Masashi Hayakawa

List of Publications by Year
in descending order

257	7,018	66336	91872
papers	citations	42 h-index	69 g-index

263	263	263	1689
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Results of ultra-low-frequency magnetic field measurements during the Guam Earthquake of 8 August 1993. Geophysical Research Letters, 1996, 23, 241-244.	4.0	302
2	Subionospheric VLF signal perturbations possibly related to earthquakes. Journal of Geophysical Research, 1998, 103, 17489-17504.	3.3	266
3	Thermal IR satellite data application for earthquake research in Japan and China. Journal of Geodynamics, 2002, 33, 519-534.	1.6	254
4	Generation of ULF electromagnetic emissions by microfracturing. Geophysical Research Letters, 1995, 22, 3091-3094.	4.0	201
5	Fractal analysis of ULF geomagnetic data associated with the Guam Earthquake on August 8, 1993. Geophysical Research Letters, 1999, 26, 2797-2800.	4.0	169
6	A statistical study on the correlation between lower ionospheric perturbations as seen by subionospheric VLF/LF propagation and earthquakes. Journal of Geophysical Research, 2010, 115, .	3.3	147
7	Precursory effects in the subionospheric VLF signals for the Kobe earthquake. Physics of the Earth and Planetary Interiors, 1998, 105, 239-248.	1.9	145
8	Middle latitude LF (40 kHz) phase variations associated with earthquakes for quiet and disturbed geomagnetic conditions. Physics and Chemistry of the Earth, 2004, 29, 589-598.	2.9	143
9	VLF/LF Radio Sounding of Ionospheric Perturbations Associated with Earthquakes. Sensors, 2007, 7, 1141-1158.	3.8	132
10	Monitoring of ULF (Ultra-Low-Frequency) Geomagnetic Variations Associated with Earthquakes. Sensors, 2007, 7, 1108-1122.	3.8	126
11	Electromagnetic anomalies associated with 1995 Kobe earthquake. Journal of Geodynamics, 2002, 33, 401-411.	1.6	125
12	Lithosphere-atmosphere-ionosphere coupling as governing mechanism for preseismic short-term events in atmosphere and ionosphere. Natural Hazards and Earth System Sciences, 2004, 4, 757-767.	3.6	116
13	On the generation mechanism of ULF seismogenic electromagnetic emissions. Physics of the Earth and Planetary Interiors, 1998, 105, 201-210.	1.9	110
14	Current status of seismo-electromagnetics for short-term earthquake prediction. Geomatics, Natural Hazards and Risk, 2010, 1, 115-155.	4.3	104
15	A statistical study on the effect of earthquakes on the ionosphere, based on the subionospheric LF propagation data in Japan. Annales Geophysicae, 2006, 24, 2219-2225.	1.6	92
16	Interrelation between ELF transients and ionospheric disturbances in association with sprites and elves. Geophysical Research Letters, 2001, 28, 935-938.	4.0	89
17	Summary report of NASDA's earthquake remote sensing frontier project. Physics and Chemistry of the Earth, 2004, 29, 617-625.	2.9	82
18	Schumann Resonance for Tyros. , 2014, , .		77

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19	Observation of sprites over the Sea of Japan and conditions for lightning-induced sprites in winter. Journal of Geophysical Research, 2004, 109, .	3.3	74
20	Anomalous effect in Schumann resonance phenomena observed in Japan, possibly associated with the Chi-chi earthquake in Taiwan. Annales Geophysicae, 2005, 23, 1335-1346.	1.6	72
21	AGW as a seismo-ionospheric coupling responsible agent. Physics and Chemistry of the Earth, 2009, 34, 485-495.	2.9	70
22	ULF geomagnetic anomaly associated with 2000 Izu Islands earthquake swarm, Japan. Physics and Chemistry of the Earth, 2004, 29, 425-435.	2.9	69
23	Singular spectral analysis and principal component analysis for signal discrimination of ULF geomagnetic data associated with 2000 Izu Island Earthquake Swarm. Physics and Chemistry of the Earth, 2006, 31, 281-291.	2.9	67
24	Fractal analysis of seismogenic ULF emissions. Physics and Chemistry of the Earth, 2004, 29, 419-424.	2.9	64
25	Ultra-low-frequency magnetic fields during the Guam earthquake of 8 August 1993 and their interpretation. Physics of the Earth and Planetary Interiors, 1998, 105, 229-238.	1.9	62
26	Ultra and Extremely Low Frequency Electromagnetic Fields. , 2014, , .		61
27	Multifractal analysis for the ULF geomagnetic data during the 1993 Guam earthquake. Nonlinear Processes in Geophysics, 2005, 12, 157-162.	1.3	58
28	Fractal analysis of the ULF geomagnetic data obtained at Izu Peninsula, Japan in relation to the nearby earthquake swarm of Juneâ€“August 2000. Natural Hazards and Earth System Sciences, 2003, 3, 229-236.	3.6	56
29	Precursory behavior of fractal characteristics of the ULF electromagnetic fields in seismic active zones before strong earthquakes. Physics and Chemistry of the Earth, 2004, 29, 445-451.	2.9	56
30	Abnormal Gravity Wave Activity in the Stratosphere Prior to the 2016 Kumamoto Earthquakes. Journal of Geophysical Research: Space Physics, 2019, 124, 1410-1425.	2.4	55
31	Scaling characteristics of ULF geomagnetic fields at the Guam seismoactive area and their dynamics in relation to the earthquake. Natural Hazards and Earth System Sciences, 2001, 1, 119-126.	3.6	53
32	Generation of Seismic-Related DC Electric Fields and Lithosphere-Atmosphere-Ionosphere Coupling. Modern Applied Science, 2013, 7, .	0.6	53
33	Evidence on a link between the intensity of Schumann resonance and global surface temperature. Annales Geophysicae, 2006, 24, 1809-1817.	1.6	52
34	Formation mechanism of the lower-ionospheric disturbances by the atmosphere electric current over a seismic region. Journal of Atmospheric and Solar-Terrestrial Physics, 2006, 68, 1260-1268.	1.6	52
35	ULF/ELF emissions observed in Japan, possibly associated with the Chi-Chi earthquake in Taiwan. Natural Hazards and Earth System Sciences, 2001, 1, 37-42.	3.6	49
36	Fractal analysis for the ULF data during the 1993 Guam earthquake to study prefracture criticality. Nonlinear Processes in Geophysics, 2006, 13, 409-412.	1.3	49

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37	ULF/ELF magnetic field variations from atmosphere induced by seismicity. Radio Science, 2007, 42, .	1.6	48
38	Fractal properties of medium and seismoelectric phenomena. Journal of Geodynamics, 2002, 33, 477-487.	1.6	47
39	Principal component analysis and singular spectrum analysis of ULF geomagnetic data associated with earthquakes. Natural Hazards and Earth System Sciences, 2005, 5, 685-689.	3.6	47
40	Meteorological effects in the lower ionosphere as based on VLF/LF signal observations. Natural Hazards and Earth System Sciences, 2014, 14, 2671-2679.	3.6	46
41	Criticality features in ULF magnetic fields prior to the 2011 Tohoku earthquake. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2015, 91, 25-30.	3.8	45
42	Pre-earthquake ULF electromagnetic perturbations as a result of inductive seismomagnetic phenomena during microfracturing. Journal of Atmospheric and Solar-Terrestrial Physics, 2003, 65, 31-46.	1.6	44
43	Seismo-ionospheric depression of the ULF geomagnetic fluctuations at Kamchatka and Japan. Physics and Chemistry of the Earth, 2006, 31, 313-318.	2.9	44
44	Probing the lower ionospheric perturbations associated with earthquakes by means of subionospheric VLF/LF propagation. Earthquake Science, 2011, 24, 609-637.	0.9	44
45	Principal component analysis of ULF geomagnetic data for Izu islands earthquakes in July 2000. Journal of Atmospheric Electricity, 2002, 22, 1-12.	0.3	43
46	Survey of anomalous Schumann resonance phenomena observed in Japan, in possible association with earthquakes in Taiwan. Physics and Chemistry of the Earth, 2006, 31, 397-402.	2.9	40
47	Anomalous ELF phenomena in the Schumann resonance band as observed at Moshiri (Japan) in possible association with an earthquake in Taiwan. Natural Hazards and Earth System Sciences, 2008, 8, 1309-1316.	3.6	40
48	The ULF/ELF electromagnetic radiation before the 11 March 2011 Japanese earthquake. Radio Science, 2013, 48, 589-596.	1.6	39
49	LOCATION AND ELECTRICAL PROPERTIES OF SPRITE-PRODUCING LIGHTNING FROM A SINGLE ELF SITE. , 2006, , 211-235.		39
50	Atmospheric gravity waves as a possible candidate for seismo-ionospheric perturbations. Journal of Atmospheric Electricity, 2011, 31, 129-140.	0.3	39
51	Computer simulations on sprite initiation for realistic lightning models with higherâ€frequency surges. Journal of Geophysical Research, 2009, 114, .	3.3	38
52	Does Schumann resonance affect our blood pressure?. Biomedicine and Pharmacotherapy, 2005, 59, S10-S14.	5.6	37
53	On the statistical correlation between the ionospheric perturbations as detected by subionospheric VLF/LF propagation anomalies and earthquakes. Natural Hazards and Earth System Sciences, 2008, 8, 653-656.	3.6	37
54	Criticality Analysis of the Lower Ionosphere Perturbations Prior to the 2016 Kumamoto (Japan) Earthquakes as Based on VLF Electromagnetic Wave Propagation Data Observed at Multiple Stations. Entropy, 2018, 20, 199.	2.2	37

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55	Model modifications in Schumann resonance intensity caused by a localized ionosphere disturbance over the earthquake epicenter. Annales Geophysicae, 2006, 24, 567-575.	1.6	34
56	Ionospheric disturbances caused by SGR 1900+14 giant gamma ray flare in 1998: Constraints on the energy spectrum of the flare. Journal of Geophysical Research, 2008, 113, .	3.3	34
57	On the correlation between ionospheric perturbations as detected by subionospheric VLF/LF signals and earthquakes as characterized by seismic intensity. Journal of Atmospheric and Solar-Terrestrial Physics, 2010, 72, 982-987.	1.6	34
58	Finite difference analyses of Schumann resonance and reconstruction of lightning distribution. Radio Science, 2005, 40, n/a-n/a.	1.6	33
59	Computer simulations on the initiation and morphological difference of Japan winter and summer sprites. Journal of Geophysical Research, 2008, 113, .	3.3	33
60	Further study on the role of atmospheric gravity waves on the seismo-ionospheric perturbations as detected by subionospheric VLF/LF propagation. Natural Hazards and Earth System Sciences, 2009, 9, 1111-1118.	3.6	33
61	Pre-Seismic Irregularities during the 2020 Samos (Greece) Earthquake (M = 6.9) as Investigated from Multi-Parameter Approach by Ground and Space-Based Techniques. Atmosphere, 2021, 12, 1059.	2.3	33
62	FDTD analysis of ELF wave propagation and Schumann resonances for a subionospheric waveguide model. Radio Science, 2003, 38, n/a-n/a.	1.6	32
63	A study on the radiation loss from a bent transmission line. IEEE Transactions on Electromagnetic Compatibility, 2001, 43, 618-621.	2.2	31
64	Heating of the lower ionosphere electrons by electromagnetic radiation of lightning discharges. Geophysical Research Letters, 1995, 22, 3015-3018.	4.0	30
65	How do winter thundercloud systems generate sprite-inducing lightning in the Hokuriku area of Japan?. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	30
66	The lower ionospheric perturbation as a precursor to the 11 March 2011 Japan earthquake. Geomatics, Natural Hazards and Risk, 2013, 4, 275-287.	4.3	30
67	Near-seismic effects in ULF fields and seismo-acoustic emission: statistics and explanation. Natural Hazards and Earth System Sciences, 2005, 5, 1-10.	3.6	29
68	Solar flare induced D region perturbation in the ionosphere, as revealed from a short-distance VLF propagation path. Geophysical Research Letters, 2007, 34, .	4.0	29
69	Fractal characteristics of the ground-observed ULF emissions in relation to geomagnetic and seismic activities. Journal of Atmospheric and Solar-Terrestrial Physics, 2007, 69, 1833-1841.	1.6	29
70	Underlying mechanisms of transient luminous events: a review. Annales Geophysicae, 2012, 30, 1185-1212.	1.6	29
71	Characteristics of Japanese winter sprites and their parent lightning as estimated by VHF lightning and ELF transients. Journal of Atmospheric and Solar-Terrestrial Physics, 2007, 69, 1431-1446.	1.6	28
72	Anomalous excitation of Schumann resonances and additional anomalous resonances before the 2004 Mid-Niigata prefecture earthquake and the 2007 Noto Hantou Earthquake. Physics and Chemistry of the Earth, 2009, 34, 441-448.	2.9	28

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73	The ionospheric perturbations associated with Asian earthquakes as seen from the subionospheric propagation from NWC to Japanese stations. Natural Hazards and Earth System Sciences, 2010, 10, 581-588.	3.6	28
74	Global Lightning Activity on the Basis of Inversions of Natural ELF Electromagnetic Data Observed at Multiple Stations around the World. Surveys in Geophysics, 2011, 32, 705-732.	4.6	28
75	Tsunamiâ€induced phase and amplitude perturbations of subionospheric VLF signals. Journal of Geophysical Research, 2012, 117, .	3.3	28
76	Electromagnetic Phenomena Associated with Earthquakes. IEEJ Transactions on Fundamentals and Materials, 2006, 126, 211-214.	0.2	27
77	Variations of the global lightning distribution revealed from threeâ€station Schumann resonance measurements. Journal of Geophysical Research, 2010, 115, .	3.3	27
78	Natural time analysis on the ultra-low frequency magnetic field variations prior to the 2016 Kumamoto (Japan) earthquakes. Journal of Asian Earth Sciences, 2018, 154, 419-427.	2.3	27
79	A Review on Electrodynamic Influence of Atmospheric Processes to the Ionosphere. Open Journal of Earthquake Research, 2020, 09, 113-141.	0.6	27
80	Identification of electric circuits described by ill-conditioned mathematical models. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2006, 53, 78-91.	0.1	26
81	On the precursors to the 2011 Tohoku earthquake: crustal movements and electromagnetic signatures. Geomatics, Natural Hazards and Risk, 2016, 7, 471-492.	4.3	26
82	Q-Bursts: Natural ELF Radio Transients. Surveys in Geophysics, 2010, 31, 409-425.	4.6	25
83	Intermittent criticality revealed in ULF magnetic fields prior to the 11 March 2011 Tohoku earthquake (<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si21.gif" display="inline") Tj ETQq1 1 0.784314 rgBT /Over Physica A: Statistical Mechanics and Its Applications, 2016, 452, 19-28.	2.6	25
84	Amplitude variations of ELF radio waves in the Earthâ€“ionosphere cavity with the dayâ€“night non-uniformity. Journal of Atmospheric and Solar-Terrestrial Physics, 2018, 169, 23-36.	1.6	25
85	The Ionospheric Precursor to the 2011 March 11 Earthquake Based upon Observations Obtained from the Japan-Pacific Subionospheric VLF/LF Network. Terrestrial, Atmospheric and Oceanic Sciences, 2013, 24, 393.	0.6	23
86	Vertical profile of atmospheric conductivity that matches Schumann resonance observations. SpringerPlus, 2016, 5, 108.	1.2	23
87	Fractal analysis of the ground-recorded ULF magnetic fields prior to the 11 March 2011 Tohoku earthquake (M WÂ=Â9): discriminating possible earthquake precursors from space-sourced disturbances. Natural Hazards, 2017, 85, 59-86.	3.4	23
88	Gravity Wave Activity in the Stratosphere before the 2011 Tohoku Earthquake as the Mechanism of Lithosphere-atmosphere-ionosphere Coupling. Entropy, 2020, 22, 110.	2.2	23
89	Ultra-Low-Frequency Electromagnetic Emissions Associated with Earthquakes. IEEJ Transactions on Fundamentals and Materials, 2004, 124, 1101-1108.	0.2	22
90	About possibility to locate an EQ epicenter using parameters of ELF/ULF preseismic emission. Natural Hazards and Earth System Sciences, 2008, 8, 1237-1242.	3.6	22

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91	Subionospheric VLF/LF Probing of Ionospheric Perturbations Associated with Earthquakes: A Possibility of Earthquake Prediction. SICE Journal of Control Measurement and System Integration, 2010, 3, 10-14.	0.7	22
92	Interpretation in terms of gyrotropic waves of Schumann-resonance-like line emissions observed at Nakatsugawa in possible association with nearby Japanese earthquakes. Journal of Atmospheric and Solar-Terrestrial Physics, 2010, 72, 1292-1298.	1.6	21
93	The ultra-low-frequency magnetic disturbances associated with earthquakes. Earthquake Science, 2011, 24, 523-534.	0.9	21
94	Natural Time Analysis of Global Navigation Satellite System Surface Deformation: The Case of the 2016 Kumamoto Earthquakes. Entropy, 2020, 22, 674.	2.2	21
95	Beam-plasma instability in inhomogeneous magnetic field and second order cyclotron resonance effects. Physics of Plasmas, 1999, 6, 692-698.	1.9	20
96	On the fine structure of thunderstorms leading to the generation of sprites and elves: Fractal analysis. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	20
97	Earthquake prediction with electromagnetic phenomena. AIP Conference Proceedings, 2016, , .	0.4	20
98	Deembedding and unterminating microwave fixtures with the genetic algorithm. IEEE Transactions on Microwave Theory and Techniques, 2006, 54, 3131-3140.	4.6	19
99	On Possible Electromagnetic Precursors to a Significant Earthquake (Mw = 6.3) Occurred in Lesvos (Greece) on 12 June 2017. Entropy, 2019, 21, 241.	2.2	19
100	New ELF Observation System at Moshiri, Japan and Assessments of Acquired Data. Journal of Atmospheric Electricity, 2005, 25, 29-39.	0.3	19
101	Lithosphereâ€“Atmosphereâ€“Ionosphere Coupling Effects Based on Multiparameter Precursor Observations for Februaryâ€“March 2021 Earthquakes (M~7) in the Offshore of Tohoku Area of Japan. Geosciences (Switzerland), 2021, 11, 481.	2.2	19
102	Identification of Electric Circuits: Problems and Methods of Solution Accuracy Enhancement. , 0, , .		18
103	Variations in global thunderstorm activity inferred from the OTD records. Geophysical Research Letters, 2006, 33, .	4.0	18
104	Three-dimensional EM computer simulation on sprite initiation above a horizontal lightning discharge. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 983-990.	1.6	18
105	Fractal analysis of ULF electromagnetic emissions in possible association with earthquakes in China. Nonlinear Processes in Geophysics, 2012, 19, 577-583.	1.3	18
106	An evidence on the lithosphere-ionosphere coupling in terms of atmospheric gravity waves on the basis of a combined analysis of surface pressure, ionospheric perturbations and ground-based ULF variations. Journal of Atmospheric Electricity, 2013, 33, 53-68.	0.3	18
107	Short-term earthquake prediction in Kamchatka using low-frequency magnetic fields. Natural Hazards, 2020, 100, 735-755.	3.4	18
108	Evidence of critical dynamics in various electromagnetic precursors. European Physical Journal: Special Topics, 2021, 230, 151-177.	2.6	18

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109	Seismogenic Effects in the ELF Schumann Resonance Band. IEEJ Transactions on Fundamentals and Materials, 2011, 131, 684-690.	0.2	18
110	New ELF Observation Site in Moshiri, Hokkaido Japan and the Results of Preliminary Data Analysis. Journal of Atmospheric Electricity, 2000, 20, 99-109.	0.3	18
111	Unusual Surface Latent Heat Flux Variations and Their Critical Dynamics Revealed before Strong Earthquakes. Entropy, 2022, 24, 23.	2.2	18
112	ELF sub-ionospheric pulse in time domain. Geophysical Research Letters, 1999, 26, 999-1002.	4.0	17
113	Theoretical analysis on the penetration of power line harmonic radiation into the ionosphere. Radio Science, 2002, 37, 5-1-5-12.	1.6	17
114	ULF Magnetic Field Depression as a Possible Precursor to the 2011/3.11 Japan Earthquake. Journal of Atmospheric Electricity, 2013, 33, 41-51.	0.3	17
115	Progress in the Study of Transient Luminous and Atmospheric Events: A Review. Surveys in Geophysics, 2020, 41, 1101-1142.	4.6	17
116	On the lithosphere-atmosphere coupling of seismo-electromagnetic signals. Radio Science, 2003, 38, n/a-n/a.	1.6	16
117	Investigation of ULF magnetic anomaly during Izu earthquake swarm and Miyakejima volcano eruption at summer 2000, Japan. Natural Hazards and Earth System Sciences, 2005, 5, 63-69.	3.6	16
118	Comparison of time delays of sprites induced by winter lightning flashes in the Japan Sea with those in the Pacific Ocean. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 101-111.	1.6	16
119	Over-the-Horizon Anomalous VHF Propagation and Earthquake Precursors. Surveys in Geophysics, 2012, 33, 1081-1106.	4.6	16
120	Electromagnetic manifestations of Tonga eruption in Schumann resonance band. Journal of Atmospheric and Solar-Terrestrial Physics, 2022, 237, 105897.	1.6	16
121	Phase-bunching effects in triggered VLF emissions: Antenna effect. Journal of Geophysical Research, 2003, 108, .	3.3	15
122	The effect of a gamma ray flare on Schumann resonances. Annales Geophysicae, 2012, 30, 1321-1329.	1.6	15
123	Seismo-meteo-electromagnetic phenomena observed during a 5-year interval around the 2011 Tohoku earthquake. Physics and Chemistry of the Earth, 2015, 85-86, 167-173.	2.9	15
124	Seismogenic effects in ULF/ELF/VLF electromagnetic waves. International Journal of Electronics and Applied Research, 2019, 06, 1-86.	0.8	15
125	The modelling of VLF Trimpis using both finite element and 3D Born Modelling. Geophysical Research Letters, 1998, 25, 4453-4456.	4.0	14
126	Natural electromagnetic pulses in the ELF range. Geophysical Research Letters, 1998, 25, 3103-3106.	4.0	14

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127	Use of wavelet analysis for detection of seismogenic ULF emissions. Radio Science, 2003, 38, n/a-n/a.	1.6	14
128	On the generation of narrowâ€banded ULF/ELF pulsations in the lower ionospheric conducting layer. Journal of Geophysical Research, 2008, 113, .	3.3	14
129	The observation of Doppler shifts of subionospheric LF signal in possible association with earthquakes. Journal of Geophysical Research, 2012, 117, .	3.3	14
130	On precursory ULF/ELF electromagnetic signatures for the Kobe earthquake on April 12, 2013. Journal of Asian Earth Sciences, 2015, 114, 305-311.	2.3	14
131	Time domain presentation for ELF pulses with accelerated convergence. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	13
132	Relation between the energy of earthquake swarm and the Hurst exponent of random variations of the geomagnetic field. Physics and Chemistry of the Earth, 2004, 29, 379-387.	2.9	13
133	Determination of hearth position of a forthcoming strong EQ using gradients and phase velocities of ULF geomagnetic disturbances. Physics and Chemistry of the Earth, 2006, 31, 292-298.	2.9	13
134	Interferometric direction finding of overâ€horizon VHF transmitter signals and natural VHF radio emissions possibly associated with earthquakes. Radio Science, 2009, 44, .	1.6	13
135	Detection of transient ELF emission caused by the extremely intense cosmic gamma-ray flare of 27 December 2004. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	13
136	Knee model: Comparison between heuristic and rigorous solutions for the Schumann resonance problem. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 135, 85-91.	1.6	13
137	Intermittency-induced criticality in the lower ionosphere prior to the 2016 Kumamoto earthquakes as embedded in the VLF propagation data observed at multiple stations. Tectonophysics, 2018, 722, 422-431.	2.2	13
138	Statistical and Criticality Analysis of the Lower Ionosphere Prior to the 30 October 2020 Samos (Greece) Earthquake (M6.9), Based on VLF Electromagnetic Propagation Data as Recorded by a New VLF/LF Receiver Installed in Athens (Greece). Entropy, 2021, 23, 676.	2.2	13
139	Contaminated Effect of Geomagnetic Storms on Pre-Seismic Atmospheric and Ionospheric Anomalies during Imphal Earthquake. Open Journal of Earthquake Research, 2020, 09, 383-402.	0.6	13
140	Acousto-Optic Solitons in Fibers. Optical Review, 2000, 7, 323-325.	2.0	12
141	Cellular automaton modeling of mesospheric optical emissions: Sprites. Physics of Plasmas, 2007, 14, 042902.	1.9	12
142	Use of generalized cross validation for identification of global lightning distribution by using Schumann resonances. Radio Science, 2007, 42, n/a-n/a.	1.6	12
143	Universal and local time variations deduced from simultaneous Schumann resonance records at three widely separated observatories. Radio Science, 2011, 46, .	1.6	12
144	Formation of Ionospheric Precursors of Earthquakesâ€"Probable Mechanism and Its Substantiation. Open Journal of Earthquake Research, 2020, 09, 142-169.	0.6	12

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145	Application of different signal analysis methods to the ULF data for the 1993 Guam earthquake. Natural Hazards and Earth System Sciences, 2007, 7, 479-484.	3.6	11
146	Qâ€bursts: A comparison of experimental and computed ELF waveforms. Radio Science, 2008, 43, .	1.6	11
147	The Design of Radio Maps in Tokyo City Based on Stochastic Multi-Parametric and Deterministic Ray-Tracing Approaches [Wireless Corner. IEEE Antennas and Propagation Magazine, 2009, 51, 200-208.	1.4	11
148	Schumann resonance observation in China and anomalous disturbance possibly associated with Tohoku M9.0 earthquake. Earthquake Science, 2013, 26, 137-145.	0.9	11
149	On the Tempo-Spatial Evolution of the Lower Ionospheric Perturbation for the 2016 Kumamoto Earthquakes from Comparisons of VLF Propagation Data Observed at Multiple Stations with Wave-Hop Theoretical Computations. Open Journal of Earthquake Research, 2018, 07, 161-185.	0.6	11
150	Seismogenic Anomalies in Atmospheric Gravity Waves as Observed from SABER/TIMED Satellite during Large Earthquakes. Journal of Sensors, 2022, 2022, 1-23.	1.1	11
151	Cyclotron amplification of whistler waves by nonstationary electron beams in an inhomogeneous magnetic field. Physics of Plasmas, 2000, 7, 5153-5158.	1.9	10
152	The Importance of Direction Finding Technique for the Study of VLF/ELF Sferics and Whistlers. IEEJ Transactions on Fundamentals and Materials, 2006, 126, 65-70.	0.2	10
153	Schumann resonances excitation due to positive and negative cloudâ€toâ€ground lightning. Journal of Geophysical Research, 2010, 115, .	3.3	10
154	Possible Electromagnetic Effects on Abnormal Animal Behavior Before an Earthquake. Animals, 2013, 3, 19-32.	2.3	10
155	ULF/ELF Atmospheric Radiation in Possible Association to the 2011 Tohoku Earthquake as Observed in China. Earth Science Research, 2016, 5, 47.	0.3	10
156	Modifications of Middle Atmosphere Conductivity During Sudden Ionospheric Disturbances Deduced From Changes of Schumann Resonance Peak Frequencies. Radio Science, 2018, 53, 670-682.	1.6	10
157	Numerical simulation of lower ionospheric reflection parameters by using International Reference Ionosphere (IRI) model and validation with Very Low Frequency (VLF) radio signal characteristics. Advances in Space Research, 2021, 67, 1599-1611.	2.6	10
158	Electromagnetic Precursors to the 2016 Kumamoto Earthquakes. Open Journal of Earthquake Research, 2017, 06, 168-179.	0.6	10
159	Multi-Parameter Observations of Seismogenic Phenomena Related to the Tokyo Earthquake (M = 5.9) on 7 October 2021. Geosciences (Switzerland), 2022, 12, 265.	2.2	10
160	Characteristics of mid-latitude whistler ducts as deduced from ground-based measurements. Geophysical Research Letters, 1996, 23, 3301-3304.	4.0	9
161	Three-dimensional subionospheric VLF field diffraction by a truncated highly conducting cylinder and its application to the Trimpi effect problem. Radio Science, 2002, 37, 12-1-12-15.	1.6	9
162	The Solutions of LCD Panel (T-Con) EMI Noise for Wireless Integration. , 2007, , .		9

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163	Measurement of Doppler shifts of short-distance subionospheric LF transmitter signals and seismic effects. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	9
164	Localized ionospheric disturbance over the earthquake epicentre and modifications of Schumann resonance electromagnetic fields. Geomatics, Natural Hazards and Risk, 2014, 5, 271-283.	4.3	9
165	The origin of spectral resonance structures of the ionospheric AlfvÃ©n resonator. Single highâ€altitude reflection or resonant cavity excitation?. Journal of Geophysical Research: Space Physics, 2014, 119, 3117-3129.	2.4	9
166	Detection of tsunamiâ€driven phase and amplitude perturbations of subionospheric VLF signals following the 2010 Chile earthquake. Journal of Geophysical Research: Space Physics, 2014, 119, 5012-5019.	2.4	9
167	Does air ionization by radon cause low-frequencyÂatmospheric electromagnetic earthquake precursors?. Natural Hazards, 2021, 106, 701-714.	3.4	9
168	COMPARISON OF EXACT AND APPROXIMATE SOLUTIONS OF THE SCHUMANN RESONANCE PROBLEM FOR THE KNEE CONDUCTIVITY PROFILE. Telecommunications and Radio Engineering (English Translation of) Tj ETQq0 0 0 rgBT /Overlock 10	0.4	9
169	VERTICAL PROFILE OF ATMOSPHERIC CONDUCTIVITY CORRESPONDING TO SCHUMANN RESONANCE PARAMETERS. Telecommunications and Radio Engineering (English Translation of Elektrosvyaz and) Tj ETQq1 1 0.784314 rgBT /Overlock	0.4	9
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