

# Catherine Johnson

## List of Publications by Year in descending order

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113  
papers

8,326  
citations

50276

46  
h-index

46799

89  
g-index

118  
all docs

118  
docs citations

118  
times ranked

4685  
citing authors

#	ARTICLE	IF	CITATIONS
1	Natural Orthogonal Component Analysis of Daily Magnetic Variations at the Martian Surface: InSight Observations. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	5
2	The Lunar Geophysical Network Landing Sites Science Rationale. <i>Planetary Science Journal</i> , 2022, 3, 40.	3.6	7
3	Science Goals and Mission Concept for a Landed Investigation of Mercury. <i>Planetary Science Journal</i> , 2022, 3, 68.	3.6	2
4	Geologic Context of the OSIRIS-REx Sample Site from High-resolution Topography and Imaging. <i>Planetary Science Journal</i> , 2022, 3, 75.	3.6	10
5	The Formation of Terraces on Asteroid (101955) Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	14
6	Low surface strength of the asteroid Bennu inferred from impact ejecta deposit. <i>Nature Geoscience</i> , 2022, 15, 447-452.	12.9	19
7	Investigation of magnetic field signals during vortex-induced pressure drops at InSight. <i>Planetary and Space Science</i> , 2022, 217, 105487.	1.7	3
8	InSight Constraints on the Global Character of the Martian Crust. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	45
9	The Martian Crustal Magnetic Field. <i>Frontiers in Astronomy and Space Sciences</i> , 2022, 9, .	2.8	9
10	Disk-resolved photometric modeling and properties of asteroid (101955) Bennu. <i>Icarus</i> , 2021, 357, 113724.	2.5	29
11	A high-resolution normal albedo map of asteroid (101955) Bennu. <i>Icarus</i> , 2021, 355, 114133.	2.5	14
12	Mercury sample return to revolutionize our understanding of the solar system. , 2021, 53, .		0
13	Validation of Stereophotoclinometric Shape Models of Asteroid (101955) Bennu during the OSIRIS-REx Mission. <i>Planetary Science Journal</i> , 2021, 2, 82.	3.6	17
14	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multiâ€Instrument Observations, Analysis, and Implications. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006757.	3.6	23
15	Thickness and structure of the martian crust from InSight seismic data. <i>Science</i> , 2021, 373, 438-443.	12.6	140
16	Evidence for a Locally Thinned Lithosphere Associated With Recent Volcanism at Aramaiti Corona, Venus. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006783.	3.6	12
17	Regional Photometric Modeling of Asteroid (101955) Bennu. <i>Planetary Science Journal</i> , 2021, 2, 124.	3.6	4
18	Absence of a long-lived lunar paleomagnetosphere. <i>Science Advances</i> , 2021, 7, .	10.3	18

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19	Mercury's Northern Rise Coreâ€™Field Magnetic Anomaly. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094695.	4.0	9
20	Thermal evolution of Mercury with a volcanic heat-pipe flux: Reconciling early volcanism, tectonism, and magnetism. <i>Science Advances</i> , 2021, 7, eabh2482.	10.3	5
21	Internal rubble properties of asteroid (101955) Bennu. <i>Icarus</i> , 2021, 370, 114665.	2.5	15
22	Bifurcated Current Sheets in Mercuryâ€™s Magnetotail: Observations and Implications. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029417.	2.4	1
23	Space Weather Observations With InSight. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095432.	4.0	5
24	Digital terrain mapping by the OSIRIS-REx mission. <i>Planetary and Space Science</i> , 2020, 180, 104764.	1.7	81
25	Hemispherical differences in the shape and topography of asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	10.3	57
26	Heterogeneous mass distribution of the rubble-pile asteroid (101955) Bennu. <i>Science Advances</i> , 2020, 6, .	10.3	50
27	The Morphometry of Impact Craters on Bennu. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089672.	4.0	20
28	Geophysical Observations of Phobos Transits by InSight. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089099.	4.0	10
29	The Origin of Observed Magnetic Variability for a Sol on Mars From InSight. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006505.	3.6	15
30	Timing of the martian dynamo: New constraints for a core field 4.5 and 3.7 Ga ago. <i>Science Advances</i> , 2020, 6, eaba0513.	10.3	62
31	The Shape of Mercury's Magnetopause: The Picture From MESSENGER Magnetometer Observations and Future Prospects for BepiColombo. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027544.	2.4	20
32	Fault Structure and Origin of Compressional Tectonic Features Within the Smooth Plains on Mercury. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006183.	3.6	7
33	Observations of Extreme ICME Ram Pressure Compressing Mercuryâ€™s Dayside Magnetosphere to the Surface. <i>Astrophysical Journal</i> , 2020, 889, 184.	4.5	22
34	The atmosphere of Mars as observed by InSight. <i>Nature Geoscience</i> , 2020, 13, 190-198.	12.9	161
35	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. <i>Nature Geoscience</i> , 2020, 13, 213-220.	12.9	207
36	Crustal and time-varying magnetic fields at the InSight landing site on Mars. <i>Nature Geoscience</i> , 2020, 13, 199-204.	12.9	68

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37	Dependence of the Interplanetary Magnetic Field on Heliocentric Distance at 0.3–1.7 AU: A Six-Spacecraft Study. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027139.	2.4	4
38	Initial results from the InSight mission on Mars. <i>Nature Geoscience</i> , 2020, 13, 183-189.	12.9	274
39	Transitional impact craters on the Moon: Insight into the effect of target lithology on the impact cratering process. <i>Meteoritics and Planetary Science</i> , 2019, 54, 573-591.	1.6	16
40	Modeling Wind-Driven Ionospheric Dynamo Currents at Mars: Expectations for InSight Magnetic Field Measurements. <i>Geophysical Research Letters</i> , 2019, 46, 5083-5091.	4.0	20
41	Global shape modeling using the OSIRIS-REx scanning Laser Altimeter. <i>Planetary and Space Science</i> , 2019, 177, 104688.	1.7	32
42	Revolutionizing Our Understanding of the Solar System via Sample Return from Mercury. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	10
43	Distribution of Areal Strain on Mercury: Insights Into the Interaction of Volcanism and Global Contraction. <i>Geophysical Research Letters</i> , 2019, 46, 608-615.	4.0	3
44	SEIS: InSight's Seismic Experiment for Internal Structure of Mars. <i>Space Science Reviews</i> , 2019, 215, 12.	8.1	238
45	Shallow seismic activity and young thrust faults on the Moon. <i>Nature Geoscience</i> , 2019, 12, 411-417.	12.9	64
46	Mercury: Inside the Iron Planet. <i>Elements</i> , 2019, 15, 21-26.	0.5	6
47	The dynamic geophysical environment of (101955) Bennu based on OSIRIS-REx measurements. <i>Nature Astronomy</i> , 2019, 3, 352-361.	10.1	132
48	Shape of (101955) Bennu indicative of a rubble pile with internal stiffness. <i>Nature Geoscience</i> , 2019, 12, 247-252.	12.9	179
49	The global surface roughness of 25143 Itokawa. <i>Icarus</i> , 2019, 325, 141-152.	2.5	13
50	InSight Auxiliary Payload Sensor Suite (APSS). <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	104
51	Pre-mission InSights on the Interior of Mars. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	85
52	Mercury's Internal Magnetic Field. , 2018, , 114-143.		12
53	Structure and Configuration of Mercury's Magnetosphere. , 2018, , 430-460.		7
54	The Mars 2020 Candidate Landing Sites: A Magnetic Field Perspective. <i>Earth and Space Science</i> , 2018, 5, 410-424.	2.6	12

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55	A New Magnetic Field Activity Proxy for Mars From MAVEN Data. <i>Geophysical Research Letters</i> , 2018, 45, 5899-5907.	4.0	20
56	PSV10: A Global Data Set for 0–10 Ma Time-Averaged Field and Paleosecular Variation Studies. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 1533-1558.	2.5	70
57	Statistical study of ICME effects on Mercury's magnetospheric boundaries and northern cusp region from MESSENGER. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 4960-4975.	2.4	24
58	Global-scale external magnetic fields at Mars measured at satellite altitude. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1243-1257.	3.6	18
59	A Dynamic Model of Mercury's Magnetospheric Magnetic Field. <i>Geophysical Research Letters</i> , 2017, 44, 10147-10154.	4.0	30
60	The OSIRIS-REx Laser Altimeter (OLA) Investigation and Instrument. <i>Space Science Reviews</i> , 2017, 212, 899-924.	8.1	97
61	MESSENGER observations of induced magnetic fields in Mercury's core. <i>Geophysical Research Letters</i> , 2016, 43, 2436-2444.	4.0	51
62	Magnetic mineralogy of the Mercurian lithosphere. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 2225-2238.	3.6	11
63	A whole new Mercury: MESSENGER reveals a dynamic planet at the last frontier of the inner solar system. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 2349-2362.	3.6	13
64	The low-degree shape of Mercury. <i>Geophysical Research Letters</i> , 2015, 42, 6951-6958.	4.0	36
65	Improving solar wind modeling at Mercury: Incorporating transient solar phenomena into the WSA-ENLIL model with the Cone extension. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 5667-5685.	2.4	16
66	Modeling seismic energy propagation in highly scattering environments. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 515-537.	3.6	8
67	Effects of lateral variations in megaregolith thickness on predicted lunar seismic signals. <i>Geophysical Research Letters</i> , 2015, 42, 10,171.	4.0	5
68	Modular model for Mercury's magnetospheric magnetic field confined within the average observed magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 4503-4518.	2.4	59
69	<i>Planetary Seismology</i> , 2015, , 65-120.		37
70	Low-altitude magnetic field measurements by MESSENGER reveal Mercury's ancient crustal field. <i>Science</i> , 2015, 348, 892-895.	12.6	89
71	The OSIRIS-REx target asteroid (101955) Bennu: Constraints on its physical, geological, and dynamical nature from astronomical observations. <i>Meteoritics and Planetary Science</i> , 2015, 50, 834-849.	1.6	168
72	Constraints on the secular variation of Mercury's magnetic field from the combined analysis of MESSENGER and Mariner 10 data. <i>Geophysical Research Letters</i> , 2014, 41, 6627-6634.	4.0	23

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73	Mercury's Weather-Beaten Surface: Understanding Mercury in the Context of Lunar and Asteroidal Space Weathering Studies. <i>Space Science Reviews</i> , 2014, 181, 121-214.	8.1	108
74	Steady-state field-aligned currents at Mercury. <i>Geophysical Research Letters</i> , 2014, 41, 7444-7452.	4.0	55
75	Mercury's surface magnetic field determined from proton reflection magnetometry. <i>Geophysical Research Letters</i> , 2014, 41, 4463-4470.	4.0	39
76	MESSENGER observations of Mercury's dayside magnetosphere under extreme solar wind conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8087-8116.	2.4	125
77	Solar wind forcing at Mercury: WSA-NLIL model results. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 45-57.	2.4	46
78	A comparison of magnetic overshoots at the bow shocks of Mercury and Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 4381-4390.	2.4	17
79	Mercury's magnetopause and bow shock from MESSENGER Magnetometer observations. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 2213-2227.	2.4	182
80	The curious case of Mercury's internal structure. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1204-1220.	3.6	210
81	A magnetic disturbance index for Mercury's magnetic field derived from MESSENGER Magnetometer data. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 3875-3886.	2.5	39
82	Topographic characterization of lunar complex craters. <i>Geophysical Research Letters</i> , 2013, 40, 38-42.	4.0	48
83	Gravity Field and Internal Structure of Mercury from MESSENGER. <i>Science</i> , 2012, 336, 214-217.	12.6	305
84	Topography of the Northern Hemisphere of Mercury from MESSENGER Laser Altimetry. <i>Science</i> , 2012, 336, 217-220.	12.6	223
85	MESSENGER observations of a flux-transfer event shower at Mercury. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	85
86	Investigation of scattering in lunar seismic coda. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	31
87	Characteristics of the plasma distribution in Mercury's equatorial magnetosphere derived from MESSENGER Magnetometer observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	23
88	Observations of Mercury's northern cusp region with MESSENGER's Magnetometer. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	86
89	Low-degree structure in Mercury's planetary magnetic field. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	131
90	MESSENGER observations of Mercury's magnetic field structure. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	109

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91	Plasma pressure in Mercury's equatorial magnetosphere derived from MESSENGER Magnetometer observations. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	38
92	The Global Magnetic Field of Mercury from MESSENGER Orbital Observations. <i>Science</i> , 2011, 333, 1859-1862.	12.6	301
93	Mercury's magnetospheric magnetic field after the first two MESSENGER flybys. <i>Icarus</i> , 2010, 209, 23-39.	2.5	110
94	Accommodation of lithospheric shortening on Mercury from altimetric profiles of ridges and lobate scarps measured during MESSENGER flybys 1 and 2. <i>Icarus</i> , 2010, 209, 247-255.	2.5	29
95	A simple physical model for deep moonquake occurrence times. <i>Physics of the Earth and Planetary Interiors</i> , 2010, 182, 152-160.	1.9	13
96	Paleomagnetic field properties at high southern latitude. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	2.5	63
97	Constraints on deep moonquake focal mechanisms through analyses of tidal stress. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	28
98	Moon meteoritic seismic hum: Steady state prediction. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	53
99	Lunar paleointensity measurements: Implications for lunar magnetic evolution. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 168, 71-87.	1.9	60
100	The Structure of Mercury's Magnetic Field from MESSENGER's First Flyby. <i>Science</i> , 2008, 321, 82-85.	12.6	194
101	Temporal and spatial properties of some deep moonquake clusters. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	39
102	A magmatic loading model for coronae on Venus. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	37
103	Paleosecular variation and the average geomagnetic field at $\hat{A}\pm 20\hat{A}^\circ$ latitude. <i>Geochemistry, Geophysics, Geosystems</i> , 2006, 7, n/a-n/a.	2.5	28
104	Evolution of the Tharsis region of Mars: insights from magnetic field observations. <i>Earth and Planetary Science Letters</i> , 2005, 230, 241-254.	4.4	81
105	New events discovered in the Apollo lunar seismic data. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	36
106	Paleomagnetism of the southwestern U.S.A. recorded by 0-5 Ma igneous rocks. <i>Geochemistry, Geophysics, Geosystems</i> , 2003, 4, .	2.5	51
107	A conceptual model for the relationship between coronae and large-scale mantle dynamics on Venus. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	56
108	Mars Orbiter Laser Altimeter: Experiment summary after the first year of global mapping of Mars. <i>Journal of Geophysical Research</i> , 2001, 106, 23689-23722.	3.3	1,344

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109	Internal Structure and Early Thermal Evolution of Mars from Mars Global Surveyor Topography and Gravity. <i>Science</i> , 2000, 287, 1788-1793.	12.6	518
110	Persistently anomalous Pacific geomagnetic fields. <i>Geophysical Research Letters</i> , 1998, 25, 1011-1014.	4.0	55
111	Lithospheric flexure on Venus. <i>Geophysical Journal International</i> , 1994, 119, 627-647.	2.4	59
112	Features on Venus generated by plate boundary processes. <i>Journal of Geophysical Research</i> , 1992, 97, 13533-13544.	3.3	82
113	PHOTOGRAMMETRIC PROCESSING OF OSIRIS-REX IMAGES OF ASTEROID (101955) BENNU. <i>ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences</i> , 0, V-3-2020, 587-594.	0.0	4