Jeremy Bloxham

List of Publications by Year
in descending order

66 papers	5,569 citations	36 h-index (101543)	66 g-index (102487)
70 all docs	70 docs citations	70 times ranked	3055 citing authors

#	Article	IF	Citations
1	Time-independent and time-dependent behaviour of high-latitude flux bundles at the core-mantle boundary. Geophysical Research Letters, 2002, 29, 1-1-1-4.	4.0	432
2	An Earth-like numerical dynamo model. Nature, 1997, 389, 371-374.	27.8	392
3	The secular variation of Earth's magnetic field. Nature, 1985, 317, 777-781.	27.8	329
4	Fluid flow near the surface of Earth's outer core. Reviews of Geophysics, 1991, 29, 97-120.	23.0	263
5	A New Model of Jupiter's Magnetic Field From Juno's First Nine Orbits. Geophysical Research Letters, 2018, 45, 2590-2596.	4.0	258
6	Jupiterâ€™s interior and deep atmosphere: The initial pole-to-pole passes with the Juno spacecraft. Science, 2017, 356, 821-825.	12.6	229
7	The Juno Mission. Space Science Reviews, 2017, 213, 5-37.	8.1	222
8	Convective-region geometry as the cause of Uranus' and Neptune's unusual magnetic fields. Nature, 2004, 428, 151-153.	27.8	204
9	Thermal coreâ€"mantle interactions. Nature, 1987, 325, 511-513.	27.8	203
10	Jupiterâ€™s atmospheric jet streams extend thousands of kilometres deep. Nature, 2018, 555, 223-226.	27.8	189
11	The origin of geomagnetic jerks. Nature, 2002, 420, 65-68.	27.8	186
12	Morphology of the geomagnetic field and implications for the geodynamo. Nature, 1987, 325, 509-511.	27.8	174
13	Geomagnetic field analysis--III. Magnetic fields on the core--mantle boundary. Geophysical Journal International, 1985, 80, 695-713.	2.4	166
14	Numerical dynamo models of Uranus' and Neptune's magnetic fields. Icarus, 2006, 184, 556-572.	2.5	159
15	The Evolution of the Earth's Magnetic Field. Scientific American, 1989, 261, 68-75.	1.0	150
16	Numerical Modeling of Magnetohydrodynamic Convection in a Rapidly Rotating Spherical Shell: Weak and Strong Field Dynamo Action. Journal of Computational Physics, 1999, 153, 51-81.	3.8	149
17	Torsional oscillations and the magnetic field within the Earth's core. Nature, 1997, 388, 760-763.	27.8	141
18	Thin shell dynamo models consistent with Mercury's weak observed magnetic field. Earth and Planetary Science Letters, 2005, 234, 27-38.	4.4	129

#	Article	IF	Citations
19	Ã˜rsted Initial Field Model. Geophysical Research Letters, 2000, 27, 3607-3610.	4.0	120
20	Geomagnetic field analysis-IV. Testing the frozen-flux hypothesis. Geophysical Journal International, 1986, 84, 139-152.	2.4	93
21	The expulsion of magnetic flux from the Earth's core. Geophysical Journal International, 1986, 87, 669-678.	2.4	85
22	Simple models of fluid flow at the core surface derived from geomagnetic field models. Geophysical Journal International, 1989, 99, 173-182.	2.4	85
23	Sensitivity of the geomagnetic axial dipole to thermal coreâ€“mantle interactions. Nature, 2000, 405, 63-65.	27.8	69
24	A complex dynamo inferred from the hemispheric dichotomy of Jupiterâ€™s magnetic field. Nature, 2018, 561, 76-78.	27.8	64
25	The steady part of the secular variation of the Earth's magnetic field. Journal of Geophysical Research, 1992, 97, 19565-19579.	3.3	62
26	A New Model of Jupiter's Magnetic Field at the Completion of Juno's Prime Mission. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	60
27	Azimuthal flows in the Earth's core and changes in length of day at millennial timescales. Geophysical Journal International, 2006, 165, 32-46.	2.4	55
28	The treatment of attitude errors in satellite geomagnetic data. Physics of the Earth and Planetary Interiors, 1996, 98, 221-233.	1.9	50
29	Time variation of Jupiterâ€™s internal magnetic field consistent with zonal wind advection. Nature Astronomy, 2019, 3, 730-735.	10.1	46
30	Lateral temperature variations at the coreâ€mantle boundary deduced from the magnetic field. Geophysical Research Letters, 1990, 17, 1997-2000.	4.0	44
31	The dynamical regime of fluid flow at the core surface. Geophysical Research Letters, 1988, 15, 585-588.	4.0	42
32	The effect of thermal coreâ€“mantle interactions on the palaeomagnetic secular variation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2000, 358, 1171-1179.	3.4	42
33	Inner core tilt and polar motion. Geophysical Journal International, 2002, 151, 377-392.	2.4	42
34	Torque balance, Taylorâ€™s constraint and torsional oscillations in a numerical model of the geodynamo. Physics of the Earth and Planetary Interiors, 2003, 140, 29-51.	1.9	39
35	Mapping the fluid flow and shear near the core surface using the radial and horizontal components of the magnetic field. Geophysical Journal International, 1991, 105, 199-212.	2.4	38
36	Effects of sediment aggregate size on DRM intensity: a new theory. Earth and Planetary Science Letters, 2001, 186, 113-122.	4.4	38

#	Article	IF	Citations
37	On the consequences of strong stable stratification at the top of Earth's outer core. Geophysical Research Letters, 1990, 17, 2081-2084.	4.0	33
38	On the dynamics of topographical core-mantle coupling. Physics of the Earth and Planetary Interiors, 1997, 99, 289-294.	1.9	32
39	Variations in the Earth's gravity field caused by torsional oscillations in the core. Geophysical Journal International, 2004, 159, 417-434.	2.4	31
40	On the effect of boundary topography on flow in the Earth's core. Geophysical and Astrophysical Fluid Dynamics, 1993, 72, 161-195.	1.2	29
41	On the dynamical implications of models of Bsin the Earthâ€™s core. Geophysical Journal International, 1999, 138, 679-686.	2.4	28
42	Deep rotating convection generates the polar hexagon on Saturn. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13991-13996.	7.1	28
43	Electromagnetic Coupling and the Toroidal Magnetic Field At the Core-Mantle Boundary. Geophysical Journal International, 1994, 117, 235-256.	2.4	27
44	DYNAMICS OF ANGULAR MOMENTUM IN THE EARTH'S CORE. Annual Review of Earth and Planetary Sciences, 1998, 26, 501-517.	11.0	26
45	Deep convectionâ€"driven vortex formation on Jupiter and Saturn. Science Advances, 2020, 6, .	10.3	25
46	Alleviation of the Backus Effect in geomagnetic field modelling. Geophysical Research Letters, 1995, 22, 1641-1644.	4.0	24
47	Energetics of numerical geodynamo models. Geophysical Journal International, 2002, 149, 211-224.	2.4	23
48	Microwave observations reveal the deep extent and structure of Jupiterâ€™s atmospheric vortices. Science, 2021, 374, 968-972.	12.6	23
49	The analysis of initial Juno magnetometer data using a sparse magnetic field representation. Geophysical Research Letters, 2017, 44, 4687-4693.	4.0	22
50	Deformation of Earth's inner core by electromagnetic forces. Geophysical Research Letters, 2000, 27, 4001-4004.	4.0	21
51	Axial drop motion in rotating fluids. Journal of Fluid Mechanics, 1995, 282, 247-278.	3.4	17
52	A one-dimensional map of BS from torsional oscillations of the Earth's core. Geodynamic Series, 1998, , 183-196.	0.1	16
53	Differential Rotation in Jupiter's Interior Revealed by Simultaneous Inversion for the Magnetic Field and Zonal Flux Velocity. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	16
54	Using reversed magnetic flux spots to determine a planet's inner core size. Geophysical Research Letters, 2007, 34, .	4.0	13

#	Article	IF	Citations
55	The construction of sparse models of Mars's crustal magnetic field. Journal of Geophysical Research E: Planets, 2017, 122, 1443-1457.	3.6	13
56	The motion of an inviscid drop in a bounded rotating fluid. Physics of Fluids A, Fluid Dynamics, 1992, 4, 1142-1147.	1.6	12
57	Core-mantle interactions. Surveys in Geophysics, 1990, 11, 329-353.	4.6	11
58	Geomagnetic reversals: Evidence for asymmetry and fluctuation. Nature, 1986, 322, 13-14.	27.8	10
59	The phase difference between length of day and atmospheric angular momentum at subannual frequencies and the possible role of core-mantle coupling. Geophysical Research Letters, 1997, 24, 1799-1802.	4.0	10
60	On the secular variation of Saturnâ€™s magnetic field. Physics of the Earth and Planetary Interiors, 2016, 250, 31-34.	1.9	8
61	Contributions to Jupiter's Gravity Field From Dynamics in the Dynamo Region. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006165.	3.6	5
62	Investigating Barotropic Zonal Flow in Jupiter's Deep Atmosphere Using Juno Gravitational Data. Journal of Geophysical Research E: Planets, 2021, 126, .	3.6	5
63	The Geomagnetic Main Field and the Geodynamo. Reviews of Geophysics, 1991, 29, 428-432.	23.0	4
64	Comment on â€œThe topographic torque on a bounding surface of a rotating gravitating fluid and the excitation by core motions of decadal fluctuations in the Earth's rotationâ€. Geophysical Research Letters, 1995, 22, 3561-3562.	4.0	4
65	No Evidence for Time Variation in Saturnâ€™s Internal Magnetic Field. Planetary Science Journal, 2021, 2, 181.	3.6	2
66	A Dynamo Simulation Generating Saturnâ€Like Small Magnetic Dipole Tilts. Geophysical Research Letters, 2022, 49, .	4.0	2