Claire E Newman

List of Publications by Year
in descending order

86 papers	5,652 citations	81900 39 h-index	76900 74 g-index
108 all docs	108 docs citations	108 times ranked	3554 citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
2	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
3	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	12.9	274
4	Mars 2020 Mission Overview. Space Science Reviews, 2020, 216, 1.	8.1	239
5	PlanetWRF: A general purpose, local to global numerical model for planetary atmospheric and climate dynamics. Journal of Geophysical Research, 2007, 112, .	3.3	220
6	Modeling the Martian dust cycle, 1. Representations of dust transport processes. Journal of Geophysical Research, 2002, 107, 6-1-6-18.	3.3	194
7	The atmosphere of Mars as observed by InSight. Nature Geoscience, 2020, 13, 190-198.	12.9	161
8	Growth and form of the mound in Gale Crater, Mars: Slope wind enhanced erosion and transport. Geology, 2013, 41, 543-546.	4.4	147
9	Mars Science Laboratory Observations of the 2018/Mars Year 34 Global Dust Storm. Geophysical Research Letters, 2019, 46, 71-79.	4.0	138
10	Modeling the Martian dust cycle 2. Multiannual radiatively active dust transport simulations. Journal of Geophysical Research, 2002, 107, 7-1-7-15.	3.3	121
11	Winds measured by the Rover Environmental Monitoring Station (REMS) during the Mars Science Laboratory (MSL) rover's Bagnold Dunes Campaign and comparison with numerical modeling using MarsWRF. Icarus, 2017, 291, 203-231.	2.5	119
12	Curiosity's rover environmental monitoring station: Overview of the first 100 sols. Journal of Geophysical Research E: Planets, 2014, 119, 1680-1688.	3.6	112
13	Geology of the InSight landing site on Mars. Nature Communications, 2020, 11, 1014.	12.8	107
14	A survey of Martian dust devil activity using Mars Global Surveyor Mars Orbiter Camera images. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	105
15	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	12.6	103
16	The impact of resolution on the dynamics of the martian global atmosphere: Varying resolution studies with the MarsWRF GCM. Icarus, 2012, 221, 276-288.	2.5	97
17	Threshold for sand mobility on Mars calibrated from seasonal variations of sand flux. Nature Communications, 2014, 5, 5096.	12.8	86
18	Pressure observations by the Curiosity rover: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 82-92.	3.6	84

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19	Stratospheric superrotation in the TitanWRF model. Icarus, 2011, 213, 636-654.	2.5	81
20	The atmospheric circulation and dust activity in different orbital epochs on Mars. Icarus, 2005, 174, 135-160.	2.5	80
21	Preliminary interpretation of the REMS pressure data from the first 100 sols of the MSL mission. Journal of Geophysical Research E: Planets, 2014, 119, 440-453.	3.6	80
22	Science Goals and Objectives for the Dragonfly Titan Rotorcraft Relocatable Lander. Planetary Science Journal, 2021, 2, 130.	3.6	80
23	Martian aeolian activity at the Bagnold Dunes, Gale Crater: The view from the surface and orbit. Journal of Geophysical Research E: Planets, 2017, 122, 2077-2110.	3.6	77
24	Mars Science Laboratory relative humidity observations: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 2132-2147.	3.6	75
25	The Mars Dust Cycle. , 2017, , 295-337.		70
26	Observational evidence of a suppressed planetary boundary layer in northern Gale Crater, Mars as seen by the Navcam instrument onboard the Mars Science Laboratory rover. Icarus, 2015, 249, 129-142.	2.5	66
27	The impact of surface dust source exhaustion on the martian dust cycle, dust storms and interannual variability, as simulated by the MarsWRF General Circulation Model. Icarus, 2015, 257, 47-87.	2.5	66
28	Meteorological Predictions for Mars 2020 Perseverance Rover Landing Site at Jezero Crater. Space Science Reviews, 2020, 216, 1.	8.1	62
29	The Mars Environmental Dynamics Analyzer, MEDA. A Suite of Environmental Sensors for the Mars 2020 Mission. Space Science Reviews, 2021, 217, 48.	8.1	57
30	Convective vortices and dust devils at the MSL landing site: Annual variability. Journal of Geophysical Research E: Planets, 2016, 121, 1514-1549.	3.6	55
31	Atmospheric modeling of Mars methane surface releases. Planetary and Space Science, 2011, 59, 227-237.	1.7	54
32	The Bagnold Dunes in Southern Summer: Active Sediment Transport on Mars Observed by the Curiosity Rover. Geophysical Research Letters, 2018, 45, 8853-8863.	4.0	50
33	The dynamic atmospheric and aeolian environment of Jezero crater, Mars. Science Advances, 2022, 8, .	10.3	47
34	The rock abrasion record at Gale Crater: Mars Science Laboratory results from Bradbury Landing to Rocknest. Journal of Geophysical Research E: Planets, 2014, 119, 1374-1389.	3.6	46
35	Atmospheric tides in Gale Crater, Mars. Icarus, 2016, 268, 37-49.	2.5	45
36	Gale surface wind characterization based on the Mars Science Laboratory REMS dataset. Part I: Wind retrieval and Gale's wind speeds and directions. Icarus, 2019, 319, 909-925.	2.5	45

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37	A Study of Daytime Convective Vortices and Turbulence in the Martian Planetary Boundary Layer Based on Halfâ€aâ€Year of InSight Atmospheric Measurements and Largeâ€Eddy Simulations. Journal of Geophysical Research E: Planets, 2021, 126, .	3.6	45
38	Coarse Sediment Transport in the Modern Martian Environment. Journal of Geophysical Research E: Planets, 2018, 123, 1380-1394.	3.6	44
39	An integrated model for dune morphology and sand fluxes on Mars. Earth and Planetary Science Letters, 2017, 457, 204-212.	4.4	42
40	MarsWRF Convective Vortex and Dust Devil Predictions for Gale Crater Over 3 Mars Years and Comparison With MSLâ€REMS Observations. Journal of Geophysical Research E: Planets, 2019, 124, 3442-3468.	3.6	41
41	The sensitivity of solsticial pauses to atmospheric ice and dust in the MarsWRF General Circulation Model. Icarus, 2018, 311, 23-34.	2.5	40
42	Effects of the MY34/2018 Global Dust Storm as Measured by MSL REMS in Gale Crater. Journal of Geophysical Research E: Planets, 2019, 124, 1899-1912.	3.6	40
43	The impact of a realistic vertical dust distribution on the simulation of the Martian General Circulation. Journal of Geophysical Research E: Planets, 2013, 118, 980-993.	3.6	37
44	Simulating Titanâ€™s methane cycle with the TitanWRF General Circulation Model. Icarus, 2016, 267, 106-134.	2.5	37
45	Seasonal Deposition and Lifting of Dust on Mars as Observed by the Curiosity Rover. Scientific Reports, 2018, 8, 17576.	3.3	36
46	Gale surface wind characterization based on the Mars Science Laboratory REMS dataset. Part II: Wind probability distributions. Icarus, 2019, 319, 645-656.	2.5	36
47	Dust Devil Sediment Transport: From Lab to Field to Global Impact. Space Science Reviews, 2016, 203, 377-426.	8.1	35
48	Multi-model Meteorological and Aeolian Predictions for Mars 2020 and the Jezero Crater Region. Space Science Reviews, 2021, 217, 20.	8.1	35
49	The Methane Diurnal Variation and Microseepage Flux at Gale Crater, Mars as Constrained by the ExoMars Trace Gas Orbiter and Curiosity Observations. Geophysical Research Letters, 2019, 46, 9430-9438.	4.0	31
50	On the relationship between surface pressure, terrain elevation, and air temperature. Part I: The large diurnal surface pressure range at Gale Crater, Mars and its origin due to lateral hydrostatic adjustment. Planetary and Space Science, 2018, 164, 132-157.	1.7	30
51	Effects of a Large Dust Storm in the Nearâ€Surface Atmosphere as Measured by InSight in Elysium Planitia, Mars. Comparison With Contemporaneous Measurements by Mars Science Laboratory. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006493.	3.6	30
52	Monitoring of Dust Devil Tracks Around the InSight Landing Site, Mars, and Comparison With In Situ Atmospheric Data. Geophysical Research Letters, 2020, 47, e2020GL087234.	4.0	30
53	In situ recording of Mars soundscape. Nature, 2022, 605, 653-658.	27.8	30
54	Methane seasonal cycle at Gale Crater on Mars consistent with regolith adsorption and diffusion. Nature Geoscience, 2019, 12, 321-325.	12.9	24

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55	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multiâ€Instrument Observations, Analysis, and Implications. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006757.	3.6	23
56	Lander and rover histories of dust accumulation on and removal from solar arrays on Mars. Planetary and Space Science, 2021, 207, 105337.	1.7	23
57	The Vertical Dust Profile Over Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2017, 122, 2779-2792.	3.6	22
58	The cascade from local to global dust storms on Mars: Temporal and spatial thresholds on thermal and dynamical feedback. Icarus, 2018, 302, 514-536.	2.5	21
59	Titan: Earth-like on the Outside, Ocean World on the Inside. Planetary Science Journal, 2021, 2, 112.	3.6	21
60	Complex bedding geometry in the upper portion of Aeolis Mons, Gale crater, Mars. Icarus, 2018, 314, 246-264.	2.5	20
61	An initial assessment of the impact of postulated orbit-spin coupling on Mars dust storm variability in fully interactive dust simulations. Icarus, 2019, 317, 649-668.	2.5	20
62	The whirlwinds of Elysium: A catalog and meteorological characteristics of â€œdust devilâ€• vortices observed by InSight on Mars. Icarus, 2021, 355, 114119.	2.5	20
63	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 2: Local Meteorology, Transport Dynamics, and Model Analysis. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006514.	3.6	19
64	Earth-like thermal and dynamical coupling processes in the Martian climate system. Earth-Science Reviews, 2022, 229, 104023.	9.1	18
65	Orbital and Inâ€Situ Investigation of Periodic Bedrock Ridges in Glen Torridon, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	18
66	Large Eddy Simulations of the Dusty Martian Convective Boundary Layer With MarsWRF. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006752.	3.6	17
67	The Surface Energy Budget at Gale Crater During the First 2500 Sols of the Mars Science Laboratory Mission. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006804.	3.6	16
68	Constraints on Marsâ€™ recent equatorial wind regimes from layered deposits and comparison with general circulation model results. Icarus, 2014, 230, 81-95.	2.5	15
69	The Aeolian Environment in Glen Torridon, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	14
70	Replication of the historic record of martian global dust storm occurrence in an atmospheric general circulation model. Icarus, 2019, 317, 197-208.	2.5	12
71	InSight Pressure Data Recalibration, and Its Application to the Study of Longâ€Term Pressure Changes on Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	12
72	Martian sand sheet characterization and implications for formation: A case study. Aeolian Research, 2017, 29, 1-11.	2.7	11

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73	Gravity Wave Observations by the Mars Science Laboratory REMS Pressure Sensor and Comparison With Mesoscale Atmospheric Modeling With MarsWRF. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006907.	3.6	11
74	Advective Fluxes in the Martian Regolith as a Mechanism Driving Methane and Other Trace Gas Emissions to the Atmosphere. Geophysical Research Letters, 2020, 47, e2019GL085694.	4.0	9
75	Diurnal Variability in Aeolian Sediment Transport at Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	9
76	Vertical and horizontal heterogeneity of atmospheric dust loading in northern Gale Crater, Mars. Icarus, 2019, 329, 197-206.	2.5	6
77	Martian Dust. , 2022, , 637-666.		6
78	Multi-year measurements of ripple and dune migration on Mars: Implications for the wind regime and sand transport. Icarus, 2022, 380, 114966.	2.5	5
79	Constraints on Emission Source Locations of Methane Detected by Mars Science Laboratory. Journal of Geophysical Research E: Planets, 2021, 126, .	3.6	5
80	Winter Weakening of Titan's Stratospheric Polar Vortices. Planetary Science Journal, 2022, 3, 73.	3.6	4
81	The Lineâ€ofâ€Sight Extinction Record at Gale Crater as Observed by MSL's Mastcam and Navcam through â^¼2,500â€‰Sols. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006465.	3.6	3
82	Interâ€annual, seasonal and regional variations in the Martian convective boundary layer derived from GCM simulations with a semiâ€interactive dust transport model. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006965.	3.6	3
83	Characteristics of convective vortices and dust devils at gale crater on Mars during MY33. Planetary and Space Science, 2022, 213, 105430.	1.7	2
84	Variability in Titanâ€™s Mesospheric HCN and Temperature Structure as Observed by ALMA. Planetary Science Journal, 2022, 3, 146.	3.6	2
85	EOLIAN BEDFORMS IN THE REGION SURROUNDING THE INSIGHT LANDING SITE, MARS. , 2019, , .		1
86	Dust and water ice variability and their interaction pattern during Martian low-dust and high-dust periods. Planetary and Space Science, 2021, 209, 105357.	1.7	1