

M Joan Alexander

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

75
papers

7,261
citations

40
h-index

85
g-index

94
ext. papers

8,124
ext. citations

5.6
avg, IF

6.03
L-index

#	Paper	IF	Citations
75	Gravity wave dynamics and effects in the middle atmosphere. <i>Reviews of Geophysics</i> , 2003 , 41,	23.1	1562
74	The quasi-biennial oscillation. <i>Reviews of Geophysics</i> , 2001 , 39, 179-229	23.1	1337
73	Recent developments in gravity-wave effects in climate models and the global distribution of gravity-wave momentum flux from observations and models. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2010 , 136, 1103-1124	6.4	337
72	Absolute values of gravity wave momentum flux derived from satellite data. <i>Journal of Geophysical Research</i> , 2004 , 109,		257
71	Interpretations of observed climatological patterns in stratospheric gravity wave variance. <i>Journal of Geophysical Research</i> , 1998 , 103, 8627-8640		213
70	The Gravity Wave Response above Deep Convection in a Squall Line Simulation. <i>Journals of the Atmospheric Sciences</i> , 1995 , 52, 2212-2226	2.1	209
69	A Comparison between Gravity Wave Momentum Fluxes in Observations and Climate Models. <i>Journal of Climate</i> , 2013 , 26, 6383-6405	4.4	205
68	Global estimates of gravity wave momentum flux from High Resolution Dynamics Limb Sounder observations. <i>Journal of Geophysical Research</i> , 2008 , 113,		172
67	Gravity waves in the tropical lower stratosphere: An observational study of seasonal and interannual variability. <i>Journal of Geophysical Research</i> , 2000 , 105, 17971-17982		164
66	A Numerical Study of Three-Dimensional Gravity Waves Triggered by Deep Tropical Convection and Their Role in the Dynamics of the QBO. <i>Journals of the Atmospheric Sciences</i> , 2000 , 57, 3689-3702	2.1	160
65	A global view of stratospheric gravity wave hotspots located with Atmospheric Infrared Sounder observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 416-434	4.4	148
64	Using Satellite Observations to Constrain Parameterizations of Gravity Wave Effects for Global Models. <i>Journals of the Atmospheric Sciences</i> , 2007 , 64, 1652-1665	2.1	121
63	A Model Study of Zonal Forcing in the Equatorial Stratosphere by Convectively Induced Gravity Waves. <i>Journals of the Atmospheric Sciences</i> , 1997 , 54, 408-419	2.1	112
62	Gravity wave momentum flux in the lower stratosphere over convection. <i>Geophysical Research Letters</i> , 1995 , 22, 2029-2032	4.9	112
61	A Method of Specifying the Gravity Wave Spectrum above Convection Based on Latent Heating Properties and Background Wind. <i>Journals of the Atmospheric Sciences</i> , 2004 , 61, 324-337	2.1	99
60	On the Intermittency of Gravity Wave Momentum Flux in the Stratosphere. <i>Journals of the Atmospheric Sciences</i> , 2012 , 69, 3433-3448	2.1	94
59	Retrieval of stratospheric temperatures from Atmospheric Infrared Sounder radiance measurements for gravity wave studies. <i>Journal of Geophysical Research</i> , 2009 , 114,		93

58	Observation and analysis of a large amplitude mountain wave event over the Antarctic peninsula. <i>Journal of Geophysical Research</i> , 2007 , 112,		89
57	Global estimates of gravity wave parameters from GPS radio occultation temperature data. <i>Journal of Geophysical Research</i> , 2010 , 115,		86
56	Effects of Tropospheric Wind Shear on the Spectrum of Convectively Generated Gravity Waves. <i>Journals of the Atmospheric Sciences</i> , 2002 , 59, 1805-1824	2.1	85
55	Nonstationary gravity wave forcing of the stratospheric zonal mean wind. <i>Journal of Geophysical Research</i> , 1996 , 101, 23465-23474		72
54	Spatial and Temporal Variations of Gravity Wave Parameters. Part I: Intrinsic Frequency, Wavelength, and Vertical Propagation Direction. <i>Journals of the Atmospheric Sciences</i> , 2005 , 62, 125-142 ^{2.1}		70
53	Upper atmospheric gravity wave details revealed in nightglow satellite imagery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E6728-35	11.5	63
52	Evidence for short vertical wavelength Kelvin waves in the Department of Energy-Atmospheric Radiation Measurement Nauru99 radiosonde data. <i>Journal of Geophysical Research</i> , 2001 , 106, 20125-20129		62
51	Seasonal cycle of orographic gravity wave occurrence above small islands in the Southern Hemisphere: Implications for effects on the general circulation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 11,589-11,599	4.4	60
50	Occurrence frequency of convective gravity waves during the North American thunderstorm season. <i>Journal of Geophysical Research</i> , 2010 , 115,		60
49	Tropical stratospheric gravity wave activity and relationships to clouds. <i>Journal of Geophysical Research</i> , 2000 , 105, 22299-22309		60
48	THE NASA AIRBORNE TROPICAL TROPOPAUSE EXPERIMENT: High-Altitude Aircraft Measurements in the Tropical Western Pacific. <i>Bulletin of the American Meteorological Society</i> , 2017 , 98, 129-143	6.1	59
47	A Model Study of Gravity Waves over Hurricane Humberto (2001). <i>Journals of the Atmospheric Sciences</i> , 2008 , 65, 3231-3246	2.1	59
46	Tropical Precipitation Variability and Convectively Coupled Equatorial Waves on Submonthly Time Scales in Reanalyses and TRMM. <i>Journal of Climate</i> , 2013 , 26, 3013-3030	4.4	50
45	Simultaneous observations of convective gravity waves from a ground-based airglow imager and the AIRS satellite experiment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 3178-3191	4.4	48
44	Model Study of Waves Generated by Convection with Direct Validation via Satellite. <i>Journals of the Atmospheric Sciences</i> , 2010 , 67, 1617-1631	2.1	47
43	Antarctic NAT PSC belt of June 2003: Observational validation of the mountain wave seeding hypothesis. <i>Geophysical Research Letters</i> , 2009 , 36, n/a-n/a	4.9	47
42	Stratospheric gravity waves at Southern Hemisphere orographic hotspots: 2003-2014 AIRS/Aqua observations. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 9381-9397	6.8	45
41	Global and seasonal variations in three-dimensional gravity wave momentum flux from satellite limb-sounding temperatures. <i>Geophysical Research Letters</i> , 2015 , 42, 6860-6867	4.9	44

40	Three-dimensional properties of Andes mountain waves observed by satellite: A case study. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		43
39	Intercomparison of stratospheric gravity wave observations with AIRS and IASI. <i>Atmospheric Measurement Techniques</i> , 2014 , 7, 4517-4537	4	42
38	Exploring gravity wave characteristics in 3-D using a novel S-transform technique: AIRS/Aqua measurements over the Southern Andes and Drake Passage. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 8553-8575	6.8	41
37	Direct impacts of waves on tropical cold point tropopause temperature. <i>Geophysical Research Letters</i> , 2015 , 42, 1584-1592	4.9	40
36	Gravity waves in the tropical lower stratosphere: A model study of seasonal and interannual variability. <i>Journal of Geophysical Research</i> , 2000 , 105, 17983-17993		40
35	An analysis of the structure and forcing of the equatorial semiannual oscillation in zonal wind. <i>Journal of Geophysical Research</i> , 1998 , 103, 1759-1774		40
34	Tropical Waves and the Quasi-Biennial Oscillation in a 7-km Global Climate Simulation. <i>Journals of the Atmospheric Sciences</i> , 2016 , 73, 3771-3783	2.1	34
33	Equatorial waves in High Resolution Dynamics Limb Sounder (HIRDLS) data. <i>Journal of Geophysical Research</i> , 2010 , 115,		33
32	On the spectrum of vertically propagating gravity waves generated by a transient heat source. <i>Atmospheric Chemistry and Physics</i> , 2004 , 4, 923-932	6.8	33
31	A decadal satellite record of gravity wave activity in the lower stratosphere to study polar stratospheric cloud formation. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 2901-2920	6.8	29
30	Generation and Trapping of Gravity Waves from Convection with Comparison to Parameterization. <i>Journals of the Atmospheric Sciences</i> , 2006 , 63, 2963-2977	2.1	29
29	High-frequency gravity waves and homogeneous ice nucleation in tropical tropopause layer cirrus. <i>Geophysical Research Letters</i> , 2016 , 43, 6629-6635	4.9	27
28	Ubiquitous influence of waves on tropical high cirrus clouds. <i>Geophysical Research Letters</i> , 2016 , 43, 5895-5901	4.9	27
27	Realistic simulations of atmospheric gravity waves over the continental U.S. using precipitation radar data. <i>Journal of Advances in Modeling Earth Systems</i> , 2015 , 7, 823-835	7.1	26
26	Concentric gravity waves in polar mesospheric clouds from the Cloud Imaging and Particle Size experiment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 5115-5127	4.4	21
25	High Resolution Dynamics Limb Sounder observations of the gravity wave-driven elevated stratopause in 2006. <i>Journal of Geophysical Research</i> , 2012 , 117,		20
24	Characteristics of Gravity Waves from Convection and Implications for Their Parameterization in Global Circulation Models. <i>Journals of the Atmospheric Sciences</i> , 2016 , 73, 2729-2742	2.1	19
23	Satellite Observations of Stratospheric Gravity Waves Associated With the Intensification of Tropical Cyclones. <i>Geophysical Research Letters</i> , 2018 , 45, 1692-1700	4.9	17

22	A Census of Atmospheric Variability From Seconds to Decades. <i>Geophysical Research Letters</i> , 2017 , 44, 11,201	4.9	17
21	Small-Scale Wind Fluctuations in the Tropical Tropopause Layer from Aircraft Measurements: Occurrence, Nature, and Impact on Vertical Mixing. <i>Journals of the Atmospheric Sciences</i> , 2017 , 74, 3847-3869	2.1	16
20	Model Study of Intermediate-Scale Tropical Inertia-Gravity Waves and Comparison to TWP-ICE Campaign Observations. <i>Journals of the Atmospheric Sciences</i> , 2012 , 69, 591-610	2.1	16
19	Gravity waves in the winter stratosphere over the Southern Ocean: high-resolution satellite observations and 3-D spectral analysis. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 15377-15414	6.8	15
18	Intermediate-scale tropical inertia gravity waves observed during the TWP-ICE campaign. <i>Journal of Geophysical Research</i> , 2008 , 113,		14
17	A Case Study on the Far-Field Properties of Propagating Tropospheric Gravity Waves. <i>Monthly Weather Review</i> , 2016 , 144, 2947-2961	2.4	14
16	Climatology and ENSO-related interannual variability of gravity waves in the Southern Hemisphere subtropical stratosphere revealed by high-resolution AIRS observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 7622-7640	4.4	13
15	MJO-related intraseasonal variation of gravity waves in the Southern Hemisphere tropical stratosphere revealed by high-resolution AIRS observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 7641-7651	4.4	12
14	New AIM/CIPS global observations of gravity waves near 50°S. <i>Geophysical Research Letters</i> , 2017 , 44, 7044-7052	4.9	11
13	Sensitivity of Gravity Wave Fluxes to Interannual Variations in Tropical Convection and Zonal Wind. <i>Journals of the Atmospheric Sciences</i> , 2017 , 74, 2701-2716	2.1	10
12	Relationships Between Gravity Waves Observed at Earth's Surface and in the Stratosphere Over the Central and Eastern United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 11482-11492	4.4	8
11	MJO-Related Intraseasonal Variation in the Stratosphere: Gravity Waves and Zonal Winds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 775-788	4.4	6
10	Tropical Temperature Variability in the UTLs: New Insights from GPS Radio Occultation Observations. <i>Journal of Climate</i> , 2021 , 34, 2813-2838	4.4	6
9	Observational Validation of Parameterized Gravity Waves From Tropical Convection in the Whole Atmosphere Community Climate Model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033954	4.4	5
8	Tonga eruption triggered waves propagating globally from surface to edge of space		5
7	Balloon-Borne Observations of Short Vertical Wavelength Gravity Waves and Interaction With QBO Winds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032779	4.4	3
6	GHOST: A Satellite Mission Concept for Persistent Monitoring of Stratospheric Gravity Waves Induced by Severe Storms. <i>Bulletin of the American Meteorological Society</i> , 2018 , 99, 1813-1828	6.1	3
5	Estimating Subseasonal Variability and Trends in Global Atmosphere Using Reanalysis Data. <i>Geophysical Research Letters</i> , 2018 , 45, 12999-13007	4.9	3

4	Using TRMM Latent Heat as a Source to Estimate Convection Induced Gravity Wave Momentum Flux in the Lower Stratosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022 , 127, e2021JD035785	4.4	2
3	Realistic Simulation of Tropical Atmospheric Gravity Waves Using Radar-Observed Precipitation Rate and Echo Top Height. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS001949	7.1	1
2	Using vertical phase differences to better resolve 3D gravity wave structure. <i>Atmospheric Measurement Techniques</i> , 2021 , 14, 5873-5886	4	1
1	First Super-Pressure Balloon-Borne Fine-Vertical-Scale Profiles in the Upper TTL: Impacts of Atmospheric Waves on Cirrus Clouds and the QBO. <i>Geophysical Research Letters</i> , 2022 , 49,	4.9	0