

Joseph D Huba

List of Publications by Year in descending order

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141
papers

5,123
citations

101384

36
h-index

106150

65
g-index

154
all docs

154
docs citations

154
times ranked

3672
citing authors

#	ARTICLE	IF	CITATIONS
1	Sami2 is Another Model of the Ionosphere (SAM2): A new low-latitude ionosphere model. Journal of Geophysical Research, 2000, 105, 23035-23053.	3.3	470
2	Simulation of the seeding of equatorial spread F_2 by circular gravity waves. Geophysical Research Letters, 2013, 40, 1-5.	1.5	324
3	Three-dimensional equatorial spread F_2 modeling. Geophysical Research Letters, 2008, 35, .	1.5	196
4	The Ionospheric Connection Explorer Mission: Mission Goals and Design. Space Science Reviews, 2018, 214, 1.	3.7	152
5	An improved coupling model for the lithosphere-atmosphere-ionosphere system. Journal of Geophysical Research: Space Physics, 2014, 119, 3189-3205.	0.8	143
6	Ionosphere plasma bubbles and density variations induced by pre-earthquake rock currents and associated surface charges. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	136
7	Modeling of multiple effects of atmospheric tides on the ionosphere: An examination of possible coupling mechanisms responsible for the longitudinal structure of the equatorial ionosphere. Journal of Geophysical Research, 2010, 115, .	3.3	108
8	Simulation study of penetration electric field effects on the low- to mid-latitude ionosphere. Geophysical Research Letters, 2005, 32, .	1.5	92
9	Hall Magnetic Reconnection Rate. Physical Review Letters, 2004, 93, 175003.	2.9	91
10	Sub-Alfvénic plasma expansion. Physics of Fluids B, 1993, 5, 3491-3506.	1.7	90
11	Hall magnetohydrodynamics in space and laboratory plasmas. Physics of Plasmas, 1995, 2, 2504-2513.	0.7	70
12	Global modeling of equatorial plasma bubbles. Geophysical Research Letters, 2010, 37, .	1.5	70
13	SAMI3 prediction of the impact of the 21 August 2017 total solar eclipse on the ionosphere/plasmasphere system. Geophysical Research Letters, 2017, 44, 5928-5935.	1.5	70
14	The Kelvin-Helmholtz instability: Finite Larmor radius magnetohydrodynamics. Geophysical Research Letters, 1996, 23, 2907-2910.	1.5	68
15	On magnetic reconnection regimes and associated three-dimensional asymmetries: Hybrid, Hall-less hybrid, and Hall-MHD simulations. Journal of Geophysical Research, 2004, 109, .	3.3	66
16	Lightning driven EMP in the upper atmosphere. Geophysical Research Letters, 1995, 22, 361-364.	1.5	64
17	Hall magnetic reconnection: Guide field dependence. Physics of Plasmas, 2005, 12, 012322.	0.7	63
18	Impact of meridional winds on equatorial spread F_2 : Revisited. Geophysical Research Letters, 2013, 40, 1268-1272.	1.5	63

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19	Three-dimensional equatorial spread <i>F</i> modeling: Zonal neutral wind effects. Geophysical Research Letters, 2009, 36, .	1.5	62
20	Global Ionospheric and Thermospheric Effects of the June 2015 Geomagnetic Disturbances: Multi-Instrumental Observations and Modeling. Journal of Geophysical Research: Space Physics, 2017, 122, 11716-11742.	0.8	60
21	Hall magnetohydrodynamic modeling of a long-conduction-time plasma opening switch. Physics of Plasmas, 1994, 1, 3444-3454.	0.7	58
22	Three-dimensional simulation of equatorial spread-F with meridional wind effects. Annales Geophysicae, 2009, 27, 1821-1830.	0.6	58
23	Ground and Space-Based Measurement of Rocket Engine Burns in the Ionosphere. IEEE Transactions on Plasma Science, 2012, 40, 1267-1286.	0.6	58
24	Hall Magnetohydrodynamics - A Tutorial. , 2003, , 166-192.		57
25	Why do equatorial ionospheric bubbles stop rising?. Geophysical Research Letters, 2010, 37, .	1.5	55
26	Equatorial spread F modeling: Multiple bifurcated structures, secondary instabilities, large density bite-outs, and supersonic flows. Geophysical Research Letters, 2007, 34, .	1.5	53
27	On the seeding of equatorial spread F by gravity waves. Geophysical Research Letters, 2013, 40, 661-664.	1.5	52
28	Laboratory laser-produced astrophysical-like plasmas. Laser and Particle Beams, 1990, 8, 183-190.	0.4	51
29	Ionospheric and dayglow responses to the radiative phase of the Bastille Day flare. Geophysical Research Letters, 2002, 29, 99-1-99-4.	1.5	50
30	Theory and simulation of a high-frequency magnetic drift wave. Physics of Fluids B, 1991, 3, 3217-3225.	1.7	46
31	Modeling of equatorial plasma bubbles triggered by non-equatorial traveling ionospheric disturbances. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	45
32	Finite Larmor radius magnetohydrodynamics of the Rayleigh-Taylor instability. Physics of Plasmas, 1996, 3, 2523-2532.	0.7	43
33	Theoretical study of the ionospheric Weddell Sea Anomaly using SAMI2. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	42
34	Storm time ionosphere and plasmasphere structuring: SAMI3-RCM simulation of the 31 March 2001 geomagnetic storm. Geophysical Research Letters, 2014, 41, 8208-8214.	1.5	42
35	Full profile incoherent scatter analysis at Jicamarca. Annales Geophysicae, 2008, 26, 59-75.	0.6	40
36	Global Modeling of Equatorial Spread <i>F</i> with SAMI3/WACCM-X. Geophysical Research Letters, 2020, 47, e2020GL088258.	1.5	40

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37	Modeling the ionospheric impact of tsunami-driven gravity waves with SAMI3: Conjugate effects. <i>Geophysical Research Letters</i> , 2015, 42, 5719-5726.	1.5	38
38	Observation of faster-than-diffusion magnetic field penetration into a plasma. <i>Physics of Plasmas</i> , 2003, 10, 112-125.	0.7	37
39	Three-dimensional modeling of equatorial spread <i>F</i> airglow enhancements. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	36
40	Ion and electron temperature evolution during equatorial spread <i>F</i> . <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	35
41	SAMI3-RCM simulation of the 17 March 2015 geomagnetic storm. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 1246-1257.	0.8	33
42	Data Assimilation of Ground-Based GPS and Radio Occultation Total Electron Content for Global Ionospheric Specification. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,876.	0.8	33
43	Modeling the longitudinal variation in the post-sunset far-ultraviolet OI airglow using the SAMI2 model. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	32
44	Modeling ionospheric super-fountain effect based on the coupled TIMEGCM-SAMI3. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 2527-2535.	0.8	32
45	Global response of the low-latitude to midlatitude ionosphere due to the Bastille Day flare. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	31
46	Incoherent scatter from space shuttle and rocket engine plumes in the ionosphere. <i>Journal of Geophysical Research</i> , 1998, 103, 2239-2251.	3.3	30
47	Thermospheric tidal effects on the ionospheric midlatitude summer nighttime anomaly using SAMI3 and TIEGCM. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 3836-3845.	0.8	30
48	On the generation and structure of the quadrupole magnetic field in the reconnection process: Comparative simulation study. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	1.5	29
49	Atomic and molecular ion dynamics during equatorial spread <i>F</i> . <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	29
50	Self-consistent modeling of equatorial dawn density depletions with SAMI3. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	29
51	SAMI2-PE: A model of the ionosphere including multistream interhemispheric photoelectron transport. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	29
52	The Rayleigh-Taylor instability is not damped by recombination in the F region. <i>Journal of Geophysical Research</i> , 1996, 101, 24553-24556.	3.3	27
53	A new 3D MHD algorithm: the distribution function method. <i>Journal of Plasma Physics</i> , 1999, 61, 391-405.	0.7	27
54	Topside measurements at Jicamarca during solar minimum. <i>Annales Geophysicae</i> , 2009, 27, 427-439.	0.6	27

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55	Electrostatic reconnection in the ionosphere. <i>Geophysical Research Letters</i> , 2015, 42, 1626-1631.	1.5	27
56	SAMI3_ICON: Model of the Ionosphere/Plasmasphere System. <i>Space Science Reviews</i> , 2017, 212, 731-742.	3.7	27
57	Direct ELIV/X-Ray Modulation of the Ionosphere During the August 2017 Total Solar Eclipse. <i>Geophysical Research Letters</i> , 2018, 45, 3820-3828.	1.5	27
58	Global Ionospheric Metal Ion Transport With SAMI3. <i>Geophysical Research Letters</i> , 2019, 46, 7937-7944.	1.5	27
59	Short wavelength stabilization of the gradient drift instability due to velocity shear. <i>Geophysical Research Letters</i> , 1983, 10, 357-360.	1.5	26
60	The formation of an electron hole in the topside equatorial ionosphere. <i>Geophysical Research Letters</i> , 2000, 27, 181-184.	1.5	26
61	Ion sound waves in the topside low latitude ionosphere. <i>Geophysical Research Letters</i> , 2000, 27, 3181-3184.	1.5	26
62	Generation of waves in the Venus mantle by the ion acoustic beam instability. <i>Geophysical Research Letters</i> , 1993, 20, 1751-1754.	1.5	25
63	Self-consistent generation of MSTIDs within the SAMI3 numerical model. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 6745-6757.	0.8	24
64	Skidding™ of the CRRES barium release. <i>Geophysical Research Letters</i> , 1992, 19, 1085-1088.	1.5	23
65	Interaction of the Solar Wind with Unmagnetized Planets. <i>Physical Review Letters</i> , 1999, 83, 260-263.	2.9	23
66	An interhemispheric model of artificial ionospheric ducts. <i>Radio Science</i> , 2006, 41, n/a-n/a.	0.8	23
67	Simulation of field-aligned H ⁺ and He ⁺ dynamics during late-stage plasmasphere refilling. <i>Annales Geophysicae</i> , 2008, 26, 1507-1516.	0.6	23
68	Nonlocal theory of the Rayleigh-Taylor instability in the limit of unmagnetized ions. <i>Physics of Fluids B</i> , 1989, 1, 931-941.	1.7	22
69	Theory of small-scale density and electric field fluctuations in the nightside Venus ionosphere. <i>Journal of Geophysical Research</i> , 1992, 97, 43-50.	3.3	22
70	Comparison of O ⁺ density from ARGOS LORAAS data analysis and SAMI2 model results. <i>Geophysical Research Letters</i> , 2002, 29, 6-1.	1.5	22
71	SAMI3 simulation of plasmasphere refilling. <i>Geophysical Research Letters</i> , 2013, 40, 2484-2488.	1.5	22
72	Three-dimensional simulation study of ionospheric plasma clouds. <i>Geophysical Research Letters</i> , 1990, 17, 1597-1600.	1.5	21

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73	Self-generation of magnetic fields by sheared flows in weakly ionized plasmas. <i>Physics of Fluids B</i> , 1993, 5, 3779-3788.	1.7	21
74	Exploring the role of ionospheric drivers during the extreme solar minimum of 2008. <i>Annales Geophysicae</i> , 2013, 31, 2147-2156.	0.6	21
75	The Unknown Hydrogen Exosphere: Space Weather Implications. <i>Space Weather</i> , 2018, 16, 205-215.	1.3	20
76	Universal interchange instability in partially ionized gases. <i>Physics of Fluids B</i> , 1990, 2, 2547-2550.	1.7	17
77	The effect of the thermosphere on quiet time plasmasphere morphology. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5032-5048.	0.8	17
78	Simulation study of a positive ionospheric storm phase observed at Millstone Hill. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	16
79	Topside equatorial ionospheric density, temperature, and composition under equinox, low solar flux conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 3899-3912.	0.8	16
80	MAVEN Observations of Ionospheric Irregularities at Mars. <i>Geophysical Research Letters</i> , 2017, 44, 10,845.	1.5	16
81	Ionospheric Disturbances Triggered by SpaceX Falcon Heavy. <i>Geophysical Research Letters</i> , 2018, 45, 6334-6342.	1.5	16
82	Large-scale O^{+} Depletions Observed by ICON in the Post-Midnight Topside Ionosphere: Data/Model Comparison. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL092061.	1.5	16
83	Space-based imaging of nighttime medium-scale traveling ionospheric disturbances using FORMOSAT-2/ISUAL 630.0nm airglow observations. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 4769-4781.	0.8	15
84	Modeling Amateur Radio Soundings of the Ionospheric Response to the 2017 Great American Eclipse. <i>Geophysical Research Letters</i> , 2018, 45, 4665-4674.	1.5	15
85	Ionospheric response to the solar flare of 14 July 2000. <i>Radio Science</i> , 2004, 39, n/a-n/a.	0.8	13
86	Seeding equatorial spread F with turbulent gravity waves: Phasing effects. <i>Geophysical Research Letters</i> , 2015, 42, 15-21.	1.5	13
87	Measurement and modeling of the refilling plasmasphere during 2001. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 2226-2248.	0.8	13
88	Observation and Simulation of the Development of Equatorial Plasma Bubbles: Post-Sunset Rise or Upwelling Growth?. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028544.	0.8	13
89	Radio tomographic images of postmidnight equatorial plasma depletions. <i>Geophysical Research Letters</i> , 2014, 41, 13-19.	1.5	12
90	Understanding and Harnessing the Dual Electrostatic/Electromagnetic Character of Plasma Turbulence in the Near-Earth Space Environment. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10365-10375.	0.8	11

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91	Change in Total Electron Content During the 26 December 2019 Solar Eclipse: Constraints From GNSS Observations and Comparison With SAMI3 Model Results. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028230.	0.8	11
92	SAMI3 Simulations of Ionospheric Metallic Layers at Arecibo. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027297.	0.8	11
93	Generalized Rayleighâ€‘Taylor Instability: Ion Inertia, Acceleration Forces, and <i>E</i> Region Drivers. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	11
94	Nonlinear evolution of the unmagnetized ion Rayleighâ€‘Taylor instability. <i>Physics of Fluids B</i> , 1990, 2, 2001-2006.	1.7	10
95	Modeling Arecibo conjugate heating effects with SAMI2. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	10
96	Nonmigrating tidal signature in the distributions of equatorial plasma bubbles and prereversal enhancement. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 3254-3262.	0.8	10
97	Effect of timeâ€‘dependent 3â€‘D electron density gradients on high angle of incidence HF radiowave propagation. <i>Radio Science</i> , 2016, 51, 1131-1141.	0.8	10
98	Sensitivity studies of equatorial topside electron and ion temperatures. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	9
99	Dayâ€‘toâ€‘day variability in the thermosphere and its impact on plasmasphere refilling. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 6889-6900.	0.8	9
100	The plasmasphere electron content paradox. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8924-8935.	0.8	9
101	Erosion of the plasmasphere during a storm. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 9320-9328.	0.8	9
102	SAMI3 Simulations of a Persistent Plasmasphere Plume. <i>Geophysical Research Letters</i> , 2018, 45, 3374-3381.	1.5	9
103	Estimation of Ion Temperature in the Upper Ionosphere Along the Swarm Satellite Orbits. <i>Earth and Space Science</i> , 2021, 8, e2021EA001925.	1.1	9
104	Topside Plasma Flows in the Equatorial Ionosphere and Their Relationships to Fâ€‘Region Winds Near 250Åkm. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	9
105	Smallâ€‘scale density irregularities in the nightside Venus ionosphere: Comparison of theory and observations. <i>Journal of Geophysical Research</i> , 1993, 98, 3079-3086.	3.3	8
106	Hemispheric daytime ionospheric response to intense solar wind forcing. <i>Geophysical Monograph Series</i> , 2005, , 261-275.	0.1	8
107	Estimating the electron energy distribution during ionospheric modification from spectrographic airglow measurements. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	8
108	Heaterâ€‘induced ionization inferred from spectrometric airglow measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2038-2045.	0.8	8

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109	Eclipse-induced Changes to Topside Ion Composition and Field-Aligned Ion Flows in the August 2017 Solar Eclipse: ePOPOP Observations. <i>Geophysical Research Letters</i> , 2018, 45, 10,829.	1.5	8
110	Numerical Modeling of the Concentric Gravity Wave Seeding of Low-Latitude Nighttime Medium-Scale Traveling Ionospheric Disturbances. <i>Geophysical Research Letters</i> , 2018, 45, 6390-6399.	1.5	8
111	The Statistical Characteristics of Small-Scale Ionospheric Irregularities Observed in the Martian Ionosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 5874-5893.	0.8	8
112	Modeling the Impact of Metallic Ion Layers on Equatorial Spread With SAMI3/ESF. <i>Geophysical Research Letters</i> , 2020, 47, no.	1.5	8
113	Early Time Evolution of Turbulence in the Space Environment by Neutral Beam Injection. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027587.	0.8	8
114	Simulation study of mid-latitude ionosphere fluctuations observed at Millstone Hill. <i>Geophysical Research Letters</i> , 2003, 30, .	1.5	7
115	Propagation of whistler mode waves through the ionosphere. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	7
116	New Systems for Space Based Monitoring of Ionospheric Irregularities and Radio Wave Scintillations. <i>Geophysical Monograph Series</i> , 2013, , 431-440.	0.1	7
117	Geospace variability during the 2008-2009 Whole Heliosphere Intervals. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 3755-3776.	0.8	6
118	On the Annual Asymmetry of High-Latitude Sporadic F. <i>Space Weather</i> , 2019, 17, 1618-1626.	1.3	6
119	Simulation of Counterstreaming H + Outflows During Plasmasphere Refilling. <i>Geophysical Research Letters</i> , 2019, 46, 3052-3060.	1.5	6
120	Strong Amplification of ELF/VLF Signals in Space Using Neutral Gas Injections From a Satellite Rocket Engine. <i>Radio Science</i> , 2021, 56, e2020RS007207.	0.8	6
121	Modeling the presunrise plasma heating in the low-to midlatitude topside ionospheres. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	5
122	Modeling 3D artificial ionospheric ducts. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 7450-7457.	0.8	5
123	Theoretical study of the ionospheric plasma cave in the equatorial ionization anomaly region. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 10,324.	0.8	5
124	Low-Latitude midnight brightness in 630.0 nm limb observations by FORMOSAT-2/ISUAL. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 4894-4904.	0.8	5
125	A coupled ionosphere-raytrace model for high-power HF heating. <i>Geophysical Research Letters</i> , 2015, 42, 9650-9656.	1.5	5
126	The Effect of Oxygen on the Limiting H + Flux in the Topside Ionosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 4509-4517.	0.8	5

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127	Isolated Peak of Oxygen Ion Fraction in the Post-noon Equatorial Region: ICON and SAMI3/WACCM-X. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029217.	0.8	5
128	The Effect of Midnight Temperature Maximum Winds on Post-Midnight Equatorial Spread F. Space Weather, 2021, 19, e2021SW002728.	1.3	4
129	High-Latitude Electrodynamic Specified in SAMI3 Using AMPERE Field-Aligned Currents. Space Weather, 2022, 20, .	1.3	4
130	Open source project to aid ionosphere physics research. Eos, 2002, 83, 188.	0.1	3
131	Does Ring Current Heating Generate the Observed O ⁺ Shell?. Geophysical Research Letters, 2020, 47, e2020GL088419.	1.5	3
132	Counterstreaming Cold H ⁺ , He ⁺ , O ⁺ , and N ⁺ Outflows in the Plasmasphere. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	3
133	Theory of kilometer-size density waves in the nightside Venus ionosphere. Geophysical Research Letters, 1993, 20, 2763-2766.	1.5	2
134	Forced Hall magnetic reconnection: Parametric variation of the "Newton Challenge". Physics of Plasmas, 2006, 13, 062311.	0.7	2
135	Can HF heating generate ESF bubbles?. Geophysical Research Letters, 2014, 41, 8155-8160.	1.5	2
136	Evolution of Field-Aligned Electron and Ion Densities From Whistler Mode Radio Soundings During Quiet to Moderately Active Period and Comparisons With SAMI2 Simulations. Journal of Geophysical Research: Space Physics, 2018, 123, 1356-1380.	0.8	2
137	Anomalous Transport in Current Sheets. Symposium - International Astronomical Union, 1985, 107, 315-328.	0.1	1
138	Magnetospheric resonances at low and middle latitudes. Journal of Geophysical Research: Space Physics, 2015, 120, 7718-7727.	0.8	1
139	Observations and Modeling Studies of Solar Eclipse Effects on Oblique High Frequency Radio Propagation. Space Weather, 2021, 19, e2020SW002560.	1.3	1
140	3D Dynamics of X- and Z - Pinches. IEEE International Conference on Plasma Science, 2005, , .	0.0	0
141	The Effect of the Thermosphere on Ionosphere Outflows. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	0