G S Orton

List of Publications by Year
in descending order

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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	Convective storms in closed cyclones in Jupiter's South Temperate Belt: (I) observations. Icarus, 2022, 380, 114994.	2.5	5
2	Subseasonal Variation in Neptuneâ€™s Mid-infrared Emission. Planetary Science Journal, 2022, 3, 78.	3.6	9
3	Hazy Blue Worlds: A Holistic Aerosol Model for Uranus and Neptune, Including Dark Spots. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	18
4	Jupiter's Temperature Structure: A Reassessment of the Voyager Radio Occultation Measurements. Planetary Science Journal, 2022, 3, 159.	3.6	11
5	Fluctuations in Jupiterâ€™s equatorial stratospheric oscillation. Nature Astronomy, 2021, 5, 71-77.	10.1	17
6	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
7	Jupiterâ€™s Great Red Spot: Strong Interactions With Incoming Anticyclones in 2019. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006686.	3.6	12
8	Constraints on the Latitudinal Profile of Jupiter's Deep Jets. Geophysical Research Letters, 2021, 48, e2021GL092912.	4.0	13
9	Longitudinal variations in the stratosphere of Uranus from the Spitzer infrared spectrometer. Icarus, 2021, 365, 114506.	2.5	6
10	Vertical Structure and Color of Jovian Latitudinal Cloud Bands during the Juno Era. Planetary Science Journal, 2021, 2, 16.	3.6	7
11	Jupiter's Overturning Circulation: Breaking Waves Take the Place of Solid Boundaries. Geophysical Research Letters, 2021, 48, e2021GL095756.	4.0	11
12	Evidence for Multiple Ferrelâ€Like Cells on Jupiter. Geophysical Research Letters, 2021, 48, e2021GL095651.	4.0	18
13	Jupiter's Temperate Belt/Zone Contrasts Revealed at Depth by Juno Microwave Observations. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006858.	3.6	17
14	Microwave observations reveal the deep extent and structure of Jupiterâ€™s atmospheric vortices. Science, 2021, 374, 968-972.	12.6	23
15	SOFIA Observations of Variability in Jupiter's Para-H₂ Distribution and Subsurface Emission Characteristics of the Galilean Satellites. Planetary Science Journal, 2021, 2, 226.	3.6	4
16	Colour and tropospheric cloud structure of Jupiter from MUSE/VLT: Retrieving a universal chromophore. Icarus, 2020, 338, 113589.	2.5	21
17	Uranus in Northern Midspring: Persistent Atmospheric Temperatures and Circulations Inferred from Thermal Imaging. Astronomical Journal, 2020, 159, 45.	4.7	15
18	Angular Dependence and Spatial Distribution of Jupiter's Centimeterâ€Wave Thermal Emission From Juno's Microwave Radiometer. Earth and Space Science, 2020, 7, e2020EA001254.	2.6	12

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19	Residual Study: Testing Jupiter Atmosphere Models Against Juno MWR Observations. Earth and Space Science, 2020, 7, e2020EA001229.	2.6	3
20	Turbulence Power Spectra in Regions Surrounding Jupiter's South Polar Cyclones From Juno/JIRAM. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006096.	3.6	8
21	Storms and the Depletion of Ammonia in Jupiter: II. Explaining the Juno Observations. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006404.	3.6	24
22	Observations and Electron Density Retrievals of Jupiter's Discrete Auroral Arcs Using the Juno Microwave Radiometer. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006293.	3.6	4
23	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
24	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
25	A Survey of Smallâ€Scale Waves and Waveâ€Like Phenomena in Jupiter's Atmosphere Detected by JunoCam. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006369.	3.6	7
26	High-resolution UV/Optical/IR Imaging of Jupiter in 2016â€“2019. Astrophysical Journal, Supplement Series, 2020, 247, 58.	7.7	25
27	Twoâ€Year Observations of the Jupiter Polar Regions by JIRAM on Board Juno. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006098.	3.6	24
28	Vertically-resolved observations of Jupiterâ€™s quasi-quadrennial oscillation from 2012 to 2019. Icarus, 2020, 350, 113905.	2.5	14
29	Constraints on Neptune's haze structure and formation from VLT observations in the H-band. Icarus, 2020, 350, 113808.	2.5	5
30	Ice Giant Circulation Patterns: Implications for Atmospheric Probes. Space Science Reviews, 2020, 216, 21.	8.1	22
31	On the Spatial Distribution of Minor Species in Jupiter's Troposphere as Inferred From Juno JIRAM Data. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006206.	3.6	14
32	The water abundance in Jupiterâ€™s equatorial zone. Nature Astronomy, 2020, 4, 609-616.	10.1	96
33	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
34	The Effects of Waves on the Meridional Thermal Structure of Jupiterâ€™s Stratosphere. Planetary Science Journal, 2020, 1, 63.	3.6	5
35	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
36	Latitudinal variation in the abundance of methane (CH4) above the clouds in Neptune's atmosphere from VLT/MUSE Narrow Field Mode Observations. Icarus, 2019, 331, 69-82.	2.5	26

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37	Constraints on Uranus's haze structure, formation and transport. Icarus, 2019, 333, 1-11.	2.5	16
38	Rotational Light Curves of Jupiter from Ultraviolet to Mid-infrared and Implications for Brown Dwarfs and Exoplanets. Astronomical Journal, 2019, 157, 89.	4.7	19
39	Wave Activity in Jupiter's North Equatorial Belt From Nearâ€Infrared Reflectivity Observations. Geophysical Research Letters, 2019, 46, 1232-1241.	4.0	2
40	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
41	Herschel map of Saturnâ€™s stratospheric water, delivered by the plumes of Enceladus. Astronomy and Astrophysics, 2019, 630, A87.	5.1	15
42	Jupiterâ€™s Atmospheric Variability from Long-term Ground-based Observations at 5 Î¼m. Astronomical Journal, 2019, 158, 130.	4.7	17
43	First ALMA Millimeter-wavelength Maps of Jupiter, with a Multiwavelength Study of Convection. Astronomical Journal, 2019, 158, 139.	4.7	27
44	A New Dark Vortex on Neptune. Astronomical Journal, 2018, 155, 117.	4.7	22
45	Clusters of cyclones encircling Jupiterâ€™s poles. Nature, 2018, 555, 216-219.	27.8	90
46	Seasonal stratospheric photochemistry on Uranus and Neptune. Icarus, 2018, 307, 124-145.	2.5	40
47	Historical and Contemporary Trends in the Size, Drift, and Color of Jupiter's Great Red Spot. Astronomical Journal, 2018, 155, 151.	4.7	28
48	Jupiter's Aurora Observed With HST During Juno Orbits 3 to 7. Journal of Geophysical Research: Space Physics, 2018, 123, 3299-3319.	2.4	53
49	Characterization of Mesoscale Waves in the Jupiter NEB by Jupiter InfraRed Auroral Mapper on board Juno. Astronomical Journal, 2018, 156, 246.	4.7	5
50	The Future Exploration of Saturn. , 2018, , 417-441.		0
51	The Rich Dynamics of Jupiterâ€™s Great Red Spot from JunoCam: Juno Images. Astronomical Journal, 2018, 156, 162.	4.7	19
52	Infrared Characterization of Jupiter's Equatorial Disturbance Cycle. Geophysical Research Letters, 2018, 45, 10,987.	4.0	19
53	Hydrogen Dimers in Giant-planet Infrared Spectra. Astrophysical Journal, Supplement Series, 2018, 235, 24.	7.7	77
54	Uranus's Northern Polar Cap in 2014. Geophysical Research Letters, 2018, 45, 5329-5335.	4.0	10

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55	A hexagon in Saturnâ€™s northern stratosphere surrounding the emerging summertime polar vortex. Nature Communications, 2018, 9, 3564.	12.8	36
56	Less absorbed solar energy and more internal heat for Jupiter. Nature Communications, 2018, 9, 3709.	12.8	50
57	The Gas Composition and Deep Cloud Structure of Jupiter's Great Red Spot. Astronomical Journal, 2018, 156, 101.	4.7	29
58	A New, Long-lived, Jupiter Mesoscale Wave Observed at Visible Wavelengths. Astronomical Journal, 2018, 156, 79.	4.7	14
59	Jupiterâ€™s Mesoscale Waves Observed at 5 Î¼m by Ground-based Observations and Juno JIRAM. Astronomical Journal, 2018, 156, 67.	4.7	17
60	First Estimate of Wind Fields in the Jupiter Polar Regions From JIRAMâ€Juno Images. Journal of Geophysical Research E: Planets, 2018, 123, 1511-1524.	3.6	24
61	Mapping of Jupiterâ€™s tropospheric NH 3 abundance using ground-based IRTF/TEXES observations at 5â€Âµm. Icarus, 2018, 314, 106-120.	2.5	8
62	Prevalent lightning sferics at 600 megahertz near Jupiterâ€™s poles. Nature, 2018, 558, 87-90.	27.8	52
63	Junocam: Junoâ€™s Outreach Camera. Space Science Reviews, 2017, 213, 475-506.	8.1	42
64	Changes in Jupiterâ€™s Zonal Wind Profile preceding and during the Juno mission. Icarus, 2017, 296, 163-178.	2.5	70
65	The first closeâ€up images of Jupiter's polar regions: Results from the Juno mission JunoCam instrument. Geophysical Research Letters, 2017, 44, 4599-4606.	4.0	29
66	Multipleâ€wavelength sensing of Jupiter during the Juno mission's first perijove passage. Geophysical Research Letters, 2017, 44, 4607-4614.	4.0	14
67	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
68	Jupiterâ€™s interior and deep atmosphere: The initial pole-to-pole passes with the Juno spacecraft. Science, 2017, 356, 821-825.	12.6	229
69	Preliminary results on the composition of Jupiter's troposphere in hot spot regions from the JIRAM/Juno instrument. Geophysical Research Letters, 2017, 44, 4615-4624.	4.0	20
70	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
71	Characterization of the white ovals on Jupiter's southern hemisphere using the first data by the Juno/JIRAM instrument. Geophysical Research Letters, 2017, 44, 4660-4668.	4.0	15
72	Response of Jupiter's auroras to conditions in the interplanetary medium as measured by the Hubble Space Telescope and Juno. Geophysical Research Letters, 2017, 44, 7643-7652.	4.0	68

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73	Junoâ€UVS approach observations of Jupiter's auroras. Geophysical Research Letters, 2017, 44, 7668-7675.	4.0	25
74	A planetaryâ€scale disturbance in the most intense Jovian atmospheric jet from JunoCam and groundâ€based observations. Geophysical Research Letters, 2017, 44, 4679-4686.	4.0	35
75	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
76	MWR: Microwave Radiometer for the Juno Mission to Jupiter. Space Science Reviews, 2017, 213, 139-185.	8.1	64
77	The independent pulsations of Jupiterâ€™s northern and southern X-ray auroras. Nature Astronomy, 2017, 1, 758-764.	10.1	49
78	Disruption of Saturnâ€™s quasi-periodic equatorial oscillation by the great northern storm. Nature Astronomy, 2017, 1, 765-770.	10.1	37
79	Implications of the ammonia distribution on Jupiter from 1 to 100Âbars as measured by the Juno microwave radiometer. Geophysical Research Letters, 2017, 44, 7676-7685.	4.0	31
80	The Juno Mission. Space Science Reviews, 2017, 213, 5-37.	8.1	222
81	Ammonia in Jupiter's Troposphere From Highâ€Resolution 5ÂÎ¼m Spectroscopy. Geophysical Research Letters, 2017, 44, 10,838.	4.0	12
82	New Observations and Modeling of Jupiter's Quasiâ€Quadrennial Oscillation. Journal of Geophysical Research E: Planets, 2017, 122, 2719-2744.	3.6	30
83	The organization of Jupiterâ€™s upper tropospheric temperature structure and its evolution, 1996â€“1997. Icarus, 2016, 280, 268-277.	2.5	5
84	FIRST RESULTS FROM THE HUBBLE OPAL PROGRAM: JUPITER IN 2015. Astrophysical Journal, 2015, 812, 55.	4.5	88
85	Thermal imaging of Uranus: Upper-tropospheric temperatures one season after Voyager. Icarus, 2015, 260, 94-102.	2.5	22
86	New constraints on the CH₄vertical profile in Uranus and Neptune fromHerschelobservations. Astronomy and Astrophysics, 2015, 579, A121.	5.1	27
87	Instrumental methods for professional and amateur collaborations in planetary astronomy. Experimental Astronomy, 2014, 38, 91-191.	3.7	47
88	DRAMATIC CHANGE IN JUPITER'S GREAT RED SPOT FROM SPACECRAFT OBSERVATIONS. Astrophysical Journal Letters, 2014, 797, L31.	8.3	20
89	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
90	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

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91	Neptune at summer solstice: Zonal mean temperatures from ground-based observations, 2003â€“2007. Icarus, 2014, 231, 146-167.	2.5	48
92	Neptuneâ€™s global circulation deduced from multi-wavelength observations. Icarus, 2014, 237, 211-238.	2.5	64
93	Uranusâ€™ cloud particle properties and latitudinal methane variation from IRTF SpeX observations. Icarus, 2013, 223, 684-698.	2.5	20
94	Strong Temporal Variation Over One Saturnian Year: From Voyager to Cassini. Scientific Reports, 2013, 3, 2410.	3.3	11
95	The D/H ratio in the atmospheres of Uranus and Neptune fromHerschel-PACS observations. Astronomy and Astrophysics, 2013, 551, A126.	5.1	76
96	Recovery and characterization of Neptune's near-polar stratospheric hot spot. Planetary and Space Science, 2012, 61, 161-167.	1.7	13
97	A spatially resolved high spectral resolution study of Neptuneâ€™s stratosphere. Icarus, 2011, 214, 606-621.	2.5	41
98	Saturnâ€™s tropospheric composition and clouds from Cassini/VIMS 4.6â€“5.1Î¼m nightside spectroscopy. Icarus, 2011, 214, 510-533.	2.5	84
99	Equatorial winds on Saturn and the stratosphericÂoscillation. Nature Geoscience, 2011, 4, 750-752.	12.9	16
100	Seasonal change on Saturn from Cassini/CIRS observations, 2004â€“2009. Icarus, 2010, 208, 337-352.	2.5	63
101	Neptune's atmospheric composition from AKARI infrared spectroscopy. Astronomy and Astrophysics, 2010, 514, A17.	5.1	73
102	Ground-Based Observational Support for Spacecraft Exploration of the Outer Planets. Earth, Moon and Planets, 2009, 105, 143-152.	0.6	2
103	Review of Knowledge Prior to the Cassini-Huygens Mission and Concurrent Research. , 2009, , 9-54.		2
104	Depth of a strong jovian jet from a planetary-scale disturbance driven by storms. Nature, 2008, 451, 437-440.	27.8	82
105	Semi-annual oscillations in Saturnâ€™s low-latitude stratospheric temperatures. Nature, 2008, 453, 196-199.	27.8	77
106	Temperature and Composition of Saturn's Polar Hot Spots and Hexagon. Science, 2008, 319, 79-81.	12.6	103
107	CHANGING CHARACTERISTICS OF JUPITER'S LITTLE RED SPOT. Astronomical Journal, 2008, 135, 2446-2452.	4.7	33
108	Polar Lightning and Decadal-Scale Cloud Variability on Jupiter. Science, 2007, 318, 226-229.	12.6	52

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109	Distribution of Ethane and Methane Emission on Neptune. Astronomical Journal, 2007, 134, 637-641.	4.7	24
110	Evidence for methane escape and strong seasonal and dynamical perturbations of Neptune's atmospheric temperatures. Astronomy and Astrophysics, 2007, 473, L5-L8.	5.1	59
111	Wind variations in Jupiter's equatorial atmosphere: A QQO counterpart?. Icarus, 2007, 186, 192-203.	2.5	27
112	Revised ab initio models for H2â€“H2 collision-induced absorption at low temperatures. Icarus, 2007, 189, 544-549.	2.5	41
113	Jupiter's atmospheric temperatures: From Voyager IRIS to Cassini CIRS. Icarus, 2006, 180, 98-112.	2.5	104
114	Saturn's Temperature Field from High-Resolution Middle-Infrared Imaging. Science, 2005, 307, 696-698.	12.6	68
115	An intense stratospheric jet on Jupiter. Nature, 2004, 427, 132-135.	27.8	103
116	Exploring The Saturn System In The Thermal Infrared: The Composite Infrared Spectrometer. Space Science Reviews, 2004, 115, 169-297.	8.1	275
117	Galileo Imaging of Jupiter's Atmosphere: The Great Red Spot, Equatorial Region, and White Ovals. Icarus, 1998, 135, 265-275.	2.5	106
118	Evolution and persistence of 5-Î¼m hot spots at the Galileo probe entry latitude. Journal of Geophysical Research, 1998, 103, 23051-23069.	3.3	83
119	The clouds of Jupiter: Results of the Galileo Jupiter Mission Probe Nephelometer Experiment. Journal of Geophysical Research, 1998, 103, 22891-22909.	3.3	88
120	Cloud structure and atmospheric composition of Jupiter retrieved from Galileo near-infrared mapping spectrometer real-time spectra. Journal of Geophysical Research, 1998, 103, 23001-23021.	3.3	76
121	Galileo probe measurements of thermal and solar radiation fluxes in the Jovian atmosphere. Journal of Geophysical Research, 1998, 103, 22929-22977.	3.3	83
122	Analysis of Jupiter north equatorial belt hot spots in the 4-5 Î¼m range from Galileo/near-infrared mapping spectrometer observations: Measurements of cloud opacity, water, and ammonia. Journal of Geophysical Research, 1998, 103, 23023-23041.	3.3	56
123	The solar reflected component in Jupiter's 5-Î¼m spectra from NIMS/Galileo observations. Journal of Geophysical Research, 1998, 103, 23043-23049.	3.3	15
124	Characteristics of the Galileo probe entry site from Earth-based remote sensing observations. Journal of Geophysical Research, 1998, 103, 22791-22814.	3.3	90
125	Earth-Based Observations of the Galileo Probe Entry Site. Science, 1996, 272, 839-840.	12.6	59
126	Spatial Organization and Time Dependence of Jupiter's Tropospheric Temperatures, 1980-1993. Science, 1994, 265, 625-631.	12.6	58

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127	Thermal spectroscopy of Neptune: The stratospheric temperature, hydrocarbon abundances, and isotopic ratios. Icarus, 1992, 100, 541-555.	2.5	55
128	Thermal Maps of Jupiter: Spatial Organization and Time Dependence of Stratospheric Temperatures, 1980 to 1990. Science, 1991, 252, 537-542.	12.6	88
129	The quasiquadrennial oscillation of Jupiter's equatorial stratosphere. Nature, 1991, 354, 380-382.	27.8	100
130	Infrared polar brightenings on Jupiter. Icarus, 1988, 74, 331-339.	2.5	45
131	The spectra of Uranus and Neptune at 8â€“14 and 17â€“23 Î¼m. Icarus, 1987, 70, 1-12.	2.5	75
132	Infrared polar brightening on Jupiter. Icarus, 1985, 64, 233-248.	2.5	137
133	Optical properties of NH_3 ice from the far infrared to the near ultraviolet. Applied Optics, 1984, 23, 541.	2.1	129
134	Images of Jupiter from the pioneer 10 and pioneer 11 infrared radiometers: A comparison with visible and 5-Î¼m images. Icarus, 1981, 47, 145-158.	2.5	7