Peter L Read

List of Publications by Year
in descending order

116 papers	5,646 citations	71102 41 h-index	79698 73 g-index
133 all docs	133 docs citations	133 times ranked	2899 citing authors

#	Article	IF	Citations
1	Pen portraits of <scp>Presidents</scp> â€“ <scp>Professor Raymond Hide</scp>, <scp>CBE</scp>, <scp>ScD</scp>, <scp>FRS</scp>. Weather, 2022, 77, 103-107.	0.7	0
2	Energy Exchanges in Saturn's Polar Regions From Cassini Observations: Eddyâ€Zonal Flow Interactions. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	1
3	Characterizing Regimes of Atmospheric Circulation in Terms of Their Global Superrotation. Journals of the Atmospheric Sciences, 2021, 78, 1245-1258.	1.7	2
4	Assimilation of Both Columnâ€•and Layerâ€Integrated Dust Opacity Observations in the Martian Atmosphere. Earth and Space Science, 2021, 8, .	2.6	4
5	Baroclinic and barotropic instabilities in planetary atmospheres: energetics, equilibration and adjustment. Nonlinear Processes in Geophysics, 2020, 27, 147-173.	1.3	16
6	Thermal versus mechanical topography: an experimental investigation in a rotating baroclinic annulus. Geophysical and Astrophysical Fluid Dynamics, 2020, 114, 763-797.	1.2	2
7	Revealing the Intensity of Turbulent Energy Transfer in Planetary Atmospheres. Geophysical Research Letters, 2020, 47, e2020GL088685.	4.0	4
8	The turbulent dynamics of Jupiterâ€™s and Saturnâ€™s weather layers: order out of chaos?. Geoscience Letters, 2020, 7, .	3.3	6
9	Investigating the semiannual oscillation on Mars using data assimilation. Icarus, 2019, 333, 404-414.	2.5	7
10	Raymond Hide. 17 May 1929â€”6 September 2016. Biographical Memoirs of Fellows of the Royal Society, 2019, 67, 191-215.	0.1	2
11	Simulating Jupiterâ€™s weather layer. Part II: Passive ammonia and water cycles. Icarus, 2019, 326, 253-268.	2.5	12
12	Simulating Jupiterâ€™s weather layer. Part I: Jet spin-up in a dry atmosphere. Icarus, 2019, 326, 225-252.	2.5	33
13	Gas Giants. , 2019, , 72-103.		14
14	Potential Vorticity of Saturn's Polar Regions: Seasonality and Instabilities. Journal of Geophysical Research E: Planets, 2019, 124, 186-201.	3.6	6
15	An experimental investigation of blocking by partial barriers in a rotating baroclinic annulus. Geophysical and Astrophysical Fluid Dynamics, 2018, 112, 97-129.	1.2	5
16	Superrotation on Venus, on Titan, and Elsewhere. Annual Review of Earth and Planetary Sciences, 2018, 46, 175-202.	11.0	64
17	Comparative terrestrial atmospheric circulation regimes in simplified global circulation models. Part II: Energy budgets and spectral transfers. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 2558-2576.	2.7	11
18	A hexagon in Saturnâ€™s northern stratosphere surrounding the emerging summertime polar vortex. Nature Communications, 2018, 9, 3564.	12.8	36

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19	A Chorus of the Winds-On Saturn!. Journal of Geophysical Research E: Planets, 2018, 123, 1007-1011.	3.6	2
20	Descent Rate Models of the Synchronization of the Quasi-Biennial Oscillation by the Annual Cycle in Tropical Upwelling. Journals of the Atmospheric Sciences, 2018, 75, 2281-2297.	1.7	15
21	Atmospheric Dynamics of Terrestrial Planets. , 2018, , 1-31.		3
22	Comparative terrestrial atmospheric circulation regimes in simplified global circulation models. Part I: From cyclostrophic superâ€rotation to geostrophic turbulence. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 2537-2557.	2.7	24
23	Wave number selection in the presence of noise: Experimental results. Chaos, 2018, 28, 053110.	2.5	6
24	Ertel potential vorticity versus Bernoulli streamfunction on Mars. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 37-52.	2.7	4
25	A rotating annulus driven by localized convective forcing: a new atmosphere-like experiment. Experiments in Fluids, 2017, 58, 1.	2.4	14
26	Phase synchronization of baroclinic waves in a differentially heated rotating annulus experiment subject to periodic forcing with a variable duty cycle. Chaos, 2017, 27, 127001.	2.5	6
27	The Atmospheric Dynamics of Venus. Space Science Reviews, 2017, 212, 1541-1616.	8.1	95
28	Forward and inverse kinetic energy cascades in Jupiterâ€™s turbulent weather layer. Nature Physics, 2017, 13, 1135-1140.	16.7	71
29	Regimes of Axisymmetric Flow and Scaling Laws in a Rotating Annulus with Local Convective Forcing. Fluids, 2017, 2, 41.	1.7	8
30	Global energy budgets and â€˜Trenberth diagramsâ€™ for the climates of terrestrial and gas giant planets. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 703-720.	2.7	28
31	Synchronisation of the equatorial QBO by the annual cycle in tropical upwelling in a warming climate. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 1111-1120.	2.7	21
32	Predictability of the thermally driven laboratory rotating annulus. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 911-927.	2.7	2
33	The solsticial pause on Mars: 1. A planetary wave reanalysis. Icarus, 2016, 264, 456-464.	2.5	74
34	A regime diagram for ocean geostrophic turbulence. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 2411-2417.	2.7	15
35	Non-axisymmetric flows in a differential-disk rotating system. Journal of Fluid Mechanics, 2015, 775, 349-386.	3.4	7
36	An experimental study of multiple zonal jet formation in rotating, thermally driven convective flows on a topographic beta-plane. Physics of Fluids, 2015, 27, .	4.0	20

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37	A Lorenz/Boer energy budget for the atmosphere of Mars from a â€œreanalysisâ€•of spacecraft observations. Geophysical Research Letters, 2015, 42, 8320-8327.	4.0	13
38	Polar vortices on Earth and Mars: A comparative study of the climatology and variability from reanalyses. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 550-562.	2.7	45
39	The physics of Martian weather and climate: a review. Reports on Progress in Physics, 2015, 78, 125901.	20.1	54
40	An assessment of the impact of local processes on dust lifting in martian climate models. Icarus, 2015, 252, 212-227.	2.5	17
41	A laboratory study of global-scale wave interactions in baroclinic flow with topography II: vacillations and low-frequency variability. Geophysical and Astrophysical Fluid Dynamics, 2015, 109, 359-390.	1.2	6
42	An experimental investigation into topographic resonance in a baroclinic rotating annulus. Geophysical and Astrophysical Fluid Dynamics, 2015, 109, 391-421.	1.2	5
43	A Sea Change in Exoplanet Climate Models?. Astrobiology, 2014, 14, 627-628.	3.0	2
44	The Mars Analysis Correction Data Assimilation (<scp>MACDA</scp>) Dataset V1.0. Geoscience Data Journal, 2014, 1, 129-139.	4.4	61
45	Cassini observations reveal a regime of zonostrophic macroturbulence on Jupiter. Icarus, 2014, 229, 295-320.	2.5	50
46	Data assimilation in the laboratory using a rotating annulus experiment. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 1488-1504.	2.7	9
47	Plumbing the depths of Uranus and Neptune. Nature, 2013, 497, 323-324.	27.8	2
48	Simulating the interannual variability of major dust storms on Mars using variable lifting thresholds. Icarus, 2013, 223, 344-358.	2.5	45
49	Models of Venus Atmosphere. , 2013, , 129-156.		23
50	Diversity of Planetary Atmospheric Circulations and Climates in a Simplified General Circulation Model. Proceedings of the International Astronomical Union, 2012, 8, 297-302.	0.0	2
51	Assimilating and Modeling Dust Transport in the Martian Climate System. Proceedings of the International Astronomical Union, 2012, 8, 326-328.	0.0	0
52	Phase synchronization between stratospheric and tropospheric quasiâ€biennial and semiâ€annual oscillations. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 1338-1349.	2.7	10
53	THE MARTIAN ATMOSPHERIC BOUNDARY LAYER. Reviews of Geophysics, 2011, 49, .	23.0	119
54	A laboratory study of global-scale wave interactions in baroclinic flow with topography I: multiple flow regimes. Geophysical and Astrophysical Fluid Dynamics, 2011, 105, 128-160.	1.2	8

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55	Generation of inertiaâ€“gravity waves in the rotating thermal annulus by a localised boundary layer instability. Geophysical and Astrophysical Fluid Dynamics, 2011, 105, 161-181.	1.2	19
56	Storm-clouds brooding on towering heights. Nature, 2011, 475, 44-45.	27.8	6
57	Predicting chaotic climates: from Earth to super-Earths?. , 2010, , .		0
58	A bulk cloud parameterization in a Venus General Circulation Model. Icarus, 2010, 206, 662-668.	2.5	16
59	A laboratory model of Saturnâ€™s North Polar Hexagon. Icarus, 2010, 206, 755-763.	2.5	69
60	Assessing atmospheric predictability on Mars using numerical weather prediction and data assimilation. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 1614-1635.	2.7	24
61	Testing the limits of quasi-geostrophic theory: application to observed laboratory flows outside the quasi-geostrophic regime. Journal of Fluid Mechanics, 2010, 649, 187-203.	3.4	23
62	Synchronization in a Pair of Thermally Coupled Rotating Baroclinic Annuli: Understanding Atmospheric Teleconnections in the Laboratory. Physical Review Letters, 2010, 104, 204501.	7.8	25
63	Saturn's emitted power. Journal of Geophysical Research, 2010, 115, .	3.3	33
64	Structure and dynamics of the Martian lower and middle atmosphere as observed by the Mars Climate Sounder: Seasonal variations in zonal mean temperature, dust, and water ice aerosols. Journal of Geophysical Research, 2010, 115, .	3.3	183
65	Synchronization of modulated traveling baroclinic waves in a periodically forced, rotating fluid annulus. Physical Review E, 2009, 79, 015202.	2.1	14
66	Saturnâ€™s rotation period from its atmospheric planetary-wave configuration. Nature, 2009, 460, 608-610.	27.8	105
67	Saturn Atmospheric Structure and Dynamics. , 2009, , 113-159.		38
68	Intense polar temperature inversion in the middle atmosphere on Mars. Nature Geoscience, 2008, 1, 745-749.	12.9	71
69	Titan's winter polar vortex structure revealed by chemical tracers. Journal of Geophysical Research, 2008, 113, .	3.3	58
70	Temperature and Composition of Saturn's Polar Hot Spots and Hexagon. Science, 2008, 319, 79-81.	12.6	103
71	Turbulence, waves, and jets in a differentially heated rotating annulus experiment. Physics of Fluids, 2008, 20, .	4.0	44
72	Inertiaâ€“Gravity Waves Emitted from Balanced Flow: Observations, Properties, and Consequences. Journals of the Atmospheric Sciences, 2008, 65, 3543-3556.	1.7	70

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73	Superrotation in a Venus general circulation model. Journal of Geophysical Research, 2007, 112, .	3.3	65
74	Mars Climate Sounder: An investigation of thermal and water vapor structure, dust and condensate distributions in the atmosphere, and energy balance of the polar regions. Journal of Geophysical Research, 2007, 112, .	3.3	229
75	Dynamics of Convectively Driven Banded Jets in the Laboratory. Journals of the Atmospheric Sciences, 2007, 64, 4031-4052.	1.7	63
76	Assimilation of thermal emission spectrometer atmospheric data during the Mars Global Surveyor aerobraking period. Icarus, 2007, 192, 327-347.	2.5	91
77	Reconstructing the weather on Mars at the time of the MERs and Beagle 2 landings. Geophysical Research Letters, 2006, 33, .	4.0	11
78	Direct numerical simulations of bifurcations in an air-filled rotating baroclinic annulus. Journal of Fluid Mechanics, 2006, 561, 359.	3.4	30
79	Anisotropic turbulence and zonal jets in rotating flows with a Î²-effect. Nonlinear Processes in Geophysics, 2006, 13, 83-98.	1.3	94
80	Mapping potential-vorticity dynamics on Jupiter. I: Zonal-mean circulation from Cassini and Voyager 1 data. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 1577-1603.	2.7	63
81	Interannual variability of Martian dust storms in assimilation of several years of Mars global surveyor observations. Advances in Space Research, 2005, 36, 2146-2155.	2.6	51
82	On the generation mechanisms of short-scale unbalanced modes in rotating two-layer flows with vertical shear. Journal of Fluid Mechanics, 2005, 528, 1-22.	3.4	63
83	An intense stratospheric jet on Jupiter. Nature, 2004, 427, 132-135.	27.8	103
84	Exploring The Saturn System In The Thermal Infrared: The Composite Infrared Spectrometer. Space Science Reviews, 2004, 115, 169-297.	8.1	275
85	Upper atmosphere of Mars up to 120 km: Mars Global Surveyor accelerometer data analysis with the LMD general circulation model. Journal of Geophysical Research, 2004, 109, .	3.3	62
86	Jupiter's and Saturn's convectively driven banded jets in the laboratory. Geophysical Research Letters, 2004, 31, .	4.0	42
87	The effect of a global dust storm on simulations of the Martian water cycle. Geophysical Research Letters, 2004, 31, .	4.0	15
88	Nonconservation of Ertel Potential Vorticity in Hydrogen Atmospheres. Journals of the Atmospheric Sciences, 2004, 61, 1953-1965.	1.7	14
89	A combined laboratory and numerical study of heat transport by baroclinic eddies and axisymmetric flows. Journal of Fluid Mechanics, 2003, 489, 301-323.	3.4	22
90	Equatorial jets in the dusty Martian atmosphere. Journal of Geophysical Research, 2003, 108, .	3.3	33

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91	Spontaneous generation and impact of inertia-gravity waves in a stratified, two-layer shear flow. Geophysical Research Letters, 2003, 30, .	4.0	46
92	Modeling the Martian dust cycle, 1. Representations of dust transport processes. Journal of Geophysical Research, 2002, 107, 6-1-6-18.	3.3	194
93	Modeling the Martian dust cycle 2. Multiannual radiatively active dust transport simulations. Journal of Geophysical Research, 2002, 107, 7-1-7-15.	3.3	121
94	Bifurcations and instabilities in rotating, two-layer fluids: II. Î²-plane. Nonlinear Processes in Geophysics, 2002, 9, 289-309.	1.3	19
95	Bifurcations and instabilities in rotating two-layer fluids: I.f-plane. Nonlinear Processes in Geophysics, 2001, 8, 21-36.	1.3	11
96	Transition To Geostrophic Turbulence In The Laboratory, And As A Paradigm In Atmospheres And Oceans. Surveys in Geophysics, 2001, 22, 265-317.	4.6	42
97	A climate database for Mars. Journal of Geophysical Research, 1999, 104, 24177-24194.	3.3	299
98	Improved general circulation models of the Martian atmosphere from the surface to above 80 km. Journal of Geophysical Research, 1999, 104, 24155-24175.	3.3	955
99	Experiments on a barotropic rotating shear layer. Part 1. Instability and steady vortices. Journal of Fluid Mechanics, 1999, 383, 143-173.	3.4	56
100	Wave interactions and baroclinic chaos: a paradigm for long timescale variability in planetary atmospheres. Chaos, Solitons and Fractals, 1998, 9, 231-249.	5.1	30
101	Experiments on the structure of baroclinic waves and zonal jets in an internally heated, rotating, cylinder of fluid. Physics of Fluids, 1998, 10, 374-389.	4.0	38
102	Laboratory and numerical studies of baroclinic waves in an internally heated rotating fluid annulus: a case of wave/vortex duality?. Journal of Fluid Mechanics, 1997, 337, 155-191.	3.4	16
103	A laboratory study of baroclinic waves and turbulence in an internally heated rotating fluid annulus with sloping endwalls. Journal of Fluid Mechanics, 1997, 339, 173-198.	3.4	27
104	Wave interactions and the transition to chaos of baroclinic waves in a thermally driven rotating annulus. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1997, 355, 101-153.	3.4	68
105	Western boundary currents in the atmosphere of Mars. Nature, 1994, 367, 548-551.	27.8	23
106	Quasi-periodic and chaotic flow regimes in a thermally driven, rotating fluid annulus. Journal of Fluid Mechanics, 1992, 238, 599-632.	3.4	83
107	Temperature time-series?. Nature, 1992, 355, 686-686.	27.8	23
108	Temperature oscillations. Nature, 1992, 359, 679-679.	27.8	14

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109	Clearer circulation on Uranus. Nature, 1987, 325, 197-198.	27.8	3
110	Regimes of axisymmetric flow in an internally heated rotating fluid. Journal of Fluid Mechanics, 1986, 168, 255.	3.4	23
111	Geostrophic Scatter Diagrams and Potential Vorticity Dynamics. Journals of the Atmospheric Sciences, 1986, 43, 3226-3240.	1.7	32
112	Super-rotation and diffusion of axial angular momentum: I. â€˜Speed limitsâ€™ for axisymmetric flow in a rotating cylindrical fluid annulus. Quarterly Journal of the Royal Meteorological Society, 1986, 112, 231-251.	2.7	12
113	Super-rotation and diffusion of axial angular momentum: II. A review of quasi-axisymmetric models of planetary atmospheres. Quarterly Journal of the Royal Meteorological Society, 1986, 112, 253-272.	2.7	53
114	Super-rotation and diffusion of axial angular momentum: II. A review of quasi-axisymmetric models of planetary atmospheres. Quarterly Journal of the Royal Meteorological Society, 1986, 112, 253-272.	2.7	3
115	An isolated baroclinic eddy as a laboratory analogue of the Great Red Spot on Jupiter. Nature, 1984, 308, 45-48.	27.8	56
116	Long-lived eddies in the laboratory and in the atmospheres of Jupiter and Saturn. Nature, 1983, 302, 126-129.	27.8	46