

G S Orton

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1375367/publications.pdf>

Version: 2024-02-01

134
papers

5,612
citations

50276

46
h-index

91884

69
g-index

181
all docs

181
docs citations

181
times ranked

2220
citing authors

#	ARTICLE	IF	CITATIONS
1	Exploring The Saturn System In The Thermal Infrared: The Composite Infrared Spectrometer. Space Science Reviews, 2004, 115, 169-297.	8.1	275
2	Jupiter's interior and deep atmosphere: The initial pole-to-pole passes with the Juno spacecraft. Science, 2017, 356, 821-825.	12.6	229
3	The Juno Mission. Space Science Reviews, 2017, 213, 5-37.	8.1	222
4	Infrared polar brightening on Jupiter. Icarus, 1985, 64, 233-248.	2.5	137
5	Optical properties of NH ₃ ice from the far infrared to the near ultraviolet. Applied Optics, 1984, 23, 541.	2.1	129
6	The distribution of ammonia on Jupiter from a preliminary inversion of Juno microwave radiometer data. Geophysical Research Letters, 2017, 44, 5317-5325.	4.0	108
7	Galileo Imaging of Jupiter's Atmosphere: The Great Red Spot, Equatorial Region, and White Ovals. Icarus, 1998, 135, 265-275.	2.5	106
8	Jupiter's atmospheric temperatures: From Voyager IRIS to Cassini CIRS. Icarus, 2006, 180, 98-112.	2.5	104
9	An intense stratospheric jet on Jupiter. Nature, 2004, 427, 132-135.	27.8	103
10	Temperature and Composition of Saturn's Polar Hot Spots and Hexagon. Science, 2008, 319, 79-81.	12.6	103
11	The quasiquadrennial oscillation of Jupiter's equatorial stratosphere. Nature, 1991, 354, 380-382.	27.8	100
12	The water abundance in Jupiter's equatorial zone. Nature Astronomy, 2020, 4, 609-616.	10.1	96
13	Characteristics of the Galileo probe entry site from Earth-based remote sensing observations. Journal of Geophysical Research, 1998, 103, 22791-22814.	3.3	90
14	Clusters of cyclones encircling Jupiter's poles. Nature, 2018, 555, 216-219.	27.8	90
15	Thermal Maps of Jupiter: Spatial Organization and Time Dependence of Stratospheric Temperatures, 1980 to 1990. Science, 1991, 252, 537-542.	12.6	88
16	The clouds of Jupiter: Results of the Galileo Jupiter Mission Probe Nephelometer Experiment. Journal of Geophysical Research, 1998, 103, 22891-22909.	3.3	88
17	FIRST RESULTS FROM THE HUBBLE OPAL PROGRAM: JUPITER IN 2015. Astrophysical Journal, 2015, 812, 55.	4.5	88
18	Saturn's tropospheric composition and clouds from Cassini/VIMS 4.6–5.1 μ m nightside spectroscopy. Icarus, 2011, 214, 510-533.	2.5	84

#	ARTICLE	IF	CITATIONS
19	Evolution and persistence of 5- μ m hot spots at the Galileo probe entry latitude. <i>Journal of Geophysical Research</i> , 1998, 103, 23051-23069.	3.3	83
20	Galileo probe measurements of thermal and solar radiation fluxes in the Jovian atmosphere. <i>Journal of Geophysical Research</i> , 1998, 103, 22929-22977.	3.3	83
21	Depth of a strong jovian jet from a planetary-scale disturbance driven by storms. <i>Nature</i> , 2008, 451, 437-440.	27.8	82
22	Semi-annual oscillations in Saturn's low-latitude stratospheric temperatures. <i>Nature</i> , 2008, 453, 196-199.	27.8	77
23	Hydrogen Dimers in Giant-planet Infrared Spectra. <i>Astrophysical Journal, Supplement Series</i> , 2018, 235, 24.	7.7	77
24	Cloud structure and atmospheric composition of Jupiter retrieved from Galileo near-infrared mapping spectrometer real-time spectra. <i>Journal of Geophysical Research</i> , 1998, 103, 23001-23021.	3.3	76
25	The D/H ratio in the atmospheres of Uranus and Neptune from <i>Herschel</i> -PACS observations. <i>Astronomy and Astrophysics</i> , 2013, 551, A126.	5.1	76
26	The spectra of Uranus and Neptune at 8- μ m and 17- μ m. <i>Icarus</i> , 1987, 70, 1-12.	2.5	75
27	Neptune's atmospheric composition from AKARI infrared spectroscopy. <i>Astronomy and Astrophysics</i> , 2010, 514, A17.	5.1	73
28	Changes in Jupiter's Zonal Wind Profile preceding and during the Juno mission. <i>Icarus</i> , 2017, 296, 163-178.	2.5	70
29	Saturn's Temperature Field from High-Resolution Middle-Infrared Imaging. <i>Science</i> , 2005, 307, 696-698.	12.6	68
30	Response of Jupiter's auroras to conditions in the interplanetary medium as measured by the Hubble Space Telescope and Juno. <i>Geophysical Research Letters</i> , 2017, 44, 7643-7652.	4.0	68
31	Neptune's global circulation deduced from multi-wavelength observations. <i>Icarus</i> , 2014, 237, 211-238.	2.5	64
32	MWR: Microwave Radiometer for the Juno Mission to Jupiter. <i>Space Science Reviews</i> , 2017, 213, 139-185.	8.1	64
33	Seasonal change on Saturn from Cassini/CIRS observations, 2004-2009. <i>Icarus</i> , 2010, 208, 337-352.	2.5	63
34	Earth-Based Observations of the Galileo Probe Entry Site. <i>Science</i> , 1996, 272, 839-840.	12.6	59
35	Evidence for methane escape and strong seasonal and dynamical perturbations of Neptune's atmospheric temperatures. <i>Astronomy and Astrophysics</i> , 2007, 473, L5-L8.	5.1	59
36	Spatial Organization and Time Dependence of Jupiter's Tropospheric Temperatures, 1980-1993. <i>Science</i> , 1994, 265, 625-631.	12.6	58

#	ARTICLE	IF	CITATIONS
37	Analysis of Jupiter north equatorial belt hot spots in the 4-5 μ m range from Galileo/near-infrared mapping spectrometer observations: Measurements of cloud opacity, water, and ammonia. <i>Journal of Geophysical Research</i> , 1998, 103, 23023-23041.	3.3	56
38	Mid-infrared spectroscopy of Uranus from the Spitzer Infrared Spectrometer: 1. Determination of the mean temperature structure of the upper troposphere and stratosphere. <i>Icarus</i> , 2014, 243, 494-513.	2.5	56
39	Thermal spectroscopy of Neptune: The stratospheric temperature, hydrocarbon abundances, and isotopic ratios. <i>Icarus</i> , 1992, 100, 541-555.	2.5	55
40	Mid-infrared spectroscopy of Uranus from the Spitzer infrared spectrometer: 2. Determination of the mean composition of the upper troposphere and stratosphere. <i>Icarus</i> , 2014, 243, 471-493.	2.5	53
41	Jupiter's Aurora Observed With HST During Juno Orbits 3 to 7. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 3299-3319.	2.4	53
42	Polar Lightning and Decadal-Scale Cloud Variability on Jupiter. <i>Science</i> , 2007, 318, 226-229.	12.6	52
43	Prevalent lightning sferics at 600 megahertz near Jupiter's poles. <i>Nature</i> , 2018, 558, 87-90.	27.8	52
44	Less absorbed solar energy and more internal heat for Jupiter. <i>Nature Communications</i> , 2018, 9, 3709.	12.8	50
45	The independent pulsations of Jupiter's northern and southern X-ray auroras. <i>Nature Astronomy</i> , 2017, 1, 758-764.	10.1	49
46	Neptune at summer solstice: Zonal mean temperatures from ground-based observations, 2003-2007. <i>Icarus</i> , 2014, 231, 146-167.	2.5	48
47	Instrumental methods for professional and amateur collaborations in planetary astronomy. <i>Experimental Astronomy</i> , 2014, 38, 91-191.	3.7	47
48	Infrared polar brightenings on Jupiter. <i>Icarus</i> , 1988, 74, 331-339.	2.5	45
49	Junocam: Juno's Outreach Camera. <i>Space Science Reviews</i> , 2017, 213, 475-506.	8.1	42
50	Revised ab initio models for H ₂ -H ₂ collision-induced absorption at low temperatures. <i>Icarus</i> , 2007, 189, 544-549.	2.5	41
51	A spatially resolved high spectral resolution study of Neptune's stratosphere. <i>Icarus</i> , 2011, 214, 606-621.	2.5	41
52	Seasonal stratospheric photochemistry on Uranus and Neptune. <i>Icarus</i> , 2018, 307, 124-145.	2.5	40
53	Disruption of Saturn's quasi-periodic equatorial oscillation by the great northern storm. <i>Nature Astronomy</i> , 2017, 1, 765-770.	10.1	37
54	A hexagon in Saturn's northern stratosphere surrounding the emerging summertime polar vortex. <i>Nature Communications</i> , 2018, 9, 3564.	12.8	36

#	ARTICLE	IF	CITATIONS
55	A planetary-scale disturbance in the most intense Jovian atmospheric jet from JunoCam and ground-based observations. <i>Geophysical Research Letters</i> , 2017, 44, 4679-4686.	4.0	35
56	CHANGING CHARACTERISTICS OF JUPITER'S LITTLE RED SPOT. <i>Astronomical Journal</i> , 2008, 135, 2446-2452.	4.7	33
57	Implications of the ammonia distribution on Jupiter from 1 to 100 bars as measured by the Juno microwave radiometer. <i>Geophysical Research Letters</i> , 2017, 44, 7676-7685.	4.0	31
58	New Observations and Modeling of Jupiter's Quasi-Quadrennial Oscillation. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2719-2744.	3.6	30
59	The first close-up images of Jupiter's polar regions: Results from the Juno mission JunoCam instrument. <i>Geophysical Research Letters</i> , 2017, 44, 4599-4606.	4.0	29
60	The Gas Composition and Deep Cloud Structure of Jupiter's Great Red Spot. <i>Astronomical Journal</i> , 2018, 156, 101.	4.7	29
61	Historical and Contemporary Trends in the Size, Drift, and Color of Jupiter's Great Red Spot. <i>Astronomical Journal</i> , 2018, 155, 151.	4.7	28
62	Wind variations in Jupiter's equatorial atmosphere: A QJO counterpart?. <i>Icarus</i> , 2007, 186, 192-203.	2.5	27
63	New constraints on the vertical profile in Uranus and Neptune from <i>Herschel</i> observations. <i>Astronomy and Astrophysics</i> , 2015, 579, A121.	5.1	27
64	First ALMA Millimeter-wavelength Maps of Jupiter, with a Multiwavelength Study of Convection. <i>Astronomical Journal</i> , 2019, 158, 139.	4.7	27
65	Latitudinal variation in the abundance of methane (CH ₄) above the clouds in Neptune's atmosphere from VLT/MUSE Narrow Field Mode Observations. <i>Icarus</i> , 2019, 331, 69-82.	2.5	26
66	Juno-UVS approach observations of Jupiter's auroras. <i>Geophysical Research Letters</i> , 2017, 44, 7668-7675.	4.0	25
67	High-resolution UV/Optical/IR Imaging of Jupiter in 2016–2019. <i>Astrophysical Journal, Supplement Series</i> , 2020, 247, 58.	7.7	25
68	Distribution of Ethane and Methane Emission on Neptune. <i>Astronomical Journal</i> , 2007, 134, 637-641.	4.7	24
69	First Estimate of Wind Fields in the Jupiter Polar Regions From JIRAM Juno Images. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1511-1524.	3.6	24
70	Storms and the Depletion of Ammonia in Jupiter: II. Explaining the Juno Observations. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006404.	3.6	24
71	Two-Year Observations of the Jupiter Polar Regions by JIRAM on Board Juno. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006098.	3.6	24
72	Microwave observations reveal the deep extent and structure of Jupiter's atmospheric vortices. <i>Science</i> , 2021, 374, 968-972.	12.6	23

#	ARTICLE	IF	CITATIONS
73	Thermal imaging of Uranus: Upper-tropospheric temperatures one season after Voyager. <i>Icarus</i> , 2015, 260, 94-102.	2.5	22
74	A New Dark Vortex on Neptune. <i>Astronomical Journal</i> , 2018, 155, 117.	4.7	22
75	Ice Giant Circulation Patterns: Implications for Atmospheric Probes. <i>Space Science Reviews</i> , 2020, 216, 21.	8.1	22
76	Jupiter's North Equatorial Belt expansion and thermal wave activity ahead of Juno's arrival. <i>Geophysical Research Letters</i> , 2017, 44, 7140-7148.	4.0	21
77	Colour and tropospheric cloud structure of Jupiter from MUSE/VLT: Retrieving a universal chromophore. <i>Icarus</i> , 2020, 338, 113589.	2.5	21
78	Uranus's cloud particle properties and latitudinal methane variation from IRTF SpeX observations. <i>Icarus</i> , 2013, 223, 684-698.	2.5	20
79	DRAMATIC CHANGE IN JUPITER'S GREAT RED SPOT FROM SPACECRAFT OBSERVATIONS. <i>Astrophysical Journal Letters</i> , 2014, 797, L31.	8.3	20
80	Preliminary results on the composition of Jupiter's troposphere in hot spot regions from the JIRAM/Juno instrument. <i>Geophysical Research Letters</i> , 2017, 44, 4615-4624.	4.0	20
81	The Rich Dynamics of Jupiter's Great Red Spot from JunoCam: Juno Images. <i>Astronomical Journal</i> , 2018, 156, 162.	4.7	19
82	Infrared Characterization of Jupiter's Equatorial Disturbance Cycle. <i>Geophysical Research Letters</i> , 2018, 45, 10,987.	4.0	19
83	Rotational Light Curves of Jupiter from Ultraviolet to Mid-infrared and Implications for Brown Dwarfs and Exoplanets. <i>Astronomical Journal</i> , 2019, 157, 89.	4.7	19
84	Evidence for Multiple Ferrel-Like Cells on Jupiter. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095651.	4.0	18
85	Hazy Blue Worlds: A Holistic Aerosol Model for Uranus and Neptune, Including Dark Spots. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	18
86	Jupiter's Mesoscale Waves Observed at 5 μ m by Ground-based Observations and Juno JIRAM. <i>Astronomical Journal</i> , 2018, 156, 67.	4.7	17
87	A brightening of Jupiter's auroral 7.8 μ m CH ₄ emission during a solar-wind compression. <i>Nature Astronomy</i> , 2019, 3, 607-613.	10.1	17
88	Jupiter's Atmospheric Variability from Long-term Ground-based Observations at 5 μ m. <i>Astronomical Journal</i> , 2019, 158, 130.	4.7	17
89	Fluctuations in Jupiter's equatorial stratospheric oscillation. <i>Nature Astronomy</i> , 2021, 5, 71-77.	10.1	17
90	Jupiter's Temperate Belt/Zone Contrasts Revealed at Depth by Juno Microwave Observations. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006858.	3.6	17

#	ARTICLE	IF	CITATIONS
91	Equatorial winds on Saturn and the stratospheric oscillation. <i>Nature Geoscience</i> , 2011, 4, 750-752.	12.9	16
92	Constraints on Uranus's haze structure, formation and transport. <i>Icarus</i> , 2019, 333, 1-11.	2.5	16
93	The solar reflected component in Jupiter's 5- μ m spectra from NIMS/Galileo observations. <i>Journal of Geophysical Research</i> , 1998, 103, 23043-23049.	3.3	15
94	Characterization of the white ovals on Jupiter's southern hemisphere using the first data by the Juno/JIRAM instrument. <i>Geophysical Research Letters</i> , 2017, 44, 4660-4668.	4.0	15
95	<i>Herschel</i> map of Saturn's stratospheric water, delivered by the plumes of Enceladus. <i>Astronomy and Astrophysics</i> , 2019, 630, A87.	5.1	15
96	Uranus in Northern Midspring: Persistent Atmospheric Temperatures and Circulations Inferred from Thermal Imaging. <i>Astronomical Journal</i> , 2020, 159, 45.	4.7	15
97	Multiple-wavelength sensing of Jupiter during the Juno mission's first perijove passage. <i>Geophysical Research Letters</i> , 2017, 44, 4607-4614.	4.0	14
98	A New, Long-lived, Jupiter Mesoscale Wave Observed at Visible Wavelengths. <i>Astronomical Journal</i> , 2018, 156, 79.	4.7	14
99	Vertically-resolved observations of Jupiter's quasi-quadrennial oscillation from 2012 to 2019. <i>Icarus</i> , 2020, 350, 113905.	2.5	14
100	On the Spatial Distribution of Minor Species in Jupiter's Troposphere as Inferred From Juno JIRAM Data. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006206.	3.6	14
101	Recovery and characterization of Neptune's near-polar stratospheric hot spot. <i>Planetary and Space Science</i> , 2012, 61, 161-167.	1.7	13
102	Jupiter's Equatorial Plumes and Hot Spots: Spectral Mapping from Gemini/TEXES and Juno/MWR. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006399.	3.6	13
103	Constraints on the Latitudinal Profile of Jupiter's Deep Jets. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092912.	4.0	13
104	Independent evolution of stratospheric temperatures in Jupiter's northern and southern auroral regions from 2014 to 2016. <i>Geophysical Research Letters</i> , 2017, 44, 5345-5354.	4.0	12
105	Ammonia in Jupiter's Troposphere From High-Resolution 5- μ m Spectroscopy. <i>Geophysical Research Letters</i> , 2017, 44, 10,838.	4.0	12
106	Angular Dependence and Spatial Distribution of Jupiter's Centimeter-Wave Thermal Emission From Juno's Microwave Radiometer. <i>Earth and Space Science</i> , 2020, 7, e2020EA001254.	2.6	12
107	Jupiter's Great Red Spot: Strong Interactions With Incoming Anticyclones in 2019. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006686.	3.6	12
108	Strong Temporal Variation Over One Saturnian Year: From Voyager to Cassini. <i>Scientific Reports</i> , 2013, 3, 2410.	3.3	11

#	ARTICLE	IF	CITATIONS
109	Jupiter's Overturning Circulation: Breaking Waves Take the Place of Solid Boundaries. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095756.	4.0	11
110	Jupiter's Temperature Structure: A Reassessment of the Voyager Radio Occultation Measurements. <i>Planetary Science Journal</i> , 2022, 3, 159.	3.6	11
111	Uranus's Northern Polar Cap in 2014. <i>Geophysical Research Letters</i> , 2018, 45, 5329-5335.	4.0	10
112	Spatial Variations in the Altitude of the CH ₄ Homopause at Jupiter's Mid-to-high Latitudes, as Constrained from IRTF-TEXES Spectra. <i>Planetary Science Journal</i> , 2020, 1, 85.	3.6	9
113	Subseasonal Variation in Neptune's Mid-infrared Emission. <i>Planetary Science Journal</i> , 2022, 3, 78.	3.6	9
114	Mapping of Jupiter's tropospheric NH ₃ abundance using ground-based IRTF/TEXES observations at 5 μ m. <i>Icarus</i> , 2018, 314, 106-120.	2.5	8
115	Turbulence Power Spectra in Regions Surrounding Jupiter's South Polar Cyclones From Juno/JIRAM. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006096.	3.6	8
116	Images of Jupiter from the pioneer 10 and pioneer 11 infrared radiometers: A comparison with visible and 5-11/4m images. <i>Icarus</i> , 1981, 47, 145-158.	2.5	7
117	A Survey of Small-Scale Waves and Wave-Like Phenomena in Jupiter's Atmosphere Detected by JunoCam. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006369.	3.6	7
118	Vertical Structure and Color of Jovian Latitudinal Cloud Bands during the Juno Era. <i>Planetary Science Journal</i> , 2021, 2, 16.	3.6	7
119	Longitudinal variations in the stratosphere of Uranus from the Spitzer infrared spectrometer. <i>Icarus</i> , 2021, 365, 114506.	2.5	6
120	The organization of Jupiter's upper tropospheric temperature structure and its evolution, 1996-1997. <i>Icarus</i> , 2016, 280, 268-277.	2.5	5
121	Characterization of Mesoscale Waves in the Jupiter NEB by Jupiter InfraRed Auroral Mapper on board Juno. <i>Astronomical Journal</i> , 2018, 156, 246.	4.7	5
122	Constraints on Neptune's haze structure and formation from VLT observations in the H-band. <i>Icarus</i> , 2020, 350, 113808.	2.5	5
123	On the clouds and ammonia in Jupiter's upper troposphere from Juno JIRAM reflectivity observations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 503, 4892-4907.	4.4	5
124	The Effects of Waves on the Meridional Thermal Structure of Jupiter's Stratosphere. <i>Planetary Science Journal</i> , 2020, 1, 63.	3.6	5
125	Convective storms in closed cyclones in Jupiter's South Temperate Belt: (I) observations. <i>Icarus</i> , 2022, 380, 114994.	2.5	5
126	Observations and Electron Density Retrievals of Jupiter's Discrete Auroral Arcs Using the Juno Microwave Radiometer. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006293.	3.6	4

#	ARTICLE	IF	CITATIONS
127	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
128	Spatial structure in Neptune's 7.90×10^4 m stratospheric CH ₄ emission, as measured by VLT-VISIR. Icarus, 2020, 345, 113748.	2.5	4
129	SOFIA Observations of Variability in Jupiter's Para-H ₂ Distribution and Subsurface Emission Characteristics of the Galilean Satellites. Planetary Science Journal, 2021, 2, 226.	3.6	4
130	Residual Study: Testing Jupiter Atmosphere Models Against Juno MWR Observations. Earth and Space Science, 2020, 7, e2020EA001229.	2.6	3
131	Ground-Based Observational Support for Spacecraft Exploration of the Outer Planets. Earth, Moon and Planets, 2009, 105, 143-152.	0.6	2
132	Wave Activity in Jupiter's North Equatorial Belt From Near-Infrared Reflectivity Observations. Geophysical Research Letters, 2019, 46, 1232-1241.	4.0	2
133	Review of Knowledge Prior to the Cassini-Huygens Mission and Concurrent Research. , 2009, , 9-54.		2
134	The Future Exploration of Saturn. , 2018, , 417-441.		0