditions Over the Tropical West Pacific. Geophysical Research Letters, 2018, 45, 11,490.	4.0	13
15	Mixed-Phase Cloud Feedbacks. , 2018, , 215-236.		7
16	La NiÃ±aâ€“like Mean-State Response to Global Warming and Potential Oceanic Roles. Journal of Climate, 2017, 30, 4207-4225.	3.2	88
17	The balanced radiative effect of tropical anvil clouds. Journal of Geophysical Research D: Atmospheres, 2017, 122, 5003-5020.	3.3	47
18	The Change in Low Cloud Cover in a Warmed Climate Inferred from AIRS, MODIS, and ERA-Interim. Journal of Climate, 2017, 30, 3609-3620.	3.2	56

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19	Cloud feedback mechanisms and their representation in global climate models. Wiley Interdisciplinary Reviews: Climate Change, 2017, 8, e465.	8.1	154
20	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.	3.2	33
21	Classifying the tropospheric precursor patterns of sudden stratospheric warmings. Geophysical Research Letters, 2017, 44, 8011-8016.	4.0	28
22	The Role of Synoptic Waves in the Formation and Maintenance of the Western Hemisphere Circulation Pattern. Journal of Climate, 2017, 30, 10259-10274.	3.2	6
23	Observational evidence for a negative shortwave cloud feedback in middle to high latitudes. Geophysical Research Letters, 2016, 43, 1331-1339.	4.0	60
24	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.	3.8	20
25	The Role of Cloud Radiative Heating in Determining the Location of the ITCZ in Aquaplanet Simulations. Journal of Climate, 2016, 29, 2741-2763.	3.2	47
26	Tropical anvil clouds and climate sensitivity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8897-8899.	7.1	27
27	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.	3.8	120
28	Antarctic Sea Ice Response to Weather and Climate Modes of Variability*. Journal of Climate, 2016, 29, 721-741.	3.2	52
29	Clouds and the Atmospheric Circulation Response to Warming. Journal of Climate, 2016, 29, 783-799.	3.2	94
30	Mechanisms of the Negative Shortwave Cloud Feedback in Middle to High Latitudes. Journal of Climate, 2016, 29, 139-157.	3.2	81
31	Connections Between Clouds, Radiation, and Midlatitude Dynamics: a Review. Current Climate Change Reports, 2015, 1, 94-102.	8.6	337
32	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.	4.0	34
33	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.	3.8	23
34	Mixedâ€phase cloud physics and Southern Ocean cloud feedback in climate models. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9539-9554.	3.3	120
35	The Relationship between Atmospheric Convective Radiative Effect and Net Energy Transport in the Tropical Warm Pool. Journal of Climate, 2015, 28, 8620-8633.	3.2	9
36	Pacific sea surface temperature and the winter of 2014. Geophysical Research Letters, 2015, 42, 1894-1902.	4.0	252

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37	Natural aerosols explain seasonal and spatial patterns of Southern Ocean cloud albedo. Science Advances, 2015, 1, e1500157.	10.3	144
38	The Atmospheric Energy Constraint on Global-Mean Precipitation Change. Journal of Climate, 2014, 27, 757-768.	3.2	187
39	Observed Southern Ocean Cloud Properties and Shortwave Reflection. Part II: Phase Changes and Low Cloud Feedback*. Journal of Climate, 2014, 27, 8858-8868.	3.2	61
40	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.	3.2	47
41	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.	3.2	40
42	Two Modes of Change of the Distribution of Rain*. Journal of Climate, 2014, 27, 8357-8371.	3.2	76
43	Changes in the Distribution of Rain Frequency and Intensity in Response to Global Warming*. Journal of Climate, 2014, 27, 8372-8383.	3.2	204
44	The response of the Southern Hemispheric eddy-driven jet to future changes in shortwave radiation in CMIP5. Geophysical Research Letters, 2014, 41, 3244-3250.	4.0	98
45	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.	3.2	61
46	The relationship between the ITCZ and the Southern Hemispheric eddyâ€driven jet. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5136-5146.	3.3	104
47	Climate Feedbacks and Their Implications for Poleward Energy Flux Changes in a Warming Climate. Journal of Climate, 2012, 25, 608-624.	3.2	128
48	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.	1.7	135
49	The Global Distribution of Atmospheric Eddy Length Scales. Journal of Climate, 2012, 25, 3409-3416.	3.2	13
50	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.	3.2	192
51	Impact of Tropical SST on Stratospheric Planetary Waves in the Southern Hemisphere. Journal of Climate, 2012, 25, 5030-5046.	3.2	36
52	Computing and Partitioning Cloud Feedbacks Using Cloud Property Histograms. Part I: Cloud Radiative Kernels. Journal of Climate, 2012, 25, 3715-3735.	3.2	195
53	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
54	Testing the Role of Radiation in Determining Tropical Cloud-Top Temperature. Journal of Climate, 2012, 25, 5731-5747.	3.2	37

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55	Southern Hemisphere jet latitude biases in CMIP5 models linked to shortwave cloud forcing. Geophysical Research Letters, 2012, 39, .	4.0	99
56	Rossby Wave Scales, Propagation, and the Variability of Eddy-Driven Jets. Journals of the Atmospheric Sciences, 2011, 68, 2893-2908.	1.7	75
57	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
58	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.	1.7	94
59	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.	1.7	67
60	Dynamical Feedbacks and the Persistence of the NAO. Journals of the Atmospheric Sciences, 2010, 67, 851-865.	1.7	89
61	Dynamical Feedbacks of the Southern Annular Mode in Winter and Summer. Journals of the Atmospheric Sciences, 2010, 67, 2320-2330.	1.7	41
62	Tropospheric Precursors of Anomalous Northern Hemisphere Stratospheric Polar Vortices. Journal of Climate, 2010, 23, 3282-3299.	3.2	246
63	Effect of latitude on the persistence of eddyâ€driven jets. Geophysical Research Letters, 2010, 37, .	4.0	42
64	Testing a theory for the effect of latitude on the persistence of eddyâ€driven jets using CMIP3 simulations. Geophysical Research Letters, 2010, 37, .	4.0	41
65	Influence of eddyâ€driven jet latitude on North Atlantic jet persistence and blocking frequency in CMIP3 integrations. Geophysical Research Letters, 2010, 37, .	4.0	49
66	Why is longwave cloud feedback positive?. Journal of Geophysical Research, 2010, 115, .	3.3	223
67	A Test of the Simulation of Tropical Convective Cloudiness by a Cloud-Resolving Model. Journal of Climate, 2009, 22, 2834-2849.	3.2	16
68	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.	1.7	118
69	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.	1.7	116
70	Response of Humidity and Clouds to Tropical Deep Convection. Journal of Climate, 2009, 22, 2389-2404.	3.2	49
71	Vertical structure of tropical oceanic convective clouds and its relation to precipitation. Geophysical Research Letters, 2008, 35, .	4.0	24
72	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

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73	Dynamic Effects on the Tropical Cloud Radiative Forcing and Radiation Budget. Journal of Climate, 2008, 21, 2337-2351.	3.2	25
74	Zonal Jet Structure and the Leading Mode of Variability. Journal of Climate, 2007, 20, 5149-5163.	3.2	128
75	Radiative and Convective Driving of Tropical High Clouds. Journal of Climate, 2007, 20, 5510-5526.	3.2	69
76	Testing the Fixed Anvil Temperature Hypothesis in a Cloud-Resolving Model. Journal of Climate, 2007, 20, 2051-2057.	3.2	79
77	Resolving an Atmospheric Enigma. Science, 2007, 318, 1731-1732.	12.6	16
78	The Atmospheric General Circulation and Its Variability. Journal of the Meteorological Society of Japan, 2007, 85B, 123-143.	1.8	61
79	Increased Occurrence of Stratospheric Sudden Warmings during El NiÃ±o as Simulated by WACCM. Journal of Climate, 2006, 19, 324-332.	3.2	181
80	The Effect of the MJO on the North American Monsoon*. Journal of Climate, 2006, 19, 333-343.	3.2	103
81	Spatial Variability of Liquid Water Path in Marine Low Cloud: The Importance of Mesoscale Cellular Convection. Journal of Climate, 2006, 19, 1748-1764.	3.2	306
82	Interference of extratropical surface climate anomalies induced by El NiÃ±o and stratospheric sudden warmings. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	9
83	Stratosphere-troposphere evolution during polar vortex intensification. Journal of Geophysical Research, 2005, 110, .	3.3	156
84	The Life Cycle of the Northern Hemisphere Sudden Stratospheric Warmings. Journal of Climate, 2004, 17, 2584-2596.	3.2	409
85	On Wind, Convection, and SST Variations in the Northeastern Tropical Pacific Associated with the Maddenâ€“Julian Oscillation*. Journal of Climate, 2004, 17, 4080-4088.	3.2	2
86	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.	3.2	17
87	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.	3.2	35
88	Eddyâ€“Zonal Flow Feedback in the Northern Hemisphere Winter. Journal of Climate, 2003, 16, 1212-1227.	3.2	261
89	No Evidence for Iris. Bulletin of the American Meteorological Society, 2002, 83, 249-254.	3.3	86
90	An important constraint on tropical cloud - climate feedback. Geophysical Research Letters, 2002, 29, 12-1-12-4.	4.0	337

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91	CLIMATE CHANGE: Tropical Surprises. Science, 2002, 295, 811-812.	12.6	31
92	The heat balance of the tropical tropopause, cirrus, and stratospheric dehydration. Geophysical Research Letters, 2001, 28, 1969-1972.	4.0	227
93	The Sensitivity of Intraseasonal Variability in the NCAR CCM3 to Changes in Convective Parameterization. Journal of Climate, 2001, 14, 2015-2034.	3.2	160
94	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.	1.7	48
95	Eddyâ€“Zonal Flow Feedback in the Southern Hemisphere. Journals of the Atmospheric Sciences, 2001, 58, 3312-3327.	1.7	356
96	The Maddenâ€“Julian Oscillation, Barotropic Dynamics, and North Pacific Tropical Cyclone Formation. Part I: Observations. Journals of the Atmospheric Sciences, 2001, 58, 2545-2558.	1.7	259
97	Tropical Convection and the Energy Balance at the Top of the Atmosphere. Journal of Climate, 2001, 14, 4495-4511.	3.2	210
98	The Key Role of Lower-Level Meridional Shear in Baroclinic Wave Life Cycles. Journals of the Atmospheric Sciences, 2000, 57, 389-401.	1.7	22
99	Subsidence and Upper-Tropospheric Drying along Trajectories in a General Circulation Model. Journal of Climate, 2000, 13, 257-263.	3.2	12
100	Modulation of Eastern North Pacific Hurricanes by the Maddenâ€“Julian Oscillation. Journal of Climate, 2000, 13, 1451-1460.	3.2	429
101	Wave-Maintained Annular Modes of Climate Variability*. Journal of Climate, 2000, 13, 4414-4429.	3.2	336
102	Modulation of Hurricane Activity in the Gulf of Mexico by the Madden-Julian Oscillation. Science, 2000, 287, 2002-2004.	12.6	340
103	Eddies and the annular modes of climate variability. Geophysical Research Letters, 1999, 26, 3133-3136.	4.0	301
104	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.	3.2	87
105	Wave-Driven Zonal Flow Vacillation in the Southern Hemisphere. Journals of the Atmospheric Sciences, 1998, 55, 1303-1315.	1.7	257
106	Frictional Moisture Convergence in a Composite Life Cycle of the Maddenâ€“Julian Oscillation. Journal of Climate, 1998, 11, 2387-2403.	3.2	315
107	Response of Baroclinic Life Cycles to Barotropic Shear. Journals of the Atmospheric Sciences, 1998, 55, 297-313.	1.7	59
108	A Trajectory Analysis of Tropical Upper-Tropospheric Moisture and Convection. Journal of Climate, 1997, 10, 2533-2547.	3.2	95

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109	A PV View of Zonal Flow Vacillation. Journals of the Atmospheric Sciences, 1995, 52, 2561-2576.	1.7	56
110	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.	3.2	175
111	Influence of tropical cloud systems on the relative humidity in the upper troposphere. Journal of Geophysical Research, 1995, 100, 7423-7440.	3.3	105
112	Large-Scale Effects on the Regulation of Tropical Sea Surface Temperature. Journal of Climate, 1993, 6, 2049-2062.	3.2	153
113	The Seasonal Cycle of Low Stratiform Clouds. Journal of Climate, 1993, 6, 1587-1606.	3.2	1,289
114	Tropical Intraseasonal Oscillations in a Simple Nonlinear Model. Journals of the Atmospheric Sciences, 1993, 50, 2922-2939.	1.7	219
115	Zonal Flow Vacillation and Eddy Forcing in a Simple GCM of the Atmosphere. Journals of the Atmospheric Sciences, 1993, 50, 3244-3259.	1.7	113
116	The Effect of Cloud Type on Earth's Energy Balance: Results for Selected Regions. Journal of Climate, 1992, 5, 1157-1171.	3.2	68
117	The Effect of Cloud Type on Earth's Energy Balance: Global Analysis. Journal of Climate, 1992, 5, 1281-1304.	3.2	588
118	Seasonal Variations of Tropical Intraseasonal Oscillations: A 20â€“25-Day Oscillation in the Western Pacific. Journals of the Atmospheric Sciences, 1992, 49, 1277-1289.	1.7	94
119	On the net radiative effectiveness of clouds. Journal of Geophysical Research, 1991, 96, 869-891.	3.3	82
120	Intraseasonal Periodicities in Indian Rainfall. Journals of the Atmospheric Sciences, 1989, 46, 2838-2862.	1.7	157
121	Some Aspects of Stratospheric Dynamics. Advances in Geophysics, 1985, 28, 219-247.	2.8	8
122	Evidence for Equatorial Kelvin Modes in Nimbus-7 LIMS. Journals of the Atmospheric Sciences, 1984, 41, 220-235.	1.7	180
123	Observations of Wave-Mean Flow Interaction in the Southern Hemisphere. Journals of the Atmospheric Sciences, 1984, 41, 351-362.	1.7	63
124	On the Use of Earth Radiation Budget Statistics for Studies of Clouds and Climate. Journals of the Atmospheric Sciences, 1980, 37, 1233-1250.	1.7	192