## Umran S Inan

List of Publications by Year in descending order

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313 papers 13,601 citations

61 h-index 97 g-index

316 all docs

316 docs citations

316 times ranked

3878 citing authors

#	Article	IF	CITATIONS
1	Wave acceleration of electrons in the Van Allen radiation belts. Nature, 2005, 437, 227-230.	27.8	505
2	Sprites produced by quasi-electrostatic heating and ionization in the lower ionosphere. Journal of Geophysical Research, 1997, 102, 4529-4561.	3.3	386
3	Electrical discharge from a thundercloud top to the lower ionosphere. Nature, 2002, 416, 152-154.	27.8	301
4	Elves: Lightningâ€induced transient luminous events in the lower ionosphere. Geophysical Research Letters, 1996, 23, 2157-2160.	4.0	252
5	Spatial structure of sprites. Geophysical Research Letters, 1998, 25, 2123-2126.	4.0	214
6	Nonlinear interaction of energetic electrons with large amplitude chorus. Geophysical Research Letters, 2008, 35, .	4.0	201
7	Identification of sprites and elves with intensified video and broadband array photometry. Journal of Geophysical Research, 2001, 106, 1741-1750.	3.3	195
8	Sensitive Broadband ELF/VLF Radio Reception With the AWESOME Instrument. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 3-17.	6.3	193
9	Heating, ionization and upward discharges in the mesosphere, due to intense quasi-electrostatic thundercloud fields. Geophysical Research Letters, 1995, 22, 365-368.	4.0	188
10	IonosphericDregion remote sensing using VLF radio atmospherics. Radio Science, 1998, 33, 1781-1792.	1.6	184
11	Heating and ionization of the lower ionosphere by lightning. Geophysical Research Letters, 1991, 18, 705-708.	4.0	176
12	Lightning-induced electron precipitation. Nature, 1984, 312, 740-742.	27.8	157
13	Telescopic imaging of sprites. Geophysical Research Letters, 2000, 27, 2637-2640.	4.0	155
14	Highly intense lightning over the oceans: Estimated peak currents from global GLD360 observations. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6905-6915.	3.3	154
15	ELF radiation produced by electrical currents in sprites. Geophysical Research Letters, 1998, 25, 1281-1284.	4.0	152
16	Longâ€range lightning geolocation using a VLF radio atmospheric waveform bank. Journal of Geophysical Research, 2010, 115, .	3.3	152
17	A survey of ELF and VLF research on lightningâ€ionosphere interactions and causative discharges. Journal of Geophysical Research, 2010, 115, .	3.3	146
18	Global response of the plasmasphere to a geomagnetic disturbance. Journal of Geophysical Research, 2003, 108, .	3.3	144

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19	On the association of terrestrial gamma-ray bursts with lightning and implications for sprites. Geophysical Research Letters, 1996, 23, 1017-1020.	4.0	140
20	Interaction with the lower ionosphere of electromagnetic pulses from lightning: Heating, attachment, and ionization. Geophysical Research Letters, 1993, 20, 1539-1542.	4.0	139
21	Source characteristics of ELF/VLF chorus. Journal of Geophysical Research, 2002, 107, SMP 10-1-SMP 10-17.	3.3	128
22	Lightning as an embryonic source of VLF hiss. Journal of Geophysical Research, 1989, 94, 6986-6994.	3.3	114
23	Rapid lateral expansion of optical luminosity in lightning-induced ionospheric flashes referred to as â€~elves'. Geophysical Research Letters, 1997, 24, 583-586.	4.0	111
24	The link between a detached subauroral proton arc and a plasmaspheric plume. Geophysical Research Letters, 2004, 31, .	4.0	109
25	Direct observation of radiation belt electrons precipitated by the controlled injection of VLF signals from a groundâ€based transmitter. Geophysical Research Letters, 1983, 10, 361-364.	4.0	102
26	Runaway electrons as a source of red sprites in the mesosphere. Geophysical Research Letters, 1995, 22, 2127-2130.	4.0	102
27	Controlled precipitation of radiation belt electrons. Journal of Geophysical Research, 2003, 108, .	3.3	102
28	Space-time structure of optical flashes and ionization changes produced by lighting-EMP. Geophysical Research Letters, 1996, 23, 133-136.	4.0	101
29	Elves triggered by positive and negative lightning discharges. Geophysical Research Letters, 1999, 26, 683-686.	4.0	101
30	Radiation of ELF/VLF waves by harmonically varying currents into a stratified ionosphere with application to radiation by a modulated electrojet. Journal of Geophysical Research, 2008, 113, .	3.3	98
31	Modeling ELF radio atmospheric propagation and extracting lightning currents from ELF observations. Radio Science, 2000, 35, 385-394.	1.6	94
32	VLF signatures of ionospheric disturbances associated with sprites. Geophysical Research Letters, 1995, 22, 3461-3464.	4.0	93
33	Measurement of charge transfer in sprite-producing lightning using ELF radio atmospherics. Geophysical Research Letters, 1997, 24, 1731-1734.	4.0	93
34	Sprites triggered by negative lightning discharges. Geophysical Research Letters, 1999, 26, 3605-3608.	4.0	92
35	Constraints on terrestrial gamma ray flash production from satellite observation. Geophysical Research Letters, 2007, 34, .	4.0	89
36	Electron precipitation zones around major groundâ€based VLF signal sources. Journal of Geophysical Research, 1984, 89, 2891-2906.	3.3	87

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37	Magnetospherically reflected whistlers as a source of plasmaspheric hiss. Geophysical Research Letters, 1992, 19, 233-236.	4.0	86
38	Sprites as luminous columns of ionization produced by quasi-electrostatic thundercloud fields. Geophysical Research Letters, 1996, 23, 649-652.	4.0	84
39	Plasma wave observations with the Dynamics Explorer 1 spacecraft. Reviews of Geophysics, 1988, 26, 285-316.	23.0	83
40	The interaction with the lower ionosphere of electromagnetic pulses from lightning: Excitation of optical emissions. Geophysical Research Letters, 1993, 20, 2675-2678.	4.0	83
41	VLF signatures of lightningâ€induced heating and ionization of the nighttime Dâ€region. Geophysical Research Letters, 1993, 20, 2355-2358.	4.0	82
42	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
43	Evidence for continuing current in sprite-producing cloud-to-ground lightning. Geophysical Research Letters, 1996, 23, 3639-3642.	4.0	80
44	Mechanism of ELF radiation from sprites. Geophysical Research Letters, 1998, 25, 3493-3496.	4.0	79
45	Observations of the relationship between sprite morphology and in-cloud lightning processes. Journal of Geophysical Research, 2006, $111$ , .	3.3	79
46	Fullâ€wave modeling of transionospheric propagation of VLF waves. Geophysical Research Letters, 2009, 36, .	4.0	76
47	Sustained heating of the ionosphere above thunderstorms as evidenced in "early/fast―VLF events. Geophysical Research Letters, 1996, 23, 1067-1070.	4.0	74
48	Fractal structure of sprites. Geophysical Research Letters, 2000, 27, 497-500.	4.0	72
49	LEAP: Layout Design through Error-Aware Transistor Positioning for soft-error resilient sequential cell design. , 2010, , .		72
50	Precipitation of radiation belt electrons by manâ€made waves: A comparison between theory and measurement. Journal of Geophysical Research, 1985, 90, 359-369.	3.3	70
51	Landau damping and resultant unidirectional propagation of chorus waves. Geophysical Research Letters, 2006, 33, .	4.0	70
52	The apparent spectral broadening of VLF transmitter signals during transionospheric propagation. Journal of Geophysical Research, 1983, 88, 4813-4840.	3.3	69
53	Intense continuing currents following positive cloud-to-ground lightning associated with red sprites. Geophysical Research Letters, 1998, 25, 1285-1288.	4.0	69
54	Terrestrial gamma ray flash production by active lightning leader channels. Journal of Geophysical Research, 2010, 115, .	3.3	69

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55	ULF magnetic signatures at the Earth surface due to ground water flow: A possible precursor to earthquakes. Geophysical Research Letters, 1991, 18, 1127-1130.	4.0	68
56	Wave normal angles of magnetospheric chorus emissions observed on the Polar spacecraft. Journal of Geophysical Research, 2010, $115$ , .	3.3	68
57	Subionospheric early VLF signal perturbations observed in one-to-one association with sprites. Journal of Geophysical Research, 2004, 109, .	3.3	66
58	VLF heating of the lower ionosphere. Geophysical Research Letters, 1990, 17, 729-732.	4.0	65
59	A multipleâ€mode threeâ€dimensional model of VLF propagation in the Earthâ€ionosphere waveguide in the presence of localized <i>D</i> region disturbances. Journal of Geophysical Research, 1993, 98, 1705-1717.	3.3	65
60	$\hat{l}^3$ -Ray emission produced by a relativistic beam of runaway electrons accelerated by quasi-electrostatic thundercloud fields. Geophysical Research Letters, 1996, 23, 2645-2648.	4.0	65
61	Temporal signatures of radiation belt electron precipitation induced by lightning-generated MR whistler waves: 1. Methodology. Journal of Geophysical Research, 2006, 111, .	3.3	65
62	A two-dimensional model of runaway electron beams driven by quasi-electrostatic thundercloud fields. Geophysical Research Letters, 1997, 24, 2639-2642.	4.0	62
63	Ionization of the lower ionosphere by $\hat{I}^3$ -rays from a Magnetar: Detection of a low energy (3-10 keV) component. Geophysical Research Letters, 1999, 26, 3357-3360.	4.0	62
64	Frequency-time spectra of magnetospherically reflecting whistlers in the plasmasphere. Journal of Geophysical Research, 2003, $108$ , .	3.3	62
65	Scattering pattern of lightning-induced ionospheric disturbances associated with early/fast VLF events. Geophysical Research Letters, 1999, 26, 2363-2366.	4.0	61
66	Blue jets produced by quasi-electrostatic pre-discharge thundercloud fields. Geophysical Research Letters, 1996, 23, 301-304.	4.0	60
67	Terrestrial gamma ray flashes and lightning discharges. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	59
68	Possible persistent ionization caused by giant blue jets. Geophysical Research Letters, 2007, 34, .	4.0	59
69	Observation of an ionospheric disturbance caused by a gamma-ray burst. Nature, 1988, 331, 418-420.	27.8	58
70	DEMETER satellite observations of lightning-induced electron precipitation. Geophysical Research Letters, 2007, 34, .	4.0	58
71	Terrestrial VLF transmitter injection into the magnetosphere. Journal of Geophysical Research, 2012, 117, .	3.3	57
72	Terrestrial gamma ray flash production by lightning current pulses. Journal of Geophysical Research, 2009, 114, .	3.3	56

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73	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
74	Lightningâ€associated precipitation of MeV electrons from the inner radiation belt. Geophysical Research Letters, 1988, 15, 172-175.	4.0	55
75	Small-scale field-aligned plasmaspheric density structures inferred from the Radio Plasma Imager on IMAGE. Journal of Geophysical Research, 2002, 107, SMP 22-1.	3.3	55
76	Source regions of banded chorus. Geophysical Research Letters, 2009, 36, .	4.0	55
77	ELF waves generated by modulated HF heating of the auroral electrojet and observed at a ground distance of $\hat{a}^4$ 4400 km. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	52
78	Early/fast VLF events produced by electron density changes associated with sprite halos. Journal of Geophysical Research, 2003, $108$ , .	3.3	51
79	Gyroresonant pitch angle scattering by coherent and incoherent whistler mode waves in the magnetosphere. Journal of Geophysical Research, 1987, 92, 127-142.	3.3	50
80	Whistlerâ€mode chorus and morningside aurorae. Geophysical Research Letters, 1992, 19, 653-656.	4.0	50
81	Neutron production in terrestrial gamma ray flashes. Journal of Geophysical Research, 2010, 115, .	3.3	50
82	Distributing space weather monitoring instruments and educational materials worldwide for IHY 2007: The AWESOME and SID project. Advances in Space Research, 2008, 42, 1777-1785.	2.6	49
83	Recovery signatures of lightning-associated VLF perturbations as a measure of the lower ionosphere. Journal of Geophysical Research, 1994, 99, 17523.	3.3	48
84	A survey of streamer and diffuse glow dynamics observed in sprites using telescopic imagery. Journal of Geophysical Research, 2002, 107, SIA 4-1.	3.3	48
85	Energy distribution and lifetime of magnetospherically reflecting whistlers in the plasmasphere. Journal of Geophysical Research, 2003, $108$ , .	3.3	48
86	Terrestrial gamma ray flashes observed aboard the Compton Gamma Ray Observatory/Burst and Transient Source Experiment and ELF/VLF radio atmospherics. Journal of Geophysical Research, 2006, 111, .	3.3	48
87	Analysis of experimentally validated transâ€ionospheric attenuation estimates of VLF signals. Journal of Geophysical Research: Space Physics, 2013, 118, 2708-2720.	2.4	48
88	VLF chorus emissions observed by Polar during the January 10, 1997, magnetic cloud. Geophysical Research Letters, 1998, 25, 2995-2998.	4.0	47
89	Perturbations of midlatitude subionospheric VLF signals associated with lower ionospheric disturbances during major geomagnetic storms. Journal of Geophysical Research, 2006, 111, .	3.3	47
90	"Early/slow―events: A new category of VLF perturbations observed in relation with sprites. Journal of Geophysical Research, 2006, 111, .	3.3	47

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91	Geolocation of terrestrial gammaâ€ray flash source lightning. Geophysical Research Letters, 2010, 37, .	4.0	46
92	Multi-hop whistler-mode ELF/VLF signals and triggered emissions excited by the HAARP HF heater. Geophysical Research Letters, 2004, 31, .	4.0	45
93	DEMETER observations of an intense upgoing column of ELF/VLF radiation excited by the HAARP HF heater. Journal of Geophysical Research, 2008, $113,\ldots$	3.3	45
94	Propagation of unducted whistlers from their source lightning: A case study. Journal of Geophysical Research, 2009, $114$ , .	3.3	45
95	Latitudinal and seasonal variations of quasiperiodic and periodic VLF emissions in the outer magnetosphere. Journal of Geophysical Research, 2004, 109, .	3.3	44
96	Production of terrestrial gamma-ray flashes by an electromagnetic pulse from a lightning return stroke. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	44
97	Precipitation signatures of groundâ€based VLF transmitters. Journal of Geophysical Research, 2008, 113, .	3.3	44
98	Models of ionospheric VLF absorption of powerful ground based transmitters. Geophysical Research Letters, 2012, 39, .	4.0	44
99	Subionospheric VLF signatures of oblique (nonducted) whistler-induced precipitation. Geophysical Research Letters, 1999, 26, 3569-3572.	4.0	43
100	Observations of decameter-scale morphologies in sprites. Journal of Atmospheric and Solar-Terrestrial Physics, 2003, 65, 567-572.	1.6	43
101	Perturbations of subionospheric LF and MF signals due to whistlerâ€induced electron precipitation bursts. Journal of Geophysical Research, 1984, 89, 9857-9862.	3.3	42
102	Sprites as evidence of vertical gravity wave structures above mesoscale thunderstorms. Geophysical Research Letters, 1997, 24, 1735-1738.	4.0	41
103	Characteristics of mesospheric optical emissions produced by lightning discharges. Journal of Geophysical Research, 1999, 104, 12645-12656.	3.3	41
104	Subionospheric VLF observations of transmitter-induced precipitation of inner radiation belt electrons. Geophysical Research Letters, 2007, 34, .	4.0	41
105	Early VLF perturbations caused by lightning EMPâ€driven dissociative attachment. Geophysical Research Letters, 2008, 35, .	4.0	41
106	Magnetospheric amplification and emission triggering by ELF/VLF waves injected by the 3.6 MW HAARP ionospheric heater. Journal of Geophysical Research, 2008, $113$ , .	3.3	41
107	The modulated precipitation of radiation belt electrons by controlled signals from VLF transmitters. Geophysical Research Letters, 1983, 10, 615-618.	4.0	40
108	On the generation of ELF/VLF waves for long $\hat{\mathbf{e}}$ distance propagation via steerable HF heating of the lower ionosphere. Journal of Geophysical Research, 2010, 115, .	3.3	40

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109	High-speed telescopic imaging of sprites. Geophysical Research Letters, 2005, 32, .	4.0	39
110	Subionospheric VLF signatures and their association with sprites observed during EuroSprite-2003. Journal of Atmospheric and Solar-Terrestrial Physics, 2005, 67, 1580-1597.	1.6	39
111	Longâ€lasting <i>D</i> àâ€region ionospheric modifications, caused by intense lightning in association with elve and sprite pairs. Geophysical Research Letters, 2012, 39, .	4.0	38
112	Trapped energetic electron curtains produced by thunderstorm driven relativistic runaway electrons. Geophysical Research Letters, 2000, 27, 1095-1098.	4.0	37
113	Z-mode sounding within propagation "cavities―and other inner magnetospheric regions by the RPI instrument on the IMAGE satellite. Journal of Geophysical Research, 2003, 108, .	3.3	37
114	D-region ionosphere response to the total solar eclipse of 22 July 2009 deduced from ELF-VLF tweek observations in the Indian sector. Journal of Geophysical Research, 2011, 116, $n/a-n/a$ .	3.3	37
115	Nighttime D region electron density measurements from ELFâ€VLF tweek radio atmospherics recorded at low latitudes. Journal of Geophysical Research, 2012, 117, .	3.3	37
116	ELF sferic energy as a proxy indicator for sprite occurrence. Geophysical Research Letters, 1999, 26, 987-990.	4.0	36
117	Poleward-displaced electron precipitation from lightning-generated oblique whistlers. Geophysical Research Letters, 1999, 26, 2633-2636.	4.0	36
118	DEMETER observations of ELF waves injected with the HAARP HF transmitter. Geophysical Research Letters, $2006, 33, .$	4.0	36
119	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
120	Mitigation of 50-60 Hz power line interference in geophysical data. Radio Science, 2010, 45, n/a-n/a.	1.6	36
121	Orientation of the HAARP ELF ionospheric dipole and the auroral electrojet. Geophysical Research Letters, 2008, 35, .	4.0	35
122	ELF/VLF wave generation via ionospheric HF heating: Experimental comparison of amplitude modulation, beam painting, and geometric modulation. Journal of Geophysical Research, 2010, 115, .	3.3	35
123	Drivers of chorus in the outer dayside magnetosphere. Journal of Geophysical Research, 2010, 115, .	3.3	35
124	Diurnal variation of burst precipitation effects on subionospheric VLF/LF signal propagation near L = 2. Journal of Geophysical Research, 1984, 89, 9139-9143.	3.3	34
125	The scattering of VLF waves by localized ionospheric disturbances produced by lightningâ€induced electron precipitation. Journal of Geophysical Research, 1993, 98, 15553-15559.	3.3	34
126	Sferic clusters associated with early/Fast VLF events. Geophysical Research Letters, 2000, 27, 1391-1394.	4.0	34

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127	Mesosphere-troposphere coupling due to sprites. Geophysical Research Letters, 2001, 28, 3821-3824.	4.0	34
128	On the occurrence and spatial extent of electron precipitation induced by oblique nonducted whistler waves. Journal of Geophysical Research, 2004, 109, .	3.3	34
129	Subionospheric VLF "imaging―of lightning―nduced electron precipitation from the magnetosphere. Journal of Geophysical Research, 1990, 95, 17217-17231.	3.3	33
130	Terminal Impedance and Antenna Current Distribution of a VLF Electric Dipole in the Inner Magnetosphere. IEEE Transactions on Antennas and Propagation, 2008, 56, 2454-2468.	5.1	33
131	On the occurrence of ground observations of ELF/VLF magnetospheric amplification induced by the HAARP facility. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	33
132	Overview and early results of the Global Lightning and Sprite Measurements mission. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3822-3851.	3.3	33
133	Electron density changes in the nighttimeDregion due to heating by very-low-frequency transmitters. Geophysical Research Letters, 1994, 21, 93-96.	4.0	32
134	Determining the size of lightning-induced electron precipitation patches. Journal of Geophysical Research, 2002, 107, SIA 10-1-SIA 10-11.	3.3	32
135	Geometric modulation: A more effective method of steerable ELF/VLF wave generation with continuous HF heating of the lower ionosphere. Geophysical Research Letters, 2008, 35, .	4.0	32
136	DEMETER observations of transmitterâ€induced precipitation of inner radiation belt electrons. Journal of Geophysical Research, 2009, 114, .	3.3	32
137	Broadband longwave radio remote sensing instrumentation. Review of Scientific Instruments, 2018, 89, 094501.	1.3	32
138	Wave normal direction and spectral properties of whistler mode hiss observed on the DE 1 satellite. Journal of Geophysical Research, 1988, 93, 7493-7514.	3.3	31
139	Anomalous optical events detected by rocketâ€borne sensor in the WIPP Campaign. Journal of Geophysical Research, 1991, 96, 1315-1326.	3.3	31
140	Cluster measurements of rapidly moving sources of ELF/VLF chorus. Journal of Geophysical Research, 2004, 109, .	3.3	31
141	A quantitative comparison of lightningâ€induced electron precipitation and VLF signal perturbations. Journal of Geophysical Research, 2007, 112, .	3.3	31
142	VLF observation of long ionospheric recovery events. Geophysical Research Letters, 2007, 34, .	4.0	31
143	HF modulated ionospheric currents. Geophysical Research Letters, 2007, 34, .	4.0	31
144	Multistation observations of ELF/VLF whistler mode chorus. Journal of Geophysical Research, 2008, 113, .	3.3	30

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145	Seasonal dependence of energetic electron precipitation: Evidence for a global role of lightning. Geophysical Research Letters, 2009, 36, .	4.0	30
146	A lightning discharge producing a beam of relativistic electrons into space. Geophysical Research Letters, $2010,37,.$	4.0	30
147	Design Framework for Soft-Error-Resilient Sequential Cells. IEEE Transactions on Nuclear Science, 2011, 58, 3026-3032.	2.0	30
148	Cluster observations of whistler mode ducts and banded chorus. Geophysical Research Letters, 2011, 38, $n/a-n/a$ .	4.0	30
149	Simultaneous Disturbance of Conjugate Ionospheric Regions in Association With Individual Lightning Flashes. Geophysical Research Letters, 1990, 17, 259-262.	4.0	29
150	Diagnostics of magnetospheric electron density and irregularities at altitudes $<$ 5000 km using whistler and Z mode echoes from radio sounding on the IMAGE satellite. Journal of Geophysical Research, 2004, 109, .	3.3	29
151	Observations of amplitude saturation in ELF/VLF wave generation by modulated HF heating of the auroral electrojet. Geophysical Research Letters, 2006, 33, .	4.0	28
152	Terrestrial versus Jovian VLF chorus; A comparative study. Journal of Geophysical Research, 1983, 88, 6171-6180.	3.3	27
153	<i>D</i> region disturbances caused by electromagnetic pulses from lightning. Geophysical Research Letters, 1992, 19, 2067-2070.	4.0	27
154	Ionospheric effects due to electrostatic thundercloud fields. Journal of Atmospheric and Solar-Terrestrial Physics, 1998, 60, 863-870.	1.6	27
155	IonosphericEregion remote sensing with ELF radio atmospherics. Radio Science, 2000, 35, 1437-1444.	1.6	27
156	A first approach to model the low-frequency wave activity in the plasmasphere. Annales Geophysicae, 2002, 20, 981-996.	1.6	27
157	A theoretical model study of observed correlations between whistler mode waves and energetic electron precipitation events in the magnetosphere. Journal of Geophysical Research, 1983, 88, 10053-10064.	<b>3.</b> 3	26
158	Direct multiple path magnetospheric propagation: A fundamental property of nonducted VLF waves. Journal of Geophysical Research, 1984, 89, 2823-2830.	3.3	26
159	Fundamental properties of inert gas mixtures for plasma display panels. IEEE Transactions on Plasma Science, 2000, 28, 1271-1279.	1.3	26
160	High-speed measurements of small-scale features in sprites: Sizes and lifetimes. Radio Science, 2006, 41, n/a-n/a.	1.6	26
161	Runaway relativistic electron avalanche seeding in the Earth's atmosphere. Journal of Geophysical Research, 2008, 113, .	3 <b>.</b> 3	26
162	ionospheric modification with a VLF transmitter. Geophysical Research Letters, 1992, 19, 2071-2074.	4.0	25

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163	Mesospheric electric field transients due to tropospheric lightning discharges. Geophysical Research Letters, 1999, 26, 1247-1250.	4.0	25
164	Simultaneous triggered VLF emissions and energetic electron distributions observed on POLAR with PWI and HYDRA. Geophysical Research Letters, 2000, 27, 165-168.	4.0	25
165	IonosphericDregion electron density profiles derived from the measured interference pattern of VLF waveguide modes. Radio Science, 2003, 38, n/a-n/a.	1.6	25
166	Penetration of lightning MF signals to the upper ionosphere over VLF groundâ€based transmitters. Journal of Geophysical Research, 2009, 114, .	3.3	25
167	DEMETER observations of ionospheric heating by powerful VLF transmitters. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	25
168	Precipitation of suprathermal (100 EV) Electrons by oblique whistler waves. Geophysical Research Letters, 1992, 19, 1639-1642.	4.0	24
169	Magnetic Sensor Design for Femtotesla Low-Frequency Signals. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 396-402.	6.3	24
170	Twoâ€dimensional frequency domain modeling of lightning EMPâ€induced perturbations to VLF transmitter signals. Journal of Geophysical Research, 2010, 115, .	3.3	24
171	DEâ€1 observations of lower hybrid waves excited by VLF whistler mode waves. Geophysical Research Letters, 1991, 18, 393-396.	4.0	23
172	Altitude profiles of localizedDregion density disturbances produced in lightning-induced electron precipitation events. Journal of Geophysical Research, 1995, 100, 21375-21383.	3.3	23
173	Energetic electron precipitation due to gyroresonant interactions in the magnetosphere Involving coherent VLF waves with slowly varying frequency. Journal of Geophysical Research, 1983, 88, 7037-7050.	3.3	22
174	Pitch angle scattering of energetic particles by oblique whistler waves. Geophysical Research Letters, 1991, 18, 49-52.	4.0	22
175	Ldependence of energetic electron precipitation driven by magnetospherically reflecting whistler waves. Journal of Geophysical Research, 2002, 107, SMP 1-1-SMP 1-13.	3.3	22
176	Role of the plasmapause in dictating the ground accessibility of ELF/VLF chorus. Journal of Geophysical Research, 2010, $115$ , .	3.3	22
177	The relationship between geophysical conditions and ELF amplitude in modulated heating experiments at HAARP: Modeling and experimental results. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	22
178	Differing current and optical return stroke speeds in lightning. Geophysical Research Letters, 2014, 41, 2561-2567.	4.0	22
179	DEâ€1 observations of VLF transmitter signals and waveâ€particle interactions in the magnetosphere. Geophysical Research Letters, 1982, 9, 917-920.	4.0	21
180	Heating of the nighttimeDregion by very low frequency transmitters. Journal of Geophysical Research, 1994, 99, 23329.	3.3	21

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181	ATMOSPHERIC SCIENCE: Gamma Rays Made on Earth. Science, 2005, 307, 1054-1055.	12.6	21
182	Infrared glow above thunderstorms?. Geophysical Research Letters, 1997, 24, 2635-2638.	4.0	20
183	Simulation studies of the coplanar electrode and other plasma display panel cell designs. Journal of Applied Physics, 2002, 91, 9502.	2.5	20
184	A Technique for Efficiently Modeling Long-Path Propagation for Use in Both FDFD and FDTD. IEEE Antennas and Wireless Propagation Letters, 2006, 5, 525-528.	4.0	20
185	Possible direct cloud-to-ionosphere current evidenced by sprite-initiated secondary TLEs. Geophysical Research Letters, 2007, 34, .	4.0	20
186	Optical signatures of lightningâ€Induced heating of the <i>D</i> region. Geophysical Research Letters, 1992, 19, 1815-1818.	4.0	19
187	Long-range tracking of thunderstorms using sferic measurements. Journal of Geophysical Research, 2002, 107, ACL 1-1-ACL 1-9.	3.3	19
188	Current distribution of a VLF electric dipole antenna in the plasmasphere. Radio Science, 2006, 41, n/a-n/a.	1.6	19
189	Modeling of Dopplerâ€shifted terrestrial VLF transmitter signals observed by DEMETER. Geophysical Research Letters, 2009, 36, .	4.0	19
190	DEMETER observations of the ionospheric trough over HAARP in relation to HF heating experiments. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	19
191	On the spatial relationship between lightning discharges and propagation paths of perturbed subionospheric VLF/LF signals. Journal of Geophysical Research, 1991, 96, 249-258.	3.3	18
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