

Philip S Marcus

List of Publications by Year in descending order

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45
papers

2,401
citations

201674

27
h-index

254184

43
g-index

46
all docs

46
docs citations

46
times ranked

1224
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of the Horizontal Winds in Jupiter's Great Red Spot From One Jovian Year of HST/WFC3 Maps. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093982.	4.0	10
2	Strength through defects: A novel Bayesian approach for the optimization of architected materials. <i>Science Advances</i> , 2021, 7, eabk2218.	10.3	41
3	An equatorial thermal wind equation: Applications to Jupiter. <i>Icarus</i> , 2019, 324, 198-223.	2.5	12
4	Finding the optimal shape of the leading-and-trailing car of a high-speed train using design-by-morphing. <i>Computational Mechanics</i> , 2018, 62, 23-45.	4.0	14
5	Zombie Vortex Instability. III. Persistence with Nonuniform Stratification and Radiative Damping. <i>Astrophysical Journal</i> , 2018, 869, 127.	4.5	21
6	Vertical wind shear in Neptune's upper atmosphere explained with a modified thermal wind equation. <i>Icarus</i> , 2018, 311, 317-339.	2.5	27
7	Changes in Jupiter's Zonal Wind Profile preceding and during the Juno mission. <i>Icarus</i> , 2017, 296, 163-178.	2.5	70
8	Stability of three-dimensional Gaussian vortices in an unbounded, rotating, vertically stratified, Boussinesq flow: linear analysis. <i>Journal of Fluid Mechanics</i> , 2017, 824, 97-134.	3.4	16
9	ZOMBIE VORTEX INSTABILITY. II. THRESHOLDS TO TRIGGER INSTABILITY AND THE PROPERTIES OF ZOMBIE TURBULENCE IN THE DEAD ZONES OF PROTOPLANETARY DISKS. <i>Astrophysical Journal</i> , 2016, 833, 148.	4.5	30
10	ZOMBIE VORTEX INSTABILITY. I. A PURELY HYDRODYNAMIC INSTABILITY TO RESURRECT THE DEAD ZONES OF PROTOPLANETARY DISKS. <i>Astrophysical Journal</i> , 2015, 808, 87.	4.5	99
11	DRAMATIC CHANGE IN JUPITER'S GREAT RED SPOT FROM SPACECRAFT OBSERVATIONS. <i>Astrophysical Journal Letters</i> , 2014, 797, L31.	8.3	20
12	Neptune's global circulation deduced from multi-wavelength observations. <i>Icarus</i> , 2014, 237, 211-238.	2.5	64
13	Three-Dimensional Vortices Generated by Self-Replication in Stably Stratified Rotating Shear Flows. <i>Physical Review Letters</i> , 2013, 111, 084501.	7.8	57
14	The universal aspect ratio of vortices in rotating stratified flows: theory and simulation. <i>Journal of Fluid Mechanics</i> , 2012, 706, 46-57.	3.4	37
15	The universal aspect ratio of vortices in rotating stratified flows: experiments and observations. <i>Journal of Fluid Mechanics</i> , 2012, 706, 34-45.	3.4	35
16	Neptune's zonal winds from near-IR Keck adaptive optics imaging in August 2001. <i>Astrophysics and Space Science</i> , 2012, 337, 65-78.	1.4	26
17	Jupiter's zonal winds: are they bands of homogenized potential vorticity organized as a monotonic staircase?. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 771-795.	3.4	22
18	Vertical structure of Jupiter's Oval BA before and after it reddened: What changed?. <i>Icarus</i> , 2011, 215, 211-225.	2.5	39

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19	Changes in Jupiter's zonal velocity between 1979 and 2008†. <i>Icarus</i> , 2011, 211, 1215-1232.	2.5	36
20	Changes in Jupiter's Great Red Spot (1979-2006) and Oval BA (2000-2006). <i>Icarus</i> , 2010, 210, 182-201.	2.5	27
21	Persistent rings in and around Jupiter's anticyclones – Observations and theory. <i>Icarus</i> , 2010, 210, 742-762.	2.5	52
22	Selection Rules for the Nonlinear Interaction of Internal Gravity Waves. <i>Physical Review Letters</i> , 2009, 102, 124502.	7.8	20
23	Jupiter's shrinking Great Red Spot and steady Oval BA: Velocity measurements with the –Advection Corrected Correlation Image Velocimetry™ automated cloud-tracking method. <i>Icarus</i> , 2009, 203, 164-188.	2.5	63
24	On the Interaction of Jupiter's Great Red Spot and Zonal Jet Streams. <i>Journals of the Atmospheric Sciences</i> , 2007, 64, 4432-4444.	1.7	21
25	Vortex Street Dynamics: The Selection Mechanism for the Areas and Locations of Jupiter's Vortices. <i>Journals of the Atmospheric Sciences</i> , 2007, 64, 1318-1333.	1.7	14
26	A 3D spectral anelastic hydrodynamic code for shearing, stratified flows. <i>Journal of Computational Physics</i> , 2006, 219, 21-46.	3.8	23
27	Three-dimensional Vortices in Stratified Protoplanetary Disks. <i>Astrophysical Journal</i> , 2005, 623, 1157-1170.	4.5	135
28	Breaking of Rotational Symmetry in Cylindrically Bounded 2D Electron Plasmas and 2D Fluids. <i>Physical Review Letters</i> , 2004, 93, 215002.	7.8	6
29	Planet Embryos in Vortex Wombs. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	0
30	Prediction of a global climate change on Jupiter. <i>Nature</i> , 2004, 428, 828-831.	27.8	40
31	The dynamics of jovian white ovals from formation to merger. <i>Icarus</i> , 2003, 162, 74-93.	2.5	39
32	Jupiter's Great Red Spot and zonal winds as a self-consistent, one-layer, quasigeostrophic flow. <i>Chaos</i> , 1994, 4, 269-286.	2.5	45
33	Jupiter's Great Red Spot and Other Vortices. <i>Annual Review of Astronomy and Astrophysics</i> , 1993, 31, 523-569.	24.3	184
34	Vortex dynamics in a shearing zonal flow. <i>Journal of Fluid Mechanics</i> , 1990, 215, 393.	3.4	87
35	Nonlinear standing waves in Couette-Taylor flow. <i>Physical Review A</i> , 1989, 39, 3734-3737.	2.5	43
36	Numerical simulation of Jupiter's Great Red Spot. <i>Nature</i> , 1988, 331, 693-696.	27.8	150

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37	Simulation of flow between concentric rotating spheres. Part 1. Steady states. Journal of Fluid Mechanics, 1987, 185, 1-30.	3.4	110
38	Simulation of flow between concentric rotating spheres. Part 2. Transitions. Journal of Fluid Mechanics, 1987, 185, 31-65.	3.4	78
39	Description and Philosophy of Spectral Methods. , 1986, , 359-386.		5
40	Simulation of Taylor-Couette flow. Part 1. Numerical methods and comparison with experiment. Journal of Fluid Mechanics, 1984, 146, 45-64.	3.4	201
41	Simulation of Taylor-Couette flow. Part 2. Numerical results for wavy-vortex flow with one travelling wave. Journal of Fluid Mechanics, 1984, 146, 65-113.	3.4	161
42	Wave speeds in wavy Taylor-vortex flow. Journal of Fluid Mechanics, 1984, 141, 365-390.	3.4	104
43	Effects of truncation in modal representations of thermal convection. Journal of Fluid Mechanics, 1981, 103, 241.	3.4	51
44	On Green's functions for small disturbances of plane Couette flow. Journal of Fluid Mechanics, 1977, 79, 525-534.	3.4	59
45	Stablest Shapes for an Axisymmetric Body of Gravitating, Incompressible Fluid. Astrophysical Journal, 1977, 214, 584.	4.5	7