Jonathan J Makela

List of Publications by Year in Descending Order

138 papers	3,926 citations	35 h-index	55 g-index
150 ext. papers	4,629 ext. citations	3.4 avg, IF	5.33 L-index

#	Paper	IF	Citations
138	Thermospheric Neutral Wind Measurements and Investigations across the African Region: A Review. *Atmosphere*, **2022**, 13, 863	2.7	1
137	Regulation of ionospheric plasma velocities by thermospheric winds.. *Nature Geoscience*, **2021**, 14, 893-898	18.3	4
136	A climatology of the nighttime thermospheric winds over Sutherland, South Africa. *Advances in Space Research*, **2021**,	2.4	4
135	Q2DW-Tide and -Ionosphere Interactions as Observed From ICON and Ground-Based Radars.. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2021JA029961	2.6	0
134	Validation of ICON-MIGHTI Thermospheric Wind Observations: 2. Green-Line Comparisons to Specular Meteor Radars. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2020JA028947	2.6	18
133	Atmosphere-Ionosphere (A-I) Coupling as Viewed by ICON: Day-to-Day Variability Due to Planetary Wave (PW)-Tide Interactions. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2020JA028927	2.6	2
132	Quasi-2-Day Wave in Low-Latitude Atmospheric Winds as Viewed From the Ground and Space During January–March, 2020. *Geophysical Research Letters*, **2021**, 48, e2021GL093466	4.9	4
131	Validation of ICON-MIGHTI Thermospheric Wind Observations: 1. Nighttime Red-Line Ground-Based Fabry-Perot Interferometers. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2020JA028726	2.6	14
130	Comparison of Thermospheric Winds Measured by GOCE and Ground-Based FPIs at Low and Middle Latitudes. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2020JA028182	2.6	0
129	Predictability of Geomagnetically Induced Currents as a Function of Available Magnetic Field Information. *Space Weather*, **2021**, 19, e2021SW002747	3.7	0
128	Errors From Asymmetric Emission Rate in Spaceborne, Limb Sounding Doppler Interferometry: A Correction Algorithm With Application to ICON/MIGHTI. *Earth and Space Science*, **2020**, 7, e2020EA001164	3.1	4
127	Thermospheric Neutral Winds Above the Oukaimeden Observatory: Effects of Geomagnetic Activity. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2019JA027383	2.6	1
126	Atmospheric Gravity Waves Observed in the Nightglow Following the 21 August 2017 Total Solar Eclipse. *Geophysical Research Letters*, **2020**, 47, e2020GL088924	4.9	4
125	Thermospheric Weather as Observed by Ground-Based FPIs and Modeled by GITM. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 1307-1316	2.6	8
124	Postmidnight equatorial plasma irregularities on the June solstice during low solar activity – a case study. *Annales Geophysicae*, **2019**, 37, 657-672	2	2
123	HL-TWiM Empirical Model of High-Latitude Upper Thermospheric Winds. *Journal of Geophysical Research: Space Physics*, **2019**, 124, 10592-10618	2.6	8
122	Measurement of atmospheric neutral wind and temperature from Fabry-Perot interferometer data using piloted deconvolution. *Applied Optics*, **2019**, 58, 3685-3695	1.7	1

121	Nightside Detection of a Large-Scale Thermospheric Wave Generated by a Solar Eclipse. *Geophysical Research Letters*, **2018**, 45, 3366-3373	4.9	23
120	Seasonal Dependence of Geomagnetic Active-Time Northern High-Latitude Upper Thermospheric Winds. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 739-754	2.6	22
119	Inferring Nighttime Ionospheric Parameters With the Far Ultraviolet Imager Onboard the Ionospheric Connection Explorer. *Space Science Reviews*, **2018**, 214, 1	7.5	10
118	New results on the mid-latitude midnight temperature maximum. *Annales Geophysicae*, **2018**, 36, 541-552	2	3
117	The Ionospheric Connection Explorer Mission: Mission Goals and Design. *Space Science Reviews*, **2018**, 214, 1	7.5	68
116	The Impact of Magnetic Field Temporal Sampling on Modeled Surface Electric Fields. *Space Weather*, **2018**, 16, 1721-1739	3.7	8
115	Ionospheric and thermospheric response to the 27–28 February 2014 geomagnetic storm over north Africa. *Annales Geophysicae*, **2018**, 36, 987-998	2	8
114	Intrinsic parameters of periodic waves observed in the OI6300 airglow layer over the Brazilian equatorial region. *Annales Geophysicae*, **2018**, 36, 265-273	2	10
113	**2018**,		3
112	Seasonal dependence of northern high-latitude upper thermospheric winds: A quiet time climatological study based on ground-based and space-based measurements. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 2619-2644	2.6	24
111	Traveling ionospheric disturbances over the United States induced by gravity waves from the 2011 Tohoku tsunami and comparison with gravity wave dissipative theory. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 3430-3447	2.6	33
110	Atmospheric scattering effects on ground-based measurements of thermospheric vertical wind, horizontal wind, and temperature. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 7654-7669	2.6	12
109	Michelson Interferometer for Global High-resolution Thermospheric Imaging (MIGHTI): Instrument Design and Calibration. *Space Science Reviews*, **2017**, 212, 553-584	7.5	64
108	Observation of tsunami-generated ionospheric signatures over Hawaii caused by the 16 September 2015 Illapel earthquake. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 1128-1136	2.6	8
107	Ground-Based Optical Measurements of Quiet Time Thermospheric Wind and Temperature: Atmospheric Scattering Corrections. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 11,624-11,632	2.6	3
106	Effects of the midnight temperature maximum observed in the thermosphere–ionosphere over the northeast of Brazil. *Annales Geophysicae*, **2017**, 35, 953-963	2	4
105	New results on equatorial thermospheric winds and temperatures from Ethiopia, Africa. *Annales Geophysicae*, **2017**, 35, 333-344	2	14
104	Climatology of thermospheric neutral winds over Oukaïmeden Observatory in Morocco. *Annales Geophysicae*, **2017**, 35, 161-170	2	16

103	Thermospheric Dynamics in Quiet and Disturbed Conditions. *Proceedings of the International Astronomical Union*, **2017**, 13, 151-158	0.1	
102	Redistribution of H atoms in the upper atmosphere during geomagnetic storms. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 10,686-10,693	2.6	12
101	Modeling Geomagnetically Induced Currents From Magnetometer Measurements: Spatial Scale Assessed With Reference Measurements. *Space Weather*, **2017**, 15, 1357-1372	3.7	17
100	The MIGHTI Wind Retrieval Algorithm: Description and Verification. *Space Science Reviews*, **2017**, 212, 585-600	7.5	39
99	Simultaneous Measurements and Monthly Climatologies of Thermospheric Winds and Temperatures in the Peruvian and Brazilian Longitudinal Sectors. *Geophysical Monograph Series*, **2016**, 175-186	1.1	5
98	Quantifying the inversion accuracy of simplified physical models for the nighttime OI 135.6nm emission. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 5805-5814	2.6	7
97	Assimilation of thermospheric measurements for ionosphere-thermosphere state estimation. *Radio Science*, **2016**, 51, 1818-1837	1.4	3
96	The geospace response to variable inputs from the lower atmosphere: a review of the progress made by Task Group 4 of CAWSES-II. *Progress in Earth and Planetary Science*, **2015**, 2,	3.9	36
95	Estimation of mesoscale thermospheric wind structure using a network of interferometers. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 3928-3940	2.6	15
94	Electrostatic reconnection in the ionosphere. *Geophysical Research Letters*, **2015**, 42, 1626-1631	4.9	20
93	Thermospheric poleward wind surge at midlatitudes during great storm intervals. *Geophysical Research Letters*, **2015**, 42, 5132-5140	4.9	49
92	Excitation of gravity waves by ocean surface wave packets: Upward propagation and reconstruction of the thermospheric gravity wave field. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 9748-9780	2.6	25
91	Observations of storm time midlatitude ion-neutral coupling using SuperDARN radars and NATION Fabry-Perot interferometers. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 8989-9003	2.6	12
90	Modeled and observed equatorial thermospheric winds and temperatures. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 5832-5844	2.6	9
89	The ionospheric responses to the 2011 Tohoku, 2012 Haida Gwaii, and 2010 Chile tsunamis: Effects of tsunami orientation and observation geometry. *Earth and Space Science*, **2015**, 2, 472-483	3.1	19
88	Climatologies of nighttime thermospheric winds and temperatures from Fabry-Perot interferometer measurements: From solar minimum to solar maximum. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 6679-6693	2.6	38
87	Radiative transfer modeling of the OI 135.6nm emission in the nighttime ionosphere. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 10116-10135	2.6	22
86	Modeling the ionospheric impact of tsunami-driven gravity waves with SAMI3: Conjugate effects. *Geophysical Research Letters*, **2015**, 42, 5719-5726	4.9	22

85	An update to the Horizontal Wind Model (HWM): The quiet time thermosphere. *Earth and Space Science*, **2015**, 2, 301-319	3.1	327
84	Storm time response of the midlatitude thermosphere: Observations from a network of Fabry-Perot interferometers. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 6758-6773	2.6	18
83	Self-consistent generation of MSTIDs within the SAMI3 numerical model. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 6745-6757	2.6	17
82	**2014**,		21
81	Topside signature of medium-scale traveling ionospheric disturbances. *Annales Geophysicae*, **2014**, 32, 959-965	2	21
80	Nonlinear regression method for estimating neutral wind and temperature from Fabry-Perot interferometer data. *Applied Optics*, **2014**, 53, 666-73	1.7	31
79	Experimental Validation of a Technique to Estimate Vertical Wavelength Parameters From Gravity Wave Perturbations on Mesospheric Airglows. *IEEE Transactions on Geoscience and Remote Sensing*, **2014**, 52, 1982-1990	8.1	3
78	Optical and Radio Observations of Structure in the Midlatitude Ionosphere: Midlatitude Ionospheric Dynamics and Disturbances. *Geophysical Monograph Series*, **2013**, 311-317	1.1	
77	. *IEEE Transactions on Power Systems*, **2013**, 28, 3253-3262	7	126
76	Low latitude thermospheric responses to magnetic storms. *Journal of Geophysical Research: Space Physics*, **2013**, 118, 3866-3876	2.6	15
75	Near-continual ground-based nighttime observations of thermospheric neutral winds and temperatures over equatorial Brazil from 2009 to 2012. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2013**, 103, 94-102	2	33
74	Comparison of zonal neutral winds with equatorial plasma bubble and plasma drift velocities. *Journal of Geophysical Research: Space Physics*, **2013**, 118, 1802-1812	2.6	28
73	Reply to Tsurutani et al.S comment on "Storming the Bastille: the effect of electric fields on the ionospheric F-layer" by Rishbeth et al. (2010). *Annales Geophysicae*, **2013**, 31, 151-152	2	8
72	Climatology of nighttime medium-scale traveling ionospheric disturbances (MSTIDs) in the Central Pacific and South American sectors. *Annales Geophysicae*, **2013**, 31, 2229-2237	2	33
71	Comparison of nighttime zonal neutral winds and equatorial plasma bubble drift velocities over Brazil. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		25
70	Equatorial plasma bubble zonal velocity using 630.0 nm airglow observations and plasma drift modeling over Ascension Island. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		15
69	Overview of Nighttime Ionospheric Instabilities at Low- and Mid-Latitudes: Coupling Aspects Resulting in Structuring at the Mesoscale. *Space Science Reviews*, **2012**, 168, 419-440	7.5	53
68	Large-Scale Measurements of Thermospheric Dynamics with a Multisite Fabry-Perot Interferometer Network: Overview of Plans and Results from Midlatitude Measurements. *International Journal of Geophysics*, **2012**, 2012, 1-10	2	29

67	Simulations of imaging Fabry-Perot interferometers for measuring upper-atmospheric temperatures and winds. *Applied Optics*, **2012**, 51, 3787-800	1.7	4
66	Solar initiative at Oukaimeden Observatory. *Proceedings of the International Astronomical Union*, **2012**, 8, 479-480	0.1	
65	CONVECTIVE IONOSPHERIC STORMS: A REVIEW. *Reviews of Geophysics*, **2011**, 49,	23.1	69
64	Modeling of equatorial plasma bubbles triggered by non-equatorial traveling ionospheric disturbances. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	38
63	Imaging and modeling the ionospheric airglow response over Hawaii to the tsunami generated by the Tohoku earthquake of 11 March 2011. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	112
62	Simulation and analysis of a multi-order imaging Fabry-Perot interferometer for the study of thermospheric winds and temperatures. *Applied Optics*, **2011**, 50, 4403-16	0.2	38
61	Climatology of the nighttime equatorial thermospheric winds and temperatures over Brazil near solar minimum. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		57
60	Three-dimensional numerical modeling of tsunami-related internal gravity waves in the Hawaiian atmosphere. *Earth, Planets and Space*, **2011**, 63, 847-851	2.9	70
59	Influences on the Development of Equatorial Plasma Bubbles: Insights from a Long-Term Optical Dataset **2011**, 239-249		8
58	Overview of Nighttime Ionospheric Instabilities at Low- and Mid-Latitudes: Coupling Aspects Resulting in Structuring at the Mesoscale. *Space Sciences Series of ISSI*, **2011**, 419-440	0.1	2
57	Storming the Bastille: the effect of electric fields on the ionospheric F-layer. *Annales Geophysicae*, **2010**, 28, 977-981	2	34
56	Coordinated study of coherent radar backscatter and optical airglow depletions in the central Pacific. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		17
55	Mesospheric wave signatures and equatorial plasma bubbles: A case study. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		20
54	Periodic spacing between consecutive equatorial plasma bubbles. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	48
53	Nighttime medium-scale traveling ionospheric disturbances at low geomagnetic latitudes. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	43
52	The Remote Equatorial Nighttime Observatory of Ionospheric Regions Project and the International Heliospherical Year. *Earth, Moon and Planets*, **2009**, 104, 211-226	0.6	31
51	Observations of midlatitude ionospheric instabilities generating meter-scale waves at the magnetic equator. *Journal of Geophysical Research*, **2009**, 114, n/a-n/a		9
50	C/NOFS and radar observations during a convective ionospheric storm event over South America. *Geophysical Research Letters*, **2009**, 36,	4.9	17

49	Seeding of equatorial plasma depletions by polarization electric fields from middle latitudes: Experimental evidence. *Geophysical Research Letters*, **2009**, 36,	4.9	51
48	Simultaneous radio interferometer and optical observations of ionospheric structure at the Very Large Array. *Radio Science*, **2009**, 44, n/a-n/a	1.4	11
47	Day-to-day variability of the equatorial ionization anomaly and scintillations at dusk observed by GUVI and modeling by SAMI3. *Journal of Geophysical Research*, **2009**, 114, n/a-n/a		42
46	Optical observations of the growth and day-to-day variability of equatorial plasma bubbles. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		29
45	Three-dimensional tomography of ionospheric variability using a dense GPS receiver array. *Radio Science*, **2008**, 43, n/a-n/a	1.4	30
44	Large magnetic storm-induced nighttime ionospheric flows at midlatitudes and their impacts on GPS-based navigation systems. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		39
43	A multi-instrument technique for localization of scintillation-causing regions in the equatorial ionosphere. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		4
42	Tracking F-region plasma depletion bands using GPS-TEC, incoherent scatter radar, and all-sky imaging at Arecibo. *Earth, Planets and Space*, **2008**, 60, 633-646	2.9	7
41	Localized three-dimensional ionospheric tomography with GPS ground receiver measurements. *Radio Science*, **2007**, 42, n/a-n/a	1.4	23
40	Analysis of equatorial plasma bubble zonal drift velocities in the Pacific sector by imaging techniques. *Annales Geophysicae*, **2007**, 25, 701-709	2	30
39	Optical observations of the development of secondary instabilities on the eastern wall of an equatorial plasma bubble. *Journal of Geophysical Research*, **2006**, 111,		15
38	A review of imaging low-latitude ionospheric irregularity processes. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2006**, 68, 1441-1458	2	56
37	Convective Ionospheric Storms: A Major Space Weather Problem. *Space Weather*, **2006**, 4, n/a-n/a	3.7	16
36	Two components of ionospheric plasma structuring at midlatitudes observed during the large magnetic storm of October 30, 2003. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	38
35	Two-dimensional imaging of the development phase of plasma instabilities in the Earth's ionosphere. *IEEE Transactions on Plasma Science*, **2005**, 33, 502-503	1.3	3
34	First observations of SBAS/WAAS scintillations: Using collocated scintillation measurements and all-sky images to study equatorial plasma bubbles. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	14
33	Simultaneous observations of convective ionospheric storms: ROCSAT-1 and ground-based imagers. *Space Weather*, **2005**, 3, n/a-n/a	3.7	9
32	Analysis of the seasonal variations of equatorial plasma bubble occurrence observed from Haleakala, Hawaii. *Annales Geophysicae*, **2004**, 22, 3109-3121	2	60

31	Mid-latitude ionospheric fluctuation spectra due to secondary instabilities. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2004**, 66, 1559-1565	2	17
30	Temporal properties of intense GPS L1 amplitude scintillations at midlatitudes. *Radio Science*, **2004**, 39, n/a-n/a	1.4	18
29	Imaging the structure of a large-scale TID using ISR and TEC data. *Geophysical Research Letters*, **2004**, 31, n/a-n/a	4.9	82
28	All-sky imaging observations of mesospheric fronts in OI 557.7 nm and broadband OH airglow emissions: Analysis of frontal structure, atmospheric background conditions, and potential sourcing mechanisms. *Journal of Geophysical Research*, **2004**, 109,		37
27	Mid-latitude plasma and electric field measurements during space weather month, September 1999. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2003**, 65, 1077-1085	2	7
26	Intense nighttime flux from the plasmasphere during a modest magnetic storm. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2003**, 65, 1099-1105	2	9
25	Ionospheric data assimilation: recovery of strong mid-latitudinal density gradients. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2003**, 65, 1087-1097	2	8
24	Penetration of the solar wind electric field into the magnetosphere/ionosphere system. *Geophysical Research Letters*, **2003**, 30,	4.9	202
23	Field-aligned 777.4-nm composite airglow images of equatorial plasma depletions. *Geophysical Research Letters*, **2003**, 30,	4.9	56
22	The first coordinated ground- and space-based optical observations of equatorial plasma bubbles. *Geophysical Research Letters*, **2003**, 30,	4.9	78
21	Using the 630.0-nm nightglow emission as a surrogate for the ionospheric Pedersen conductivity. *Journal of Geophysical Research*, **2003**, 108,		25
20	Case studies of coupling between the E and F regions during unstable sporadic-E conditions. *Journal of Geophysical Research*, **2003**, 108,		51
19	Further studies of the Perkins stability during Space Weather Month. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2003**, 65, 1071-1075	2	11
18	First observations of an F-region turbulent upwelling coincident with severe E-region plasma and neutral atmosphere perturbations. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2002**, 64, 1545-1556	2	18
17	Experiment for studying spatial and temporal behavior of the ionosphere **2002**, 4485, 266		1
16	First observations of intense GPS L1 amplitude scintillations at midlatitude. *Geophysical Research Letters*, **2002**, 29, 4-1-4-4	4.9	65
15	Observations of equatorial spread-F from Haleakala, Hawaii. *Geophysical Research Letters*, **2002**, 29, 64-1-64-4	4.9	61
14	By-dependent prompt penetrating electric fields at the magnetic equator. *Geophysical Research Letters*, **2002**, 29, 57-1	4.9	19

13	Assimilation Ionosphere Model: Development and testing with Combined Ionospheric Campaign Caribbean measurements. *Radio Science*, **2001**, 36, 247-259	1.4	22
12	GPS normalization and preliminary modeling results of total electron content during a midlatitude space weather event. *Radio Science*, **2001**, 36, 351-361	1.4	18
11	Resolution of the discrepancy between experiment and theory of midlatitude F-region structures. *Geophysical Research Letters*, **2001**, 28, 2589-2592	4.9	73
10	Ionospheric topography maps using multiple-wavelength all-sky images. *Journal of Geophysical Research*, **2001**, 106, 29161-29174		23
9	First observations of coherent scatter from the mid-latitude F-region in the Caribbean. *Geophysical Research Letters*, **2000**, 27, 935-938	4.9	9
8	Highly structured tropical airglow and TEC signatures during strong geomagnetic activity. *Geophysical Research Letters*, **2000**, 27, 465-468	4.9	29
7	Airglow observations of mesoscale low-velocity traveling ionospheric disturbances at midlatitudes. *Journal of Geophysical Research*, **2000**, 105, 18407-18415		150
6	Mesoscale structure of the midlatitude ionosphere during high geomagnetic activity: Airglow and GPS observations. *Journal of Geophysical Research*, **2000**, 105, 18417-18427		24
5	Coherent and incoherent scatter radar observations during intense mid-latitude spread F. *Geophysical Research Letters*, **2000**, 27, 2829-2832	4.9	23
4	Caribbean Ionosphere Campaign, year one: Airglow and plasma observations during two intense mid-latitude spread-F events. *Geophysical Research Letters*, **2000**, 27, 2825-2828	4.9	38
3	Intercomparisons of total electron content measurements using the Arecibo Incoherent Scatter Radar and GPS. *Geophysical Research Letters*, **2000**, 27, 2841-2844	4.9	22
2	On the electrical structure of airglow depletion/Height layer bands over Arecibo. *Geophysical Research Letters*, **2000**, 27, 2837-2840	4.9	35
1	Combined Ionospheric Campaign 1: Ionospheric tomography and GPS total electron count (TEC) depletions. *Geophysical Research Letters*, **2000**, 27, 2849-2852	4.9	38