James Hecht

List of Publications by Year in descending order

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88 papers	2,217 citations	186265 28 h-index	265206 42 g-index
88 all docs	88 docs citations	88 times ranked	1305 citing authors

#	Article	IF	Citations
1	Kelvinâ€Helmholtz Billow Interactions and Instabilities in the Mesosphere Over the Andes Lidar Observatory: 1. Observations. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033414.	3.3	15
2	Kelvinâ€Helmholtz Billow Interactions and Instabilities in the Mesosphere Over the Andes Lidar Observatory: 2. Modeling and Interpretation. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033412.	3.3	12
3	Editorial: Topical Collection on Auroral Physics. Space Science Reviews, 2021, 217, 1.	8.1	4
4	Observations of sunlit N₂⁺ aurora at high altitudes during the RENU2 flight. Annales Geophysicae, 2021, 39, 849-859.	1.6	1
5	Overview of the Rocket Experiment for Neutral Upwelling Sounding Rocket 2 (RENU2). Geophysical Research Letters, 2020, 47, e2018GL081885.	4.0	7
6	RENU2 UV PMT Observations of the Cusp. Geophysical Research Letters, 2020, 47, e2019GL082314.	4.0	2
7	A New Technique for Estimating the Lifetime of Bursts of Electron Precipitation From Sounding Rocket Measurements. Geophysical Research Letters, 2020, 47, e2019GL082894.	4.0	2
8	Auroral Image Classification With Deep Neural Networks. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027808.	2.4	19
9	Observational Validation of Cutoff Models as Boundaries of Solar Proton Event Impact Area. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027935.	2.4	3
10	Observations of Electron Precipitation During Pulsating Aurora and Its Chemical Impact. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027713.	2.4	23
11	Diffuse and Pulsating Aurora. Space Science Reviews, 2020, 216, 1.	8.1	69
12	Energetic Electron Precipitation Occurrence Rates Determined Using the Syowa East SuperDARN Radar. Journal of Geophysical Research: Space Physics, 2019, 124, 6253-6265.	2.4	19
13	Cosmic Noise Absorption During Solar Proton Events in WACCMâ€Ð and Riometer Observations. Journal of Geophysical Research: Space Physics, 2019, 124, 1361-1376.	2.4	8
14	Patch Size Evolution During Pulsating Aurora. Journal of Geophysical Research: Space Physics, 2019, 124, 4725-4738.	2.4	13
15	Diffuse Auroral Electron and Ion Precipitation Effects on RCMâ€Ɛ Comparisons With Satellite Data During the 17 March 2013 Storm. Journal of Geophysical Research: Space Physics, 2019, 124, 4194-4216.	2.4	22
16	A Comparative Study of Spectral Auroral Intensity Predictions From Multiple Electron Transport Models. Journal of Geophysical Research: Space Physics, 2018, 123, 993-1005.	2.4	13
17	Observations of the Breakdown of Mountain Waves Over the Andes Lidar Observatory at Cerro Pachon on 8/9 July 2012. Journal of Geophysical Research D: Atmospheres, 2018, 123, 276-299.	3.3	19
18	Observations of Spatial Variations in O/N₂ During an Auroral Substorm Using the Multichannel Downlooking Camera on the VISIONS Rocket. Journal of Geophysical Research: Space Physics, 2018, 123, 7089-7105.	2.4	0

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19	SuperDARN Radarâ€Derived HF Radio Attenuation During the September 2017 Solar Proton Events. Space Weather, 2018, 16, 1455-1469.	3.7	21
20	GHOST: A Satellite Mission Concept for Persistent Monitoring of Stratospheric Gravity Waves Induced by Severe Storms. Bulletin of the American Meteorological Society, 2018, 99, 1813-1828.	3.3	6
21	Highâ€resolution modeling of the cusp density anomaly: Response to particle and Joule heating under typical conditions. Journal of Geophysical Research: Space Physics, 2016, 121, 2645-2661.	2.4	11
22	Comparison of simulated and observed trapped and precipitating electron fluxes during a magnetic storm. Geophysical Research Letters, 2015, 42, 8302-8311.	4.0	24
23	An investigation comparing groundâ€based techniques that quantify auroral electron flux and conductance. Journal of Geophysical Research: Space Physics, 2015, 120, 9038-9056.	2.4	34
24	Simultaneous observations of the phaseâ€locked 2 day wave at Adelaide, Cerro Pachon, and Darwin. Journal of Geophysical Research D: Atmospheres, 2015, 120, 1808-1825.	3.3	7
25	A new technique for remote sensing of O2 density from 140 to 180 km. Geophysical Research Letters, 2015, 42, 233-240.	4.0	3
26	Modeling the implications of Kelvinâ€Helmholtz instability dynamics for airglow observations. Journal of Geophysical Research D: Atmospheres, 2014, 119, 8858-8871.	3.3	25
27	The life cycle of instability features measured from the Andes Lidar Observatory over Cerro Pachon on 24 March 2012. Journal of Geophysical Research D: Atmospheres, 2014, 119, 8872-8898.	3.3	32
28	Altitude profiles of lower thermospheric temperature from RAIDS/NIRS and TIMED/SABER remote sensing experiments. Journal of Geophysical Research: Space Physics, 2013, 118, 3740-3746.	2.4	19
29	Instability structures during periods of large Richardson number (Riâ€‰>â€‰): Evidence of parametric instability. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6929-6939.	3.3	10
30	An intense traveling airglow front in the upper mesosphereâ€“lower thermosphere with characteristics of a bore observed over Alice Springs, Australia, during a strong 2 day wave episode. Journal of Geophysical Research, 2012, 117, .	3.3	14
31	A multiyear (2002â€“2006) climatology of O/N₂ in the lower thermosphere from TIMED GUVI and groundâ€based photometer observations. Journal of Geophysical Research, 2012, 117, .	3.3	10
32	Observations of molecular oxygen Atmospheric band emission in the thermosphere using the near infrared spectrometer on the ISS/RAIDS experiment. Journal of Geophysical Research, 2012, 117, .	3.3	15
33	Observations of the phaseâ€locked 2 day wave over the Australian sector using mediumâ€frequency radar and airglow data. Journal of Geophysical Research, 2010, 115, .	3.3	32
34	The Remote Atmospheric and Ionospheric Detection System experiment on the ISS: mission overview. , 2009, , .		11
35	Backscatter Lidar Observations of Lower Tropospheric Dynamics during Southern California Wildfires. Journals of the Atmospheric Sciences, 2009, 66, 2116-2124.	1.7	0
36	The Remote Atmospheric and Ionospheric Detection System on the ISS: sensor performance and space weather applications from the extreme to the near ultraviolet. , 2009, , .		7

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37	The Remote Atmospheric and Ionospheric Detection System on the ISS: sensor performance and space weather applications from the visible to the near infrared. , 2009, , .		5
38	Satellite and groundâ€based observations of auroral energy deposition and the effects on thermospheric composition during large geomagnetic storms: 1. Great geomagnetic storm of 20 November 2003. Journal of Geophysical Research, 2008, 113, .	3.3	12
39	A seasonal study of mesospheric temperatures and emission intensities at Adelaide and Alice Springs. Journal of Geophysical Research, 2008, 113, .	3.3	18
40	Thermospheric density in the Earth's magnetic cusp as observed by the Streak mission. Geophysical Research Letters, 2008, 35, .	4.0	41
41	Characteristics of shortâ€period wavelike features near 87 km altitude from airglow and lidar observations over Maui. Journal of Geophysical Research, 2007, 112, .	3.3	29
42	Computational Analysis of High-Altitude Ionization Gauge Flight Measurements. Journal of Spacecraft and Rockets, 2006, 43, 186-193.	1.9	11
43	Maui Mesosphere and Lower Thermosphere (Maui MALT) observations of the evolution of Kelvin-Helmholtz billows formed near 86 km altitude. Journal of Geophysical Research, 2005, 110, .	3.3	57
44	Observations of gravity wave breakdown into ripples associated with dynamical instabilities. Journal of Geophysical Research, 2005, 110, .	3.3	40
45	Airglow emissions and oxygen mixing ratios from the photometer experiment on the Turbulent Oxygen Mixing Experiment (TOMEX). Journal of Geophysical Research, 2004, 109, .	3.3	15
46	Unstable layers in the mesopause region observed with Na lidar during the Turbulent Oxygen Mixing Experiment (TOMEX) campaign. Journal of Geophysical Research, 2004, 109, .	3.3	50
47	TOMEX: Mesospheric and lower thermospheric diffusivities and instability layers. Journal of Geophysical Research, 2004, 109, .	3.3	38
48	An overview of observations of unstable layers during the Turbulent Oxygen Mixing Experiment (TOMEX). Journal of Geophysical Research, 2004, 109, .	3.3	30
49	Instability layers and airglow imaging. Reviews of Geophysics, 2004, 42, .	23.0	107
50	Airglow imager observations of atmospheric gravity waves at Alice Springs and Adelaide, Australia during the Darwin Area Wave Experiment (DAWEX). Journal of Geophysical Research, 2004, 109, .	3.3	27
51	A reexamination of evanescent acoustic-gravity waves: Special properties and aeronomical significance. Journal of Geophysical Research, 2003, 108, .	3.3	51
52	An observation of a fast external atmospheric acoustic-gravity wave. Journal of Geophysical Research, 2002, 107, ACL 12-1.	3.3	12
53	Airglow observations of dynamical (wind shear-induced) instabilities over Adelaide, Australia, associated with atmospheric gravity waves. Journal of Geophysical Research, 2001, 106, 28189-28197.	3.3	38
54	Simultaneous observations of lower thermospheric composition change during moderate auroral activity from Kangerlussuaq and Narsarsuaq, Greenland. Journal of Geophysical Research, 2000, 105, 27109-27118.	3.3	12

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55	Observations of the breakdown of an atmospheric gravity wave near the cold summer mesopause at 54N. Geophysical Research Letters, 2000, 27, 879-882.	4.0	39
56	The excitation of the Na airglow from Coqui Dos rocket and ground-based observations. Geophysical Research Letters, 2000, 27, 453-456.	4.0	22
57	Thermospheric disturbance recorded by photometers onboard the ARIA II rocket. Journal of Geophysical Research, 2000, 105, 2461-2475.	3.3	9
58	A comparison between auroral particle characteristics and atmospheric composition inferred from analyzing optical emission measurements alone and in combination with incoherent scatter radar measurements. Journal of Geophysical Research, 1999, 104, 33-44.	3.3	16
59	Reply [to â€œComment on Paper: â€˜Trends of airglow imager observations near Adelaide, Australiaâ€˜ by J. H. Hecht, R. E. Walterscheid, J. Woithe, L. Campbell, R. A. Vincent, and I. M. Reidâ€]. Geophysical Research Letters, 1998, 25, 23-23.	4.0	1
60	Ultraviolet Observations of the Hot R Coronae Borealisâ€“Type Star V348 Sagittarii during a Deep Minimum. Astrophysical Journal, 1998, 501, 813-822.	4.5	7
61	The Ultraviolet Extinction Curve for Circumstellar Dust Formed in the Hydrogenâ€poor Environment of V348 Sagittarii. Astrophysical Journal, 1997, 476, 865-869.	4.5	14
62	Depletion of oxygen in aurora: Evidence for a local mechanism. Journal of Geophysical Research, 1997, 102, 22273-22277.	3.3	18
63	Trends of airglow imager observations near Adelaide, Australia. Geophysical Research Letters, 1997, 24, 587-590.	4.0	22
64	Remote sensing of atomic oxygen in auroral rocket experiments using topside zenith viewing O/N2brightness ratios. Journal of Geophysical Research, 1997, 102, 2475-2482.	3.3	5
65	Wave breaking signatures in sodium densities and OH nightglow: 2. Simulation of wave and instability structures. Journal of Geophysical Research, 1997, 102, 6669-6684.	3.3	58
66	Wave breaking signatures in OH airglow and sodium densities and temperatures: 1. Airglow imaging, Na lidar, and MF radar observations. Journal of Geophysical Research, 1997, 102, 6655-6668.	3.3	110
67	Fabry Perot observations of helium 10830 Ã... emission at Millstone Hill. Geophysical Research Letters, 1996, 23, 3239-3242.	4.0	13
68	Observations of variations in airglow emissions during ALOHA-93. Geophysical Research Letters, 1995, 22, 2817-2820.	4.0	28
69	Observations of spectra of intensity fluctuations of the OH Meinel nightglow during ALOHA-93. Geophysical Research Letters, 1995, 22, 2873-2876.	4.0	24
70	Observations of the neutral atmosphere between 100 and 200 km using ARIA rocket-borne and ground-based instruments. Journal of Geophysical Research, 1995, 100, 17285.	3.3	17
71	First measurements of the two-dimensional horizontal wave number spectrum from CCD images of the nightglow. Journal of Geophysical Research, 1994, 99, 11449.	3.3	69
72	Photofragmentation of massâ€selected (C6H6)+n clusters: Measurement of monomerâ€“cluster binding energy for n=7â€“15. Journal of Chemical Physics, 1992, 96, 1975-1981.	3.0	30

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73	Lower thermospheric composition changes derived from optical and radar data taken at Sondre Stromfjord during the Great Magnetic Storm of February 1986. Journal of Geophysical Research, 1991, 96, 5757-5776.	3.3	36
74	Observations of the OH Meinel (6,2) and O₂ atmospheric (0,1) Nightglow emissions from Maui during the ALOHAâ€90 Campaign. Geophysical Research Letters, 1991, 18, 1341-1344.	4.0	40
75	Formation characteristics of sporadic Na layers observed simultaneously by lidar and airglow instruments during ALOHAâ€90. Geophysical Research Letters, 1991, 18, 1369-1372.	4.0	32
76	Comparison of groundâ€based optical observations of N₂ second positive to N₂⁺ first negative emission ratios with electron precipitation energies inferred from the Sondre Stromfjord radar. Journal of Geophysical Research, 1991, 96, 11341-11351.	3.3	35
77	The nature of the dust around R Coronae Borealis stars - Isolated amorphous carbon or graphite fractals?. Astrophysical Journal, 1991, 367, 635.	4.5	18
78	Observations that link infrared cirrus and ultraviolet extinction. Astrophysical Journal, 1991, 375, 163.	4.5	6
79	Signatures of aging silicate dust. Astrophysics and Space Science, 1990, 163, 79-94.	1.4	57
80	Deducing composition and incident electron spectra from groundâ€based auroral optical measurements: Theory and model results. Journal of Geophysical Research, 1989, 94, 13527-13539.	3.3	119
81	Deducing composition and incident electron spectra from groundâ€based auroral optical measurements: A study of auroral red line processes. Journal of Geophysical Research, 1989, 94, 13541-13552.	3.3	55
82	Coordinated satellite and groundâ€based measurements of the energy characteristics of a Sunâ€aligned arc over SÃ¸ndre StrÃ¸mfjord. Journal of Geophysical Research, 1989, 94, 17201-17213.	3.3	17
83	A Physical Model for the 2175 Angstrom Interstellar Extinction Feature: Erratum. Astrophysical Journal, 1987, 314, 429.	4.5	4
84	Auroral and airglow Fabryâ€“Perot spectrometer. Review of Scientific Instruments, 1986, 57, 240-247.	1.3	7
85	A physical model for the 2175 A interstellar extinction feature. Astrophysical Journal, 1986, 305, 817.	4.5	52
86	Simulation of cosmic dust spectra. Astrophysical Journal, 1986, 309, 90.	4.5	15
87	Highâ€resolution auroral observations of the OI(7774) and OI(8446) multiplets. Geophysical Research Letters, 1985, 12, 605-608.	4.0	33
88	The dust around R Coronae Borealis type stars. Astrophysical Journal, 1984, 280, 228.	4.5	64