Riwal Plougonven

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Internal gravity waves from atmospheric jets and fronts. Reviews of Geophysics, 2014, 52, 33-76.	23.0	294
2	Inertiaâ€"Gravity Waves Spontaneously Generated by Jets and Fronts. Part I: Different Baroclinic Life Cycles. Journals of the Atmospheric Sciences, 2007, 64, 2502-2520.	1.7	182
3	On the Intermittency of Gravity Wave Momentum Flux in the Stratosphere. Journals of the Atmospheric Sciences, 2012, 69, 3433-3448.	1.7	113
4	Gravity waves over Antarctica and the Southern Ocean: consistent momentum fluxes in mesoscale simulations and stratospheric balloon observations. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 101-118.	2.7	83
5	Comparison of Gravity Waves in the Southern Hemisphere Derived from Balloon Observations and the ECMWF Analyses. Journals of the Atmospheric Sciences, 2015, 72, 3449-3468.	1.7	75
6	Sub-hourly forecasting of wind speed and wind energy. Renewable Energy, 2020, 145, 2373-2379.	8.9	73
7	Observations and Numerical Simulations of Inertiaâ€"Gravity Waves and Shearing Instabilities in the Vicinity of a Jet Stream. Journals of the Atmospheric Sciences, 2004, 61, 2692-2706.	1.7	72
8	Lagrangian temperature and vertical velocity fluctuations due to gravity waves in the lower stratosphere. Geophysical Research Letters, 2016, 43, 3543-3553.	4.0	70
9	Inertiaâ€"Gravity Waves Generated within a Dipole Vortex. Journals of the Atmospheric Sciences, 2007, 64, 4417-4431.	1.7	68
10	Assessment of the accuracy of (re)analyses in the equatorial lower stratosphere. Journal of Geophysical Research D: Atmospheres, 2014, 119, 11,166.	3.3	54
11	Gravity waves generated by deep tropical convection: Estimates from balloon observations and mesoscale simulations. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9690-9707.	3.3	52
12	Effect of gravity wave temperature fluctuations on homogeneous ice nucleation in the tropical tropopause layer. Atmospheric Chemistry and Physics, 2016, 16, 35-46.	4.9	51
13	Atmospheric response to sea surface temperature mesoscale structures. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9611-9621.	3.3	45
14	A Baroclinic Instability that Couples Balanced Motions and Gravity Waves. Journals of the Atmospheric Sciences, 2005, 62, 1545-1559.	1.7	44
15	Frontal geostrophic adjustment, slow manifold and nonlinear wave phenomena in one-dimensional rotating shallow water. Part 1. Theory. Journal of Fluid Mechanics, 2003, 481, 269-290.	3.4	41
16	Uncertainties in using the hodograph method to retrieve gravity wave characteristics from individual soundings. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	41
17	Storm Track Response to Oceanic Eddies in Idealized Atmospheric Simulations. Journal of Climate, 2019, 32, 445-463.	3.2	41
18	How does knowledge of atmospheric gravity waves guide their parameterizations?. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 1529-1543.	2.7	40

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19	Gravity Waves Generated by Sheared Potential Vorticity Anomalies. Journals of the Atmospheric Sciences, 2010, 67, 157-170.	1.7	34
20	Nonlinear development of inertial instability in a barotropic shear. Physics of Fluids, 2009, 21, .	4.0	33
21	Mechanisms for Spontaneous Gravity Wave Generation within a Dipole Vortex. Journals of the Atmospheric Sciences, 2009, 66, 3464-3478.	1.7	33
22	On the Forcing of Inertiaâ€“Gravity Waves by Synoptic-Scale Flows. Journals of the Atmospheric Sciences, 2007, 64, 1737-1742.	1.7	31
23	On the Gravity Wave Forcing during the Southern Stratospheric Final Warming in LMDZ. Journals of the Atmospheric Sciences, 2016, 73, 3213-3226.	1.7	31
24	Lagrangian approach to geostrophic adjustment of frontal anomalies in a stratified fluid. Geophysical and Astrophysical Fluid Dynamics, 2005, 99, 101-135.	1.2	29
25	Gravity Waves Generated by Sheared Three-Dimensional Potential Vorticity Anomalies. Journals of the Atmospheric Sciences, 2012, 69, 2134-2151.	1.7	28
26	On the Relation between Gravity Waves and Wind Speed in the Lower Stratosphere over the Southern Ocean. Journals of the Atmospheric Sciences, 2017, 74, 1075-1093.	1.7	28
27	Structure, Energy, and Parameterization of Inertiaâ€“Gravity Waves in Dry and Moist Simulations of a Baroclinic Wave Life Cycle. Journals of the Atmospheric Sciences, 2014, 71, 2390-2414.	1.7	26
28	Around the World in 84 Days. Eos, 2018, 99, .	0.1	25
29	Ageostrophic instabilities of fronts in a channel in a stratified rotating fluid. Journal of Fluid Mechanics, 2009, 627, 485-507.	3.4	24
30	Small-Scale Wind Fluctuations in the Tropical Tropopause Layer from Aircraft Measurements: Occurrence, Nature, and Impact on Vertical Mixing. Journals of the Atmospheric Sciences, 2017, 74, 3847-3869.	1.7	23
31	Comments on â€œThe Gulf Stream Convergence Zone in the Time-Mean Windsâ€• Journals of the Atmospheric Sciences, 2018, 75, 2139-2149.	1.7	23
32	Impact of gravity waves on the motion and distribution of atmospheric ice particles. Atmospheric Chemistry and Physics, 2018, 18, 10799-10823.	4.9	23
33	Inertial versus baroclinic instability of the Bickley jet in continuously stratified rotating fluid. Journal of Fluid Mechanics, 2014, 743, 1-31.	3.4	22
34	Response of Surface Wind Divergence to Mesoscale SST Anomalies under Different Wind Conditions. Journals of the Atmospheric Sciences, 2019, 76, 2065-2082.	1.7	20
35	Observation of Gravity Waves at the Tropical Tropopause Using Superpressure Balloons. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035165.	3.3	20
36	Case studies of nonorographic gravity waves over the Southern Ocean emphasize the role of moisture. Journal of Geophysical Research D: Atmospheres, 2015, 120, 1278-1299.	3.3	19

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37	Observed and Modeled Mountain Waves from the Surface to the Mesosphere near the Drake Passage. Journals of the Atmospheric Sciences, 2022, 79, 909-932.	1.7	19
38	Internal gravity waves convectively forced in the atmospheric residual layer during the morning transition. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 1610-1624.	2.7	18
39	Modelling the variability of the wind energy resource on monthly and seasonal timescales. Renewable Energy, 2017, 113, 1434-1446.	8.9	18
40	Instabilities of two-layer shallow-water flows with vertical shear in the rotating annulus. Journal of Fluid Mechanics, 2009, 638, 27-47.	3.4	13
41	Singularity formation during relaxation of jets and fronts toward the state of geostrophic equilibrium. Communications in Nonlinear Science and Numerical Simulation, 2003, 8, 415-442.	3.3	12
42	Generation and backreaction of spontaneously emitted inertiaâ€gravity waves. Geophysical Research Letters, 2016, 43, 3519-3525.	4.0	11
43	Comments on â€œApplication of the Lighthillâ€"Ford Theory of Spontaneous Imbalance to Clear-Air Turbulence Forecastingâ€• Journals of the Atmospheric Sciences, 2009, 66, 2506-2510.	1.7	10
44	Using Space Lidar Observations to Decompose Longwave Cloud Radiative Effect Variations Over the Last Decade. Geophysical Research Letters, 2017, 44, 11,994.	4.0	10
45	Sensitivity study for mesoscale simulations of gravity waves above Antarctica during Vorcore. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 1371-1377.	2.7	9
46	A modelling case study of a large-scale cirrus in the tropical tropopause layer. Atmospheric Chemistry and Physics, 2016, 16, 3881-3902.	4.9	9
47	Quasigeostrophic Dynamics of a Finite-Thickness Tropopause. Journals of the Atmospheric Sciences, 2010, 67, 3149-3163.	1.7	8
48	Probabilistic wind forecasting up to three months ahead using ensemble predictions for geopotential height. International Journal of Forecasting, 2020, 36, 515-530.	6.5	8
49	From Numerical Weather Prediction Outputs to Accurate Local Surface Wind Speed: Statistical Modeling and Forecasts. Springer Proceedings in Mathematics and Statistics, 2018, , 23-44.	0.2	8
50	Lagrangian gravity wave spectra in the lower stratosphere of current (re)analyses. Atmospheric Chemistry and Physics, 2020, 20, 9331-9350.	4.9	8
51	On periodic inertiaâ€"gravity waves of finite amplitude propagating without change of form at sharp density-gradient interfaces in the rotating fluid. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 314, 140-149.	2.1	7
52	On the Prediction of Stratospheric Balloon Trajectories: Improving Winds with Mesoscale Simulations. Journal of Atmospheric and Oceanic Technology, 2016, 33, 1629-1647.	1.3	7
53	On the Quantification of Imbalance and Inertiaâ€"Gravity Waves Generated in Numerical Simulations of Moist Baroclinic Waves Using the WRF Model. Journals of the Atmospheric Sciences, 2017, 74, 4241-4263.	1.7	7
54	Gravity Waves Generated by Jets and Fronts and Their Relevance for Clear-Air Turbulence. , 2016, , 385-406.		7

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55	Using Machine-Learning Methods to Improve Surface Wind Speed from the Outputs of a Numerical Weather Prediction Model. Boundary-Layer Meteorology, 2021, 179, 133-161.	2.3	6
56	An adiabatic foehn mechanism. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 1369-1381.	2.7	5
57	Accuracy of Balloon Trajectory Forecasts in the Lower Stratosphere. Atmosphere, 2019, 10, 102.	2.3	4
58	How Skillful Are the European Subseasonal Predictions of Wind Speed and Surface Temperature?. Monthly Weather Review, 2022, 150, 1621-1637.	1.4	4
59	Numerical Simulations of Gravity Waves and Turbulence During the ATReC Campaign. , 2005, , .		2
60	Application of the Compressible, Nonhydrostatic, Balanced Omega Equation in Estimating Diabatic Forcing for Parameterization of Inertiaâ€"Gravity Waves: Case Study of Moist Baroclinic Waves Using WRF. Journals of the Atmospheric Sciences, 2020, 77, 113-129.	1.7	2
61	Measuring the Risk of Supply and Demand Imbalance at the Monthly to Seasonal Scale in France. Energies, 2020, 13, 4888.	3.1	1
62	The Spatiotemporal Variability of Nonorographic Gravity Wave Energy and Relation to Its Source Functions. Monthly Weather Review, 2020, 148, 4837-4857.	1.4	1
63	Bimodality in ensemble forecasts of 2â€‰m temperature: identification. Weather and Climate Dynamics, 2021, 2, 1209-1224.	3.5	1