Kevin B Stevenson

List of Publications by Year
in descending order

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95 papers	7,000 citations	66343 42 h-index	62596 80 g-index
96 all docs	96 docs citations	96 times ranked	2836 citing authors

#	Article	IF	Citations
1	Clouds in the atmosphere of the super-Earth exoplanet GJâ€‰1214b. Nature, 2014, 505, 69-72.	27.8	688
2	A PRECISE WATER ABUNDANCE MEASUREMENT FOR THE HOT JUPITER WASP-43b. Astrophysical Journal Letters, 2014, 793, L27.	8.3	297
3	A high C/O ratio and weak thermal inversion in the atmosphere of exoplanet WASP-12b. Nature, 2011, 469, 64-67.	27.8	274
4	Thermal structure of an exoplanet atmosphere from phase-resolved emission spectroscopy. Science, 2014, 346, 838-841.	12.6	266
5	Possible thermochemical disequilibrium in the atmosphere of the exoplanet GJ 436b. Nature, 2010, 464, 1161-1164.	27.8	242
6	PandExo: A Community Tool for Transiting Exoplanet Science withJWST&HST. Publications of the Astronomical Society of the Pacific, 2017, 129, 064501.	3.1	230
7	H^{â”} Opacity and Water Dissociation in the Dayside Atmosphere of the Very Hot Gas Giant WASP-18b. Astrophysical Journal Letters, 2018, 855, L30.	8.3	217
8	A DETECTION OF WATER IN THE TRANSMISSION SPECTRUM OF THE HOT JUPITER WASP-12b AND IMPLICATIONS FOR ITS ATMOSPHERIC COMPOSITION. Astrophysical Journal, 2015, 814, 66.	4.5	212
9	SPITZERPHASE CURVE CONSTRAINTS FOR WASP-43b AT 3.6 AND 4.5Î¼m. Astronomical Journal, 2017, 153, 68.	4.7	157
10	Global Climate and Atmospheric Composition of the Ultra-hot Jupiter WASP-103b from HST and Spitzer Phase Curve Observations. Astronomical Journal, 2018, 156, 17.	4.7	156
11	TRANSMISSION SPECTROSCOPY OF THE HOT JUPITER WASP-12b FROM 0.7 TO 5 Î¼m. Astronomical Journal, 2014, 147, 161.	4.7	154
12	TRANSIT AND ECLIPSE ANALYSES OF THE EXOPLANET HD 149026b USING BLISS MAPPING. Astrophysical Journal, 2012, 754, 136.	4.5	153
13	NO THERMAL INVERSION AND A SOLAR WATER ABUNDANCE FOR THE HOT JUPITER HD 209458B FROM HST/WFC3 SPECTROSCOPY. Astronomical Journal, 2016, 152, 203.	4.7	144
14	Absence of a thick atmosphere on the terrestrial exoplanet LHSÂ3844b. Nature, 2019, 573, 87-90.	27.8	139
15	Aerosol composition of hot giant exoplanets dominated by silicates and hydrocarbon hazes. Nature Astronomy, 2020, 4, 951-956.	10.1	137
16	QUANTIFYING AND PREDICTING THE PRESENCE OF CLOUDS IN EXOPLANET ATMOSPHERES. Astrophysical Journal Letters, 2016, 817, L16.	8.3	132
17	Exoplanet Biosignatures: Observational Prospects. Astrobiology, 2018, 18, 739-778.	3.0	130
18	DECIPHERING THE ATMOSPHERIC COMPOSITION OF WASP-12b: A COMPREHENSIVE ANALYSIS OF ITS DAYSIDE EMISSION. Astrophysical Journal, 2014, 791, 36.	4.5	128

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19	HELIOS: AN OPEN-SOURCE, GPU-ACCELERATED RADIATIVE TRANSFER CODE FOR SELF-CONSISTENT EXOPLANETARY ATMOSPHERES. Astronomical Journal, 2017, 153, 56.	4.7	128
20	ON THE ORBIT OF EXOPLANET WASP-12b. Astrophysical Journal, 2011, 727, 125.	4.5	124
21	Characterizing Transiting Planet Atmospheres through 2025. Publications of the Astronomical Society of the Pacific, 2015, 127, 311-327.	3.1	121
22	NEW ANALYSIS INDICATES NO THERMAL INVERSION IN THE ATMOSPHERE OF HD 209458b. Astrophysical Journal, 2014, 796, 66.	4.5	120
23	THE ATMOSPHERIC CIRCULATION OF THE HOT JUPITER WASP-43b: COMPARING THREE-DIMENSIONAL MODELS TO SPECTROPHOTOMETRIC DATA. Astrophysical Journal, 2015, 801, 86.	4.5	116
24	THE IMPACT OF NON-UNIFORM THERMAL STRUCTURE ON THE INTERPRETATION OF EXOPLANET EMISSION SPECTRA. Astrophysical Journal, 2016, 829, 52.	4.5	113
25	REPEATABILITY AND ACCURACY OF EXOPLANET ECLIPSE DEPTHS MEASURED WITH POST-CRYOGENIC SPITZER. Astronomical Journal, 2016, 152, 44.	4.7	102
26	The Transiting Exoplanet Community Early Release Science Program for JWST. Publications of the Astronomical Society of the Pacific, 2018, 130, 114402.	3.1	100
27	Transiting Exoplanet Studies and Community Targets forJWST's Early Release Science Program. Publications of the Astronomical Society of the Pacific, 2016, 128, 094401.	3.1	98
28	Impact of Clouds and Hazes on the Simulated JWST Transmission Spectra of Habitable Zone Planets in the TRAPPIST-1 System. Astrophysical Journal, 2019, 887, 194.	4.5	92
29	SPITZEROBSERVATIONS OF THE THERMAL EMISSION FROM WASP-43b. Astrophysical Journal, 2014, 781, 116.	4.5	91
30	A SEARCH FOR WATER IN THE ATMOSPHERE OF HAT-P-26b USING LDSS-3C. Astrophysical Journal, 2016, 817, 141.	4.5	86
31	SPITZERSECONDARY ECLIPSES OF WASP-18b. Astrophysical Journal, 2011, 742, 35.	4.5	85
32	Strategies for Constraining the Atmospheres of Temperate Terrestrial Planets with JWST. Astrophysical Journal Letters, 2018, 856, L34.	8.3	82
33	WASP-8b: CHARACTERIZATION OF A COOL AND ECCENTRIC EXOPLANET WITHSPITZER. Astrophysical Journal, 2013, 768, 42.	4.5	76
34	SPITZERIRAC SECONDARY ECLIPSE PHOTOMETRY OF THE TRANSITING EXTRASOLAR PLANET HAT-P-1b. Astrophysical Journal, 2010, 708, 498-504.	4.5	73
35	Detection of Helium in the Atmosphere of the Exo-Neptune HAT-P-11b. Astrophysical Journal Letters, 2018, 868, L34.	8.3	73
36	Statistical Characterization of Hot Jupiter Atmospheres Using Spitzerâ€™s Secondary Eclipses. Astronomical Journal, 2020, 159, 137.	4.7	72

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37	Climate of an ultra hot Jupiter. Astronomy and Astrophysics, 2019, 625, A136.	5.1	71
38	An HST/WFC3 Thermal Emission Spectrum of the Hot Jupiter HAT-P-7b. Astronomical Journal, 2018, 156, 10.	4.7	70
39	Water, High-altitude Condensates, and Possible Methane Depletion in the Atmosphere of the Warm Super-Neptune WASP-107b. Astrophysical Journal Letters, 2018, 858, L6.	8.3	67
40	THERMAL EMISSION OF WASP-14b REVEALED WITH THREESPITZERECLIPSES. Astrophysical Journal, 2013, 779, 5.	4.5	61
41	Gemini/GMOS Transmission Spectral Survey: Complete Optical Transmission Spectrum of the Hot Jupiter WASP-4b. Astronomical Journal, 2017, 154, 95.	4.7	59
42	Evidence for H2 Dissociation and Recombination Heat Transport in the Atmosphere of KELT-9b. Astrophysical Journal Letters, 2020, 888, L15.	8.3	57
43	TWO NEARBY SUB-EARTH-SIZED EXOPLANET CANDIDATES IN THE GJ 436 SYSTEM. Astrophysical Journal, 2012, 755, 9.	4.5	56
44	HST PanCET Program: A Cloudy Atmosphere for the Promising JWST Target WASP-101b. Astrophysical Journal Letters, 2017, 835, L12.	8.3	56
45	Global Chemistry and Thermal Structure Models for the Hot Jupiter WASP-43b and Predictions for JWST. Astrophysical Journal, 2020, 890, 176.	4.5	53
46	Clouds in Three-dimensional Models of Hot Jupiters over a Wide Range of Temperatures. I. Thermal Structures and Broadband Phase-curve Predictions. Astrophysical Journal, 2021, 908, 101.	4.5	51
47	Mass loss from the exoplanet WASP-12b inferred from Spitzer phase curves. Monthly Notices of the Royal Astronomical Society, 2019, 489, 1995-2013.	4.4	43
48	A Comparative Study of WASP-67 b and HAT-P-38 b from WFC3 Data. Astronomical Journal, 2018, 155, 55.	4.7	41
49	The Origins Space Telescope. Nature Astronomy, 2018, 2, 596-599.	10.1	41
50	AHUBBLE SPACE TELESCOPESEARCH FOR A SUB-EARTH-SIZED EXOPLANET IN THE GJ 436 SYSTEM. Astrophysical Journal, 2014, 796, 32.	4.5	37
51	Into the UV: A Precise Transmission Spectrum of HAT-P-41b Using Hubbleâ€™s WFC3/UVIS G280 Grism. Astronomical Journal, 2020, 159, 204.	4.7	36
52	Exoplanet Atmosphere Forecast: Observers Should Expect Spectroscopic Transmission Features to be Muted to 33%. Research Notes of the AAS, 2019, 3, 7.	0.7	34
53	The HST PanCET Program: Hints of Na i and Evidence of a Cloudy Atmosphere for the Inflated Hot Jupiter WASP-52b. Astronomical Journal, 2018, 156, 298.	4.7	30
54	A comprehensive reanalysis of Spitzerâ€™s 4.5â€‰Î¼m phase curves, and the phase variations of the ultra-hot Jupiters MASCARA-1b and KELT-16b. Monthly Notices of the Royal Astronomical Society, 2021, 504, 3316-3337.	4.4	28

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55	Spitzer Phase-curve Observations and Circulation Models of the Inflated Ultrahot Jupiter WASP-76b. Astronomical Journal, 2021, 162, 158.	4.7	27
56	Introducing a New Spitzer Master BLISS Map to Remove the Instrument Systematic Phase-curve-parameter Degeneracy, as Demonstrated by a Reanalysis of the 4.5 Î¼m WASP-43b Phase Curve. Astronomical Journal, 2020, 160, 140.	4.7	27
57	Community Targets of JWSTâ€™s Early Release Science Program: Evaluation of WASP-63b. Astronomical Journal, 2018, 156, 103.	4.7	25
58	Into the UV: The Atmosphere of the Hot Jupiter HAT-P-41b Revealed. Astrophysical Journal Letters, 2020, 902, L19.	8.3	25
59	Starspot Occultations in Infrared Transit Spectroscopy: The Case of WASP-52b. Astronomical Journal, 2018, 156, 124.	4.7	24
60	The Detectability and Constraints of Biosignature Gases in the Near- and Mid-infrared from Transit Transmission Spectroscopy. Astronomical Journal, 2020, 159, 117.	4.7	23
61	The Hubble PanCET Program: Transit and Eclipse Spectroscopy of the Strongly Irradiated Giant Exoplanet WASP-76b. Astronomical Journal, 2021, 162, 108.	4.7	23
62	Transmission Spectroscopy of WASP-79b from 0.6 to 5.0 Î¼m. Astronomical Journal, 2020, 159, 5.	4.7	22
63	No Umbrella Needed: Confronting the Hypothesis of Iron Rain on WASP-76b with Post-processed General Circulation Models. Astrophysical Journal, 2022, 926, 85.	4.5	22
64	An Unusual Transmission Spectrum for the Sub-Saturn KELT-11b Suggestive of a Subsolar Water Abundance. Astronomical Journal, 2020, 160, 280.	4.7	21
65	UV absorption by silicate cloud precursors in ultra-hot Jupiter WASP-178b. Nature, 2022, 604, 49-52.	27.8	21
66	TheÎ´Scuti pulsations ofÎ²Pictoris as observed by ASTEP from Antarctica. Astronomy and Astrophysics, 2017, 608, L6.	5.1	17
67	Constraining Exoplanet Metallicities and Aerosols with the Contribution to ARIEL Spectroscopy of Exoplanets (CASE). Publications of the Astronomical Society of the Pacific, 2019, 131, 094401.	3.1	15
68	The Origins Space Telescope: mission concept overview. , 2018, , .		15
69	Least Asymmetry Centering Method and Comparisons. Publications of the Astronomical Society of the Pacific, 2014, 126, 1092-1101.	3.1	14
70	The Dark World: A Tale of WASP-43b in Reflected Light with HST WFC3/UVIS. Astronomical Journal, 2021, 161, 269.	4.7	13
71	Smaller than Expected Bright-spot Offsets in Spitzer Phase Curves of the Hot Jupiter Qatar-1b. Astronomical Journal, 2020, 159, 225.	4.7	13
72	Spectroscopic Determination of Radius Changes of Cepheid Variable Stars. Publications of the Astronomical Society of the Pacific, 2007, 119, 398-406.	3.1	12

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73	Ground-based optical transmission spectrum of the hot Jupiter HAT-P-1b. Astronomy and Astrophysics, 2019, 631, A169.	5.1	12
74	Variable Irradiation on 1D Cloudless Eccentric Exoplanet Atmospheres. Astrophysical Journal, 2021, 915, 41.	4.5	11
75	Neptune Odyssey: A Flagship Concept for the Exploration of the Neptuneâ€“Triton System. Planetary Science Journal, 2021, 2, 184.	3.6	11
76	Confirmation of Water Absorption in the Thermal Emission Spectrum of the Hot Jupiter WASP-77Ab with HST/WFC3. Astronomical Journal, 2022, 163, 261.	4.7	11
77	A New Method for Studying Exoplanet Atmospheres Using Planetary Infrared Excess. Astrophysical Journal Letters, 2020, 898, L35.	8.3	10
78	The Exo.MAST Table for JWST Exoplanet Atmosphere Observability. Research Notes of the AAS, 2019, 3, 193.	0.7	10
79	A New Analysis of Eight Spitzer Phase Curves and Hot Jupiter Population Trends: Qatar-1b, Qatar-2b, WASP-52b, WASP-34b, and WASP-140b. Astronomical Journal, 2022, 163, 256.	4.7	10
80	Eigenspectra: a framework for identifying spectra from 3D eclipse mapping. Monthly Notices of the Royal Astronomical Society, 2020, 499, 5151-5162.	4.4	9
81	Hierarchical Bayesian Atmospheric Retrieval Modeling for Population Studies of Exoplanet Atmospheres: A Case Study on the Habitable Zone. Astronomical Journal, 2022, 163, 140.	4.7	9
82	Transmission Spectroscopy of the Earthâ€“Sun System to Inform the Search for Extrasolar Life. Planetary Science Journal, 2021, 2, 140.	3.6	8
83	CT Density Changes with Rapid Onset Acute, Severe, Focal Cerebral Ischemia in Monkeys. Translational Stroke Research, 2012, 3, 369-374.	4.2	6
84	Retrieving Exoplanet Atmospheres Using Planetary Infrared Excess: Prospects for the Night Side of WASP-43 b and Other Hot Jupiters. Astrophysical Journal Letters, 2021, 921, L4.	8.3	5
85	A new method to measure the spectra of transiting exoplanet atmospheres using multi-object spectroscopy. Monthly Notices of the Royal Astronomical Society, 2022, 510, 3236-3265.	4.4	5
86	Quantifying the Impact of Spectral Coverage on the Retrieval of Molecular Abundances from Exoplanet Transmission Spectra. Publications of the Astronomical Society of the Pacific, 2017, 129, 104402.	3.1	4
87	Time series observations with the mid-infrared instrument (MIRI) on JWST. , 2018, , .		4
88	An Ultra-Stable Mid-Infrared Sensor for the Detection of Bio-Signatures by Means of Transit Spectroscopy. , 2019, , .		3
89	Keys of a Mission to Uranus or Neptune, the Closest Ice Giants. , 2021, 53, .		3
90	Origins Space Telescope: trades and decisions leading to the baseline mission concept. Journal of Astronomical Telescopes, Instruments, and Systems, 2021, 7, .	1.8	3

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91	The Hubble PanCET program: Transit and Eclipse Spectroscopy of the Hot-Jupiter WASP-74b. Astronomical Journal, 2021, 162, 271.	4.7	3
92	Overview of the Origins Space telescope: science drivers to observatory requirements. , 2018, , .		2
93	Looking Back is Looking Forward: The Need for Retrospective Solar System Observations in Advance of Exoplanet Retrievals. , 2021, 53, .		1
94	On the Utility of Transmission Color Analysis i: Differentiating Super-Earths and Sub-Neptunes. Astronomical Journal, 2021, 162, 168.	4.7	1
95	A new method to correct for host star variability in multi-epoch observations of exoplanet transmission spectra. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	1