

Gerald Schubert

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71
papers

3,142
citations

29
h-index

55
g-index

71
ext. papers

3,365
ext. citations

10.9
avg, IF

4.96
L-index

#	Paper	IF	Citations
71	Effects of an endothermic phase transition at 670 km depth in a spherical model of convection in the Earth's mantle. <i>Nature</i> , 1993 , 361, 699-704	50.4	497
70	Discovery of Ganymede's magnetic field by the Galileo spacecraft. <i>Nature</i> , 1996 , 384, 537-541	50.4	310
69	Gravitational constraints on the internal structure of Ganymede. <i>Nature</i> , 1996 , 384, 541-543	50.4	213
68	Numerical simulations of three-dimensional thermal convection in a fluid with strongly temperature-dependent viscosity. <i>Journal of Fluid Mechanics</i> , 1991 , 233, 299-328	3.7	155
67	Structure and circulation of the Venus atmosphere. <i>Journal of Geophysical Research</i> , 1980 , 85, 8007		154
66	Saturn's gravitational field, internal rotation, and interior structure. <i>Science</i> , 2007 , 317, 1384-7	33.3	124
65	Galileo Gravity Results and the Internal Structure of Io. <i>Science</i> , 1996 , 272, 709-12	33.3	116
64	Propagation of tsunami-driven gravity waves into the thermosphere and ionosphere. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		92
63	Saturn's rotation period from its atmospheric planetary-wave configuration. <i>Nature</i> , 2009 , 460, 608-610	50.4	90
62	Cloud Patterns, Waves and Convection in the Venus Atmosphere. <i>Journals of the Atmospheric Sciences</i> , 1976 , 33, 1394-1417	2.1	90
61	Timing of the Martian dynamo. <i>Nature</i> , 2000 , 408, 666-7	50.4	88
60	Geophysical constraints on the composition and structure of the Martian interior. <i>Journal of Geophysical Research</i> , 2005 , 110,		62
59	Patterns of stress and strain rate in southern Africa. <i>Journal of Geophysical Research</i> , 2006 , 111,		53
58	Chaotic, subduction-like downflows in a spherical model of convection in the Earth's mantle. <i>Nature</i> , 1990 , 347, 274-277	50.4	53
57	Two-dimensional oscillatory convection in a gravitationally modulated fluid layer. <i>Journal of Fluid Mechanics</i> , 1993 , 253, 663	3.7	51
56	Teleconvection: remotely driven thermal convection in rotating stratified spherical layers. <i>Science</i> , 2000 , 290, 1944-7	33.3	45
55	Origin of Jupiter's cloud-level zonal winds remains a puzzle even after Juno. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 8499-8504	11.5	44

54	Evolution of Icy Satellites. <i>Space Science Reviews</i> , 2010 , 153, 447-484	7.5	44
53	A simple-physics global circulation model for Venus: Sensitivity assessments of atmospheric superrotation. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	41
52	Jupiter's moment of inertia: A possible determination by Juno. <i>Icarus</i> , 2011 , 216, 440-448	3.8	40
51	Acoustic waves in the upper mesosphere and lower thermosphere generated by deep tropical convection. <i>Journal of Geophysical Research</i> , 2003 , 108,		40
50	THERMAL-GRAVITATIONAL WIND EQUATION FOR THE WIND-INDUCED GRAVITATIONAL SIGNATURE OF GIANT GASEOUS PLANETS: MATHEMATICAL DERIVATION, NUMERICAL METHOD, AND ILLUSTRATIVE SOLUTIONS. <i>Astrophysical Journal</i> , 2015 , 806, 270	4.7	37
49	Atmospheric airglow fluctuations due to a tsunami-driven gravity wave disturbance. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		37
48	Transitions to chaotic thermal convection in a rapidly rotating spherical fluid shell. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1993 , 69, 95-131	1.4	36
47	LAPLACE: A mission to Europa and the Jupiter System for ESA's Cosmic Vision Programme. <i>Experimental Astronomy</i> , 2009 , 23, 849-892	1.3	33
46	Planetary-Scale Waves in the Venus Atmosphere. <i>Journals of the Atmospheric Sciences</i> , 1982 , 39, 2397-2413	4.3	33
45	Saturn's satellite Rhea is a homogeneous mix of rock and ice. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	32
44	Atmospheric mountain wave generation on Venus and its influence on the solid planet's rotation rate. <i>Nature Geoscience</i> , 2018 , 11, 487-491	18.3	30
43	Angular momentum budget in General Circulation Models of superrotating atmospheres: A critical diagnostic. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		29
42	Penetrative Convection and Zonal Flow on Jupiter. <i>Science</i> , 1996 , 273, 941-3	33.3	29
41	Shapes of two-layer models of rotating planets. <i>Journal of Geophysical Research</i> , 2010 , 115,		28
40	Jupiter and Saturn rotation periods. <i>Planetary and Space Science</i> , 2009 , 57, 1467-1473	2	24
39	Shape, Internal Structure, Zonal Winds, and Gravitational Field of Rapidly Rotating Jupiter-Like Planets. <i>Annual Review of Earth and Planetary Sciences</i> , 2017 , 45, 419-446	15.3	22
38	Physical processes in acoustic wave heating of the thermosphere. <i>Journal of Geophysical Research</i> , 2005 , 110,		21
37	Numerical simulations of thermal convection in a rotating spherical fluid shell at high Taylor and Rayleigh numbers. <i>Physics of Fluids</i> , 1995 , 7, 2686-2699	4.4	21

36	On the convergence of the theory of figures. <i>Icarus</i> , 2014 , 242, 138-141	3.8	20
35	ON THE VARIATION OF ZONAL GRAVITY COEFFICIENTS OF A GIANT PLANET CAUSED BY ITS DEEP ZONAL FLOWS. <i>Astrophysical Journal</i> , 2012 , 748, 143	4.7	19
34	Venus Atmosphere Dynamics: A Continuing Enigma. <i>Geophysical Monograph Series</i> , 2007 , 101-120	1.1	19
33	Search for the global signature of the Martian dynamo. <i>Journal of Geophysical Research</i> , 2010 , 115,		18
32	Numerical simulations of thermal convection in a rapidly rotating spherical shell cooled inhomogeneously from above. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1994 , 75, 199-226	1.4	18
31	Gravitational signature of rotationally distorted Jupiter caused by deep zonal winds. <i>Icarus</i> , 2013 , 226, 1425-1430	3.8	17
30	Three-dimensional forward and backward numerical modeling of mantle plume evolution: Effects of thermal diffusion. <i>Journal of Geophysical Research</i> , 2006 , 111, n/a-n/a		17
29	The spatial distribution of coronae and related features on Venus. <i>Geophysical Research Letters</i> , 1993 , 20, 2965-2968	4.9	17
28	Wave mean flow interactions in the thermosphere induced by a major tsunami. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		16
27	Polar night vortex breakdown and large-scale stirring in the southern stratosphere. <i>Climate Dynamics</i> , 2010 , 35, 965-975	4.2	16
26	Stress field in the subducting lithosphere and comparison with deep earthquakes in Tonga. <i>Journal of Geophysical Research</i> , 2003 , 108,		15
25	A THREE-DIMENSIONAL NUMERICAL SOLUTION FOR THE SHAPE OF A ROTATIONALLY DISTORTED POLYTROPE OF INDEX UNITY. <i>Astrophysical Journal</i> , 2013 , 763, 116	4.7	12
24	Odd gravitational harmonics of Jupiter: Effects of spherical versus nonspherical geometry and mathematical smoothing of the equatorially antisymmetric zonal winds across the equatorial plane. <i>Icarus</i> , 2016 , 277, 416-423	3.8	11
23	A nonlinear vacillating dynamo induced by an electrically heterogeneous mantle. <i>Geophysical Research Letters</i> , 2001 , 28, 4411-4414	4.9	11
22	A FULLY SELF-CONSISTENT MULTI-LAYERED MODEL OF JUPITER. <i>Astrophysical Journal</i> , 2016 , 826, 127	4.7	10
21	Foundering of the lithosphere at the onset of subduction. <i>Geophysical Research Letters</i> , 1997 , 24, 1527-1529	4.9	9
20	A Long-Lived Sharp Disruption on the Lower Clouds of Venus. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL087221	4.9	8
19	EQUATORIAL ZONAL JETS AND JUPITER'S GRAVITY. <i>Astrophysical Journal Letters</i> , 2014 , 791, L24	7.9	7

18	Experiencing Venus: Clues to the Origin, Evolution, and Chemistry of Terrestrial Planets Via In-Situ Exploration of Our Sister World. <i>Geophysical Monograph Series</i> , 2007 , 171-189	1.1	6
17	Spatial symmetry breaking in rapidly rotating convective spherical shells. <i>Geophysical Research Letters</i> , 1995 , 22, 1265-1268	4.9	6
16	Wind-induced odd gravitational harmonics of Jupiter. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2015 , 450, L11-L15	4.3	5
15	Using Jupiter's gravitational field to probe the Jovian convective dynamo. <i>Scientific Reports</i> , 2016 , 6, 23497	4.9	5
14	A model of Saturn inferred from its measured gravitational field. <i>Research in Astronomy and Astrophysics</i> , 2018 , 18, 038	1.5	5
13	Depth of the dynamo region and zonal circulation of the molecular layer in Saturn inferred from its equatorially symmetric gravitational field. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019 , 488, 5633-5640	4.3	5
12	Self-consistent internal structure of a rotating gaseous planet and its comparison with an approximation by oblate spheroidal equidensity surfaces. <i>Physics of the Earth and Planetary Interiors</i> , 2015 , 249, 43-50	2.3	5
11	Pore water convection within carbonaceous chondrite parent bodies: Temperature-dependent viscosity and flow structure. <i>Physics of Fluids</i> , 2005 , 17, 086602	4.4	5
10	The effect of the equatorially symmetric zonal winds of Saturn on its gravitational field. <i>Research in Astronomy and Astrophysics</i> , 2018 , 18, 039	1.5	5
9	Venus upper atmosphere revealed by a GCM: II. Model validation with temperature and density measurements. <i>Icarus</i> , 2021 , 366, 114432	3.8	5
8	Interpreting the Equatorially Antisymmetric Gravitational Field of Saturn Measured by the Cassini Grand Finale. <i>Astrophysical Journal</i> , 2020 , 890, 26	4.7	3
7	On the interpretation of the equatorially antisymmetric Jovian gravitational field. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017 ,	4.3	3
6	Saturn's gravitational field induced by its equatorially antisymmetric zonal winds. <i>Research in Astronomy and Astrophysics</i> , 2018 , 18, 050	1.5	3
5	Venus's upper atmosphere revealed by a GCM: I. Structure and variability of the circulation. <i>Icarus</i> , 2021 , 366, 114400	3.8	3
4	On the gravitational signature of zonal flows in Jupiter-like planets: An analytical solution and its numerical validation. <i>Physics of the Earth and Planetary Interiors</i> , 2017 , 263, 1-6	2.3	2
3	Simulations of nonlinear pore-water convection in spherical shells. <i>Physics of Fluids</i> , 2008 , 20, 026601	4.4	2
2	Breakthroughs in our Knowledge and Understanding of the Earth and Planets. <i>Annual Review of Earth and Planetary Sciences</i> , 2001 , 29, 1-15	15.3	
1	Venus mountain waves in the upper atmosphere simulated by a time-invariant linear full-wave spectral model. <i>Icarus</i> , 2022 , 377, 114922	3.8	

