Kathleen E Mandt

List of Publications by Year
in descending order

129 papers	3,579 citations	87888 38 h-index	155660 55 g-index
146 all docs	146 docs citations	146 times ranked	2539 citing authors

#	Article	IF	Citations
1	In Situ exploration of the giant planets. Experimental Astronomy, 2022, 54, 975-1013.	3.7	5
2	Science goals and new mission concepts for future exploration of Titanâ€™s atmosphere, geology and habitability: titan POlar scout/orbitEr and in situ lake lander and DrONe explorer (POSEIDON). Experimental Astronomy, 2022, 54, 911-973.	3.7	5
3	Exogenic origin for the volatiles sampled by the Lunar CRater Observation and Sensing Satellite impact. Nature Communications, 2022, 13, 642.	12.8	13
4	Hierarchical Bayesian Atmospheric Retrieval Modeling for Population Studies of Exoplanet Atmospheres: A Case Study on the Habitable Zone. Astronomical Journal, 2022, 163, 140.	4.7	9
5	Dual storage and release of molecular oxygen in comet 67P/Churyumovâ€“Gerasimenko. Nature Astronomy, 2022, 6, 724-730.	10.1	8
6	The Case for a New Frontiersâ€“Class Uranus Orbiter: System Science at an Underexplored and Unique World with a Mid-scale Mission. Planetary Science Journal, 2022, 3, 58.	3.6	12
7	The Role of Atmospheric Exchange in Falseâ€Positive Biosignature Detection. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	4
8	TRAPPIST-1h as an Exo-Titan. I. The Role of Assumptions about Atmospheric Parameters in Understanding an Exoplanet Atmosphere. Astrophysical Journal, 2022, 930, 73.	4.5	0
9	The Volatile Carbon-to-oxygen Ratio as a Tracer for the Formation Locations of Interstellar Comets. Planetary Science Journal, 2022, 3, 150.	3.6	10
10	Science Goals and Mission Objectives for the Future Exploration of Ice Giants Systems: A Horizon 2061 Perspective. Space Science Reviews, 2021, 217, 1.	8.1	11
11	FUV Observations of the Inner Coma of 46P/Wirtanen. Planetary Science Journal, 2021, 2, 8.	3.6	6
12	The Fundamental Connections between the Solar System and Exoplanetary Science. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006643.	3.6	15
13	Planetary and Astrobiology Blank Papers: Science White Papers Cancelled or Downscaled Due to Direct Impact of COVID-19 and National-scale Civil Action. , 2021, 53, .		0
14	Looking Back is Looking Forward: The Need for Retrospective Solar System Observations in Advance of Exoplanet Retrievals. , 2021, 53, .		1
15	The Value of a Dual Anonymous System for Reducing Bias in Reviews of Planetary Research and Analysis Proposals and Scientific Papers. , 2021, 53, .		1
16	The Science Case for a Titan Flagship-class Orbiter with Probes. , 2021, 53, .		0
17	Recommendations for Addressing Priority Io Science in the Next Decade. , 2021, 53, .		0
18	The Science Case for Io Exploration. , 2021, 53, .		1

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19	Lunar Volatiles and Solar System Science. , 2021, 53, .		1
20	Modeling Plutoâ€™s minimum pressure: Implications for haze production. Icarus, 2021, 356, 114070.	2.5	10
21	Potential Ocean Worlds. , 2021, 53, .		0
22	Cold Traps of Hypervolatiles in the Protosolar Nebula at the Origin of the Peculiar Composition of Comet C/2016 R2 (PanSTARRS). Planetary Science Journal, 2021, 2, 72.	3.6	16
23	Transmission Spectroscopy of the Earthâ€“Sun System to Inform the Search for Extrasolar Life. Planetary Science Journal, 2021, 2, 140.	3.6	8
24	On the Utility of Transmission Color Analysis i: Differentiating Super-Earths and Sub-Neptunes. Astronomical Journal, 2021, 162, 168.	4.7	1
25	Neptune Odyssey: A Flagship Concept for the Exploration of the Neptuneâ€“Triton System. Planetary Science Journal, 2021, 2, 184.	3.6	11
26	LRO/LAMP observations of the lunar helium exosphere: constraints on thermal accommodation and outgassing rate. Monthly Notices of the Royal Astronomical Society, 2021, 501, 4438-4451.	4.4	5
27	Tritonâ€™s Variable Interaction With Neptuneâ€™s Magnetospheric Plasma. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029740.	2.4	9
28	Retrieving Exoplanet Atmospheres Using Planetary Infrared Excess: Prospects for the Night Side of WASP-43 b and Other Hot Jupiters. Astrophysical Journal Letters, 2021, 921, L4.	8.3	5
29	Determining the origin of the building blocks of the Ice Giants based on analogue measurements from comets. Monthly Notices of the Royal Astronomical Society, 2020, 491, 488-494.	4.4	8
30	Escape and evolution of Titanâ€™s N2 atmosphere constrained by 14N/15N isotope ratios. Monthly Notices of the Royal Astronomical Society, 2020, 500, 2020-2035.	4.4	8
31	Tracing the Origins of the Ice Giants Through Noble Gas Isotopic Composition. Space Science Reviews, 2020, 216, 1.	8.1	13
32	Nitrogen Atmospheres of the Icy Bodies in the Solar System. Space Science Reviews, 2020, 216, 1.	8.1	11
33	Farâ€UV Observations of Lunar Rayed Craters with LROâ€LAMP. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006269.	3.6	3
34	Key Atmospheric Signatures for Identifying the Source Reservoirs of Volatiles in Uranus and Neptune. Space Science Reviews, 2020, 216, 1.	8.1	14
35	The carbon monoxide-rich interstellar comet 2I/Borisov. Nature Astronomy, 2020, 4, 867-871.	10.1	60
36	Uranus and Neptune missions: A study in advance of the next Planetary Science Decadal Survey. Planetary and Space Science, 2019, 177, 104680.	1.7	50

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37	An Examination of Several Discrete Lunar Nearside Photometric Anomalies Observed in Lymanâ€Î± Maps. Journal of Geophysical Research E: Planets, 2019, 124, 294-315.	3.6	5
38	Effects of Space Weathering and Porosity on the Farâ€UV Reflectance of Amundsen Crater. Journal of Geophysical Research E: Planets, 2019, 124, 823-836.	3.6	16
39	Comparison of neutral outgassing of comet 67P/Churyumov-Gerasimenko inbound and outbound beyond 3 AU from ROSINA/DFMS. Astronomy and Astrophysics, 2019, 630, A30.	5.1	8
40	Influence of collisions on ion dynamics in the inner comae of four comets. Astronomy and Astrophysics, 2019, 630, A48.	5.1	4
41	Titan's cold case files - Outstanding questions after Cassini-Huygens. Planetary and Space Science, 2018, 155, 50-72.	1.7	37
42	Recent Advancements and Motivations of Simulated Pluto Experiments. Space Science Reviews, 2018, 214, 1.	8.1	2
43	Noble Gas Abundance Ratios Indicate the Agglomeration of 67P/Churyumovâ€“Gerasimenko from Warmed-up Ice. Astrophysical Journal Letters, 2018, 865, L11.	8.3	11
44	Origin of Molecular Oxygen in Comets: Current Knowledge and Perspectives. Space Science Reviews, 2018, 214, 1.	8.1	23
45	The Far Ultraviolet Wavelength Dependence of the Lunar Phase Curve as Seen by LRO LAMP. Journal of Geophysical Research E: Planets, 2018, 123, 2550-2563.	3.6	11
46	Contributions of solar wind and micrometeoroids to molecular hydrogen in the lunar exosphere. Icarus, 2017, 283, 31-37.	2.5	30
47	Isotopic composition of CO₂in the coma of 67P/Churyumov-Gerasimenko measured with ROSINA/DFMS. Astronomy and Astrophysics, 2017, 605, A50.	5.1	35
48	Photochemistry on Pluto â€“ I. Hydrocarbons and aerosols. Monthly Notices of the Royal Astronomical Society, 2017, 472, 104-117.	4.4	45
49	Photochemistry on Pluto: part II HCN and nitrogen isotope fractionation. Monthly Notices of the Royal Astronomical Society, 2017, 472, 118-128.	4.4	38
50	Photoionization Modeling of Titanâ€™s Dayside Ionosphere. Astrophysical Journal Letters, 2017, 850, L26.	8.3	3
51	Interplanetary coronal mass ejection observed at STEREOâ€A, Mars, comet 67P/Churyumovâ€Gerasimenko, Saturn, and New Horizons en route to Pluto: Comparison of its Forbush decreases at 1.4, 3.1, and 9.9ÂAU. Journal of Geophysical Research: Space Physics, 2017, 122, 7865-7890.	2.4	87
52	Titan's ionosphere: A survey of solar EUV influences. Journal of Geophysical Research: Space Physics, 2017, 122, 7491-7503.	2.4	17
53	Two years of solar wind and pickup ion measurements at comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S262-S267.	4.4	5
54	Comets as Tracers of Solar System Formation and Evolution. , 2017, , 5-7.		0

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55	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. , 2017, , 297-342.		0
56	Mass-loading, pile-up, and mirror-mode waves at comet 67P/Churyumov-Gerasimenko. Annales Geophysicae, 2016, 34, 1-15.	1.6	46
57	RPC observation of the development and evolution of plasma interaction boundaries at 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S9-S22.	4.4	62
58	Ion and aerosol precursor densities in Titan's ionosphere: A multiâ€instrument case study. Journal of Geophysical Research: Space Physics, 2016, 121, 10075-10090.	2.4	23
59	Charged particle signatures of the diamagnetic cavity of comet 67P/Churyumovâ€"Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S415-S421.	4.4	28
60	Characterizing cometary electrons with kappa distributions. Journal of Geophysical Research: Space Physics, 2016, 121, 7407-7422.	2.4	62
61	THE ROLE OF NITROGEN IN TITANâ€™S UPPER ATMOSPHERIC HYDROCARBON CHEMISTRY OVER THE SOLAR CYCLE. Astrophysical Journal, 2016, 823, 163.	4.5	6
62	Solar wind interaction with comet 67P: Impacts of corotating interaction regions. Journal of Geophysical Research: Space Physics, 2016, 121, 949-965.	2.4	33
63	Isotopic constraints on the source of Pluto×³s nitrogen and the history of atmospheric escape. Planetary and Space Science, 2016, 130, 104-109.	1.7	4
64	LRO-LAMP detection of geologically young craters within lunar permanently shaded regions. Icarus, 2016, 273, 114-120.	2.5	15
65	Ion chemistry in the coma of comet 67P near perihelion. Monthly Notices of the Royal Astronomical Society, 2016, 462, S67-S77.	4.4	28
66	Suprathermal electrons near the nucleus of comet 67P/Churyumovâ€Gerasimenko at 3â€‰AU: Model comparisons with Rosetta data. Journal of Geophysical Research: Space Physics, 2016, 121, 5815-5836.	2.4	49
67	Statistical analysis of suprathermal electron drivers at 67P/Churyumovâ€"Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S312-S322.	4.4	45
68	Ionospheric plasma of comet 67P probed by<i>Rosetta</i>at 3Âau from the Sun. Monthly Notices of the Royal Astronomical Society, 2016, 462, S331-S351.	4.4	75
69	The presence of clathrates in comet 67P/Churyumov-Gerasimenko. Science Advances, 2016, 2, e1501781.	10.3	38
70	CME impact on comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S45-S56.	4.4	42
71	SUBSURFACE CHARACTERIZATION OF 67P/CHURYUMOVâ€"GERASIMENKOâ€™S ABYDOS SITE. Astrophysical Journal, 2016, 822, 98.	4.5	11
72	ORIGIN OF MOLECULAR OXYGEN IN COMET 67P/CHURYUMOVâ€"GERASIMENKO. Astrophysical Journal Letters, 2016, 823, L41.	8.3	58

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73	13C and 15N fractionation of CH4/N2 mixtures during photochemical aerosol formation: Relevance to Titan. Icarus, 2016, 270, 421-428.	2.5	31
74	Lunar swirls: Far-UV characteristics. Icarus, 2016, 273, 68-74.	2.5	29
75	Space Weather at Comet 67P/Churyumovâ€"Gerasimenko Before its Perihelion. Earth, Moon and Planets, 2016, 117, 1-22.	0.6	8
76	Yardang. , 2015, , 2339-2347.		0
77	The Rosetta Ion and Electron Sensor (IES) measurement of the development of pickup ions from comet 67P/Churyumovâ€Gerasimenko. Geophysical Research Letters, 2015, 42, 3093-3099.	4.0	45
78	Spatial distribution of lowâ€energy plasma around comet 67P/CG from Rosetta measurements. Geophysical Research Letters, 2015, 42, 4263-4269.	4.0	74
79	Composition-dependent outgassing of comet 67P/Churyumov-Gerasimenko from ROSINA/DFMS. Astronomy and Astrophysics, 2015, 583, A4.	5.1	67
80	Suprathermal electron environment of comet 67P/Churyumov-Gerasimenko: Observations from the Rosetta Ion and Electron Sensor. Astronomy and Astrophysics, 2015, 583, A24.	5.1	51
81	ROSINA/DFMS and IES observations of 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. Astronomy and Astrophysics, 2015, 583, A2.	5.1	43
82	Rosetta observations of solar wind interaction with the comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A21.	5.1	48
83	EFFECTS OF NITROGEN PHOTOABSORPTION CROSS SECTION RESOLUTION ON MINOR SPECIES VERTICAL PROFILES IN TITANâ€™S UPPER ATMOSPHERE. Astrophysical Journal Letters, 2015, 801, L14.	8.3	9
84	Evolution of the ion environment of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A20.	5.1	76
85	An empirical approach to modeling ion production rates in Titan's ionosphere II: Ion production rates on the nightside. Journal of Geophysical Research: Space Physics, 2015, 120, 1281-1298.	2.4	14
86	An empirical approach to modeling ion production rates in Titan's ionosphere I: Ion production rates on the dayside and globally. Journal of Geophysical Research: Space Physics, 2015, 120, 1264-1280.	2.4	18
87	A Revised Sensitivity Model for Cassini INMS: Results at Titan. Space Science Reviews, 2015, 190, 47-84.	8.1	54
88	A qualitative study of the retention and release of volatile gases in JSC-1A lunar soil simulant at room temperature under ultrahigh vacuum (UHV) conditions. Icarus, 2015, 255, 30-43.	2.5	7
89	Comparative planetology of the history of nitrogen isotopes in the atmospheres of Titan and Mars. Icarus, 2015, 254, 259-261.	2.5	13
90	Performance evaluation of a prototype multi-bounce time-of-flight mass spectrometer in linear mode and applications in space science. Planetary and Space Science, 2015, 117, 436-443.	1.7	7

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91	Constraints from Comets on the Formation and Volatile Acquisition of the Planets and Satellites. Space Science Reviews, 2015, 197, 297-342.	8.1	25
92	Comets as Tracers of Solar System Formation and Evolution. Space Science Reviews, 2015, 197, 5-7.	8.1	3
93	Uncertainty for calculating transport on Titan: A probabilistic description of bimolecular diffusion parameters. Planetary and Space Science, 2015, 117, 377-384.	1.7	2
94	Ionization balance in Titanâ€™s nightside ionosphere. Icarus, 2015, 248, 539-546.	2.5	22
95	Plateau Degradation Landforms. , 2015, , 1587-1595.		0
96	NEW INSIGHTS ON SATURN'S FORMATION FROM ITS NITROGEN ISOTOPIC COMPOSITION. Astrophysical Journal Letters, 2014, 796, L28.	8.3	22
97	Science goals and mission concept for the future exploration of Titan and Enceladus. Planetary and Space Science, 2014, 104, 59-77.	1.7	15
98	Yardang. , 2014, , 1-10.		0
99	PROTOSOLAR AMMONIA AS THE UNIQUE SOURCE OF TITAN's NITROGEN. Astrophysical Journal Letters, 2014, 788, L24.	8.3	74
100	Developing a selfâ€consistent description of Titan's upper atmosphere without hydrodynamic escape. Journal of Geophysical Research: Space Physics, 2014, 119, 4957-4972.	2.4	38
101	Plateau Degradation Landforms. , 2014, , 1-10.		0
102	Negative ion densities in the ionosphere of Titanâ€“Cassini RPWS/LP results. Planetary and Space Science, 2013, 84, 153-162.	1.7	73
103	On the possible noble gas deficiency of Plutoâ€™s atmosphere. Icarus, 2013, 225, 856-861.	2.5	16
104	THE¹²C/¹³C RATIO ON TITAN FROM<i>CASSINI</i>INMS MEASUREMENTS AND IMPLICATIONS FOR THE EVOLUTION OF METHANE. Astrophysical Journal, 2012, 749, 160.	4.5	66
105	ISOTOPIC RATIOS IN TITAN's METHANE: MEASUREMENTS AND MODELING. Astrophysical Journal, 2012, 749, 159.	4.5	91
106	Ion densities and composition of Titan's upper atmosphere derived from the Cassini Ion Neutral Mass Spectrometer: Analysis methods and comparison of measured ion densities to photochemical model simulations. Journal of Geophysical Research, 2012, 117, .	3.3	67
107	A prototype mass spectrometer for <i>in situ</i> analysis of cave atmospheres. Review of Scientific Instruments, 2012, 83, 105116.	1.3	3
108	Titan's ionospheric composition and structure: Photochemical modeling of Cassini INMS data. Journal of Geophysical Research, 2012, 117, .	3.3	60

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109	The observed composition of ions outflowing from Titan. Geophysical Research Letters, 2012, 39, .	4.0	12
110	Comparisons of Cassini flybys of the Titan magnetospheric interaction with an MHD model: Evidence for organized behavior at high altitudes. Icarus, 2012, 217, 43-54.	2.5	8
111	Investigating magnetospheric interaction effects on Titanâ€™s ionosphere with the Cassini orbiter Ion Neutral Mass Spectrometer, Langmuir Probe and magnetometer observations during targeted flybys. Icarus, 2012, 219, 534-555.	2.5	15
112	Titan's thermospheric response to various plasma environments. Journal of Geophysical Research, 2011, 116, .	3.3	73
113	Simulating the one-dimensional structure of Titan's upper atmosphere: 3. Mechanisms determining methane escape. Journal of Geophysical Research, 2011, 116, .	3.3	24
114	REMOVAL OF TITAN'S ATMOSPHERIC NOBLE GASES BY THEIR SEQUESTRATION IN SURFACE CLATHRATES. Astrophysical Journal Letters, 2011, 740, L9.	8.3	28
115	Investigation of the force balance in the Titan ionosphere: Cassini T5 flyby model/data comparisons. Icarus, 2010, 210, 867-880.	2.5	13
116	Yardangs in terrestrial ignimbrites: Synergistic remote and field observations on Earth with applications to Mars. Planetary and Space Science, 2010, 58, 459-471.	1.7	84
117	Simulating the oneâ€dimensional structure of Titan's upper atmosphere: 1. Formulation of the Titan Global Ionosphereâ€Thermosphere Model and benchmark simulations. Journal of Geophysical Research, 2010, 115, .	3.3	34
118	Simulating the oneâ€dimensional structure of Titan's upper atmosphere: 2. Alternative scenarios for methane escape. Journal of Geophysical Research, 2010, 115, .	3.3	27
119	Distinct erosional progressions in the Medusae Fossae Formation, Mars, indicate contrasting environmental conditions. Icarus, 2009, 204, 471-477.	2.5	40
120	A primordial origin for the atmospheric methane of Saturnâ€™s moon Titan. Icarus, 2009, 204, 749-751.	2.5	31
121	Isotopic evolution of the major constituents of Titan's atmosphere based on Cassini data. Planetary and Space Science, 2009, 57, 1917-1930.	1.7	63
122	INMS-derived composition of Titan's upper atmosphere: Analysis methods and model comparison. Planetary and Space Science, 2009, 57, 1895-1916.	1.7	152
123	Structure of Titan's ionosphere: Model comparisons with Cassini data. Planetary and Space Science, 2009, 57, 1834-1846.	1.7	68
124	On the amount of heavy molecular ions in Titan's ionosphere. Planetary and Space Science, 2009, 57, 1857-1865.	1.7	96
125	Heavy ions, temperatures and winds in Titan's ionosphere: Combined Cassini CAPS and INMS observations. Planetary and Space Science, 2009, 57, 1847-1856.	1.7	113
126	FORMATION CONDITIONS OF ENCELADUS AND ORIGIN OF ITS METHANE RESERVOIR. Astrophysical Journal, 2009, 701, L39-L42.	4.5	24

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127	Origin of the Medusae Fossae Formation, Mars: Insights from a synoptic approach. Journal of Geophysical Research, 2008, 113, .	3.3	141
128	The source of heavy organics and aerosols in Titan's atmosphere. Proceedings of the International Astronomical Union, 2008, 4, 321-326.	0.0	14
129	First in-situ detection of the cometary ammonium ion NH$_4^{+}$ (protonated ammonia NH) Tj ETQq1 1 0.784314 rgBT /Overlock 1 Society, 0, , stw3370.	4.4	6