

Mark I Richardson

List of Publications by Year in descending order

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docs citations

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times ranked

2034
citing authors

#	ARTICLE	IF	CITATIONS
1	Warm early Mars surface enabled by high-altitude water ice clouds. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	23
2	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
3	Large Eddy Simulations of the Dusty Martian Convective Boundary Layer With MarsWRF. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006752.	3.6	17
4	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
5	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
6	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
7	The sensitivity of solstitial pauses to atmospheric ice and dust in the MarsWRF General Circulation Model. Icarus, 2018, 311, 23-34.	2.5	40
8	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
9	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
10	Simulating Titan's methane cycle with the TitanWRF General Circulation Model. Icarus, 2016, 267, 106-134.	2.5	37
11	Sensitivity of simulated Martian atmospheric temperature to prescribed dust opacity distribution: Comparison of model results with reconstructed data from Mars Exploration Rover missions. Journal of Geophysical Research E: Planets, 2015, 120, 2002-2019.	3.6	7
12	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
13	General circulation models of the dynamics of Pluto's volatile transport on the eve of the New Horizons encounter. Icarus, 2015, 254, 306-323.	2.5	17
14	The origin, evolution, and trajectory of large dust storms on Mars during Mars years 24-30 (1999-2011). Icarus, 2015, 251, 112-127.	2.5	155
15	Threshold for sand mobility on Mars calibrated from seasonal variations of sand flux. Nature Communications, 2014, 5, 5096.	12.8	86
16	Constraints on Mars' recent equatorial wind regimes from layered deposits and comparison with general circulation model results. Icarus, 2014, 230, 81-95.	2.5	15
17	Observations and preliminary science results from the first 100 sols of MSL Rover Environmental Monitoring Station ground temperature sensor measurements at Gale Crater. Journal of Geophysical Research E: Planets, 2014, 119, 745-770.	3.6	67
18	Zonal wavenumber three traveling waves in the northern hemisphere of Mars simulated with a general circulation model. Icarus, 2013, 223, 654-676.	2.5	23

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19	The impact of a realistic vertical dust distribution on the simulation of the Martian General Circulation. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 980-993.	3.6	37
20	Growth and form of the mound in Gale Crater, Mars: Slope wind enhanced erosion and transport. <i>Geology</i> , 2013, 41, 543-546.	4.4	147
21	The impact of resolution on the dynamics of the martian global atmosphere: Varying resolution studies with the MarsWRF GCM. <i>Icarus</i> , 2012, 221, 276-288.	2.5	97
22	Angular momentum conservation in a simplified Venus General Circulation Model. <i>Icarus</i> , 2012, 221, 1173-1176.	2.5	7
23	The Ashima/MIT Mars GCM and argon in the martian atmosphere. <i>Icarus</i> , 2012, 218, 1043-1070.	2.5	30
24	Curvilinear features in the southern hemisphere observed by Mars Global Surveyor Mars Orbiter Camera. <i>Icarus</i> , 2011, 215, 242-252.	2.5	11
25	Atmospheric modeling of Mars methane surface releases. <i>Planetary and Space Science</i> , 2011, 59, 227-237.	1.7	54
26	Stratospheric superrotation in the TitanWRF model. <i>Icarus</i> , 2011, 213, 636-654.	2.5	81
27	Convective instability in the martian middle atmosphere. <i>Icarus</i> , 2010, 208, 574-589.	2.5	25
28	THEMIS-VIS observations of clouds in the martian mesosphere: Altitudes, wind speeds, and decameter-scale morphology. <i>Icarus</i> , 2010, 210, 545-565.	2.5	46
29	Mars Climate Sounder limb profile retrieval of atmospheric temperature, pressure, and dust and water ice opacity. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	220
30	Fitting the Viking lander surface pressure cycle with a Mars General Circulation Model. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	42
31	PlanetWRF: A general purpose, local to global numerical model for planetary atmospheric and climate dynamics. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	220
32	High-resolution atmospheric observations by the Mars Odyssey Thermal Emission Imaging System. <i>Icarus</i> , 2007, 192, 378-395.	2.5	22
33	Surface dust redistribution on Mars as observed by the Mars Global Surveyor and Viking orbiters. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	67
34	A survey of Martian dust devil activity using Mars Global Surveyor Mars Orbiter Camera images. <i>Journal of Geophysical Research</i> , 2005, 110, n/a-n/a.	3.3	105
35	A reanalysis of water abundances in the Martian atmosphere at high obliquity. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	34
36	Aeolian processes in Proctor Crater on Mars: Mesoscale modeling of dune-forming winds. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	68

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37	Observations of the initiation and evolution of the 2001 Mars global dust storm. Journal of Geophysical Research, 2005, 110, .	3.3	108
38	Long-term evolution of transient liquid water on Mars. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	75
39	Relationship between frontal dust storms and transient eddy activity in the northern hemisphere of Mars as observed by Mars Global Surveyor. Journal of Geophysical Research, 2005, 110, .	3.3	68
40	Simulation of the Martian dust cycle with the GFDL Mars GCM. Journal of Geophysical Research, 2004, 109, .	3.3	137
41	Morphology and Composition of the Surface of Mars: Mars Odyssey THEMIS Results. Science, 2003, 300, 2056-2061.	12.6	368
42	Cyclones, tides, and the origin of a cross-equatorial dust storm on Mars. Geophysical Research Letters, 2003, 30, .	4.0	104
43	An assessment of the global, seasonal, and interannual spacecraft record of Martian climate in the thermal infrared. Journal of Geophysical Research, 2003, 108, .	3.3	94
44	Numerical simulation of Martian dust devils. Journal of Geophysical Research, 2003, 108, .	3.3	108
45	On the orbital forcing of Martian water and CO ₂ cycles: A general circulation model study with simplified volatile schemes. Journal of Geophysical Research, 2003, 108, .	3.3	217
46	Meteorology of proposed Mars Exploration Rover landing sites. Journal of Geophysical Research, 2003, 108, .	3.3	44
47	Thermal Emission Imaging System (THEMIS) infrared observations of atmospheric dust and water ice cloud optical depth. Journal of Geophysical Research, 2003, 108, .	3.3	55
48	Investigation of the nature and stability of the Martian seasonal water cycle with a general circulation model. Journal of Geophysical Research, 2002, 107, 7-1.	3.3	153
49	A first look at dust lifting and dust storms near the south pole of Mars with a mesoscale model. Journal of Geophysical Research, 2002, 107, 4-1.	3.3	54
50	Water ice clouds in the Martian atmosphere: General circulation model experiments with a simple cloud scheme. Journal of Geophysical Research, 2002, 107, 2-1.	3.3	81
51	A mesoscale model for the Martian atmosphere. Journal of Geophysical Research, 2002, 107, 3-1.	3.3	49
52	A topographically forced asymmetry in the martian circulation and climate. Nature, 2002, 416, 298-301.	27.8	123
53	Martian surface winds: Insensitivity to orbital changes and implications for aeolian processes. Journal of Geophysical Research, 2001, 106, 32885-32902.	3.3	67
54	Seasonal variation of aerosols in the Martian atmosphere. Journal of Geophysical Research, 2000, 105, 4109-4121.	3.3	26

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55	Mars: The next steps. Eos, 2000, 81, 302.	0.1	1
56	Comparison of microwave and infrared measurements of Martian atmospheric temperatures: Implications for short-term climate variability. Journal of Geophysical Research, 1998, 103, 5911-5918.	3.3	19
57	New dust opacity mapping from Viking infrared thermal mapper data. Journal of Geophysical Research, 1993, 98, 10941-10949.	3.3	69