Henrik Melin

List of Publications by Year
in descending order

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76	1,847	218677	315739
papers	citations	26 h-index	38 g-index

84	84	84	1109
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Auroral Processes at the Giant Planets: Energy Deposition, Emission Mechanisms, Morphology and Spectra. Space Science Reviews, 2015, 187, 99-179.	8.1	86
2	Multispectral simultaneous diagnosis of Saturn's aurorae throughout a planetary rotation. Journal of Geophysical Research: Space Physics, 2013, 118, 4817-4843.	2.4	74
3	The domination of Saturnâ€™s low-latitude ionosphere by ring â€˜rainâ€™. Nature, 2013, 496, 193-195.	27.8	70
4	The distribution of atomic hydrogen and oxygen in the magnetosphere of Saturn. Planetary and Space Science, 2009, 57, 1743-1753.	1.7	64
5	H3+ cooling in planetary atmospheres. Faraday Discussions, 2010, 147, 283.	3.2	61
6	Variability in the H+3 emission of Saturn: Consequences for ionisation rates and temperature. Icarus, 2007, 186, 234-241.	2.5	53
7	Earthâ€based detection of Uranus' aurorae. Geophysical Research Letters, 2012, 39, .	4.0	51
8	Weakening of Jupiter's main auroral emission during January 2014. Geophysical Research Letters, 2016, 43, 988-997.	4.0	50
9	Estimated energy balance in the jovian upper atmosphere during an auroral heating event. Icarus, 2006, 181, 256-265.	2.5	48
10	: the driver of giant planet atmospheres. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 3121-3137.	3.4	47
11	Cassini observations of ion and electron beams at Saturn and their relationship to infrared auroral arcs. Journal of Geophysical Research, 2012, 117, .	3.3	47
12	Uranus Pathfinder: exploring the origins and evolution of Ice Giant planets. Experimental Astronomy, 2012, 33, 753-791.	3.7	44
13	Jovian-like aurorae on Saturn. Nature, 2008, 453, 1083-1085.	27.8	43
14	Dynamic auroral storms on Saturn as observed by the Hubble Space Telescope. Geophysical Research Letters, 2014, 41, 3323-3330.	4.0	43
15	Saturn's auroral/polar H+3 infrared emission. Icarus, 2007, 189, 1-13.	2.5	40
16	Ice Giant Systems: The scientific potential of orbital missions to Uranus and Neptune. Planetary and Space Science, 2020, 191, 105030.	1.7	39
17	Non-LTE effects on H3+ emission in the jovian upper atmosphere. Icarus, 2005, 178, 97-103.	2.5	38
18	Simultaneous Cassini VIMS and UVIS observations of Saturn's southern aurora: Comparing emissions from H, H₂ and H₃⁺ at a high spatial resolution. Geophysical Research Letters, 2011, 38, .	4.0	37

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19	Rotational modulation and local time dependence of Saturn's infrared H₃⁺ auroral intensity. Journal of Geophysical Research, 2012, 117, .	3.3	33
20	Cooling by H₃⁺ Emission. Journal of Physical Chemistry A, 2013, 117, 9770-9777.	2.5	33
21	Heating of Jupiterâ€™s upper atmosphere above the Great Red Spot. Nature, 2016, 536, 190-192.	27.8	32
22	Saturn's auroral/polar H+3 infrared emission. Icarus, 2007, 191, 678-690.	2.5	29
23	Temperature changes and energy inputs in giant planet atmospheres: what we are learning from H ₃ ⁺. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5213-5224.	3.4	29
24	Conjugate observations of Saturnâ€™s northern and southern <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si22.gif" overflow="scroll"><mml:mrow><mml:msubsup><mml:mrow><mml:mi mathvariant="normal">H</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow><mml:mrow><mml:mo>+</mml:mo> aurorae. Icarus, 2014, 229, 214-220.	2.5	29
25	Location of Saturn's northern infrared aurora determined from Cassini VIMS images. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	28
26	Saturnâ€™s auroral morphology and field-aligned currents during a solar wind compression. Icarus, 2016, 263, 83-93.	2.5	26
27	Peak emission altitude of Saturn's H₃⁺ aurora. Geophysical Research Letters, 2012, 39, .	4.0	25
28	The aurorae of Uranus past equinox. Journal of Geophysical Research: Space Physics, 2017, 122, 3997-4008.	2.4	24
29	Cassini VIMS observations of latitudinal and hemispheric variations in Saturnâ€™s infrared auroral intensity. Icarus, 2011, 216, 367-375.	2.5	23
30	Post-equinoctial observations of the ionosphere of Uranus. Icarus, 2013, 223, 741-748.	2.5	23
31	Jupiter's polar ionospheric flows: High resolution mapping of spectral intensity and lineâ€ofâ€sight velocity of H₃⁺ ions. Journal of Geophysical Research: Space Physics, 2017, 122, 7599-7618.	2.4	23
32	Observations of the chemical and thermal response of â€˜ring rainâ€™ on Saturnâ€™s ionosphere. Icarus, 2019, 322, 251-260.	2.5	22
33	SEASONAL VARIABILITY IN THE IONOSPHERE OF URANUS. Astrophysical Journal, 2011, 729, 134.	4.5	22
34	LOCATION AND MAGNETOSPHERIC MAPPING OF SATURN'S MID-LATITUDE INFRARED AURORAL OVAL. Astrophysical Journal Letters, 2010, 722, L85-L89.	8.3	21
35	Jupiter's North Equatorial Belt expansion and thermal wave activity ahead of Juno's arrival. Geophysical Research Letters, 2017, 44, 7140-7148.	4.0	21
36	Mapping H₃⁺ Temperatures in Jupiter's Northern Auroral Ionosphere Using VLTâ€CRIRES. Journal of Geophysical Research: Space Physics, 2018, 123, 5990-6008.	2.4	21

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37	Assessing the long-term variability of acetylene and ethane in the stratosphere of Jupiter. Icarus, 2018, 305, 301-313.	2.5	20
38	Infrared Characterization of Jupiter's Equatorial Disturbance Cycle. Geophysical Research Letters, 2018, 45, 10,987.	4.0	19
39	On the anticorrelation between H$_3^+$ temperature and density in giant planet ionospheres. Monthly Notices of the Royal Astronomical Society, 2014, 438, 1611-1617.	4.4	17
40	Stability within Jupiterâ€™s polar auroral â€˜Swirl regionâ€™ over moderate timescales. Icarus, 2016, 268, 145-155.	2.5	17
41	Jupiterâ€™s Mesoscale Waves Observed at 5 Î¼m by Ground-based Observations and Juno JIRAM. Astronomical Journal, 2018, 156, 67.	4.7	17
42	Identification of Jupiterâ€™s magnetic equator through H3+ ionospheric emission. Nature Astronomy, 2018, 2, 773-777.	10.1	17
43	Jupiterâ€™s Atmospheric Variability from Long-term Ground-based Observations at 5 Î¼m. Astronomical Journal, 2019, 158, 130.	4.7	17
44	Redetection of the Ionospheric Signature of Saturn's â€œRing Rainâ€• Geophysical Research Letters, 2017, 44, 11,762.	4.0	16
45	Towards a solution to the energy crisis. Nature Astronomy, 2020, 4, 837-838.	10.1	16
46	Global upper-atmospheric heating on Jupiter by the polar aurorae. Nature, 2021, 596, 54-57.	27.8	16
47	The H ₃ ⁺ ionosphere of Uranus: decades-long cooling and local-time morphology. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180408.	3.4	15
48	New limits on H+3 abundance on Neptune using Keck NIRSPEC. Monthly Notices of the Royal Astronomical Society, 2011, 410, 641-644.	4.4	14
49	Variability of Jupiter's IR H₃⁺ aurorae during Juno approach. Geophysical Research Letters, 2017, 44, 4513-4522.	4.0	14
50	The quest for H$_3^+$ at Neptune: deep burn observations with NASA IRTF iSHELL. Monthly Notices of the Royal Astronomical Society, 2018, 474, 3714-3719.	4.4	14
51	Saturn's Nightside Dynamics During Cassini's F Ring and Proximal Orbits: Response to Solar Wind and Planetary Period Oscillation Modulations. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027907.	2.4	14
52	Saturn's auroral/polar H₃⁺ infrared emission: The effect of solar wind compression. Journal of Geophysical Research, 2012, 117, .	3.3	13
53	Ground-based observations of Saturnâ€™s auroral ionosphere over three days: Trends in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll"><mml:mrow><mml:msubsup><mml:mrow><mml:mtext>H</mml:mtext></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow> temperature, density and emission with Saturn local time and planetary period oscillation. Icarus, 2016, 263, 44-55.	2.5	13
54	Saturn kilometric radiation intensities during the Saturn auroral campaign of 2013. Icarus, 2016, 263, 2-9.	2.5	13

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55	Jupiter's Equatorial Plumes and Hot Spots: Spectral Mapping from Gemini/TEXES and Juno/MWR. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006399.	3.6	13
56	Cassini VIMS observations of H 3 + emission on the nightside of Jupiter. Journal of Geophysical Research: Space Physics, 2015, 120, 6948-6973.	2.4	12
57	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
58	Local-time averaged maps of H ₃ ⁺ emission, temperature and ion winds. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180405.	3.4	11
59	Jupiter in the Ultraviolet: Acetylene and Ethane Abundances in the Stratosphere of Jupiter from Cassini Observations between 0.15 and 0.19 Î¼m. Astronomical Journal, 2020, 159, 291.	4.7	11
60	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
61	Detection of H₃⁺auroral emission in Jupiterâ€™s 5-micron window. Astronomy and Astrophysics, 2016, 589, A67.	5.1	9
62	Jupiterâ€™s hydrogen bulge: A Cassini perspective. Icarus, 2016, 278, 238-247.	2.5	9
63	An isolated, bright cusp aurora at Saturn. Journal of Geophysical Research: Space Physics, 2017, 122, 6121-6138.	2.4	9
64	Saturn's Weatherâ€Driven Aurorae Modulate Oscillations in the Magnetic Field and Radio Emissions. Geophysical Research Letters, 2022, 49, .	4.0	9
65	The Great Cold Spot in Jupiter's upper atmosphere. Geophysical Research Letters, 2017, 44, 3000-3008.	4.0	7
66	Exploring Key Characteristics in Saturn's Infrared Auroral Emissions Using VLTâ€CRIRES: Intensities, Ion Lineâ€ofâ€Sight Velocities, and Rotational Temperatures. Geophysical Research Letters, 2019, 46, 7137-7146.	4.0	7
67	Measurements of the rotation rate of the jovian mid-to-low latitude ionosphere. Icarus, 2016, 280, 249-254.	2.5	6
68	The upper atmospheres of Uranus and Neptune. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190478.	3.4	6
69	Clues on Ionospheric Electrodynamics From Ir Aurora at Jupiter and Saturn. Geophysical Monograph Series, 0, , 215-224.	0.1	5
70	Characterization of Mesoscale Waves in the Jupiter NEB by Jupiter InfraRed Auroral Mapper on board Juno. Astronomical Journal, 2018, 156, 246.	4.7	5
71	On the clouds and ammonia in Jupiterâ€™s upper troposphere from Juno JIRAM reflectivity observations. Monthly Notices of the Royal Astronomical Society, 2021, 503, 4892-4907.	4.4	5
72	Meridional Variations of C₂H₂ in Jupiter's Stratosphere From Juno UVS Observations. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006928.	3.6	5

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73	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
74	Characterizing Temperature and Aerosol Variability During Jupiter's 2006â€“2007 Equatorial Zone Disturbance. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006413.	3.6	4
75	Ice giant system exploration within ESAâ€™s Voyage 2050. Experimental Astronomy, 2022, 54, 1015-1025.	3.7	4
76	The 2013 Saturn auroral campaign. Icarus, 2016, 263, 1.	2.5	1