

Robert A Marshall

List of Publications by Year in descending order

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Version: 2024-02-01

91
papers

1,872
citations

279798

23
h-index

345221

36
g-index

102
all docs

102
docs citations

102
times ranked

1565
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling Low-Frequency Radio Emissions From Terrestrial Gamma Ray Flash Sources. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	3
2	Active VLF Transmission Experiments Between the DSX and VPM Spacecraft. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	2.4	6
3	Using VLF Transmitter Signals at LEO for Plasmasphere Model Validation. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	2.4	2
4	3-D FDTD Modeling of Long-Distance VLF Propagation in the Earth-Ionosphere Waveguide. <i>IEEE Transactions on Antennas and Propagation</i> , 2021, 69, 7743-7752.	5.1	9
5	A New Longwave Mode Propagator for the Earth's Ionosphere Waveguide. <i>IEEE Transactions on Antennas and Propagation</i> , 2021, 69, 8675-8688.	5.1	9
6	A Method for Calculating Atmospheric Radiation Produced by Relativistic Electron Precipitation. <i>Space Weather</i> , 2021, 19, e2021SW002735.	3.7	7
7	Simulation-Derived Radar Cross Sections of a New Meteor Head Plasma Distribution Model. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029171.	2.4	3
8	An Electron Density Model of the D and E Region Ionosphere for Transionospheric VLF Propagation. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029288.	2.4	12
9	A Storm Safari in Subtropical South America: Proyecto RELAMPAGO. <i>Bulletin of the American Meteorological Society</i> , 2021, 102, E1621-E1644.	3.3	42
10	Chemical Response of the Upper Atmosphere Due to Lightning-Induced Electron Precipitation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD034914.	3.3	2
11	Lightning Geolocation and Flash Rates from LF Radio Observations During the RELAMPAGO Field Campaign. <i>Earth and Space Science</i> , 2021, 8, e2021EA001813.	2.6	1
12	Meteoroid Mass Estimation Based on Single-Frequency Radar Cross Section Measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029525.	2.4	2
13	The Micro-Broadband Receiver (1/4BBR) on the Very-Low-Frequency Propagation Mapper CubeSat. <i>Earth and Space Science</i> , 2021, 8, e2021EA001951.	2.6	6
14	Energetic Intracloud Lightning in the RELAMPAGO Field Campaign. <i>Earth and Space Science</i> , 2021, 8, e2021EA001856.	2.6	1
15	Atmospheric effects and signatures of high-energy electron precipitation. , 2020, , 199-255.		9
16	Incoherent scatter radar observations of 10-100 keV precipitation: review and outlook. , 2020, , 145-197.		8
17	A technique for inferring lower thermospheric neutral density from meteoroid ablation. <i>Planetary and Space Science</i> , 2020, 180, 104735.	1.7	2
18	A Generalized Method for Calculating Atmospheric Ionization by Energetic Electron Precipitation. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028482.	2.4	24

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19	An Array of Low-Cost, High-Speed, Autonomous Electric Field Mills for Thunderstorm Research. <i>Earth and Space Science</i> , 2020, 7, e2020EA001309.	2.6	12
20	The AEPEX mission: Imaging energetic particle precipitation in the atmosphere through its bremsstrahlung X-ray signatures. <i>Advances in Space Research</i> , 2020, 66, 66-82.	2.6	13
21	Solving the auroral-arc-generator question by using an electron beam to unambiguously connect critical magnetospheric measurements to auroral images. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2020, 206, 105310.	1.6	11
22	Assimilating VLF Transmitter Observations With an LETKF for Spatial Estimates of the D -Region Ionosphere. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2020, 58, 3526-3543.	6.3	3
23	Lightning Distance Estimation Using LF Lightning Radio Signals via Analytical and Machine-Learned Models. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2020, 58, 5892-5907.	6.3	4
24	A two year survey for VLF emission from fireballs. <i>Planetary and Space Science</i> , 2020, 184, 104872.	1.7	2
25	Compton Scattering Effects on the Spectral and Temporal Properties of Terrestrial Gamma-Ray Flashes. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 7220-7230.	2.4	14
26	VLF Measurements and Modeling of the D-Region Response to the 2017 Total Solar Eclipse. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2019, 57, 7613-7622.	6.3	16
27	Atmospheric Effects of a Relativistic Electron Beam Injected From Above: Chemistry, Electrodynamics, and Radio Scattering. <i>Frontiers in Astronomy and Space Sciences</i> , 2019, 6, .	2.8	19
28	Characteristics of Energetic Electron Precipitation Estimated from Simulated Bremsstrahlung X-ray Distributions. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2831-2843.	2.4	12
29	X-ray Signatures of Lightning-Induced Electron Precipitation. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10230-10245.	2.4	9
30	Relativistic Particle Beams as a Resource to Solve Outstanding Problems in Space Physics. <i>Frontiers in Astronomy and Space Sciences</i> , 2019, 6, .	2.8	13
31	A CubeSat receiver for the study of VLF-waves at LEO. , 2019, , .		1
32	Pitch Angle Dependence of Energetic Electron Precipitation: Energy Deposition, Backscatter, and the Bounce Loss Cone. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 2412-2423.	2.4	26
33	On the Effects of Bremsstrahlung Radiation During Energetic Electron Precipitation. <i>Geophysical Research Letters</i> , 2018, 45, 1167-1176.	4.0	29
34	Conceptual Design of an Air-Breathing Electric Thruster for CubeSat Applications. <i>Journal of Spacecraft and Rockets</i> , 2018, 55, 632-639.	1.9	22
35	The Lower Ionospheric VLF/LF Response to the 2017 Great American Solar Eclipse Observed Across the Continent. <i>Geophysical Research Letters</i> , 2018, 45, 3348-3355.	4.0	20
36	Spatial distributions of magnetospheric radio energy due to lightning. , 2018, , .		0

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37	Late-time instability in finite difference modeling of very-low-frequency propagation in the earth-ionosphere waveguide. , 2018, , .		0
38	Plasma distributions in meteor head echoes and implications for radar cross section interpretation. Planetary and Space Science, 2017, 143, 203-208.	1.7	24
39	A novel type of transient luminous event produced by terrestrial gamma-ray flashes. Geophysical Research Letters, 2017, 44, 2571-2578.	4.0	9
40	Experimental setup for the laboratory investigation of micrometeoroid ablation using a dust accelerator. Review of Scientific Instruments, 2017, 88, 034501.	1.3	12
41	Early/fast VLF events produced by the quiescent heating of the lower ionosphere by thunderstorms. Journal of Geophysical Research D: Atmospheres, 2017, 122, 6217-6230.	3.3	14
42	Modeling of X-ray Images and Energy Spectra Produced by Stepping Lightning Leaders. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11,776.	3.3	1
43	Radar Detectability Studies of Slow and Small Zodiacal Dust Cloud Particles. III. The Role of Sodium and the Head Echo Size on the Probability of Detection. Astrophysical Journal, 2017, 843, 1.	4.5	33
44	Finite-Difference Modeling of Very-Low-Frequency Propagation in the Earth-Ionosphere Waveguide. IEEE Transactions on Antennas and Propagation, 2017, 65, 7185-7197.	5.1	30
45	Global occurrence rate of elves and ionospheric heating due to cloud-to-ground lightning. Journal of Geophysical Research: Space Physics, 2016, 121, 699-712.	2.4	15
46	Multichannel tunable imager architecture for hyperspectral imaging in relevant spectral domains. Applied Optics, 2016, 55, 3149.	1.8	5
47	An FDTD model of scattering from meteor head plasma. Journal of Geophysical Research: Space Physics, 2015, 120, 5931-5942.	2.4	29
48	Numerical simulation of an elve modulated by a gravity wave. Geophysical Research Letters, 2015, 42, 6120-6127.	4.0	7
49	Elve doublets and compact intracloud discharges. Geophysical Research Letters, 2015, 42, 6112-6119.	4.0	30
50	Numerical modeling of radio wave scattering from meteor head plasma. , 2015, , .		0
51	Collaborative experiment to improve radar performance modeling: Overview. , 2015, , .		0
52	Finding Leaves in the Forest: The Dual-Wavelength Echidna Lidar. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 776-780.	3.1	58
53	LiCHI – Liquid Crystal Hyperspectral Imager for simultaneous multispectral imaging in aeronomy. Optics Express, 2015, 23, 17772.	3.4	2
54	Differing current and optical return stroke speeds in lightning. Geophysical Research Letters, 2014, 41, 2561-2567.	4.0	22

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55	Diagnostics of an artificial relativistic electron beam interacting with the atmosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 8560-8577.	2.4	29
56	Rare examples of early VLF events observed in association with ISUAL-detected gigantic jets. Radio Science, 2014, 49, 36-43.	1.6	5
57	Return stroke speed of cloud-to-ground lightning estimated from elve hole radii. Geophysical Research Letters, 2014, 41, 9182-9187.	4.0	10
58	Very low frequency subionospheric remote sensing of thunderstorm-driven acoustic waves in the lower ionosphere. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5037-5045.	3.3	24
59	Effect of self-absorption on attenuation of lightning and transmitter signals in the lower ionosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 4062-4076.	2.4	17
60	Tunable filters for multispectral imaging of aeronomical features. Advances in Space Research, 2013, 52, 1366-1377.	2.6	6
61	Analysis of experimentally validated trans-ionospheric attenuation estimates of VLF signals. Journal of Geophysical Research: Space Physics, 2013, 118, 2708-2720.	2.4	48
62	The optical manifestation of dispersive field-aligned bursts in auroral breakup arcs. Journal of Geophysical Research: Space Physics, 2013, 118, 4572-4582.	2.4	18
63	Extended lateral heating of the nighttime ionosphere by ground-based VLF transmitters. Journal of Geophysical Research: Space Physics, 2013, 118, 7783-7797.	2.4	10
64	DWEL: A Dual-Wavelength Echidna Lidar for ground-based forest scanning. , 2012, , .		23
65	ELF/VLF recordings during the 11 March 2011 Japanese Tohoku earthquake. Geophysical Research Letters, 2012, 39, .	4.0	15
66	An improved model of the lightning electromagnetic field interaction with the D-region ionosphere. Journal of Geophysical Research, 2012, 117, .	3.3	61
67	Optical signatures of lightning-induced electron precipitation. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	2
68	Continuous ground-based multiwavelength airglow measurements. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	6
69	Model estimates of optical emissions due to lightning-induced electron precipitation. , 2011, , .		1
70	Elves and associated electron density changes due to cloud-to-ground and in-cloud lightning discharges. Journal of Geophysical Research, 2010, 115, .	3.3	56
71	Two-dimensional frequency domain modeling of lightning EMP-induced perturbations to VLF transmitter signals. Journal of Geophysical Research, 2010, 115, .	3.3	24
72	A survey of ELF and VLF research on lightning-ionosphere interactions and causative discharges. Journal of Geophysical Research, 2010, 115, .	3.3	146

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73	Full-wave modeling of early VLF perturbations caused by lightning electromagnetic pulses. Journal of Geophysical Research, 2010, 115, .	3.3	14
74	Decameter structure in heater-induced airglow at the High frequency Active Auroral Research Program facility. Journal of Geophysical Research, 2010, 115, .	3.3	22
75	Optical signatures of radiation belt electron precipitation induced by ground-based VLF transmitters. Journal of Geophysical Research, 2010, 115, .	3.3	9
76	Correction to "Optical signatures of radiation belt electron precipitation induced by ground-based VLF transmitters". Journal of Geophysical Research, 2010, 115, n/a-n/a.	3.3	0
77	On remote sensing of transient luminous events' parent lightning discharges by ELF/VLF wave measurements on board a satellite. Journal of Geophysical Research, 2009, 114, .	3.3	13
78	Early VLF perturbations caused by lightning EMP-driven dissociative attachment. Geophysical Research Letters, 2008, 35, .	4.0	41
79	Fast Photometric Imaging Using Orthogonal Linear Arrays. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3885-3893.	6.3	14
80	Observations of artificial and natural optical emissions at the HAARP facility. Annales Geophysicae, 2008, 26, 1089-1099.	1.6	13
81	Possible direct cloud-to-ionosphere current evidenced by sprite-initiated secondary TLEs. Geophysical Research Letters, 2007, 34, .	4.0	20
82	Very low frequency sferic bursts, sprites, and their association with lightning activity. Journal of Geophysical Research, 2007, 112, .	3.3	15
83	High-speed measurements of small-scale features in sprites: Sizes and lifetimes. Radio Science, 2006, 41, n/a-n/a.	1.6	26
84	"Early/slow" events: A new category of VLF perturbations observed in relation with sprites. Journal of Geophysical Research, 2006, 111, .	3.3	47
85	On the association of early/fast very low frequency perturbations with sprites and rare examples of VLF backscatter. Journal of Geophysical Research, 2006, 111, .	3.3	36
86	Early VLF perturbations observed in association with elves. Annales Geophysicae, 2006, 24, 2179-2189.	1.6	35
87	High-speed telescopic imaging of sprites. Geophysical Research Letters, 2005, 32, .	4.0	39
88	Co-ordinated observations of transient luminous events during the EuroSprite2003 campaign. Journal of Atmospheric and Solar-Terrestrial Physics, 2005, 67, 807-820.	1.6	81
89	Optical observations geomagnetically conjugate to sprite-producing lightning discharges. Annales Geophysicae, 2005, 23, 2231-2237.	1.6	6
90	Artificial optical emissions at HAARP for pump frequencies near the third and second electron gyro-harmonic. Annales Geophysicae, 2005, 23, 1585-1592.	1.6	37

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91	Subionospheric early VLF signal perturbations observed in one-to-one association with sprites. Journal of Geophysical Research, 2004, 109, .	3.3	66