James Russell

List of Publications by Year in descending order

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99 papers	5,984 citations	87723 38 h-index	88477 70 g-index
118 all docs	118 docs citations	118 times ranked	2631 citing authors

#	Article	IF	Citations
1	Overview of the SABER experiment and preliminary calibration results. , 1999, 3756, 277.		450
2	Validation of the Aura Microwave Limb Sounder temperature and geopotential height measurements. Journal of Geophysical Research, 2008, 113, .	3.3	370
3	Assessment of the quality of the Version 1.07 temperatureâ€versusâ€pressure profiles of the middle atmosphere from TIMED/SABER. Journal of Geophysical Research, 2008, 113, .	3.3	369
4	Retrieval of mesospheric and lower thermospheric kinetic temperature from measurements of CO215 Âµm Earth Limb Emission under non-LTE conditions. Geophysical Research Letters, 2001, 28, 1391-1394.	1.5	241
5	Stratospheric effects of energetic particle precipitation in 2003â€“2004. Geophysical Research Letters, 2005, 32, .	1.5	227
6	Evidence for slowdown in stratospheric ozone loss: First stage of ozone recovery. Journal of Geophysical Research, 2003, 108, .	3.3	224
7	Implications for atmospheric dynamics derived from global observations of gravity wave momentum flux in stratosphere and mesosphere. Journal of Geophysical Research, 2011, 116, .	3.3	203
8	The evolution of the stratopause during the 2006 major warming: Satellite data and assimilated meteorological analyses. Journal of Geophysical Research, 2008, 113, .	3.3	199
9	Energetic particle precipitation effects on the Southern Hemisphere stratosphere in 1992â€“2005. Journal of Geophysical Research, 2007, 112, .	3.3	186
10	The Aeronomy of Ice in the Mesosphere (AIM) mission: Overview and early science results. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 289-299.	0.6	179
11	SABER observations of mesospheric temperatures and comparisons with falling sphere measurements taken during the 2002 summer MaCWAVE campaign. Geophysical Research Letters, 2004, 31, .	1.5	174
12	Severe chemical ozone loss in the Arctic during the winter of 1995â€“96. Nature, 1997, 389, 709-712.	13.7	155
13	The solar occultation for ice experiment. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 300-315.	0.6	123
14	Global ray tracing simulations of the SABER gravity wave climatology. Journal of Geophysical Research, 2009, 114, .	3.3	120
15	Recent Northern Hemisphere stratospheric HCl increase due to atmospheric circulation changes. Nature, 2014, 515, 104-107.	13.7	110
16	Interaction of gravity waves with the QBO: A satellite perspective. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2329-2355.	1.2	109
17	Atomic oxygen in the mesosphere and lower thermosphere derived from SABER: Algorithm theoretical basis and measurement uncertainty. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5724-5735.	1.2	101
18	Errors in Sounding of the Atmosphere using Broadband Emission Radiometry (SABER) kinetic temperature caused by nonâ€localâ€thermodynamicâ€equilibrium model parameters. Journal of Geophysical Research, 2008, 113, .	3.3	99

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19	Ground-based assessment of the bias and long-term stability of 14 limb and occultation ozone profile data records. Atmospheric Measurement Techniques, 2016, 9, 2497-2534.	1.2	92
20	Interpretation of SOFIE PMC measurements: Cloud identification and derivation of mass density, particle shape, and particle size. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 316-330.	0.6	91
21	GRACILE: a comprehensive climatology of atmospheric gravity wave parameters based on satellite limb soundings. Earth System Science Data, 2018, 10, 857-892.	3.7	91
22	Long-term trends of inorganic chlorine from ground-based infrared solar spectra: Past increases and evidence for stabilization. Journal of Geophysical Research, 2003, 108, .	3.3	86
23	Tropopause to mesopause gravity waves in August: Measurement and modeling. Journal of Atmospheric and Solar-Terrestrial Physics, 2006, 68, 1730-1751.	0.6	77
24	Mesopause structure from Thermosphere, Ionosphere, Mesosphere, Energetics, and Dynamics (TIMED)/Sounding of the Atmosphere Using Broadband Emission Radiometry (SABER) observations. Journal of Geophysical Research, 2007, 112, .	3.3	72
25	SABER temperature observations in the summer polar mesosphere and lower thermosphere: Importance of accounting for the CO2Î½2quanta Vâ€“V exchange. Geophysical Research Letters, 2006, 33, .	1.5	68
26	Phase functions of polar mesospheric cloud ice as observed by the CIPS instrument on the AIM satellite. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 373-380.	0.6	66
27	Satellite observations of ozone in the upper mesosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5803-5821.	1.2	63
28	The Seasonal and Long Term Changes in Mesospheric Water Vapor. Geophysical Research Letters, 1997, 24, 639-642.	1.5	61
29	Satellite observations of middle atmosphere gravity wave absolute momentum flux and of its vertical gradient during recent stratospheric warmings. Atmospheric Chemistry and Physics, 2016, 16, 9983-10019.	1.9	59
30	Polar mesospheric cloud structures observed from the cloud imaging and particle size experiment on the Aeronomy of Ice in the Mesosphere spacecraft: Atmospheric gravity waves as drivers for longitudinal variability in polar mesospheric cloud occurrence. Journal of Geophysical Research, 2010, 115, .	3.3	58
31	Kinetic temperature and carbon dioxide from broadband infrared limb emission measurements taken from the TIMED/SABER instrument. Advances in Space Research, 2009, 43, 15-27.	1.2	53
32	An evaluation of trends in middle atmospheric water vapor as measured by HALOE, WVMS, and POAM. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	51
33	Variations of global gravity waves derived from 14Âyears of SABER temperature observations. Journal of Geophysical Research D: Atmospheres, 2017, 122, 6231-6249.	1.2	50
34	Comparative study of shortâ€term diurnal tidal variability. Journal of Geophysical Research, 2007, 112, .	3.3	49
35	Updated SABER Night Atomic Oxygen and Implications for SABER Ozone and Atomic Hydrogen. Geophysical Research Letters, 2018, 45, 5735-5741.	1.5	44
36	SOFIE PMC observations during the northern summer of 2007. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 331-339.	0.6	41

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37	Atomic hydrogen in the mesopause region derived from SABER: Algorithm theoretical basis, measurement uncertainty, and results. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3516-3526.	1.2	41
38	Increasing carbon dioxide concentration in the upper atmosphere observed by SABER. Geophysical Research Letters, 2015, 42, 7194-7199.	1.5	41
39	Comparison of polar mesospheric cloud measurements from the Cloud Imaging and Particle Size experiment and the solar backscatter ultraviolet instrument in 2007. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 365-372.	0.6	39
40	Validation of SABER v2.0 Operational Temperature Data With Groundâ€Based Lidars in the Mesosphereâ€Lower Thermosphere Region (75â€“105Âkm). Journal of Geophysical Research D: Atmospheres, 2018, 123, 9916-9934.	1.2	39
41	A link between variability of the semidiurnal tide and planetary waves in the opposite hemisphere. Geophysical Research Letters, 2007, 34, .	1.5	35
42	Validation of upper mesospheric and lower thermospheric temperatures measured by the Solar Occultation for Ice Experiment. Journal of Geophysical Research, 2012, 117, .	3.3	34
43	Gravity wave activity during recent stratospheric sudden warming events from SOFIE temperature measurements. Journal of Geophysical Research D: Atmospheres, 2014, 119, 8091-8103.	1.2	34
44	Intercomparison of kinetic temperature from 15 Î¼m CO2limb emissions and OH*(3,1) rotational temperature in nearly coincident air masses: SABER, GRIPS. Geophysical Research Letters, 2006, 33, .	1.5	32
45	An observational and theoretical study of the longitudinal variation in neutral temperature induced by aurora heating in the lower thermosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 7410-7425.	0.8	32
46	Influence of El NiÃ±oâ€Southern Oscillation in the mesosphere. Geophysical Research Letters, 2013, 40, 3292-3296.	1.5	32
47	Evidence for an OH(Ï…) excitation mechanism of CO24.3 Î¼m nighttime emission from SABER/TIMED measurements. Journal of Geophysical Research, 2004, 109, .	3.3	31
48	Gravity wave variations in the polar stratosphere and mesosphere from SOFIE/AIM temperature observations. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7368-7381.	1.2	31
49	Validation of the global distribution of CO₂ volume mixing ratio in the mesosphere and lower thermosphere from SABER. Journal of Geophysical Research D: Atmospheres, 2015, 120, 12,067.	1.2	31
50	Zonalâ€mean global teleconnection from 15 to 110 km derived from SABER and WACCM. Journal of Geophysical Research, 2012, 117, .	3.3	27
51	Radiative and energetic constraints on the global annual mean atomic oxygen concentration in the mesopause region. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5796-5802.	1.2	26
52	A comparison of middle atmospheric water vapor as measured by WVMS, EOSâ€MLS, and HALOE. Journal of Geophysical Research, 2007, 112, .	3.3	25
53	Validation of ACE-FTS version 3.5 NO_{<i>y</i>} species profiles using correlative satellite measurements. Atmospheric Measurement Techniques, 2016, 9, 5781-5810.	1.2	25
54	Mid-latitude mesospheric clouds and their environment from SOFIE observations. Journal of Atmospheric and Solar-Terrestrial Physics, 2016, 149, 1-14.	0.6	24

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55	Impacts of SABER CO₂â€based eddy diffusion coefficients in the lower thermosphere on the ionosphere/thermosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 12,080.	0.8	24
56	Southern Hemisphere Summer Mesopause Responses to El NiÃ±oâ€“Southern Oscillation. Journal of Climate, 2016, 29, 6319-6328.	1.2	23
57	High-Latitude Gravity Wave Measurements in Noctilucent Clouds and Polar Mesospheric Clouds. , 2011, , 93-105.		23
58	Morphology of polar mesospheric clouds as seen from space. Journal of Atmospheric and Solar-Terrestrial Physics, 2013, 104, 234-243.	0.6	21
59	Concentric gravity waves in polar mesospheric clouds from the Cloud Imaging and Particle Size experiment. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5115-5127.	1.2	21
60	A combined solar and geomagnetic index for thermospheric climate. Geophysical Research Letters, 2015, 42, 3677-3682.	1.5	21
61	Largeâ€Amplitude Mountain Waves in the Mesosphere Observed on 21 June 2014 During DEEPWAVE: 1. Wave Development, Scales, Momentum Fluxes, and Environmental Sensitivity. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10364-10384.	1.2	21
62	Characterization of a Double Mesospheric Bore Over Europe. Journal of Geophysical Research: Space Physics, 2017, 122, 9738-9750.	0.8	20
63	On Longâ€Term SABER CO₂ Trends and Effects Due to Nonuniform Space and Time Sampling. Journal of Geophysical Research: Space Physics, 2018, 123, 7958-7967.	0.8	20
64	Resolving the mesospheric nighttime 4.3â€‰Âµm emission puzzle: comparison of the CO₂(<i>Î½</i>₃) and OH(<i>Î½</i>) emission models. Atmospheric Chemistry and Physics, 2017, 17, 9751-9760.	1.9	19
65	Variability of the Bruntâ€“VÃ¤isÃ¤lÃ¤ frequency at the OH* layer height. Atmospheric Measurement Techniques, 2017, 10, 4895-4903.	1.2	19
66	Evaluation of AIM CIPS measurements of Polar Mesospheric Clouds by comparison with SBUV data. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 2065-2072.	0.6	18
67	New AIM/CIPS global observations of gravity waves near 50â€“55Âkm. Geophysical Research Letters, 2017, 44, 7044-7052.	1.5	18
68	Oblique propagation of monsoon gravity waves during the northern hemisphere 2007 summer. Journal of Geophysical Research D: Atmospheres, 2017, 122, 5063-5075.	1.2	17
69	Validation of stratospheric temperatures measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. Journal of Geophysical Research, 2005, 110, .	3.3	16
70	Responses of Lower Thermospheric Temperature to the 2013 St. Patrick's Day Geomagnetic Storm. Geophysical Research Letters, 2018, 45, 4656-4664.	1.5	15
71	Observations of the 7-day Kelvin Wave in the Tropical Atmosphere During the CPEA Campaign. Journal of the Meteorological Society of Japan, 2006, 84A, 259-275.	0.7	15
72	Satellite observations of stratospheric hydrogen fluoride and comparisons with SLIMCAT calculations. Atmospheric Chemistry and Physics, 2016, 16, 10501-10519.	1.9	14

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73	Trend differences in lower stratospheric water vapour between Boulder and the zonal mean and their role in understanding fundamental observational discrepancies. Atmospheric Chemistry and Physics, 2018, 18, 8331-8351.	1.9	14
74	The SPARC water vapour assessment II: profile-to-profile comparisons of stratospheric and lower mesospheric water vapour data sets obtained from satellites. Atmospheric Measurement Techniques, 2019, 12, 2693-2732.	1.2	13
75	Intercomparison of ILAS and HALOE ozone at high latitudes. Geophysical Research Letters, 1999, 26, 835-838.	1.5	12
76	Observations of OH airglow from ground, aircraft, and satellite: investigation of wave-like structures before a minor stratospheric warming. Atmospheric Chemistry and Physics, 2019, 19, 6401-6418.	1.9	12
77	HALOE observations of a slowdown in the rate of increase of HF in the lower mesosphere. Geophysical Research Letters, 1997, 24, 3217-3220.	1.5	11
78	Ozone and temperature decadal responses to solar variability in the mesosphere and lower thermosphere, based on measurements from SABER on TIMED. Annales Geophysicae, 2016, 34, 29-40.	0.6	11
79	Trends in the polar summer mesosphere temperature and pressure altitude from satellite observations. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 220, 105650.	0.6	11
80	Global balanced wind derived from SABER temperature and pressure observations and its validations. Earth System Science Data, 2021, 13, 5643-5661.	3.7	11
81	MAHRSI observations of nitric oxide in the mesosphere and lower thermosphere. Geophysical Research Letters, 1997, 24, 3213-3216.	1.5	10
82	Radiative constraints on the minimum atomic oxygen concentration in the mesopause region. Geophysical Research Letters, 2013, 40, 3777-3780.	1.5	10
83	Absolute concentrations of highly vibrationally excited OH(Ï… = 9 + 8) in the mesopause region derived from the TIMED/SABER instrument. Geophysical Research Letters, 2013, 40, 646-650.	1.5	9
84	Validation of Solar Occultation for Ice Experiment (SOFIE) nitric oxide measurements. Atmospheric Measurement Techniques, 2019, 12, 3111-3121.	1.2	9
85	Radiometric Stability of the SABER Instrument. Earth and Space Science, 2020, 7, e2019EA001011.	1.1	9
86	Ground-based assessment of the bias and long-term stability of fourteen limb and occultation ozone profile data records. , 2016, 9, 2497-2534.		9
87	Variability of the Bruntâ€“VÃisÃlÃ frequency at the OH^{â^—}-airglow layer height at low and midlatitudes. Atmospheric Measurement Techniques, 2020, 13, 6067-6093.	1.2	9
88	Assessment of the quality of ACE-FTS stratospheric ozone data. Atmospheric Measurement Techniques, 2022, 15, 1233-1249.	1.2	9
89	Investigating Gravity Waves in Polar Mesospheric Clouds Using Tomographic Reconstructions of AIM Satellite Imagery. Journal of Geophysical Research: Space Physics, 2018, 123, 955-973.	0.8	8
90	Derivation of gravity wave intrinsic parameters and vertical wavelength using a single scanning OH(3-1) airglow spectrometer. Atmospheric Measurement Techniques, 2018, 11, 2937-2947.	1.2	8

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91	Understanding the Effects of Polar Mesospheric Clouds on the Environment of the Upper Mesosphere and Lower Thermosphere. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11,705.	1.2	8
92	Investigating an Unusually Large 28â€Day Oscillation in Mesospheric Temperature Over Antarctica Using Groundâ€Based and Satellite Measurements. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8576-8593.	1.2	7
93	Quasiâ€Biennial Oscillation of Shortâ€Period Planetary Waves and Polar Night Jet in Winter Antarctica Observed in SABER and MERRAâ€2 and Mechanism Study With a Quasiâ€Geostrophic Model. Geophysical Research Letters, 2019, 46, 13526-13534.	1.5	7
94	Ozone and temperature decadal responses to solar variability in the stratosphere and lower mesosphere, based on measurements from SABER on TIMED. Annales Geophysicae, 2016, 34, 801-813.	0.6	6
95	Universal power law of the gravity wave manifestation in the AIM CIPS polar mesospheric cloud images. Atmospheric Chemistry and Physics, 2018, 18, 883-899.	1.9	6
96	A case study of a thermally ducted undular mesospheric bore accompanied by ripples over the western Himalayan region. Advances in Space Research, 2021, 68, 1425-1440.	1.2	6
97	A case study of a ducted gravity wave event over northern Germany using simultaneous airglow imaging and wind-field observations. Annales Geophysicae, 2022, 40, 179-190.	0.6	4
98	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
99	Technical note: LIMS observations of lower stratospheric ozone in the southern polar springtime of 1978. Atmospheric Chemistry and Physics, 2020, 20, 3663-3668.	1.9	0