Robert A Marshall

List of Publications by Year
in descending order

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	A survey of ELF and VLF research on lightningâ€ionosphere interactions and causative discharges. Journal of Geophysical Research, 2010, 115, .	3.3	146
2	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
3	Subionospheric early VLF signal perturbations observed in one-to-one association with sprites. Journal of Geophysical Research, 2004, 109, .	3.3	66
4	An improved model of the lightning electromagnetic field interaction with the Dâ€region ionosphere. Journal of Geophysical Research, 2012, 117, .	3.3	61
5	Finding Leaves in the Forest: The Dual-Wavelength Echidna Lidar. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 776-780.	3.1	58
6	Elves and associated electron density changes due to cloudâ€toâ€ground and inâ€cloud lightning discharges. Journal of Geophysical Research, 2010, 115, .	3.3	56
7	Analysis of experimentally validated transâ€ionospheric attenuation estimates of VLF signals. Journal of Geophysical Research: Space Physics, 2013, 118, 2708-2720.	2.4	48
8	â€œEarly/slowâ€•events: A new category of VLF perturbations observed in relation with sprites. Journal of Geophysical Research, 2006, 111, .	3.3	47
9	A Storm Safari in Subtropical South America: Proyecto RELAMPAGO. Bulletin of the American Meteorological Society, 2021, 102, E1621-E1644.	3.3	42
10	Early VLF perturbations caused by lightning EMPâ€driven dissociative attachment. Geophysical Research Letters, 2008, 35, .	4.0	41
11	High-speed telescopic imaging of sprites. Geophysical Research Letters, 2005, 32, .	4.0	39
12	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
13	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
14	Early VLF perturbations observed in association with elves. Annales Geophysicae, 2006, 24, 2179-2189.	1.6	35
15	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
16	Elve doublets and compact intracloud discharges. Geophysical Research Letters, 2015, 42, 6112-6119.	4.0	30
17	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
18	Diagnostics of an artificial relativistic electron beam interacting with the atmosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 8560-8577.	2.4	29

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19	An FDTD model of scattering from meteor head plasma. Journal of Geophysical Research: Space Physics, 2015, 120, 5931-5942.	2.4	29
20	On the Effects of Bremsstrahlung Radiation During Energetic Electron Precipitation. Geophysical Research Letters, 2018, 45, 1167-1176.	4.0	29
21	High-speed measurements of small-scale features in sprites: Sizes and lifetimes. Radio Science, 2006, 41, n/a-n/a.	1.6	26
22	Pitch Angle Dependence of Energetic Electron Precipitation: Energy Deposition, Backscatter, and the Bounce Loss Cone. Journal of Geophysical Research: Space Physics, 2018, 123, 2412-2423.	2.4	26
23	Twoâ€dimensional frequency domain modeling of lightning EMPâ€induced perturbations to VLF transmitter signals. Journal of Geophysical Research, 2010, 115, .	3.3	24
24	Very low frequency subionospheric remote sensing of thunderstormâ€driven acoustic waves in the lower ionosphere. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5037-5045.	3.3	24
25	Plasma distributions in meteor head echoes and implications for radar cross section interpretation. Planetary and Space Science, 2017, 143, 203-208.	1.7	24
26	A Generalized Method for Calculating Atmospheric Ionization by Energetic Electron Precipitation. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028482.	2.4	24
27	DWEL: A Dual-Wavelength Echidna Lidar for ground-based forest scanning. , 2012, , .		23
28	Decameter structure in heaterâ€induced airglow at the High frequency Active Auroral Research Program facility. Journal of Geophysical Research, 2010, 115, .	3.3	22
29	Differing current and optical return stroke speeds in lightning. Geophysical Research Letters, 2014, 41, 2561-2567.	4.0	22
30	Conceptual Design of an Air-Breathing Electric Thruster for CubeSat Applications. Journal of Spacecraft and Rockets, 2018, 55, 632-639.	1.9	22
31	Possible direct cloud-to-ionosphere current evidenced by sprite-initiated secondary TLEs. Geophysical Research Letters, 2007, 34, .	4.0	20
32	The Lower Ionospheric VLF/LF Response to the 2017 Great American Solar Eclipse Observed Across the Continent. Geophysical Research Letters, 2018, 45, 3348-3355.	4.0	20
33	Atmospheric Effects of a Relativistic Electron Beam Injected From Above: Chemistry, Electrodynamics, and Radio Scattering. Frontiers in Astronomy and Space Sciences, 2019, 6, .	2.8	19
34	The optical manifestation of dispersive fieldâ€aligned bursts in auroral breakup arcs. Journal of Geophysical Research: Space Physics, 2013, 118, 4572-4582.	2.4	18
35	Effect of selfâ€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
36	VLF Measurements and Modeling of the D-Region Response to the 2017 Total Solar Eclipse. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 7613-7622.	6.3	16

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37	Very low frequency sferic bursts, sprites, and their association with lightning activity. Journal of Geophysical Research, 2007, 112, .	3.3	15
38	ELF/VLF recordings during the 11 March 2011 Japanese Tohoku earthquake. Geophysical Research Letters, 2012, 39, .	4.0	15
39	Global occurrence rate of elves and ionospheric heating due to cloudâ€toâ€ground lightning. Journal of Geophysical Research: Space Physics, 2016, 121, 699-712.	2.4	15
40	Fast Photometric Imaging Using Orthogonal Linear Arrays. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3885-3893.	6.3	14
41	Fullâ€wave modeling of â€œearlyâ€•VLF perturbations caused by lightning electromagnetic pulses. Journal of Geophysical Research, 2010, 115, .	3.3	14
42	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
43	Compton Scattering Effects on the Spectral and Temporal Properties of Terrestrial Gammaâ€Ray Flashes. Journal of Geophysical Research: Space Physics, 2019, 124, 7220-7230.	2.4	14
44	Observations of artificial and natural optical emissions at the HAARP facility. Annales Geophysicae, 2008, 26, 1089-1099.	1.6	13
45	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
46	Relativistic Particle Beams as a Resource to Solve Outstanding Problems in Space Physics. Frontiers in Astronomy and Space Sciences, 2019, 6, .	2.8	13
47	The AEPEX mission: Imaging energetic particle precipitation in the atmosphere through its bremsstrahlung X-ray signatures. Advances in Space Research, 2020, 66, 66-82.	2.6	13
48	Experimental setup for the laboratory investigation of micrometeoroid ablation using a dust accelerator. Review of Scientific Instruments, 2017, 88, 034501.	1.3	12
49	Characteristics of Energetic Electron Precipitation Estimated from Simulated Bremsstrahlung Xâ€ray Distributions. Journal of Geophysical Research: Space Physics, 2019, 124, 2831-2843.	2.4	12
50	An Array of Lowâ€Cost, Highâ€Speed, Autonomous Electric Field Mills for Thunderstorm Research. Earth and Space Science, 2020, 7, e2020EA001309.	2.6	12
51	An Electron Density Model of the Dâ€•and Eâ€Region Ionosphere for Transionospheric VLF Propagation. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029288.	2.4	12
52	Solving the auroral-arc-generator question by using an electron beam to unambiguously connect critical magnetospheric measurements to auroral images. Journal of Atmospheric and Solar-Terrestrial Physics, 2020, 206, 105310.	1.6	11
53	Extended lateral heating of the nighttime ionosphere by groundâ€'based VLF transmitters. Journal of Geophysical Research: Space Physics, 2013, 118, 7783-7797.	2.4	10
54	Return stroke speed of cloudâ€toâ€ground lightning estimated from elve hole radii. Geophysical Research Letters, 2014, 41, 9182-9187.	4.0	10

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55	Optical signatures of radiation belt electron precipitation induced by groundâ€based VLF transmitters. Journal of Geophysical Research, 2010, 115, .	3.3	9
56	A novel type of transient luminous event produced by terrestrial gammaâ€ray flashes. Geophysical Research Letters, 2017, 44, 2571-2578.	4.0	9
57	Xâ€ray Signatures of Lightningâ€Induced Electron Precipitation. Journal of Geophysical Research: Space Physics, 2019, 124, 10230-10245.	2.4	9
58	Atmospheric effects and signatures of high-energy electron precipitation. , 2020, , 199-255.		9
59	3-D FDTD Modeling of Long-Distance VLF Propagation in the Earth-Ionosphere Waveguide. IEEE Transactions on Antennas and Propagation, 2021, 69, 7743-7752.	5.1	9
60	A New Longwave Mode Propagator for the Earthâ€“Ionosphere Waveguide. IEEE Transactions on Antennas and Propagation, 2021, 69, 8675-8688.	5.1	9
61	Incoherent scatter radar observations of 10â€“100 keV precipitation: review and outlook. , 2020, , 145-197.		8
62	Numerical simulation of an elve modulated by a gravity wave. Geophysical Research Letters, 2015, 42, 6120-6127.	4.0	7
63	A Method for Calculating Atmospheric Radiation Produced by Relativistic Electron Precipitation. Space Weather, 2021, 19, e2021SW002735.	3.7	7
64	Optical observations geomagnetically conjugate to sprite-producing lightning discharges. Annales Geophysicae, 2005, 23, 2231-2237.	1.6	6
65	Continuous ground-based multiwavelength airglow measurements. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	6
66	Tunable filters for multispectral imaging of aeronomical features. Advances in Space Research, 2013, 52, 1366-1377.	2.6	6
67	The Microâ€Broadband Receiver (Î¼BBR) on the Veryâ€Lowâ€Frequency Propagation Mapper CubeSat. Earth and Space Science, 2021, 8, e2021EA001951.	2.6	6
68	Active VLF Transmission Experiments Between the DSX and VPM Spacecraft. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	6
69	Rare examples of early VLF events observed in association with ISUAL-detected gigantic jets. Radio Science, 2014, 49, 36-43.	1.6	5
70	Multichannel tunable imager architecture for hyperspectral imaging in relevant spectral domains. Applied Optics, 2016, 55, 3149.	1.8	5
71	Lightning Distance Estimation Using LF Lightning Radio Signals via Analytical and Machine-Learned Models. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 5892-5907.	6.3	4
72	Assimilating VLF Transmitter Observations With an LETKF for Spatial Estimates of the ${D}$ -Region Ionosphere. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 3526-3543.	6.3	3

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73	Simulationâ€Derived Radar Cross Sections of a New Meteor Head Plasma Distribution Model. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029171.	2.4	3
74	Modeling Lowâ€Frequency Radio Emissions From Terrestrial Gamma Ray Flash Sources. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	3
75	Optical signatures of lightning-induced electron precipitation. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	2
76	LiCHI â€“ Liquid Crystal Hyperspectral Imager for simultaneous multispectral imaging in aeronomy. Optics Express, 2015, 23, 17772.	3.4	2
77	A technique for inferring lower thermospheric neutral density from meteoroid ablation. Planetary and Space Science, 2020, 180, 104735.	1.7	2
78	A two year survey for VLF emission from fireballs. Planetary and Space Science, 2020, 184, 104872.	1.7	2
79	Chemical Response of the Upper Atmosphere Due to Lightningâ€Induced Electron Precipitation. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034914.	3.3	2
80	Meteoroid Mass Estimation Based on Singleâ€Frequency Radar Cross Section Measurements. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029525.	2.4	2
81	Using VLF Transmitter Signals at LEO for Plasmasphere Model Validation. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	2
82	Model estimates of optical emissions due to lightning-induced electron precipitation. , 2011, , .		1
83	Modeling of Xâ€ray Images and Energy Spectra Produced by Stepping Lightning Leaders. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11,776.	3.3	1
84	Lightning Geolocation and Flash Rates from LF Radio Observations During the RELAMPAGO Field Campaign. Earth and Space Science, 2021, 8, e2021EA001813.	2.6	1
85	Energetic Intracloud Lightning in the RELAMPAGO Field Campaign. Earth and Space Science, 2021, 8, e2021EA001856.	2.6	1
86	A CubeSat receiver for the study of VLF-waves at LEO. , 2019, , .		1
87	Correction to â€œOptical signatures of radiation belt electron precipitation induced by ground-based VLF transmittersâ€• Journal of Geophysical Research, 2010, 115, n/a-n/a.	3.3	0
88	Numerical modeling of radio wave scattering from meteor head plasma. , 2015, , .		0
89	Collaborative experiment to improve radar performance modeling: Overview. , 2015, , .		0
90	Spatial distributions of magnetospheric radio energy due to lightning. , 2018, , .		0

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91	Late-time instability in finite difference modeling of very-low-frequency propagation in the earth-ionosphere waveguide. , 2018, , .		0