

Raymond J Walker

List of Publications by Year in descending order

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127
papers

7,538
citations

87723

38
h-index

53109

85
g-index

135
all docs

135
docs citations

135
times ranked

2935
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Bursty bulk flows in the inner central plasma sheet. <i>Journal of Geophysical Research</i> , 1992, 97, 4027-4039. | 3.3 | 980 |
| 2 | Statistical characteristics of bursty bulk flow events. <i>Journal of Geophysical Research</i> , 1994, 99, 21257. | 3.3 | 642 |
| 3 | Galileo Magnetometer Measurements: A Stronger Case for a Subsurface Ocean at Europa. <i>Science</i> , 2000, 289, 1340-1343. | 6.0 | 576 |
| 4 | Induced magnetic fields as evidence for subsurface oceans in Europa and Callisto. <i>Nature</i> , 1998, 395, 777-780. | 13.7 | 539 |
| 5 | Discovery of Ganymede's magnetic field by the Galileo spacecraft. <i>Nature</i> , 1996, 384, 537-541. | 13.7 | 348 |
| 6 | Alfvén wave resonances in a realistic magnetospheric magnetic field geometry. <i>Journal of Geophysical Research</i> , 1981, 86, 4589-4596. | 3.3 | 248 |
| 7 | Probabilistic models of the Jovian magnetopause and bow shock locations. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 17-1. | 3.3 | 195 |
| 8 | Multipoint analysis of a bursty bulk flow event on April 11, 1985. <i>Journal of Geophysical Research</i> , 1996, 101, 4967-4989. | 3.3 | 184 |
| 9 | The structure of the distant geomagnetic tail during long periods of northward IMF. <i>Geophysical Research Letters</i> , 1995, 22, 349-352. | 1.5 | 182 |
| 10 | Observations and simulations of non-local acceleration of electrons in magnetotail magnetic reconnection events. <i>Nature Physics</i> , 2011, 7, 360-365. | 6.5 | 165 |
| 11 | Magnetospheric plasma pressures in the midnight meridian: Observations from 2.5 to 35 R_{E} . <i>Journal of Geophysical Research</i> , 1989, 94, 5264-5272. | 3.3 | 137 |
| 12 | Anomalous aspects of magnetosheath flow and of the shape and oscillations of the magnetopause during an interval of strongly northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 1993, 98, 5727-5742. | 3.3 | 133 |
| 13 | The magnetic field and magnetosphere of Ganymede. <i>Geophysical Research Letters</i> , 1997, 24, 2155-2158. | 1.5 | 127 |
| 14 | Wave and particle characteristics of earthward electron injections associated with dipolarization fronts. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 118 |
| 15 | Intermittent short-duration magnetic field anomalies in the Io torus: Evidence for plasma interchange?. <i>Geophysical Research Letters</i> , 1997, 24, 2127-2130. | 1.5 | 107 |
| 16 | A global magnetohydrodynamic simulation of the response of the magnetosphere to a northward turning of the interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 1994, 99, 11027. | 3.3 | 99 |
| 17 | Improved mapping of Jupiter's auroral features to magnetospheric sources. <i>Journal of Geophysical Research</i> , 2011, 116, . | 3.3 | 98 |
| 18 | Reconnection and flows in the Jovian magnetotail as inferred from magnetometer observations. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 93 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | Mirror mode structures in the Jovian magnetosheath. <i>Journal of Geophysical Research</i> , 2006, 111, . | 3.3 | 88 |
| 20 | A global magnetohydrodynamic simulation of the magnetosphere when the interplanetary magnetic field is southward: The onset of magnetotail reconnection. <i>Journal of Geophysical Research</i> , 1993, 98, 17235-17249. | 3.3 | 87 |
| 21 | Properties of Ganymede's magnetosphere inferred from improved three-dimensional MHD simulations. <i>Journal of Geophysical Research</i> , 2009, 114, . | 3.3 | 84 |
| 22 | Three-dimensional MHD simulations of Ganymede's magnetosphere. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 80 |
| 23 | Observations of an Electron Diffusion Region in Symmetric Reconnection with Weak Guide Field. <i>Astrophysical Journal</i> , 2019, 870, 34. | 1.6 | 79 |
| 24 | Coalescence of Macroscopic Flux Ropes at the Subsolar Magnetopause: Magnetospheric Multiscale Observations. <i>Physical Review Letters</i> , 2017, 119, 055101. | 2.9 | 72 |
| 25 | MHD simulations of Io's interaction with the plasma torus. <i>Journal of Geophysical Research</i> , 1998, 103, 19867-19877. | 3.3 | 68 |
| 26 | Cluster observations of kinetic structures and electron acceleration within a dynamic plasma bubble. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 674-684. | 0.8 | 66 |
| 27 | A global magnetohydrodynamic simulation of the Jovian magnetosphere. <i>Journal of Geophysical Research</i> , 1998, 103, 225-235. | 3.3 | 65 |
| 28 | On the importance of antiparallel reconnection when the dipole tilt and IMFBy are nonzero. <i>Journal of Geophysical Research</i> , 2006, 111, . | 3.3 | 64 |
| 29 | An MHD simulation of $\langle i \rangle B_{\langle y \rangle} / \langle i \rangle$ -dependent magnetospheric convection and field-aligned currents during northward IMF. <i>Journal of Geophysical Research</i> , 1985, 90, 10835-10842. | 3.3 | 52 |
| 30 | An MHD simulation of plasma flow past Io: Alfvén and slow mode perturbations. <i>Geophysical Research Letters</i> , 1988, 15, 1311-1314. | 1.5 | 51 |
| 31 | Absence of an internal magnetic field at Callisto. <i>Nature</i> , 1997, 387, 262-264. | 13.7 | 51 |
| 32 | Dynamics of Ganymede's magnetopause: Intermittent reconnection under steady external conditions. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 44 |
| 33 | Static magnetic field models consistent with nearly isotropic plasma pressure. <i>Geophysical Research Letters</i> , 1987, 14, 872-875. | 1.5 | 43 |
| 34 | Taylor scale and effective magnetic Reynolds number determination from plasma sheet and solar wind magnetic field fluctuations. <i>Journal of Geophysical Research</i> , 2007, 112, . | 3.3 | 43 |
| 35 | On the origin of the crescent-shaped distributions observed by MMS at the magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 2024-2039. | 0.8 | 43 |
| 36 | Adiabatic acceleration of suprathermal electrons associated with dipolarization fronts. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 42 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Substorm evolution as revealed by THEMIS satellites and a global MHD simulation. <i>Journal of Geophysical Research</i> , 2009, 114, . | 3.3 | 41 |
| 38 | A magnetohydrodynamic simulation of the formation of magnetic flux tubes at the Earth's dayside magnetopause. <i>Geophysical Research Letters</i> , 1989, 16, 155-158. | 1.5 | 39 |
| 39 | Magnetohydrodynamic simulations of the effects of the solar wind on the Jovian magnetosphere. <i>Planetary and Space Science</i> , 2001, 49, 237-245. | 0.9 | 39 |
| 40 | Ion sources and acceleration mechanisms inferred from local distribution functions. <i>Geophysical Research Letters</i> , 1997, 24, 955-958. | 1.5 | 38 |
| 41 | Configuration and dynamics of the Jovian magnetosphere. <i>Journal of Geophysical Research</i> , 2006, 111, . | 3.3 | 38 |
| 42 | A new convection state at substorm onset: Results from an MHD study. <i>Geophysical Research Letters</i> , 2002, 29, 26-1-26-4. | 1.5 | 37 |
| 43 | Suprathermal Electron Acceleration in a Reconnecting Magnetotail: Large-Scale Kinetic Simulation. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8087-8108. | 0.8 | 34 |
| 44 | Localized reconnection and substorm onset on Dec. 22, 1996. <i>Geophysical Research Letters</i> , 1999, 26, 3545-3548. | 1.5 | 33 |
| 45 | Magnetospheric convection at Saturn as a function of IMF BZ. <i>Geophysical Research Letters</i> , 2007, 34, . | 1.5 | 32 |
| 46 | Dipolarization and turbulence in the plasma sheet during a substorm: THEMIS observations and global MHD simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 7752-7761. | 0.8 | 32 |
| 47 | Observation of high-frequency electrostatic waves in the vicinity of the reconnection ion diffusion region by the spacecraft of the Magnetospheric Multiscale (MMS) mission. <i>Geophysical Research Letters</i> , 2016, 43, 4808-4815. | 1.5 | 32 |
| 48 | Magnetospheric Multiscale Observations of an Ion Diffusion Region With Large Guide Field at the Magnetopause: Current System, Electron Heating, and Plasma Waves. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1834-1852. | 0.8 | 32 |
| 49 | Evidence that crater flux transfer events are initial stages of typical flux transfer events. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 31 |
| 50 | A simulation study of dynamics in the distant Jovian magnetotail. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 31 |
| 51 | A simulation study of Kelvin-Helmholtz waves at Saturn's magnetopause. <i>Journal of Geophysical Research</i> , 2011, 116, . | 3.3 | 30 |
| 52 | Vortex-associated reconnection for northward IMF in the Kronian magnetosphere. <i>Geophysical Research Letters</i> , 2007, 34, . | 1.5 | 29 |
| 53 | Multiscale study of electron energization during unsteady reconnection events. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 4784-4799. | 0.8 | 29 |
| 54 | Dynamics of the Jovian magnetosphere for northward interplanetary magnetic field (IMF). <i>Geophysical Research Letters</i> , 2005, 32, . | 1.5 | 28 |

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|----|--|-----|-----------|
| 55 | A simulation study of currents in the Jovian magnetosphere. Planetary and Space Science, 2003, 51, 295-307. | 0.9 | 27 |
| 56 | The effect of mass loading on the temperature of a flowing plasma. Geophysical Research Letters, 1989, 16, 763-766. | 1.5 | 26 |
| 57 | A Global Magnetohydrodynamic Simulation of the Origin and Evolution of Magnetic Flux Ropes in the Magnetotail. Journal of Geomagnetism and Geoelectricity, 1996, 48, 765-779. | 0.8 | 26 |
| 58 | Magnetic flux ropes in 3-Dimensional MHD simulations. Geophysical Monograph Series, 1990, , 669-678. | 0.1 | 25 |
| 59 | Global magnetohydrodynamic simulation of reconnection and turbulence in the plasma sheet. Journal of Geophysical Research, 2010, 115, . | 3.3 | 25 |
| 60 | Observation of Threeâ€³Dimensional Magnetic Reconnection in the Terrestrial Magnetotail. Journal of Geophysical Research: Space Physics, 2017, 122, 9513-9520. | 0.8 | 25 |
| 61 | A stochastic sea: The source of plasma sheet boundary layer ion structures observed by Cluster. Journal of Geophysical Research, 2005, 110, . | 3.3 | 24 |
| 62 | Oxygen acceleration in magnetotail reconnection. Journal of Geophysical Research: Space Physics, 2017, 122, 618-639. | 0.8 | 23 |
| 63 | Generation and properties of in vivo flux transfer events. Journal of Geophysical Research, 2012, 117, . | 3.3 | 22 |
| 64 | Oxygen impacts on dipolarization fronts and reconnection rate. Journal of Geophysical Research: Space Physics, 2016, 121, 1148-1166. | 0.8 | 22 |
| 65 | Sheared magnetic field structure in Jupiter's dusk magnetosphere: Implications for return currents. Journal of Geophysical Research, 2002, 107, SMP 17-1. | 3.3 | 21 |
| 66 | Electron energization and transport in the magnetotail during substorms. Journal of Geophysical Research: Space Physics, 2014, 119, 1060-1079. | 0.8 | 21 |
| 67 | Magnetospheric convection during prolonged intervals with southward interplanetary magnetic field. Journal of Geophysical Research, 2006, 111, . | 3.3 | 20 |
| 68 | Quantitative Modeling of Planetary Magnetospheric Magnetic Fields. Geophysical Monograph Series, 0, , 9-34. | 0.1 | 20 |
| 69 | Turbulence in a global magnetohydrodynamic simulation of the Earth's magnetosphere during northward and southward interplanetary magnetic field. Nonlinear Processes in Geophysics, 2012, 19, 165-175. | 0.6 | 19 |
| 70 | Source distributions of substorm ions observed in the near-Earth magnetotail. Geophysical Research Letters, 1999, 26, 955-958. | 1.5 | 18 |
| 71 | A Possible Signature of Magnetic Cavity Mode Oscillations in ISEE Spacecraft Observations.. Journal of Geomagnetism and Geoelectricity, 1997, 49, 1079-1098. | 0.8 | 18 |
| 72 | A simulation study of particle energization observed by THEMIS spacecraft during a substorm. Journal of Geophysical Research, 2009, 114, . | 3.3 | 17 |

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| 73 | Simulating the effect of centrifugal forces in Jupiter's magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 1925-1950. | 0.8 | 17 |
| 74 | Non-self-similar scaling of plasma sheet and solar wind probability distribution functions of magnetic field fluctuations. Journal of Geophysical Research, 2006, 111, . | 3.3 | 16 |
| 75 | Externally driven magnetic reconnection. Geophysical Monograph Series, 1984, , 272-281. | 0.1 | 15 |
| 76 | Explanation of the inward displacement of Io's hot plasma torus and consequences for sputtering sources. Nature, 1985, 315, 373-378. | 13.7 | 15 |
| 77 | Comparison of empirical magnetic field models and global MHD simulations: The near-tail currents. Geophysical Research Letters, 1995, 22, 675-678. | 1.5 | 15 |
| 78 | Interplanetary magnetic field control of the entry of solar energetic particles into the magnetosphere. Journal of Geophysical Research, 2002, 107, SSH 7-1-SSH 7-20. | 3.3 | 15 |
| 79 | A multiscale study of ion heating in Earth's magnetotail. Geophysical Research Letters, 2016, 43, 515-524. | 1.5 | 15 |
| 80 | Two models of cross polar cap potential saturation compared: Siscoe's Hill model versus Kivelson's Ridley model. Journal of Geophysical Research: Space Physics, 2013, 118, 794-803. | 0.8 | 14 |
| 81 | The origin of the near-Earth plasma population during a substorm on November 24, 1996. Journal of Geophysical Research, 2000, 105, 2589-2605. | 3.3 | 13 |
| 82 | The linear dependence of polar cap index on its controlling factors in solar wind and magnetotail. Journal of Geophysical Research, 2012, 117, . | 3.3 | 13 |
| 83 | Multiscale MHD-Kinetic PIC Study of Energy Fluxes Caused by Reconnection. Journal of Geophysical Research: Space Physics, 2020, 125, no. | 0.8 | 13 |
| 84 | An MHD simulation of the interaction of the solar wind with the outflowing plasma from a comet. Geophysical Research Letters, 1986, 13, 929-932. | 1.5 | 12 |
| 85 | Field-aligned currents and magnetospheric convection—A comparison between MHD simulations and observations. Geophysical Monograph Series, 1988, , 39-49. | 0.1 | 12 |
| 86 | Forces driving fast flow channels, dipolarizations, and turbulence in the magnetotail. Journal of Geophysical Research: Space Physics, 2016, 121, 11,063. | 0.8 | 12 |
| 87 | Identifying the electron diffusion region in a realistic simulation of Earth's magnetotail. Geophysical Research Letters, 2016, 43, 6005-6011. | 1.5 | 12 |
| 88 | On the importance of accurate solar wind measurements for studying magnetospheric dynamics. Journal of Geophysical Research, 2008, 113, . | 3.3 | 11 |
| 89 | Observations and simulations of a highly structured plasma sheet during northward IMF. Journal of Geophysical Research, 2010, 115, . | 3.3 | 11 |
| 90 | Flow vortices associated with flux transfer events moving along the magnetopause: Observations and an MHD simulation. Journal of Geophysical Research, 2011, 116, n/a-n/a. | 3.3 | 11 |

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| 91 | Turbulent Energization of Electron Power Law Tails during Magnetic Reconnection. <i>Physical Review Letters</i> , 2020, 125, 225101. | 2.9 | 11 |
| 92 | The architecture of a multi-tiered virtual observatory. <i>Earth Science Informatics</i> , 2008, 1, 21-28. | 1.6 | 10 |
| 93 | A statistical study of the inner edge of the electron plasma sheet and the net convection potential as a function of geomagnetic activity. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 10 |
| 94 | A magnetohydrodynamic simulation study of Kronian field-aligned currents and auroras. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 10 |
| 95 | Propagation of Pi2 pulsations through the braking region in global MHD simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 10,574. | 0.8 | 10 |
| 96 | Modeling the entry and trapping of solar energetic particles in the magnetosphere during the November 24-25, 2001 storm. <i>Journal of Geophysical Research</i> , 2009, 114, . | 3.3 | 9 |
| 97 | Dynamic Plasma Interaction at Io: Multispecies Hybrid Simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 313-341. | 0.8 | 9 |
| 98 | Embedding particle-in-cell simulations in global magnetohydrodynamic simulations of the magnetosphere. <i>Journal of Plasma Physics</i> , 2019, 85, . | 0.7 | 9 |
| 99 | Long-term variation of driven and unloading effects on polar cap dynamics. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 8 |
| 100 | Direct auroral precipitation from the magnetotail during substorms. <i>Geophysical Research Letters</i> , 2013, 40, 3787-3792. | 1.5 | 8 |
| 101 | Simulating the Magnetosphere: The Structure of the Magnetotail. <i>Geophysical Monograph Series</i> , 0, , 61-68. | 0.1 | 8 |
| 102 | Modeling substorm ion injection observed by the THEMIS and LANL spacecraft in the near-Earth magnetotail. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 7 |
| 103 | Utilizing the polar cap index to explore strong driving of polar cap dynamics. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 7 |
| 104 | The Entry of Solar Wind Ions into the Magnetosphere. <i>Geophysical Monograph Series</i> , 0, , 311-319. | 0.1 | 7 |
| 105 | Determination of Particle Sources for a Geotail Distribution Function Observed on May 23, 1995. <i>Geophysical Monograph Series</i> , 2013, , 297-312. | 0.1 | 7 |
| 106 | The Relation of N ⁺ Auroral Streamers to Auroral Expansion. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027063. | 0.8 | 7 |
| 107 | The Locations and Shapes of Jupiter's Bow Shock and Magnetopause. <i>AIP Conference Proceedings</i> , 2005, , . | 0.3 | 6 |
| 108 | A brave new (virtual) world: distributed searches, relevance scoring and facets. <i>Earth Science Informatics</i> , 2008, 1, 29-34. | 1.6 | 6 |

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| 109 | Generation of Pi2 pulsations by intermittent earthward propagating dipolarization fronts: An MHD case study. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 6364-6377. | 0.8 | 5 |
| 110 | Contrasting electron acceleration processes during two substorms. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5382-5400. | 0.8 | 5 |
| 111 | Structure and Dynamics of Three-Dimensional Magnetotail Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8241-8260. | 0.8 | 5 |
| 112 | Characteristics of Reconnection Sites and Fast Flow Channels in an MHD Simulation. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027701. | 0.8 | 5 |
| 113 | Quasiperiodic 1-Hour Alfvén Wave Resonances in Saturn's Magnetosphere: Theory for a Realistic Plasma/Field Model. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL090967. | 1.5 | 5 |
| 114 | Magnetohydrodynamic Turbulence in the Earth's Magnetotail From Observations and Global MHD Simulations. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 8, . | 1.1 | 4 |
| 115 | Do We Need to Consider Electrons' Kinetic Effects to Properly Model a Planetary Magnetosphere: The Case of Mercury. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, . | 0.8 | 4 |
| 116 | Magnetic islands in the near geomagnetic tail and its implications for the mechanism of 1054 UT CDAW 6 substorm. <i>Geophysical Monograph Series</i> , 1990, , 647-654. | 0.1 | 3 |
| 117 | The morphology and architecture of a distributed data system. <i>AIP Conference Proceedings</i> , 1993, , . | 0.3 | 3 |
| 118 | Ion dynamics associated with substorm dipolarization fronts. <i>Science China Earth Sciences</i> , 2014, 57, 2543-2551. | 2.3 | 3 |
| 119 | Patterns of magnetic field merging sites on the magnetopause. <i>Geophysical Monograph Series</i> , 1984, , 156-157. | 0.1 | 2 |
| 120 | Ion cyclotron instability at Io: Hybrid simulation results compared to in situ observations. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 7514-7534. | 0.8 | 2 |
| 121 | Simulation Studies of Plasma Transport at Earth, Jupiter and Saturn. <i>Astrophysics and Space Science Library</i> , 2016, , 345-372. | 1.0 | 2 |
| 122 | The design and implementation of scalable data systems and incremental data sets. <i>AIP Conference Proceedings</i> , 1993, , . | 0.3 | 1 |
| 123 | The effect of solar wind structures on the storm-time magnetosphere. <i>Proceedings of the International Astronomical Union</i> , 2006, 2, 283. | 0.0 | 0 |
| 124 | A registry framework and Rosetta attributes for distributed science. <i>Earth Science Informatics</i> , 2010, 3, 127-133. | 1.6 | 0 |
| 125 | Designing science web sites. <i>Earth Science Informatics</i> , 2010, 3, 51-57. | 1.6 | 0 |
| 126 | Magnetohydrodynamic simulations of the magnetopauses of Saturn, Jupiter and the Earth. , 2011, , . | | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 127 | An MHD Simulation of the Interaction of the Solar Wind with the Outflowing Plasma from a Comet. Special Publications, 2013, , 929-932. | 0.0 | 0 |