

Liying Qian

List of Publications by Year in descending order

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Version: 2024-02-01

87
papers

3,837
citations

109321

35
h-index

133252

59
g-index

95
all docs

95
docs citations

95
times ranked

1964
citing authors

#	ARTICLE	IF	CITATIONS
1	Solar extreme-ultraviolet irradiance for general circulation models. Journal of Geophysical Research, 2005, 110, .	3.3	228
2	Development and Validation of the Whole Atmosphere Community Climate Model With Thermosphere and Ionosphere Extension (WACCMâ€2.0). Journal of Advances in Modeling Earth Systems, 2018, 10, 381-402.	3.8	213
3	Seasonal variation of thermospheric density and composition. Journal of Geophysical Research, 2009, 114, .	3.3	183
4	Anomalously low solar extremeâ€ultraviolet irradiance and thermospheric density during solar minimum. Geophysical Research Letters, 2010, 37, .	4.0	171
5	Thermosphere extension of the Whole Atmosphere Community Climate Model. Journal of Geophysical Research, 2010, 115, .	3.3	144
6	Causes of low thermospheric density during the 2007-2009 solar minimum. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	116
7	Thermospheric Density: An Overview of Temporal and Spatial Variations. Space Science Reviews, 2012, 168, 147-173.	8.1	102
8	Ionospheric annual asymmetry observed by the COSMIC radio occultation measurements and simulated by the TIEGCM. Journal of Geophysical Research, 2008, 113, .	3.3	99
9	Trends in the Neutral and Ionized Upper Atmosphere. Space Science Reviews, 2012, 168, 113-145.	8.1	98
10	The anomalous ionosphere between solar cycles 23 and 24. Journal of Geophysical Research: Space Physics, 2013, 118, 6524-6535.	2.4	93
11	Annual/semiannual variation of the ionosphere. Geophysical Research Letters, 2013, 40, 1928-1933.	4.0	90
12	Calculated and observed climate change in the thermosphere, and a prediction for solar cycle 24. Geophysical Research Letters, 2006, 33, .	4.0	77
13	Progress in observations and simulations of global change in the upper atmosphere. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	76
14	Flare location on the solar disk: Modeling the thermosphere and ionosphere response. Journal of Geophysical Research, 2010, 115, .	3.3	70
15	Variability of thermosphere and ionosphere responses to solar flares. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	68
16	Solar Flare and Geomagnetic Storm Effects on the Thermosphere and Ionosphere During 6â€11 September 2017. Journal of Geophysical Research: Space Physics, 2019, 124, 2298-2311.	2.4	67
17	XUV Photometer System (XPS): Improved Solar Irradiance Algorithm Using CHIANTI Spectral Models. Solar Physics, 2008, 250, 235-267.	2.5	62
18	Whole Atmosphere Simulation of Anthropogenic Climate Change. Geophysical Research Letters, 2018, 45, 1567-1576.	4.0	60

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19	The Two-Dimensional Evolution of Thermospheric O/N_2 Response to Weak Geomagnetic Activity During Solar Minimum Observed by GOLD. Geophysical Research Letters, 2020, 47, e2020GL088838.	4.0	59
20	Model simulations of global change in the ionosphere. Geophysical Research Letters, 2008, 35, .	4.0	58
21	The effects of Corotating interaction region/High speed stream storms on the thermosphere and ionosphere during the last solar minimum. Journal of Atmospheric and Solar-Terrestrial Physics, 2012, 83, 79-87.	1.6	56
22	Solar flare impacts on ionospheric electrodynamics. Geophysical Research Letters, 2012, 39, .	4.0	53
23	Modeling studies of the impact of high-speed streams and co-rotating interaction regions on the thermosphere-ionosphere. Journal of Geophysical Research, 2012, 117, .	3.3	50
24	First Results From the Ionospheric Extension of WACCM-X During the Deep Solar Minimum Year of 2008. Journal of Geophysical Research: Space Physics, 2018, 123, 1534-1553.	2.4	50
25	Daytime climatology of ionospheric N_m and h_m from COSMIC data. Journal of Geophysical Research, 2012, 117, .	3.3	49
26	The effect of carbon dioxide cooling on trends in the F2-layer ionosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 1592-1601.	1.6	47
27	Investigation of a Neutral "Tongue" Observed by GOLD During the Geomagnetic Storm on May 11, 2019. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028817.	2.4	46
28	Ionospheric Day-to-Day Variability Around the Whole Heliosphere Interval in 2008. Solar Physics, 2011, 274, 457-472.	2.5	45
29	Model simulation of thermospheric response to recurrent geomagnetic forcing. Journal of Geophysical Research, 2010, 115, .	3.3	44
30	Pronounced Suppression and X-Plane Pattern Merging of Equatorial Ionization Anomalies After the 2022 Tonga Volcano Eruption. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	42
31	Variations in Thermosphere Composition and Ionosphere Total Electron Content Under "Geomagnetically Quiet" Conditions at Solar Minimum. Geophysical Research Letters, 2021, 48, e2021GL093300.	4.0	40
32	On the solar cycle variation of the winter anomaly. Journal of Geophysical Research: Space Physics, 2014, 119, 4938-4949.	2.4	38
33	Hydrodynamic planetary thermosphere model: 2. Coupling of an electron transport/energy deposition model. Journal of Geophysical Research, 2008, 113, .	3.3	37
34	New 3D simulations of climate change in the thermosphere. Journal of Geophysical Research: Space Physics, 2015, 120, 2183-2193.	2.4	36
35	Whole Atmosphere Climate Change: Dependence on Solar Activity. Journal of Geophysical Research: Space Physics, 2019, 124, 3799-3809.	2.4	35
36	Comparison of GOLD Nighttime Measurements With Total Electron Content: Preliminary Results. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027767.	2.4	35

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37	Explaining solar cycle effects on composition as it relates to the winter anomaly. Journal of Geophysical Research: Space Physics, 2015, 120, 5890-5898.	2.4	30
38	Effect of trends of middle atmosphere gases on the mesosphere and thermosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 3846-3855.	2.4	29
39	Impact of the lower thermospheric winter-to-summer residual circulation on thermospheric composition. Geophysical Research Letters, 2017, 44, 3971-3979.	4.0	29
40	A Convective Wake Parameterization Scheme for Use in General Circulation Models. Monthly Weather Review, 1998, 126, 456-469.	1.4	29
41	Observation of Postsunset OI 135.6Ånm Radiance Enhancement Over South America by the GOLD Mission. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028108.	2.4	28
42	Carbon dioxide trends in the mesosphere and lower thermosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 4474-4488.	2.4	27
43	Solar flare effects in the Earth's magnetosphere. Nature Physics, 2021, 17, 807-812.	16.7	27
44	A Snapshot of the Sun Near Solar Minimum: The Whole Heliosphere Interval. Solar Physics, 2011, 274, 29-56.	2.5	25
45	Effects of the equatorial ionosphere anomaly on the interhemispheric circulation in the thermosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 2522-2530.	2.4	25
46	A Comparison Study of NO Cooling Between TIMED/SABER Measurements and TIEGCM Simulations. Journal of Geophysical Research: Space Physics, 2018, 123, 8714-8729.	2.4	25
47	Trends and Solar Irradiance Effects in the Mesosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 1343-1360.	2.4	25
48	New Observations of Large-scale Waves Coupling With the Ionosphere Made by the GOLD Mission: Quasi-16-Day Wave Signatures in the F-Region OI 135.6Ånm Nightglow During Sudden Stratospheric Warmings. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027880.	2.4	24
49	Anomalous low geomagnetic energy inputs during 2008 solar minimum. Journal of Geophysical Research, 2012, 117, .	3.3	22
50	Seasonal Variation of Thermospheric Composition Observed by NASA GOLD. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	22
51	On the secular trend of CO x and CO 2 in the lower thermosphere. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3634-3644.	3.3	20
52	Evidence of the Lower Thermospheric Winter-to-Summer Circulation From SABER CO ₂ Observations. Geophysical Research Letters, 2017, 44, 10,100.	4.0	20
53	Annual and Semiannual Oscillations of Thermospheric Composition in TIMED/GUVI Limb Measurements. Journal of Geophysical Research: Space Physics, 2019, 124, 3067-3082.	2.4	20
54	Secular changes in the thermosphere and ionosphere between two quiet Sun periods. Journal of Geophysical Research: Space Physics, 2014, 119, 2255-2262.	2.4	19

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55	Temporal Variability of Atomic Hydrogen From the Mesopause to the Upper Thermosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 1006-1017.	2.4	19
56	Effects of the September 2005 Solar Flares and Solar Proton Events on the Middle Atmosphere in WACCM. Journal of Geophysical Research: Space Physics, 2018, 123, 5747-5763.	2.4	19
57	CMIT study of CR2060 and 2068 comparing L1 and MAS solar wind drivers. Journal of Atmospheric and Solar-Terrestrial Physics, 2012, 83, 39-50.	1.6	18
58	The winter helium bulge revisited. Geophysical Research Letters, 2014, 41, 6603-6609.	4.0	18
59	Thermospheric basis functions for improved dynamic calibration of semi-empirical models. Space Weather, 2012, 10, .	3.7	17
60	Evidence of long-term change in zonal wind in the tropical lower mesosphere: Observations and model simulations. Geophysical Research Letters, 2013, 40, 397-401.	4.0	16
61	First Synoptic Observations of Geomagnetic Storm Effects on the Global-scale OI 135.6-nm Dayglow in the Thermosphere by the GOLD Mission. Geophysical Research Letters, 2020, 47, e2019GL085400.	4.0	14
62	Electrodynamical Coupling of the Geospace System During Solar Flares. Journal of Geophysical Research: Space Physics, 2021, 126, .	2.4	14
63	Thermospheric neutral density response to solar forcing. Advances in Space Research, 2008, 42, 926-932.	2.6	13
64	The Effects of IMF B_y on the Middle Thermosphere During a Geomagnetically Quiet-Period at Solar Minimum. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	13
65	Solar Flare Effects on 150-km Echoes Observed Over Jicamarca: WACCM-X Simulations. Geophysical Research Letters, 2019, 46, 10951-10958.	4.0	12
66	Responses of the Thermosphere and Ionosphere System to Concurrent Solar Flares and Geomagnetic Storms. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027431.	2.4	11
67	A Comparison of the CIR- and CME-Induced Geomagnetic Activity Effects on Mesosphere and Lower Thermospheric Temperature. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA029029.	2.4	11
68	Effect of a solar flare on a traveling atmospheric disturbance. Journal of Geophysical Research, 2012, 117, .	3.3	10
69	Solar cycle variations of thermospheric composition at the solstices. Journal of Geophysical Research: Space Physics, 2016, 121, 3740-3749.	2.4	10
70	Observations and Simulations of Eddy Diffusion and Tidal Effects on the Semiannual Oscillation in the Ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 10,502.	2.4	10
71	Longitudinal variations of thermospheric composition at the solstices. Journal of Geophysical Research: Space Physics, 2016, 121, 6818-6829.	2.4	9
72	Climate Changes in the Upper Atmosphere: Contributions by the Changing Greenhouse Gas Concentrations and Earth's Magnetic Field From the 1960s to 2010s. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA029067.	2.4	9

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73	Test of a Convective Wake Parameterization in the Single-Column Version of CCM3. Monthly Weather Review, 1999, 127, 1347-1361.	1.4	8
74	Thermospheric hydrogen response to increases in greenhouse gases. Journal of Geophysical Research: Space Physics, 2016, 121, 3545-3554.	2.4	8
75	Long-Term Trends in the Low-Latitude Middle Atmosphere Temperature and Winds: Observations and WACCM Model Simulations. Journal of Geophysical Research: Space Physics, 2019, 124, 7320-7331.	2.4	8
76	Climatology of Mesosphere and Lower Thermosphere Residual Circulations and Mesopause Height Derived From SABER Observations. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	8
77	Wavelength dependence of solar irradiance enhancement during X-class flares and its influence on the upper atmosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2014, 115-116, 87-94.	1.6	7
78	Ionospheric Electron Content During Solar Cycle 23. Journal of Geophysical Research: Space Physics, 2018, 123, 5223-5231.	2.4	7
79	Ionospheric Electrodynamical Response to Solar Flares in September 2017. Journal of Geophysical Research: Space Physics, 2021, 126, .	2.4	7
80	Signatures of Thermospheric-Exospheric Coupling of Hydrogen in Observed Seasonal Trends of H ⁺ Intensity. Journal of Geophysical Research: Space Physics, 2019, 124, 4525-4538.	2.4	4
81	The Role of Flare-Driven Ionospheric Electron Density Changes on the Doppler Flash Observed by SuperDARN HF Radars. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029300.	2.4	4
82	Driving Influences of the Doppler Flash Observed by SuperDARN HF Radars in Response to Solar Flares. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	4
83	Local-Time Variabilities of March Equinox Daytime SABER CO ₂ in the Upper Mesosphere and Lower Thermosphere Region. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027039.	2.4	3
84	Solar Cycle Response of CO ₂ Over the Austral Winter Mesosphere and Lower Thermosphere Region. Journal of Geophysical Research: Space Physics, 2018, 123, 7581-7597.	2.4	2
85	Introduction to Special Issue on "Long-Term Changes and Trends in the Middle and Upper Atmosphere". Journal of Geophysical Research: Space Physics, 2019, 124, 10360-10364.	2.4	2
86	Trends in the Neutral and Ionized Upper Atmosphere. Space Sciences Series of ISSI, 2011, , 113-145.	0.0	1
87	Thermospheric Density: An Overview of Temporal and Spatial Variations. Space Sciences Series of ISSI, 2011, , 147-173.	0.0	1