Julianne I Moses

List of Publications by Year
in descending order

105 papers	5,302 citations	71102 41 h-index	91884 69 g-index
116 all docs	116 docs citations	116 times ranked	3018 citing authors

#	Article	IF	Citations
1	DISEQUILIBRIUM CARBON, OXYGEN, AND NITROGEN CHEMISTRY IN THE ATMOSPHERES OF HD 189733b AND HD 209458b. Astrophysical Journal, 2011, 737, 15.	4.5	374
2	Photochemistry of Saturn's Atmosphere I. Hydrocarbon Chemistry and Comparisons with ISO Observations. Icarus, 2000, 143, 244-298.	2.5	274
3	COMPOSITIONAL DIVERSITY IN THE ATMOSPHERES OF HOT NEPTUNES, WITH APPLICATION TO GJ 436b. Astrophysical Journal, 2013, 777, 34.	4.5	223
4	CHEMICAL CONSEQUENCES OF THE C/O RATIO ON HOT JUPITERS: EXAMPLES FROM WASP-12b, CoRoT-2b, XO-1b, AND HD 189733b. Astrophysical Journal, 2013, 763, 25.	4.5	220
5	Exoplanetary Atmospheresâ€”Chemistry, Formation Conditions, and Habitability. Space Science Reviews, 2016, 205, 285-348.	8.1	172
6	Photochemistry and diffusion in Jupiter's stratosphere: Constraints from ISO observations and comparisons with other giant planets. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	167
7	A sub-Neptune exoplanet with a low-metallicity methane-depleted atmosphere and Mie-scattering clouds. Nature Astronomy, 2019, 3, 813-821.	10.1	151
8	Photochemistry of Saturn's Atmosphere II. Effects of an Influx of External Oxygen. Icarus, 2000, 145, 166-202.	2.5	147
9	QUENCHING OF CARBON MONOXIDE AND METHANE IN THE ATMOSPHERES OF COOL BROWN DWARFS AND HOT JUPITERS. Astrophysical Journal, 2011, 738, 72.	4.5	141
10	The effects of external material on the chemistry and structure of Saturn's ionosphere. Journal of Geophysical Research, 2000, 105, 7013-7052.	3.3	106
11	Volcanically emitted sodium chloride as a source for Io's neutral clouds and plasma torus. Nature, 2003, 421, 45-47.	27.8	102
12	The Transiting Exoplanet Community Early Release Science Program for <i>JWST</i>. Publications of the Astronomical Society of the Pacific, 2018, 130, 114402.	3.1	100
13	EChO. Experimental Astronomy, 2012, 34, 311-353.	3.7	98
14	Photochemistry of a Volcanically Driven Atmosphere on Io: Sulfur and Oxygen Species from a Pele-Type Eruption. Icarus, 2002, 156, 76-106.	2.5	96
15	Haze production rates in super-Earth and mini-Neptune atmosphere experiments. Nature Astronomy, 2018, 2, 303-306.	10.1	93
16	The Origin of Water Vapor and Carbon Dioxide in Jupiter's Stratosphere. Icarus, 2002, 159, 112-131.	2.5	92
17	Hydrocarbon nucleation and aerosol formation in Neptune's atmosphere. Icarus, 1992, 99, 318-346.	2.5	91
18	PHOTOLYTIC HAZES IN THE ATMOSPHERE OF 51 ERI B. Astrophysical Journal, 2016, 824, 137.	4.5	91

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19	Chemical kinetics on extrasolar planets. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130073.	3.4	86
20	Dust ablation on the giant planets: Consequences for stratospheric photochemistry. Icarus, 2017, 297, 33-58.	2.5	82
21	The deep water abundance on Jupiter: New constraints from thermochemical kinetics and diffusion modeling. Icarus, 2010, 209, 602-615.	2.5	78
22	Cross Sections and Reaction Rates for Comparative Planetary Aeronomy. Space Science Reviews, 2008, 139, 63-105.	8.1	74
23	External Sources of Water for Mercury's Putative Ice Deposits. Icarus, 1999, 137, 197-221.	2.5	69
24	Meteoroid ablation in Neptune's atmosphere. Icarus, 1992, 99, 368-383.	2.5	60
25	ON THE COMPOSITION OF YOUNG, DIRECTLY IMAGED GIANT PLANETS. Astrophysical Journal, 2016, 829, 66.	4.5	59
26	Photochemical Haze Formation in the Atmospheres of Super-Earths and Mini-Neptunes. Astronomical Journal, 2018, 156, 38.	4.7	59
27	Alkali and Chlorine Photochemistry in a Volcanically Driven Atmosphere on Io. Icarus, 2002, 156, 107-135.	2.5	57
28	TWO NEARBY SUB-EARTH-SIZED EXOPLANET CANDIDATES IN THE GJ 436 SYSTEM. Astrophysical Journal, 2012, 755, 9.	4.5	56
29	Mid-infrared spectroscopy of Uranus from the Spitzer Infrared Spectrometer: 1. Determination of the mean temperature structure of the upper troposphere and stratosphere. Icarus, 2014, 243, 494-513.	2.5	56
30	The science case for an orbital mission to Uranus: Exploring the origins and evolution of ice giant planets. Planetary and Space Science, 2014, 104, 122-140.	1.7	56
31	Meridional variations of temperature, C2H2 and C2H6 abundances in Saturn's stratosphere at southern summer solstice. Icarus, 2005, 177, 18-31.	2.5	53
32	Mid-infrared spectroscopy of Uranus from the Spitzer infrared spectrometer: 2. Determination of the mean composition of the upper troposphere and stratosphere. Icarus, 2014, 243, 471-493.	2.5	53
33	Global Chemistry and Thermal Structure Models for the Hot Jupiter WASP-43b and Predictions for JWST. Astrophysical Journal, 2020, 890, 176.	4.5	53
34	<i>SPITZER</i>SECONDARY ECLIPSE OBSERVATIONS OF FIVE COOL GAS GIANT PLANETS AND EMPIRICAL TRENDS IN COOL PLANET EMISSION SPECTRA. Astrophysical Journal, 2015, 810, 118.	4.5	52
35	Latitudinal and seasonal models of stratospheric photochemistry on Saturn: Comparison with infrared data from IRTF/TEXES. Journal of Geophysical Research, 2005, 110, .	3.3	51
36	Hydrogen and deuterium loss from the terrestrial atmosphere: A quantitative assessment of nonthermal escape fluxes. Journal of Geophysical Research, 1989, 94, 14971-14989.	3.3	48

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37	Solar System Ionospheres. Space Science Reviews, 2008, 139, 235-265.	8.1	48
38	Laboratory Simulations of Haze Formation in the Atmospheres of Super-Earths and Mini-Neptunes: Particle Color and Size Distribution. Astrophysical Journal Letters, 2018, 856, L3.	8.3	48
39	Post-SL9 sulfur photochemistry on Jupiter. Geophysical Research Letters, 1995, 22, 1597-1600.	4.0	45
40	Phase transformations and the spectral reflectance of solid sulfur: Can metastable sulfur allotropes exist on Io?. Icarus, 1991, 89, 277-304.	2.5	44
41	An Analysis of Neptune's Stratospheric Haze Using High-Phase-Angle Voyager Images. Icarus, 1995, 113, 232-266.	2.5	41
42	A spatially resolved high spectral resolution study of Neptuneâ€™s stratosphere. Icarus, 2011, 214, 606-621.	2.5	41
43	General circulation and transport in Saturnâ€™s upper troposphere and stratosphere. Icarus, 2012, 218, 861-875.	2.5	41
44	Seasonal stratospheric photochemistry on Uranus and Neptune. Icarus, 2018, 307, 124-145.	2.5	40
45	Gas Phase Chemistry of Cool Exoplanet Atmospheres: Insight from Laboratory Simulations. ACS Earth and Space Chemistry, 2019, 3, 39-50.	2.7	38
46	Seasonal variations of temperature, acetylene and ethane in Saturnâ€™s atmosphere from 2005 to 2010, as observed by Cassini-CIRS. Icarus, 2013, 225, 257-271.	2.5	36
47	Meridional distribution of CH3C2H and C4H2 in Saturnâ€™s stratosphere from CIRS/Cassini limb and nadir observations. Icarus, 2010, 209, 682-695.	2.5	35
48	The first detection of propane on Saturn. Icarus, 2006, 181, 266-271.	2.5	34
49	Chemistry of Temperate Super-Earth and Mini-Neptune Atmospheric Hazes from Laboratory Experiments. Planetary Science Journal, 2020, 1, 17.	3.6	34
50	Haze Formation in Warm H₂-rich Exoplanet Atmospheres. Planetary Science Journal, 2020, 1, 51.	3.6	34
51	Sulfur-driven haze formation in warm CO2-rich exoplanet atmospheres. Nature Astronomy, 2020, 4, 986-993.	10.1	33
52	On the abundance of non-cometary HCN on Jupiter. Faraday Discussions, 2010, 147, 103.	3.2	31
53	The EChO science case. Experimental Astronomy, 2015, 40, 329-391.	3.7	31
54	How to Identify Exoplanet Surfaces Using Atmospheric Trace Species in Hydrogen-dominated Atmospheres. Astrophysical Journal, 2021, 914, 38.	4.5	30

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55	Giant Planet Observations with the <i>James Webb Space Telescope</i>. Publications of the Astronomical Society of the Pacific, 2016, 128, 018005.	3.1	29
56	The detection of benzene in Saturn's upper atmosphere. Geophysical Research Letters, 2016, 43, 7895-7901.	4.0	29
57	Hydrocarbon ions in the lower ionosphere of Saturn. Journal of Geophysical Research: Space Physics, 2014, 119, 384-395.	2.4	29
58	Nitrogen and oxygen photochemistry following SL9. Geophysical Research Letters, 1995, 22, 1601-1604.	4.0	28
59	Neutral Atmospheres. Space Science Reviews, 2008, 139, 191-234.	8.1	27
60	Haze evolution in temperate exoplanet atmospheres through surface energy measurements. Nature Astronomy, 2021, 5, 822-831.	10.1	27
61	New constraints on the CH₄vertical profile in Uranus and Neptune from<i>Herschel</i>observations. Astronomy and Astrophysics, 2015, 579, A121.	5.1	27
62	Chemical variation with altitude and longitude on exo-Neptunes: Predictions for Ariel phase-curve observations. Experimental Astronomy, 2022, 53, 279-322.	3.7	25
63	Upper Atmosphere and Ionosphere of Saturn. , 2009, , 181-201.		25
64	Transmission Spectroscopy for the Warm Sub-Neptune HD 3167c: Evidence for Molecular Absorption and a Possible High-metallicity Atmosphere. Astronomical Journal, 2021, 161, 18.	4.7	25
65	Into the UV: The Atmosphere of the Hot Jupiter HAT-P-41b Revealed. Astrophysical Journal Letters, 2020, 902, L19.	8.3	25
66	Atmospheric chemistry on Uranus and Neptune. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190477.	3.4	24
67	SL9 impact chemistry: Long-term photochemical evolution. , 1996, , 243-268.		23
68	Evolution of stratospheric chemistry in the Saturn storm beacon region. Icarus, 2015, 261, 149-168.	2.5	23
69	Saturnâ€™s upper atmosphere during the Voyager era: Reanalysis and modeling of the UVS occultations. Icarus, 2015, 258, 135-163.	2.5	23
70	Saturn: Composition and Chemistry. , 2009, , 83-112.		23
71	Jupiterâ€™s auroral-related stratospheric heating and chemistry I: Analysis of Voyager-IRIS and Cassini-CIRS spectra. Icarus, 2017, 292, 182-207.	2.5	22
72	Photochemical modeling of CH3abundances in the outer solar system. Journal of Geophysical Research, 2000, 105, 20207-20225.	3.3	21

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73	Jupiterâ€™s auroral-related stratospheric heating and chemistry II: Analysis of IRTF-TEXES spectra measured in December 2014. Icarus, 2018, 300, 305-326.	2.5	21
74	New Horizons Alice ultraviolet observations of a stellar occultation by Jupiterâ€™s atmosphere. Icarus, 2010, 208, 293-305.	2.5	20
75	Neptune and Uranus: ice or rock giants?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190489.	3.4	20
76	Investigating Trends in Atmospheric Compositions of Cool Gas Giant Planets Using Spitzer Secondary Eclipses. Astronomical Journal, 2019, 158, 217.	4.7	19
77	The three-micron spectral feature of the Saturnian haze: Implications for the haze composition and formation process. Planetary and Space Science, 2012, 65, 122-129.	1.7	18
78	Jupiter's auroral-related stratospheric heating and chemistry III: Abundances of C2H4, CH3C2H, C4H2 and C6H6 from Voyager-IRIS and Cassini-CIRS. Icarus, 2019, 328, 176-193.	2.5	18
79	Neptuneâ€™s carbon monoxide profile and phosphine upper limits from Herschel/SPIRE: Implications for interior structure and formation. Icarus, 2019, 319, 86-98.	2.5	18
80	A brightening of Jupiterâ€™s auroral 7.8-Î¼m CH4 emission during a solar-wind compression. Nature Astronomy, 2019, 3, 607-613.	10.1	17
81	Neptune's visual albedo variations over a solar cycle: A preâ€Voyager look at ionâ€induced nucleatlon and cloud formation in Neptune's troposphere. Geophysical Research Letters, 1989, 16, 1489-1492.	4.0	15
82	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
83	H₂SO₄ and Organosulfur Compounds in Laboratory Analogue Aerosols of Warm High-metallicity Exoplanet Atmospheres. Planetary Science Journal, 2021, 2, 2.	3.6	14
84	CH4 mixing ratios at microbar pressure levels of Jupiter as constrained by 3-micron ISO data. Icarus, 2014, 237, 42-51.	2.5	13
85	Independent evolution of stratospheric temperatures in Jupiter's northern and southern auroral regions from 2014 to 2016. Geophysical Research Letters, 2017, 44, 5345-5354.	4.0	12
86	Meteoric materialâ€"an important component of planetary atmospheres. Geophysical Monograph Series, 2002, , 235-244.	0.1	11
87	Modelling H ₃ ⁺ in planetary atmospheres: effects of vertical gradients on observed quantities. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190067.	3.4	10
88	Spatial Variations in the Altitude of the CH₄ Homopause at Jupiterâ€™s Mid-to-high Latitudes, as Constrained from IRTF-TEXES Spectra. Planetary Science Journal, 2020, 1, 85.	3.6	9
89	Subseasonal Variation in Neptuneâ€™s Mid-infrared Emission. Planetary Science Journal, 2022, 3, 78.	3.6	9
90	Observations of upper tropospheric acetylene on Saturn: No apparent correlation with 2000km-sized thunderstorms. Planetary and Space Science, 2012, 65, 21-37.	1.7	8

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91	Vacuum weathering of sulfur: Temperature effects and applications to Io. Geophysical Research Letters, 1988, 15, 697-700.	4.0	7
92	Dust ablation during the Shoemaker-Levy 9 impacts. Journal of Geophysical Research, 1997, 102, 21619-21643.	3.3	7
93	Saturnâ€™s Seasonally Changing Atmosphere. , 2018, , 251-294.		6
94	Longitudinal variations in the stratosphere of Uranus from the Spitzer infrared spectrometer. Icarus, 2021, 365, 114506.	2.5	6
95	The science of EChO. Proceedings of the International Astronomical Union, 2010, 6, 359-370.	0.0	5
96	SL9 impact chemistry: Long-term photochemical evolution. International Astronomical Union Colloquium, 1996, 156, 243-268.	0.1	4
97	Atmospheric implications of the lack of H 3 + detection at Neptune. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200100.	3.4	4
98	Spatial structure in Neptuneâ€™s 7.90-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e792" altimg="si54.svg"><mml:mi mathvariant="normal">Î¼</mml:mi></mml:math>m stratospheric CH<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e797" altimg="si55.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:msub></mml:math> emission, as measured by VLT-VISIR. Icarus, 2020, 345, 113748.	2.5	4
99	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
100	Cloudy with a chance of dustballs. Nature, 2014, 505, 31-32.	27.8	2
101	The Diversity of Planetary Atmospheric Chemistry. Space Science Reviews, 2021, 217, 1.	8.1	2
102	Cross Sections and Reaction Rates for Comparative Planetary Aeronomy. Space Sciences Series of ISSI, 2008, , 63-105.	0.0	2
103	Neutral Atmospheres. Space Sciences Series of ISSI, 2008, , 191-234.	0.0	1
104	Correction to â€œLatitudinal and seasonal models of stratospheric photochemistry on Saturn: Comparison with infrared data from IRTF/TEXESâ€• Journal of Geophysical Research, 2006, 111, .	3.3	0
105	Exoplanetary Atmospheresâ€"Chemistry, Formation Conditions, and Habitability. Space Sciences Series of ISSI, 2016, , 327-390.	0.0	0