

# M S Chaffin

## List of Publications by Year in descending order

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Version: 2024-02-01

44  
papers

2,129  
citations

236925

25  
h-index

243625

44  
g-index

52  
all docs

52  
docs citations

52  
times ranked

1311  
citing authors

#	ARTICLE	IF	CITATIONS
1	Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. <i>Icarus</i> , 2018, 315, 146-157.	2.5	216
2	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. <i>Science</i> , 2015, 350, aad0210.	12.6	166
3	Unexpected variability of Martian hydrogen escape. <i>Geophysical Research Letters</i> , 2014, 41, 314-320.	4.0	137
4	Hydrogen escape from Mars enhanced by deep convection in dust storms. <i>Nature Astronomy</i> , 2018, 2, 126-132.	10.1	112
5	Elevated atmospheric escape of atomic hydrogen from Mars induced by high-altitude water. <i>Nature Geoscience</i> , 2017, 10, 174-178.	12.9	105
6	Discovery of diffuse aurora on Mars. <i>Science</i> , 2015, 350, aad0313.	12.6	98
7	The structure and variability of Mars upper atmosphere as seen in MAVEN/IUVS dayglow observations. <i>Geophysical Research Letters</i> , 2015, 42, 9023-9030.	4.0	95
8	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. <i>Science</i> , 2015, 350, aad0459.	12.6	90
9	MAVEN IUVS observation of the hot oxygen corona at Mars. <i>Geophysical Research Letters</i> , 2015, 42, 9009-9014.	4.0	77
10	Three-dimensional structure in the Mars H corona revealed by IUVS on MAVEN. <i>Geophysical Research Letters</i> , 2015, 42, 9001-9008.	4.0	67
11	Variability of D and H in the Martian upper atmosphere observed with the MAVEN IUVS echelle channel. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 2336-2344.	2.4	64
12	SPICAM on Mars Express: A 10 year in-depth survey of the Martian atmosphere. <i>Icarus</i> , 2017, 297, 195-216.	2.5	64
13	MAVEN IUVS observations of the aftermath of the Comet Siding Spring meteor shower on Mars. <i>Geophysical Research Letters</i> , 2015, 42, 4755-4761.	4.0	56
14	Detection of a persistent meteoric metal layer in the Martian atmosphere. <i>Nature Geoscience</i> , 2017, 10, 401-404.	12.9	52
15	Discovery of a proton aurora at Mars. <i>Nature Astronomy</i> , 2018, 2, 802-807.	10.1	50
16	Global Aurora on Mars During the September 2017 Space Weather Event. <i>Geophysical Research Letters</i> , 2018, 45, 7391-7398.	4.0	44
17	Nonmigrating tides in the Martian atmosphere as observed by MAVEN IUVS. <i>Geophysical Research Letters</i> , 2015, 42, 9057-9063.	4.0	43
18	Retrieval of CO <sub>2</sub> and N <sub>2</sub> in the Martian thermosphere using dayglow observations by IUVS on MAVEN. <i>Geophysical Research Letters</i> , 2015, 42, 9040-9049.	4.0	43

#	ARTICLE	IF	CITATIONS
19	Probing the Martian atmosphere with MAVEN/IUVS stellar occultations. <i>Geophysical Research Letters</i> , 2015, 42, 9064-9070.	4.0	42
20	Mars H Escape Rates Derived From MAVEN/IUVS Lyman Alpha Brightness Measurements and Their Dependence on Model Assumptions. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2192-2210.	3.6	42
21	New observations of molecular nitrogen in the Martian upper atmosphere by IUVS on MAVEN. <i>Geophysical Research Letters</i> , 2015, 42, 9050-9056.	4.0	41
22	Martian water loss to space enhanced by regional dust storms. <i>Nature Astronomy</i> , 2021, 5, 1036-1042.	10.1	40
23	Nitric oxide nightglow and Martian mesospheric circulation from MAVEN/IUVS observations and LMDâ€MCCM predictions. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5782-5797.	2.4	36
24	Significant Space Weather Impact on the Escape of Hydrogen From Mars. <i>Geophysical Research Letters</i> , 2018, 45, 8844-8852.	4.0	29
25	The Emirates Mars Mission. <i>Space Science Reviews</i> , 2022, 218, 4.	8.1	29
26	Martian Thermospheric Response to an X8.2 Solar Flare on 10 September 2017 as Seen by MAVEN/IUVS. <i>Geophysical Research Letters</i> , 2018, 45, 7312-7319.	4.0	24
27	Proton Aurora on Mars: A Dayside Phenomenon Pervasive in Southern Summer. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10533-10548.	2.4	24
28	Martian mesospheric cloud observations by IUVS on MAVEN: Thermal tides coupled to the upper atmosphere. <i>Geophysical Research Letters</i> , 2017, 44, 4709-4715.	4.0	23
29	Emirates Mars Mission Characterization of Mars Atmosphere Dynamics and Processes. <i>Space Science Reviews</i> , 2021, 217, .	8.1	23
30	Seasonal Changes in Hydrogen Escape From Mars Through Analysis of HST Observations of the Martian Exosphere Near Perihelion. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,756.	2.4	22
31	Study of the Martian cold oxygen corona from the Oâ€‰%l 130.4â€‰%nm by IUVS/MAVEN. <i>Geophysical Research Letters</i> , 2015, 42, 9031-9039.	4.0	21
32	Localized Ionization Hypothesis for Transient Ionospheric Layers. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 4870-4880.	2.4	19
33	IUVS echelleâ€mode observations of interplanetary hydrogen: Standard for calibration and reference for cavity variations between Earth and Mars during MAVEN cruise. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 2089-2105.	2.4	16
34	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. <i>Icarus</i> , 2021, 353, 113498.	2.5	16
35	The Variability of Atmospheric Deuterium Brightness at Mars: Evidence for Seasonal Dependence. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,811.	2.4	15
36	Higher Martian Atmospheric Temperatures at All Altitudes Increase the D/H Fractionation Factor and Water Loss. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006626.	3.6	14

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37	Investigations of the Mars Upper Atmosphere with ExoMars Trace Gas Orbiter. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	13
38	Seasonal Variability of Deuterium in the Upper Atmosphere of Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2152-2164.	2.4	13
39	Effect of the 2018 Martian Global Dust Storm on the CO <sub>2</sub> Density in the Lower Nightside Thermosphere Observed From MAVEN/IUVS Lyman-Alpha Absorption. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL082889.	4.0	13
40	Ultraviolet observations of the hydrogen coma of comet C/2013 A1 (Siding Spring) by MAVEN/IUVS. <i>Geophysical Research Letters</i> , 2015, 42, 8803-8809.	4.0	11
41	Martian Oxygen and Hydrogen Upper Atmospheres Responding to Solar and Dust Storm Drivers: Hisaki Space Telescope Observations. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006500.	3.6	6
42	Estimate of the D/H Ratio in the Martian Upper Atmosphere from the Low Spectral Resolution Mode of MAVEN/IUVS. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006814.	3.6	6
43	MOSAIC: A Satellite Constellation to Enable Groundbreaking Mars Climate System Science and Prepare for Human Exploration. <i>Planetary Science Journal</i> , 2021, 2, 211.	3.6	6
44	Reappraising the Production and Transfer of Hydrogen Atoms From the Middle to the Upper Atmosphere of Mars at Times of Elevated Water Vapor. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	5