Paul Field

List of Publications by Year
in descending order

125 papers	9,269 citations	44069 48 h-index	45317 90 g-index
142 all docs	142 docs citations	142 times ranked	6811 citing authors

#	Article	IF	Citations
1	Explicit Forecasts of Winter Precipitation Using an Improved Bulk Microphysics Scheme. Part II: Implementation of a New Snow Parameterization. Monthly Weather Review, 2008, 136, 5095-5115.	1.4	2,008
2	Efficiency of the deposition mode ice nucleation on mineral dust particles. Atmospheric Chemistry and Physics, 2006, 6, 3007-3021.	4.9	328
3	Shattering and Particle Interarrival Times Measured by Optical Array Probes in Ice Clouds. Journal of Atmospheric and Oceanic Technology, 2006, 23, 1357-1371.	1.3	310
4	Studies of heterogeneous freezing by three different desert dust samples. Atmospheric Chemistry and Physics, 2009, 9, 2805-2824.	4.9	291
5	Observations and Parameterizations of Particle Size Distributions in Deep Tropical Cirrus and Stratiform Precipitating Clouds: Results from In Situ Observations in TRMM Field Campaigns. Journals of the Atmospheric Sciences, 2002, 59, 3457-3491.	1.7	277
6	Precipitation and Cloud Structure in Midlatitude Cyclones. Journal of Climate, 2007, 20, 233-254.	3.2	204
7	Parametrization of ice-particle size distributions for mid-latitude stratiform cloud. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 1997-2017.	2.7	193
8	Some ice nucleation characteristics of Asian and Saharan desert dust. Atmospheric Chemistry and Physics, 2006, 6, 2991-3006.	4.9	177
9	Ice Particle Interarrival Times Measured with a Fast FSSP. Journal of Atmospheric and Oceanic Technology, 2003, 20, 249-261.	1.3	167
10	Mixed-Phase Clouds: Progress and Challenges. Meteorological Monographs, 2017, 58, 5.1-5.50.	5.0	165
11	Snow Size Distribution Parameterization for Midlatitude and Tropical Ice Clouds. Journals of the Atmospheric Sciences, 2007, 64, 4346-4365.	1.7	162
12	Strong control of Southern Ocean cloud reflectivity by ice-nucleating particles. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2687-2692.	7.1	156
13	The Surface Downwelling Solar Radiation Surplus over the Southern Ocean in the Met Office Model: The Role of Midlatitude Cyclone Clouds. Journal of Climate, 2012, 25, 7467-7486.	3.2	155
14	The Met Office Unified Model Global Atmosphere 4.0 and JULES Global Land 4.0 configurations. Geoscientific Model Development, 2014, 7, 361-386.	3.6	154
15	The Distribution of Cloud Horizontal Sizes. Journal of Climate, 2011, 24, 4800-4816.	3.2	142
16	Large Contribution of Supercooled Liquid Clouds to the Solar Radiation Budget of the Southern Ocean. Journal of Climate, 2016, 29, 4213-4228.	3.2	136
17	Importance of snow to global precipitation. Geophysical Research Letters, 2015, 42, 9512-9520.	4.0	123
18	Chapter 7. Secondary Ice Production - current state of the science and recommendations for the future. Meteorological Monographs, 0, , .	5.0	116

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19	Properties of embedded convection in warm-frontal mixed-phase cloud from aircraft and polarimetric radar. Quarterly Journal of the Royal Meteorological Society, 2002, 128, 451-476.	2.7	115
20	The possible role of local air pollution in climate change in West Africa. Nature Climate Change, 2015, 5, 815-822.	18.8	109
21	Critical Southern Ocean climate model biases traced to atmospheric model cloud errors. Nature Communications, 2018, 9, 3625.	12.8	109
22	The Effect of Dynamics on Mixed-Phase Clouds: Theoretical Considerations. Journals of the Atmospheric Sciences, 2008, 65, 66-86.	1.7	98
23	A laboratory investigation into the aggregation efficiency of small ice crystals. Atmospheric Chemistry and Physics, 2012, 12, 2055-2076.	4.9	97
24	The response of the ionospheric F2-layer to geomagnetic activity: an analysis of worldwide data. Journal of Atmospheric and Solar-Terrestrial Physics, 1997, 59, 163-180.	1.6	90
25	Relationships between Total Water, Condensed Water, and Cloud Fraction in Stratiform Clouds Examined Using Aircraft Data. Journals of the Atmospheric Sciences, 2000, 57, 1888-1905.	1.7	88
26	Aggregation and Scaling of Ice Crystal Size Distributions. Journals of the Atmospheric Sciences, 2003, 60, 544-560.	1.7	87
27	Strong Dependence of Atmospheric Feedbacks on Mixedâ€Phase Microphysics and Aerosolâ€Cloud Interactions in HadGEM3. Journal of Advances in Modeling Earth Systems, 2019, 11, 1735-1758.	3.8	85
28	Systematic Biases in the Microphysics and Thermodynamics of Numerical Models That Ignore Subgrid-Scale Variability. Journals of the Atmospheric Sciences, 2001, 58, 1117-1128.	1.7	83
29	Opinion: Cloud-phase climate feedback and the importance of ice-nucleating particles. Atmospheric Chemistry and Physics, 2021, 21, 665-679.	4.9	78
30	Modelling composition changes in F-layer storms. Journal of Atmospheric and Solar-Terrestrial Physics, 1998, 60, 523-543.	1.6	76
31	Discrimination of micrometre-sized ice and super-cooled droplets in mixed-phase cloud. Atmospheric Environment, 2001, 35, 33-47.	4.1	74
32	Universality in snowflake aggregation. Geophysical Research Letters, 2004, 31, .	4.0	74
33	Theory of growth by differential sedimentation, with application to snowflake formation. Physical Review E, 2004, 70, 021403.	2.1	73
34	The effective density of small ice particles obtained from <i>in situ</i> aircraft observations of midâ€latitude cirrus. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 1923-1934.	2.7	71
35	Atmospheric Iceâ€Nucleating Particles in the Dusty Tropical Atlantic. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2175-2193.	3.3	66
36	Small-Scale and Mesoscale Variability of Scalars in Cloudy Boundary Layers: One-Dimensional Probability Density Functions. Journals of the Atmospheric Sciences, 2001, 58, 1978-1994.	1.7	64

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37	Assessment of the performance of the inter-arrival time algorithm to identify ice shattering artifacts in cloud particle probe measurements. Atmospheric Measurement Techniques, 2015, 8, 761-777.	3.1	63
38	Simultaneous radar and aircraft observations of mixed-phase cloud at the 100 m scale. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 1877-1904.	2.7	61
39	Ice in Clouds Experimentâ€"Layer Clouds. Part II: Testing Characteristics of Heterogeneous Ice Formation in Lee Wave Clouds. Journals of the Atmospheric Sciences, 2012, 69, 1066-1079.	1.7	61
40	Large simulated radiative effects of smoke in the south-east Atlantic. Atmospheric Chemistry and Physics, 2018, 18, 15261-15289.	4.9	61
41	Autoconversion rate bias in stratiform boundary layer cloud parameterizations. Atmospheric Research, 2002, 65, 109-128.	4.1	60
42	Ice nucleation in orographic wave clouds: Measurements made during INTACC. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1493-1512.	2.7	58
43	The CLoudâ€"Aerosolâ€"Radiation Interaction and Forcing: YearÂ2017 (CLARIFY-2017) measurement campaign. Atmospheric Chemistry and Physics, 2021, 21, 1049-1084.	4.9	57
44	Processing of Ice Cloud In Situ Data Collected by Bulk Water, Scattering, and Imaging Probes: Fundamentals, Uncertainties, and Efforts toward Consistency. Meteorological Monographs, 2017, 58, 11.1-11.33.	5.0	56
45	Observation of playa salts as nuclei in orographic wave clouds. Journal of Geophysical Research, 2010, 115, .	3.3	55
46	Ice nucleation characteristics of an isolated wave cloud. Quarterly Journal of the Royal Meteorological Society, 2002, 128, 2417-2437.	2.7	54
47	Improving a convectionâ€permitting model simulation of a cold air outbreak. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 124-138.	2.7	54
48	A model intercomparison of CCN-limited tenuous clouds in the high Arctic. Atmospheric Chemistry and Physics, 2018, 18, 11041-11071.	4.9	54
49	A Coupled Cloud Physicsâ€"Radiation Parameterization of the Bulk Optical Properties of Cirrus and Its Impact on the Met Office Unified Model Global Atmosphere 5.0 Configuration. Journal of Climate, 2014, 27, 7725-7752.	3.2	52
50	The relative importance of macrophysical and cloud albedo changes for aerosol-induced radiative effects in closed-cell stratocumulus: insight from the modelling of a case study. Atmospheric Chemistry and Physics, 2017, 17, 5155-5183.	4.9	51
51	The hemispheric contrast in cloud microphysical properties constrains aerosol forcing. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18998-19006.	7.1	51
52	Aircraft Observations of Ice Crystal Evolution in an Altostratus Cloud. Journals of the Atmospheric Sciences, 1999, 56, 1925-1941.	1.7	50
53	Determination of the Combined Ventilation Factor and Capacitance for Ice Crystal Aggregates from Airborne Observations in a Tropical Anvil Cloud. Journals of the Atmospheric Sciences, 2008, 65, 376-391.	1.7	49
54	Exploring the convective grey zone with regional simulations of a cold air outbreak. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 2537-2555.	2.7	49

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55	Improved microphysical parametrization of drizzle and fog for operational forecasting using the Met Office Unified Model. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 488-500.	2.7	48
56	Aerosolâ€"cloud interactions in mixed-phase convective clouds â€" Part 1: Aerosol perturbations. Atmospheric Chemistry and Physics, 2018, 18, 3119-3145.	4.9	48
57	Radar scattering by aggregate snowflakes. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 897-914.	2.7	47
58	Processes Controlling Tropical Tropopause Temperature and Stratospheric Water Vapor in Climate Models. Journal of Climate, 2015, 28, 6516-6535.	3.2	47
59	Midlatitude Cyclone Compositing to Constrain Climate Model Behavior Using Satellite Observations. Journal of Climate, 2008, 21, 5887-5903.	3.2	44
60	A Physically Based Subgrid Parameterization for the Production and Maintenance of Mixed-Phase Clouds in a General Circulation Model. Journals of the Atmospheric Sciences, 2016, 73, 279-291.	1.7	44
61	Predicting decadal trends in cloud droplet number concentration using reanalysis and satellite data. Atmospheric Chemistry and Physics, 2018, 18, 2035-2047.	4.9	44
62	A Test of Ice Self-Collection Kernels Using Aircraft Data. Journals of the Atmospheric Sciences, 2006, 63, 651-666.	1.7	43
63	Exponential Size Distributions for Snow. Journals of the Atmospheric Sciences, 2008, 65, 4017-4031.	1.7	43
64	In Situ, Airborne Instrumentation: Addressing and Solving Measurement Problems in Ice Clouds. Bulletin of the American Meteorological Society, 2012, 93, ES29-ES34.	3.3	38
65	Simulations of the glaciation of a frontal mixed-phase cloud with the Explicit Microphysics Model. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 1351-1371.	2.7	36
66	Using model analysis and satellite data to assess cloud and precipitation in midlatitude cyclones. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 1501-1515.	2.7	34
67	Ice-Phase Precipitation. Meteorological Monographs, 2017, 58, 6.1-6.36.	5.0	34
68	Contributions of the Liquid and Ice Phases to Global Surface Precipitation: Observations and Global Climate Modeling. Journals of the Atmospheric Sciences, 2020, 77, 2629-2648.	1.7	34
69	Sensitivity of orographic precipitation enhancement to horizontal resolution in the operational Met Office Weather forecasts. Meteorological Applications, 2015, 22, 14-24.	2.1	32
70	Mixedâ€phase clouds in a turbulent environment. Part 1: Largeâ€eddy simulation experiments. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 855-869.	2.7	31
71	Ice in Clouds Experimentâ€"Layer Clouds. Part I: Ice Growth Rates Derived from Lenticular Wave Cloud Penetrations. Journals of the Atmospheric Sciences, 2011, 68, 2628-2654.	1.7	29
72	The â€œ<scp>G</scp>rey <scp>Z</scp>oneâ€•cold air outbreak global model intercomparison: A cross evaluation using largeâ€eddy simulations. Journal of Advances in Modeling Earth Systems, 2017, 9, 39-64.	3.8	29

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73	Bimodal ice spectra in frontal clouds. Quarterly Journal of the Royal Meteorological Society, 2000, 126, 379-392.	2.7	28
74	Aerosol midlatitude cyclone indirect effects in observations and high-resolution simulations. Atmospheric Chemistry and Physics, 2018, 18, 5821-5846.	4.9	28
75	Prediction of heavy precipitation in the eastern China flooding events of 2016: Added value of convectionâ€permitting simulations. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 3300-3319.	2.7	28
76	A limited area model (LAM) intercomparison study of a TWP-ICE active monsoon mesoscale convective event. Journal of Geophysical Research, 2012, 117, n/a-n/a.	3.3	27
77	The Role of Ice Microphysics Parametrizations in Determining the Prevalence of Supercooled Liquid Water in High-Resolution Simulations of a Southern Ocean Midlatitude Cyclone. Journals of the Atmospheric Sciences, 2017, 74, 2001-2021.	1.7	27
78	Mixedâ€phase clouds in a turbulent environment. Part 2: Analytic treatment. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 870-880.	2.7	26
79	The Impact of Two Coupled Cirrus Microphysicsâ€"Radiation Parameterizations on the Temperature and Specific Humidity Biases in the Tropical Tropopause Layer in a Climate Model. Journal of Climate, 2016, 29, 5299-5316.	3.2	26
80	The temperature dependence of ice-nucleating particle concentrations affects the radiative properties of tropical convective cloud systems. Atmospheric Chemistry and Physics, 2021, 21, 5439-5461.	4.9	26
81	Dependence of the Ice Water Content and Snowfall Rate on Temperature, Globally: Comparison of in Situ Observations, Satellite Active Remote Sensing Retrievals, and Global Climate Model Simulations. Journal of Applied Meteorology and Climatology, 2017, 56, 189-215.	1.5	25
82	Untangling causality in midlatitude aerosolâ€"cloud adjustments. Atmospheric Chemistry and Physics, 2020, 20, 4085-4103.	4.9	25
83	The sensitivity of simulated high clouds to ice crystal fall speed, shape and size distribution. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1546-1559.	2.7	24
84	A test of cirrus ice crystal scattering phase functions. Geophysical Research Letters, 2003, 30, .	4.0	23
85	Comparing model and measured ice crystal concentrations in orographic clouds during the INUPIAQ campaign. Atmospheric Chemistry and Physics, 2016, 16, 4945-4966.	4.9	21
86	Cloud Microphysical Factors Affecting Simulations of Deep Convection During the Presummer Rainy Season in Southern China. Journal of Geophysical Research D: Atmospheres, 2018, 123, 10,477.	3.3	21
87	A method to represent subgridâ€scale updraft velocity in kilometerâ€scale models: Implication for aerosol activation. Journal of Geophysical Research D: Atmospheres, 2014, 119, 4149-4173.	3.3	19
88	Latitude and solar-cycle patterns in the response of the ionosphere F2-layer to geomagnetic activity. Advances in Space Research, 1997, 20, 1689-1692.	2.6	18
89	African Lightning and its Relation to Rainfall and Climate Change in a Convectionâ€Permitting Model. Geophysical Research Letters, 2020, 47, e2020GL088163.	4.0	18
90	The COMBLE Campaign: A Study of Marine Boundary Layer Clouds in Arctic Cold-Air Outbreaks. Bulletin of the American Meteorological Society, 2022, 103, E1371-E1389.	3.3	17

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91	Numerical modelling of mixed-phase frontal clouds observed during the CWVC project. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 1677-1693.	2.7	16
92	Turbulent Transport in the Gray Zone: A Large Eddy Model Intercomparison Study of the CONSTRAIN Cold Air Outbreak Case. Journal of Advances in Modeling Earth Systems, 2019, 11, 597-623.	3.8	16
93	Clusterâ€Based Evaluation of Model Compensating Errors: A Case Study of Cloud Radiative Effect in the Southern Ocean. Geophysical Research Letters, 2019, 46, 3446-3453.	4.0	15
94	Technical Note: A numerical test-bed for detailed ice nucleation studies in the AIDA cloud simulation chamber. Atmospheric Chemistry and Physics, 2007, 7, 243-256.	4.9	14
95	Investigation and prediction of helicopterâ€triggered lightning over the North Sea. Meteorological Applications, 2013, 20, 94-106.	2.1	14
96	Using operational weather radar to assess highâ€resolution numerical weather prediction over the British Isles for a cold air outbreak caseâ€study. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 225-239.	2.7	14
97	Small ice particles at slightly supercooled temperatures in tropical maritime convection. Atmospheric Chemistry and Physics, 2020, 20, 3895-3904.	4.9	14
98	The effects of cloudâ€“aerosol interaction complexity on simulations of presummer rainfall over southern China. Atmospheric Chemistry and Physics, 2020, 20, 5093-5110.	4.9	14
99	Evaluating the effects of microphysical complexity in idealised simulations of trade wind cumulus using the Factorial Method. Atmospheric Chemistry and Physics, 2011, 11, 2729-2746.	4.9	13
100	Aerosolâ€“cloud interactions in mixed-phase convective clouds â€“ Part 2: Meteorological ensemble. Atmospheric Chemistry and Physics, 2018, 18, 10593-10613.	4.9	13
101	Normalized Hail Particle Size Distributions from the T-28 Storm-Penetrating Aircraft. Journal of Applied Meteorology and Climatology, 2019, 58, 231-245.	1.5	12
102	Cloud feedbacks in extratropical cyclones: insight from long-term satellite data and high-resolution global simulations. Atmospheric Chemistry and Physics, 2019, 19, 1147-1172.	4.9	12
103	A Regime-Oriented Approach to Observationally Constraining Extratropical Shortwave Cloud Feedbacks. Journal of Climate, 2020, 33, 9967-9983.	3.2	12
104	Properties of normalised rainâ€rate distributions in the tropical Pacific. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 175-186.	2.7	11
105	Effects of aerosol in simulations of realistic shallow cumulus cloud fields in a large domain. Atmospheric Chemistry and Physics, 2019, 19, 13507-13517.	4.9	11
106	Simulated Lightning in a Convection Permitting Global Model. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9370-9377.	3.3	10
107	Improving the Southern Ocean cloud albedo biases in a general circulation model. Atmospheric Chemistry and Physics, 2020, 20, 7741-7751.	4.9	10
108	Factors influencing ice formation and growth in simulations of a mixedâ€phase wave cloud. Journal of Advances in Modeling Earth Systems, 2012, 4, .	3.8	9

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109	Precipitation sensitivity to autoconversion rate in a numerical weatherâ€prediction model. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 2032-2044.	2.7	9
110	Spatial and temporal CCN variations in convection-permitting aerosol microphysics simulations in an idealised marine tropical domain. Atmospheric Chemistry and Physics, 2017, 17, 3371-3384.	4.9	8
111	Extratropical Shortwave Cloud Feedbacks in the Context of the Global Circulation and Hydrological Cycle. Geophysical Research Letters, 2022, 49, .	4.0	8
112	A modelling study of ice-spectrum modes in deep frontal clouds. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 1873-1890.	2.7	7
113	Development of aerosol activation in the double-moment Unified Model and evaluation with CLARIFY measurements. Atmospheric Chemistry and Physics, 2020, 20, 10997-11024.	4.9	7
114	How Biased Is Aircraft Cloud Sampling?. Journal of Atmospheric and Oceanic Technology, 2016, 33, 185-189.	1.3	5
115	A new high- and low-frequency scattering parameterization for cirrus and its impact on a high-resolution numerical weather prediction model. AIP Conference Proceedings, 2013, , .	0.4	4
116	A parametrization of subgrid orographic rain enhancement via the seederâ€"feeder effect. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 132-142.	2.7	4
117	Model emulation to understand the joint effects of ice-nucleating particles and secondary ice production on deep convective anvil cirrus. Atmospheric Chemistry and Physics, 2021, 21, 17315-17343.	4.9	4
118	Verification of a seederâ€"feeder orographic precipitation enhancement scheme accounting for lowâ€level blocking. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 2909-2932.	2.7	2
119	Sensitivity of mixed-phase moderately deep convective clouds to parameterizations of ice formation â€" an ensemble perspective. Atmospheric Chemistry and Physics, 2021, 21, 3627-3642.	4.9	2
120	Contrasting Responses of Idealised and Realistic Simulations of Shallow Cumuli to Aerosol Perturbations. Geophysical Research Letters, 2021, 48, e2021GL094137.	4.0	2
121	Corrigendum to: "Studies of heterogeneous freezing by three different desert dust samples", Atmos. Chem. Phys., 9, 2805â€"2824, 2009. Atmospheric Chemistry and Physics, 2013, 13, 10079-10080.	4.9	1
122	Multi-thermals and high concentrations of secondary ice: a modelling study of convective clouds during the Ice in Clouds Experiment â€" Dust (ICE-D) campaign. Atmospheric Chemistry and Physics, 2022, 22, 1649-1667.	4.9	1
123	Spatial and Temporal Variations in Aerosol Properties in High-Resolution Convection-Permitting Simulations in an Idealized Tropical Marine Domain. Springer Proceedings in Complexity, 2016, , 61-64.	0.3	0
124	Vertical redistribution of moisture and aerosol in orographic mixed-phase clouds. Atmospheric Chemistry and Physics, 2020, 20, 7979-8001.	4.9	0
125	A strong statistical link between aerosol indirect effects and the self-similarity of rainfall distributions. Atmospheric Chemistry and Physics, 2022, 22, 3391-3407.	4.9	0