

Liying Qian

List of Publications by Year in descending order

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87
papers

3,837
citations

125106

35
h-index

150775

59
g-index

95
all docs

95
docs citations

95
times ranked

2083
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1 | Solar extreme-ultraviolet irradiance for general circulation models. <i>Journal of Geophysical Research</i> , 2005, 110, . | 3.3 | 228 |
| 2 | Development and Validation of the Whole Atmosphere Community Climate Model With Thermosphere and Ionosphere Extension (WACCM-X 2.0). <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 381-402. | 1.3 | 213 |
| 3 | Seasonal variation of thermospheric density and composition. <i>Journal of Geophysical Research</i> , 2009, 114, . | 3.3 | 183 |
| 4 | Anomalously low solar extreme-ultraviolet irradiance and thermospheric density during solar minimum. <i>Geophysical Research Letters</i> , 2010, 37, . | 1.5 | 171 |
| 5 | Thermosphere extension of the Whole Atmosphere Community Climate Model. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 144 |
| 6 | Causes of low thermospheric density during the 2007-2009 solar minimum. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 116 |
| 7 | Thermospheric Density: An Overview of Temporal and Spatial Variations. <i>Space Science Reviews</i> , 2012, 168, 147-173. | 3.7 | 102 |
| 8 | Ionospheric annual asymmetry observed by the COSMIC radio occultation measurements and simulated by the TIEGCM. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 99 |
| 9 | Trends in the Neutral and Ionized Upper Atmosphere. <i>Space Science Reviews</i> , 2012, 168, 113-145. | 3.7 | 98 |
| 10 | The anomalous ionosphere between solar cycles 23 and 24. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 6524-6535. | 0.8 | 93 |
| 11 | Annual/semiannual variation of the ionosphere. <i>Geophysical Research Letters</i> , 2013, 40, 1928-1933. | 1.5 | 90 |
| 12 | Calculated and observed climate change in the thermosphere, and a prediction for solar cycle 24. <i>Geophysical Research Letters</i> , 2006, 33, . | 1.5 | 77 |
| 13 | Progress in observations and simulations of global change in the upper atmosphere. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 76 |
| 14 | Flare location on the solar disk: Modeling the thermosphere and ionosphere response. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 70 |
| 15 | Variability of thermosphere and ionosphere responses to solar flares. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a. | 3.3 | 68 |
| 16 | Solar Flare and Geomagnetic Storm Effects on the Thermosphere and Ionosphere During 6 th 11 September 2017. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2298-2311. | 0.8 | 67 |
| 17 | XUV Photometer System (XPS): Improved Solar Irradiance Algorithm Using CHIANTI Spectral Models. <i>Solar Physics</i> , 2008, 250, 235-267. | 1.0 | 62 |
| 18 | Whole Atmosphere Simulation of Anthropogenic Climate Change. <i>Geophysical Research Letters</i> , 2018, 45, 1567-1576. | 1.5 | 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. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088838. | 1.5 | 59 |
| 20 | Model simulations of global change in the ionosphere. <i>Geophysical Research Letters</i> , 2008, 35, . | 1.5 | 58 |
| 21 | The effects of Corotating interaction region/High speed stream storms on the thermosphere and ionosphere during the last solar minimum. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2012, 83, 79-87. | 0.6 | 56 |
| 22 | Solar flare impacts on ionospheric electrodyamics. <i>Geophysical Research Letters</i> , 2012, 39, . | 1.5 | 53 |
| 23 | Modeling studies of the impact of high-speed streams and co-rotating interaction regions on the thermosphere-ionosphere. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 50 |
| 24 | First Results From the Ionospheric Extension of WACCM-X During the Deep Solar Minimum Year of 2008. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1534-1553. | 0.8 | 50 |
| 25 | Daytime climatology of ionospheric $N_m F_2$ and $h_m F_2$ from COSMIC data. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 49 |
| 26 | The effect of carbon dioxide cooling on trends in the F2-layer ionosphere. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2009, 71, 1592-1601. | 0.6 | 47 |
| 27 | Investigation of a Neutral "Tongue" Observed by GOLD During the Geomagnetic Storm on May 11, 2019. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028817. | 0.8 | 46 |
| 28 | Ionospheric Day-to-Day Variability Around the Whole Heliosphere Interval in 2008. <i>Solar Physics</i> , 2011, 274, 457-472. | 1.0 | 45 |
| 29 | Model simulation of thermospheric response to recurrent geomagnetic forcing. <i>Journal of Geophysical Research</i> , 2010, 115, . | 3.3 | 44 |
| 30 | Pronounced Suppression and X-pattern Merging of Equatorial Ionization Anomalies After the 2022 Tonga Volcano Eruption. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, . | 0.8 | 42 |
| 31 | Variations in Thermosphere Composition and Ionosphere Total Electron Content Under "Geomagnetically Quiet" Conditions at Solar Minimum. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093300. | 1.5 | 40 |
| 32 | On the solar cycle variation of the winter anomaly. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 4938-4949. | 0.8 | 38 |
| 33 | Hydrodynamic planetary thermosphere model: 2. Coupling of an electron transport/energy deposition model. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 37 |
| 34 | New 3D simulations of climate change in the thermosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 2183-2193. | 0.8 | 36 |
| 35 | Whole Atmosphere Climate Change: Dependence on Solar Activity. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 3799-3809. | 0.8 | 35 |
| 36 | Comparison of GOLD Nighttime Measurements With Total Electron Content: Preliminary Results. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027767. | 0.8 | 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. | 0.8 | 30 |
| 38 | Effect of trends of middle atmosphere gases on the mesosphere and thermosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 3846-3855. | 0.8 | 29 |
| 39 | Impact of the lower thermospheric winter-to-summer residual circulation on thermospheric composition. Geophysical Research Letters, 2017, 44, 3971-3979. | 1.5 | 29 |
| 40 | A Convective Wake Parameterization Scheme for Use in General Circulation Models. Monthly Weather Review, 1998, 126, 456-469. | 0.5 | 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. | 0.8 | 28 |
| 42 | Carbon dioxide trends in the mesosphere and lower thermosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 4474-4488. | 0.8 | 27 |
| 43 | Solar flare effects in the Earth's magnetosphere. Nature Physics, 2021, 17, 807-812. | 6.5 | 27 |
| 44 | A Snapshot of the Sun Near Solar Minimum: The Whole Heliosphere Interval. Solar Physics, 2011, 274, 29-56. | 1.0 | 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. | 0.8 | 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. | 0.8 | 25 |
| 47 | Trends and Solar Irradiance Effects in the Mesosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 1343-1360. | 0.8 | 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. | 0.8 | 24 |
| 49 | Anomalously 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, . | 0.8 | 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. | 1.2 | 20 |
| 52 | Evidence of the Lower Thermospheric Winter-to-Summer Circulation From SABER CO ₂ Observations. Geophysical Research Letters, 2017, 44, 10,100. | 1.5 | 20 |
| 53 | Annual and Semiannual Oscillations of Thermospheric Composition in TIMED/GUVI Limb Measurements. Journal of Geophysical Research: Space Physics, 2019, 124, 3067-3082. | 0.8 | 20 |
| 54 | Secular changes in the thermosphere and ionosphere between two quiet Sun periods. Journal of Geophysical Research: Space Physics, 2014, 119, 2255-2262. | 0.8 | 19 |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Temporal Variability of Atomic Hydrogen From the Mesopause to the Upper Thermosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1006-1017. | 0.8 | 19 |
| 56 | Effects of the September 2005 Solar Flares and Solar Proton Events on the Middle Atmosphere in WACCM. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 5747-5763. | 0.8 | 19 |
| 57 | CMIT study of CR2060 and 2068 comparing L1 and MAS solar wind drivers. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2012, 83, 39-50. | 0.6 | 18 |
| 58 | The winter helium bulge revisited. <i>Geophysical Research Letters</i> , 2014, 41, 6603-6609. | 1.5 | 18 |
| 59 | Thermospheric basis functions for improved dynamic calibration of semi-empirical models. <i>Space Weather</i> , 2012, 10, . | 1.3 | 17 |
| 60 | Evidence of long-term change in zonal wind in the tropical lower mesosphere: Observations and model simulations. <i>Geophysical Research Letters</i> , 2013, 40, 397-401. | 1.5 | 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. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085400. | 1.5 | 14 |
| 62 | Electrodynamical Coupling of the Geospace System During Solar Flares. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, . | 0.8 | 14 |
| 63 | Thermospheric neutral density response to solar forcing. <i>Advances in Space Research</i> , 2008, 42, 926-932. | 1.2 | 13 |
| 64 | The Effects of IMF B_y on the Middle Thermosphere During a Geomagnetically Quiet Period at Solar Minimum. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, . | 0.8 | 13 |
| 65 | Solar Flare Effects on 150-km Echoes Observed Over Jicamarca: WACCM-X Simulations. <i>Geophysical Research Letters</i> , 2019, 46, 10951-10958. | 1.5 | 12 |
| 66 | Responses of the Thermosphere and Ionosphere System to Concurrent Solar Flares and Geomagnetic Storms. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027431. | 0.8 | 11 |
| 67 | A Comparison of the CIR- and CME-Induced Geomagnetic Activity Effects on Mesosphere and Lower Thermospheric Temperature. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA029029. | 0.8 | 11 |
| 68 | Effect of a solar flare on a traveling atmospheric disturbance. <i>Journal of Geophysical Research</i> , 2012, 117, . | 3.3 | 10 |
| 69 | Solar cycle variations of thermospheric composition at the solstices. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 3740-3749. | 0.8 | 10 |
| 70 | Observations and Simulations of Eddy Diffusion and Tidal Effects on the Semiannual Oscillation in the Ionosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,502. | 0.8 | 10 |
| 71 | Longitudinal variations of thermospheric composition at the solstices. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 6818-6829. | 0.8 | 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. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA029067. | 0.8 | 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. | 0.5 | 8 |
| 74 | Thermospheric hydrogen response to increases in greenhouse gases. Journal of Geophysical Research: Space Physics, 2016, 121, 3545-3554. | 0.8 | 8 |
| 75 | Long-Term Trends in the Low-Latitude Middle Atmosphere Temperature and Winds: Observations and WACCM-X Model Simulations. Journal of Geophysical Research: Space Physics, 2019, 124, 7320-7331. | 0.8 | 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, . | 1.2 | 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. | 0.6 | 7 |
| 78 | Ionospheric Electron Content During Solar Cycle 23. Journal of Geophysical Research: Space Physics, 2018, 123, 5223-5231. | 0.8 | 7 |
| 79 | Ionospheric Electrodynamic Response to Solar Flares in September 2017. Journal of Geophysical Research: Space Physics, 2021, 126, . | 0.8 | 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. | 0.8 | 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. | 0.8 | 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, . | 0.8 | 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. | 0.8 | 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. | 0.8 | 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. | 0.8 | 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 |