Nicholas M Schneider

List of Publications by Year
in descending order

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128 papers	4,895 citations	81900 39 h-index	102487 66 g-index
133 all docs	133 docs citations	133 times ranked	2219 citing authors

#	Article	IF	Citations
1	The Mars Atmosphere and Volatile Evolution (MAVEN) Mission. Space Science Reviews, 2015, 195, 3-48.	8.1	563
2	Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. Icarus, 2018, 315, 146-157.	2.5	216
3	IO ON THE EVE OF THE GALILEO MISSION. Annual Review of Earth and Planetary Sciences, 1996, 24, 125-190.	11.0	172
4	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. Science, 2015, 350, aad0210.	12.6	166
5	The Imaging Ultraviolet Spectrograph (IUVS) for the MAVEN Mission. Space Science Reviews, 2015, 195, 75-124.	8.1	139
6	Unexpected variability of Martian hydrogen escape. Geophysical Research Letters, 2014, 41, 314-320.	4.0	137
7	The structure and variability of Mars dayside thermosphere from MAVEN NGIMS and IUVS measurements: Seasonal and solar activity trends in scale heights and temperatures. Journal of Geophysical Research: Space Physics, 2017, 122, 1296-1313.	2.4	124
8	The Structure of the Io Torus. Astrophysical Journal, 1995, 450, 450.	4.5	113
9	Elevated atmospheric escape of atomic hydrogen from Mars induced by high-altitude water. Nature Geoscience, 2017, 10, 174-178.	12.9	105
10	Volcanically emitted sodium chloride as a source for Io's neutral clouds and plasma torus. Nature, 2003, 421, 45-47.	27.8	102
11	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. Space Science Reviews, 2015, 195, 357-422.	8.1	99
12	Discovery of diffuse aurora on Mars. Science, 2015, 350, aad0313.	12.6	98
13	Distribution and Abundance of Sodium in Mercury's Atmosphere, 1985â€“1988. Icarus, 1997, 129, 506-527.	2.5	97
14	The structure and variability of Mars upper atmosphere as seen in MAVEN/IUVS dayglow observations. Geophysical Research Letters, 2015, 42, 9023-9030.	4.0	95
15	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. Science, 2015, 350, aad0459.	12.6	90
16	MAVEN IUVS observation of the hot oxygen corona at Mars. Geophysical Research Letters, 2015, 42, 9009-9014.	4.0	77
17	Threeâ€dimensional structure in the Mars H corona revealed by IUVS on MAVEN. Geophysical Research Letters, 2015, 42, 9001-9008.	4.0	67
18	Variability of D and H in the Martian upper atmosphere observed with the MAVEN IUVS echelle channel. Journal of Geophysical Research: Space Physics, 2017, 122, 2336-2344.	2.4	64

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19	SPICAM on Mars Express: A 10 year in-depth survey of the Martian atmosphere. Icarus, 2017, 297, 195-216.	2.5	64
20	Hubble Space Telescope UV spectral observations of Io passing into eclipse. Journal of Geophysical Research, 1994, 99, 8387.	3.3	63
21	Discovery of chlorine in the Io torus. Geophysical Research Letters, 2000, 27, 513-516.	4.0	63
22	Molecular Origin of Io's Fast Sodium. Science, 1991, 253, 1394-1397.	12.6	57
23	MAVEN IUVS observations of the aftermath of the Comet Siding Spring meteor shower on Mars. Geophysical Research Letters, 2015, 42, 4755-4761.	4.0	56
24	MAVEN/IUVS Stellar Occultation Measurements of Mars Atmospheric Structure and Composition. Journal of Geophysical Research E: Planets, 2018, 123, 1449-1483.	3.6	56
25	Extreme ultraviolet explorer satellite observation of Jupiter's Io plasma torus. Astrophysical Journal, 1994, 426, L51.	4.5	56
26	Detection of a persistent meteoric metal layer in the Martian atmosphere. Nature Geoscience, 2017, 10, 401-404.	12.9	52
27	Discovery of a proton aurora at Mars. Nature Astronomy, 2018, 2, 802-807.	10.1	50
28	The structure of Io's corona. Astrophysical Journal, 1991, 368, 298.	4.5	50
29	Simultaneous observations of atmospheric tides from combined in situ and remote observations at Mars from the MAVEN spacecraft. Journal of Geophysical Research E: Planets, 2016, 121, 594-607.	3.6	48
30	The Dual Sources of Io's Sodium Clouds. Icarus, 2002, 157, 476-489.	2.5	47
31	Galileo measurements of plasma density in the Io torus. Geophysical Research Letters, 1997, 24, 2119-2122.	4.0	45
32	Global Aurora on Mars During the September 2017 Space Weather Event. Geophysical Research Letters, 2018, 45, 7391-7398.	4.0	44
33	Nonmigrating tides in the Martian atmosphere as observed by MAVEN IUVS. Geophysical Research Letters, 2015, 42, 9057-9063.	4.0	43
34	Retrieval of CO₂ and N₂ in the Martian thermosphere using dayglow observations by IUVS on MAVEN. Geophysical Research Letters, 2015, 42, 9040-9049.	4.0	43
35	Probing the Martian atmosphere with MAVEN/IUVS stellar occultations. Geophysical Research Letters, 2015, 42, 9064-9070.	4.0	42
36	Mars H Escape Rates Derived From MAVEN/IUVS Lyman Alpha Brightness Measurements and Their Dependence on Model Assumptions. Journal of Geophysical Research E: Planets, 2018, 123, 2192-2210.	3.6	42

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37	No sodium in the vapour plumes of Enceladus. Nature, 2009, 459, 1102-1104.	27.8	41
38	New observations of molecular nitrogen in the Martian upper atmosphere by IUVS on MAVEN. Geophysical Research Letters, 2015, 42, 9050-9056.	4.0	41
39	Martian water loss to space enhanced by regional dust storms. Nature Astronomy, 2021, 5, 1036-1042.	10.1	40
40	Sodium and Potassium Signatures of Volcanic Satellites Orbiting Close-in Gas Giant Exoplanets. Astrophysical Journal, 2019, 885, 168.	4.5	38
41	Nitric oxide nightglow and Martian mesospheric circulation from MAVEN/IUVS observations and LMDâ€MGCM predictions. Journal of Geophysical Research: Space Physics, 2017, 122, 5782-5797.	2.4	36
42	Io's Fast Sodium: Implications for Molecular and Atomic Atmospheric Escape. Icarus, 1994, 111, 31-44.	2.5	35
43	A comparison of 3â€D model predictions of Mars' oxygen corona with early MAVEN IUVS observations. Geophysical Research Letters, 2015, 42, 9015-9022.	4.0	35
44	Shortâ€term variations of Mercury's Na exosphere observed with very high spectral resolution. Geophysical Research Letters, 2009, 36, .	4.0	34
45	Comparison of the Martian thermospheric density and temperature from IUVS/MAVEN data and general circulation modeling. Geophysical Research Letters, 2016, 43, 3095-3104.	4.0	34
46	Martian Thermospheric Warming Associated With the Planet Encircling Dust Event of 2018. Geophysical Research Letters, 2020, 47, e2019GL085302.	4.0	34
47	High latitude peaks in Mercury's sodium exosphere: Spectral signature using THEMIS solar telescope. Geophysical Research Letters, 2008, 35, .	4.0	33
48	Neutral density response to solar flares at Mars. Geophysical Research Letters, 2015, 42, 8986-8992.	4.0	33
49	Io's sodium directional feature: Evidence for ionospheric escape. Journal of Geophysical Research, 1999, 104, 16567-16583.	3.3	30
50	On the nature of the Î»IIIbrightness asymmetry in the Io torus. Journal of Geophysical Research, 1997, 102, 19823-19833.	3.3	29
51	Significant Space Weather Impact on the Escape of Hydrogen From Mars. Geophysical Research Letters, 2018, 45, 8844-8852.	4.0	29
52	Eclipse Measurements of Io's Sodium Atmosphere. Science, 1987, 238, 55-58.	12.6	28
53	Meteoric Metal Chemistry in the Martian Atmosphere. Journal of Geophysical Research E: Planets, 2018, 123, 695-707.	3.6	28
54	Longitudinal modulation of hot electrons in the Io plasma torus. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	27

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55	On the Origins of Mars' Exospheric Nonthermal Oxygen Component as Observed by MAVEN and Modeled by HELIOSARES. Journal of Geophysical Research E: Planets, 2017, 122, 2401-2428.	3.6	27
56	Galileo's close-up view of the Io sodium jet. Geophysical Research Letters, 1999, 26, 3333-3336.	4.0	26
57	Invertedâ€V Electron Acceleration Events Concurring With Localized Auroral Observations at Mars by MAVEN. Geophysical Research Letters, 2020, 47, e2020GL087414.	4.0	26
58	Sodium remote from Io. Icarus, 1981, 48, 519-535.	2.5	25
59	Martian Thermospheric Response to an X8.2 Solar Flare on 10 September 2017 as Seen by MAVEN/IUVS. Geophysical Research Letters, 2018, 45, 7312-7319.	4.0	24
60	Atmospheric Tides at High Latitudes in the Martian Upper Atmosphere Observed by MAVEN and MRO. Journal of Geophysical Research: Space Physics, 2019, 124, 2943-2953.	2.4	24
61	Proton Aurora on Mars: A Dayside Phenomenon Pervasive in Southern Summer. Journal of Geophysical Research: Space Physics, 2019, 124, 10533-10548.	2.4	24
62	Martian mesospheric cloud observations by IUVS on MAVEN: Thermal tides coupled to the upper atmosphere. Geophysical Research Letters, 2017, 44, 4709-4715.	4.0	23
63	Eclipse Spectroscopy of Io's Atmosphere. Icarus, 2000, 148, 316-319.	2.5	22
64	Seasonal Changes in Hydrogen Escape From Mars Through Analysis of HST Observations of the Martian Exosphere Near Perihelion. Journal of Geophysical Research: Space Physics, 2017, 122, 11,756.	2.4	22
65	Enhanced water loss from the martian atmosphere during a regional-scale dust storm and implications for long-term water loss. Earth and Planetary Science Letters, 2021, 571, 117109.	4.4	22
66	A comparison of the Voyager 1 ultraviolet spectrometer and plasma science measurements of the Io plasma torus. Journal of Geophysical Research, 1995, 100, 19541.	3.3	21
67	Study of the Martian cold oxygen corona from the Oâ€‰I 130.4â€‰nm by IUVS/MAVEN. Geophysical Research Letters, 2015, 42, 9031-9039.	4.0	21
68	Discrete Aurora on Mars: Insights Into Their Distribution and Activity From MAVEN/IUVS Observations. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029428.	2.4	20
69	A Cassegrain echelle spectrograph. Publications of the Astronomical Society of the Pacific, 1991, 103, 1187.	3.1	20
70	Localized Ionization Hypothesis for Transient Ionospheric Layers. Journal of Geophysical Research: Space Physics, 2019, 124, 4870-4880.	2.4	19
71	MAVENâ€IUVS Observations of the CO₂⁺ UV Doublet and CO Cameron Bands in the Martian Thermosphere: Aeronomy, Seasonal, and Latitudinal Distribution. Journal of Geophysical Research: Space Physics, 2019, 124, 5816-5827.	2.4	18
72	Vertical Propagation of Wave Perturbations in the Middle Atmosphere on Mars by MAVEN/IUVS. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006481.	3.6	18

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73	New description of Io's cold plasma torus. Journal of Geophysical Research, 2008, 113, .	3.3	16
74	IUVS echelleâ€mode observations of interplanetary hydrogen: Standard for calibration and reference for cavity variations between Earth and Mars during MAVEN cruise. Journal of Geophysical Research: Space Physics, 2017, 122, 2089-2105.	2.4	16
75	Mars's Twilight Cloud Band: A New Cloud Feature Seen During the Mars Year 34 Global Dust Storm. Geophysical Research Letters, 2020, 47, e2019GL084997.	4.0	16
76	Study of the hydrogen escape rate at Mars during martian years 28 and 29 from comparisons between SPICAM/Mars express observations and GCM-LMD simulations. Icarus, 2021, 353, 113498.	2.5	16
77	Thermal structure of Marsâ€™ middle and upper atmospheres: Understanding the impacts of dynamics and solar forcing. Icarus, 2023, 393, 114703.	2.5	16
78	The Variability of Atmospheric Deuterium Brightness at Mars: Evidence for Seasonal Dependence. Journal of Geophysical Research: Space Physics, 2017, 122, 10,811.	2.4	15
79	The Impact of Comet Siding Spring's Meteors on the Martian Atmosphere and Ionosphere. Journal of Geophysical Research E: Planets, 2018, 123, 2613-2627.	3.6	14
80	The O(¹S) 297.2â€nm Dayglow Emission: A Tracer of CO₂ Density Variations in the Martian Lower Thermosphere. Journal of Geophysical Research E: Planets, 2018, 123, 3119-3132.	3.6	14
81	Ioâ€™s neutral clouds, plasma torus, magnetospheric interaction. , 2007, , 265-286.		14
82	A Survey of Visible <scp>S⁺</scp> Emission in Io's Plasma Torus During the Hisaki Epoch. Journal of Geophysical Research: Space Physics, 2018, 123, 5610-5624.	2.4	13
83	Detection of Mesospheric CO₂ Ice Clouds on Mars in Southern Summer. Geophysical Research Letters, 2019, 46, 7962-7971.	4.0	13
84	Seasonal Variability of Deuterium in the Upper Atmosphere of Mars. Journal of Geophysical Research: Space Physics, 2019, 124, 2152-2164.	2.4	13
85	Detection of the Nitric Oxide Dayglow on Mars by MAVEN/IUVS. Journal of Geophysical Research E: Planets, 2019, 124, 1226-1237.	3.6	13
86	Effect of the 2018 Martian Global Dust Storm on the CO₂ Density in the Lower Nightside Thermosphere Observed From MAVEN/IUVS Lymanâ€Alpha Absorption. Geophysical Research Letters, 2020, 47, e2019GL082889.	4.0	13
87	Imaging of Martian Circulation Patterns and Atmospheric Tides Through MAVEN/IUVS Nightglow Observations. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027318.	2.4	13
88	The UV Spectrum of the Lymanâ€Birgeâ€Hopfield Band System of N₂ Induced by Cascading from Electron Impact. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027546.	2.4	13
89	Mutual Event Observations of Ioâ€™s Sodium Corona. Astrophysical Journal, 2001, 563, 1063-1074.	4.5	12
90	Solar control of sodium escape from Io. Journal of Geophysical Research E: Planets, 2014, 119, 404-415.	3.6	12

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91	Characteristics of Mars UV Dayglow Emissions From Atomic Oxygen at 130.4 and 135.6 nm: MAVEN/IUVS Limb Observations and Modeling. Journal of Geophysical Research: Space Physics, 2019, 124, 4809-4832.	2.4	12
92	UV Study of the Fourth Positive Band System of CO and O <scp>i</scp> 135.6Ânm From Electron Impact on CO and CO₂. Journal of Geophysical Research: Space Physics, 2019, 124, 2954-2977.	2.4	12
93	Discrete Aurora on Mars: Spectral Properties, Vertical Profiles, and Electron Energies. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029495.	2.4	12
94	Ultraviolet observations of the hydrogen coma of comet C/2013 A1 (Siding Spring) by MAVEN/IUVS. Geophysical Research Letters, 2015, 42, 8803-8809.	4.0	11
95	Airglow remote sensing of the seasonal variation of the Martian upper atmosphere: MAVEN limb observations and model comparison. Icarus, 2020, 341, 113666.	2.5	11
96	Hubble Space Telescope observations of sulfur ions in the Io plasma torus: New constraints on the plasma distribution. Journal of Geophysical Research, 2003, 108, .	3.3	10
97	A Warm Layer in the Nightside Mesosphere of Mars. Geophysical Research Letters, 2020, 47, e2019GL085646.	4.0	9
98	Spatially Asymmetric Increase in Hot Electron Fraction in the Io Plasma Torus During Volcanically Active Period Revealed by Observations by Hisaki/EXCEED From November 2014 to May 2015. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027100.	2.4	9
99	An Extremely Elongated Cloud Over Arsia Mons Volcano on Mars: I. Life Cycle. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006517.	3.6	9
100	Two-dimensional model for the martian exosphere: Applications to hydrogen and deuterium Lyman Î± observations. Icarus, 2020, 339, 113573.	2.5	8
101	Seasonal and Latitudinal Variations of Dayside N₂/CO₂ Ratio in the Martian Thermosphere Derived From MAVEN IUVS Observations. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006378.	3.6	8
102	Empirically Determined Auroral Electron Events at Marsâ€"MAVEN Observations. Geophysical Research Letters, 2022, 49, .	4.0	8
103	Laboratory Study of the Cameron Bands, the First Negative Bands, and Fourth Positive Bands in the Middle Ultraviolet 180â€"280Ânm by Electron Impact Upon CO. Journal of Geophysical Research E: Planets, 2021, 126, .	3.6	7
104	Discrete Aurora at Mars: Dependence on Upstream Solar Wind Conditions. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	7
105	Martian Oxygen and Hydrogen Upper Atmospheres Responding to Solar and Dust Storm Drivers: Hisaki Space Telescope Observations. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006500.	3.6	6
106	Estimate of the D/H Ratio in the Martian Upper Atmosphere from the Low Spectral Resolution Mode of MAVEN/IUVS. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006814.	3.6	6
107	Discrete Aurora on the Nightside of Mars: Occurrence Location and Probability. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	6
108	Reappraising the Production and Transfer of Hydrogen Atoms From the Middle to the Upper Atmosphere of Mars at Times of Elevated Water Vapor. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	5

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109	Effect of the planet shine on the corona: Application to the Martian hot oxygen. Journal of Geophysical Research: Space Physics, 2016, 121, 11,413.	2.4	4
110	Isobar Altitude Variations in the Upper Mesosphere Observed With IUVSâ€MAVEN in Response to Martian Dust Storms. Geophysical Research Letters, 2020, 47, e2020GL087468.	4.0	4
111	A Possible Dust Origin for an Unusual Feature in Ioâ€™s Sodium Neutral Clouds. Astronomical Journal, 2021, 162, 190.	4.7	4
112	Another one derives the dust: Ultraviolet dust aerosol properties retrieved from MAVEN/IUVS data. Icarus, 2022, 387, 115177.	2.5	4
113	Large Volcanic Event on Io Inferred from Jovian Sodium Nebula Brightening. Astrophysical Journal Letters, 2019, 871, L23.	8.3	3
114	LyÎ± Observations of Comet C/2013 A1 (Siding Spring) Using MAVEN IUVS Echelle. Astronomical Journal, 2020, 160, 10.	4.7	3
115	Observations of Atmospheric Tides in the Middle and Upper Atmosphere of Mars From MAVEN and MRO. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	3
116	MAVEN/IUVS observations of CÂI 156.1Ânm and 165.7Ânm dayglow: Direct detection of carbon and implications on photochemical escape. Icarus, 2022, 371, 114664.	2.5	2
117	The density of the Io plasma torus ribbon. Geophysical Research Letters, 1998, 25, 2757-2760.	4.0	1
118	Galileo's Close-up view of the Io sodium jet - Errata. Geophysical Research Letters, 2000, 27, 1081-1081.	4.0	1
119	A compact high-throughput imaging EUV/FUV spectrometer. , 2003, , .		1
120	Io, the closest Galileo's Medicean Moon: Changes in its Sodium Cloud Caused by Jupiter Eclipse. Proceedings of the International Astronomical Union, 2010, 6, 224-228.	0.0	1
121	First detection of [OI] 630â€‰nm emission in the Enceladus torus. Geophysical Research Letters, 2013, 40, 4177-4181.	4.0	1
122	Ground-Based Remote Sensing of Energetic Neutral Atoms in Jupiterâ€™s Magnetosphere. Astrophysics and Space Science Library, 1997, , 411-420.	2.7	1
123	Observations and Modeling of Martian Auroras. Space Science Reviews, 2022, 218, .	8.1	1
124	A high-resolution high-throughput FUV imager for the JMEX mission. , 2003, 4854, 620.		0
125	Photon-by-photon post-processing correction of pointing errors in an orbiting satellite. , 2005, 5899, 359.		0
126	System verification of the JMEX mission residual motion requirements with integrated modeling. , 2005, , .		0

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127	Io's Escaping Atmosphere: Continuing the Legacy of Surprise. Proceedings of the International Astronomical Union, 2010, 6, 80-86.	0.0	0
128	Exploring the Mars atmosphere with ultraviolet spectroscopy. SPIE Newsroom, 0, , .	0.1	0