Stephen D Eckermann

List of Publications by Year in descending order

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153 papers 7,155 citations

50276 46 h-index 74163 75 g-index

165 all docs 165
docs citations

165 times ranked 2928 citing authors

| # | Article | IF | Citations |
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| 1 | An overview of the past, present and future of gravityâ€wave drag parametrization for numerical climate and weather prediction models. Atmosphere - Ocean, 2003, 41, 65-98. | 1.6 | 316 |
| 2 | Global Measurements of Stratospheric Mountain Waves from Space. Science, 1999, 286, 1534-1537. | 12.6 | 254 |
| 3 | The Navy Global Environmental Model. Oceanography, 2014, 27, 116-125. | 1.0 | 237 |
| 4 | Space-based measurements of stratospheric mountain waves by CRISTA 1. Sensitivity, analysis method, and a case study. Journal of Geophysical Research, 2002, 107, CRI 6-1-CRI 6-23. | 3.3 | 227 |
| 5 | A Three-Dimensional Nonhydrostatic Ray-Tracing Model for Gravity Waves: Formulation and Preliminary Results for the Middle Atmosphere. Journals of the Atmospheric Sciences, 1995, 52, 1959-1984. | 1.7 | 198 |
| 6 | The predictability of the extratropical stratosphere on monthly timeâ€scales and its impact on the skill of tropospheric forecasts. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 987-1003. | 2.7 | 162 |
| 7 | The Deep Propagating Gravity Wave Experiment (DEEPWAVE): An Airborne and Ground-Based Exploration of Gravity Wave Propagation and Effects from Their Sources throughout the Lower and Middle Atmosphere. Bulletin of the American Meteorological Society, 2016, 97, 425-453. | 3.3 | 148 |
| 8 | Stratospheric horizontal wavenumber spectra of winds, potential temperature, and atmospheric tracers observed by high-altitude aircraft. Journal of Geophysical Research, 1996, 101, 9441-9470. | 3.3 | 142 |
| 9 | Global Gravity Wave Variances from Aura MLS: Characteristics and Interpretation. Journals of the Atmospheric Sciences, 2008, 65, 3695-3718. | 1.7 | 127 |
| 10 | On recent interannual variability of the Arctic winter mesosphere: Implications for tracer descent. Geophysical Research Letters, 2007, 34, . | 4.0 | 122 |
| 11 | Gravity wave and equatorial wave morphology of the stratosphere derived from long-term rocket soundings. Quarterly Journal of the Royal Meteorological Society, 1995, 121, 149-186. | 2.7 | 121 |
| 12 | Geographical distribution and interseasonal variability of tropical deep convection: UARS MLS observations and analyses. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 121 |
| 13 | Global ray tracing simulations of the SABER gravity wave climatology. Journal of Geophysical Research, 2009, 114, . | 3.3 | 120 |
| 14 | Remote sounding of atmospheric gravity waves with satellite limb and nadir techniques. Advances in Space Research, 2006, 37, 2269-2277. | 2.6 | 118 |
| 15 | Case studies of the mesospheric response to recent minor, major, and extended stratospheric warmings. Journal of Geophysical Research, 2010, 115, . | 3.3 | 114 |
| 16 | High-altitude data assimilation system experiments for the northern summer mesosphere season of 2007. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 531-551. | 1.6 | 106 |
| 17 | Transparency of the atmosphere to short horizontal wavelength gravity waves. Journal of Geophysical Research, 2008, 113 , . | 3.3 | 105 |
| 18 | MIPAS detects Antarctic stratospheric belt of NAT PSCs caused by mountain waves. Atmospheric Chemistry and Physics, 2006, 6, 1221-1230. | 4.9 | 102 |

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| 19 | Momentum flux estimates for South Georgia Island mountain waves in the stratosphere observed via satellite. Geophysical Research Letters, 2009, 36, . | 4.0 | 91 |
| 20 | Falling sphere observations of anisotropic gravity wave motions in the upper stratosphere over Australia. Pure and Applied Geophysics, 1989, 130, 509-532. | 1.9 | 85 |
| 21 | Gravity wave variances and propagation derived from AIRS radiances. Atmospheric Chemistry and Physics, 2012, 12, 1701-1720. | 4.9 | 84 |
| 22 | Upper Atmosphere Research Satellite (UARS) MLS observation of mountain waves over the Andes. Journal of Geophysical Research, 2002, 107, SOL 15-1. | 3.3 | 81 |
| 23 | Characteristics of gravity waves resolved by ECMWF. Atmospheric Chemistry and Physics, 2014, 14, 10483-10508. | 4.9 | 78 |
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| 30 | What Is the Source of the Stratospheric Gravity Wave Belt in Austral Winter?. Journals of the Atmospheric Sciences, 2014, 71, 1583-1592. | 1.7 | 69 |
| 31 | Hemispheric differences in the temperature of the summertime stratosphere and mesosphere. Journal of Geophysical Research, 2003, 108, . | 3.3 | 68 |
| 32 | A search for mountain waves in MLS stratospheric limb radiances from the winter Northern Hemisphere: Data analysis and global mountain wave modeling. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 66 |
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| 35 | Comparison of global distributions of zonal-mean gravity wave variance inferred from different satellite instruments. Geophysical Research Letters, 2000, 27, 3877-3880. | 4.0 | 62 |
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| 38 | GROGRAT: A new model of the global propagation and dissipation of atmospheric gravity waves. Advances in Space Research, 1997, 20, 1253-1256. | 2.6 | 60 |
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| 40 | Amplification of the quasiâ€ŧwo day wave through nonlinear interaction with the migrating diurnal tide. Geophysical Research Letters, 2010, 37, . | 4.0 | 60 |
| 41 | Antarctic NAT PSC belt of June 2003: Observational validation of the mountain wave seeding hypothesis. Geophysical Research Letters, 2009, 36, . | 4.0 | 56 |
| 42 | Differences in gravity wave drag between realistic oblique and assumed vertical propagation. Journal of Geophysical Research D: Atmospheres, 2014, 119, 10,081. | 3.3 | 51 |
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| 52 | High-Altitude (0–100 km) Global Atmospheric Reanalysis System: Description and Application to the 2014 Austral Winter of the Deep Propagating Gravity Wave Experiment (DEEPWAVE). Monthly Weather Review, 2018, 146, 2639-2666. | 1.4 | 47 |
| 53 | On the observed morphology of gravity-wave and equatorial-wave variance in the stratosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 1995, 57, 105-134. | 0.9 | 46 |
| 54 | RAY METHODS FOR INTERNAL WAVES IN THE ATMOSPHERE AND OCEAN. Annual Review of Fluid Mechanics, 2004, 36, 233-253. | 25.0 | 46 |

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| 64 | A threeâ€dimensional mountain wave imaged in satellite radiance throughout the stratosphere: Evidence of the effects of directional wind shear. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 1959-1975. | 2.7 | 38 |
| 65 | VHF radar observations of mesoscale motions in the troposphere: Evidence for gravity wave Doppler shifting. Radio Science, 1990, 25, 1019-1037. | 1.6 | 37 |
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| 67 | Gravity waves and mesospheric clouds in the summer middle atmosphere: A comparison of lidar measurements and ray modeling of gravity waves over Sondrestrom, Greenland. Journal of Geophysical Research, 2004, 109, . | 3.3 | 37 |
| 68 | Hybrid Ïf–p Coordinate Choices for a Global Model. Monthly Weather Review, 2009, 137, 224-245. | 1.4 | 37 |
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| 130 | Stratospheric Gravity Wave Products from Satellite Infrared Nadir Radiances in the Planning, Execution, and Validation of Aircraft Measurements during DEEPWAVE. Journal of Applied Meteorology and Climatology, 2019, 58, 2049-2075. | 1.5 | 8 |
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