

# Masatoshi Yamauchi

## List of Publications by Year in descending order

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109  
papers

3,405  
citations

182225

30  
h-index

182931

54  
g-index

131  
all docs

131  
docs citations

131  
times ranked

2524  
citing authors

#	ARTICLE	IF	CITATIONS
1	What makes a planet habitable?. <i>Astronomy and Astrophysics Review</i> , 2009, 17, 181-249.	9.1	281
2	The Analyzer of Space Plasmas and Energetic Atoms (ASPERA-3) for the Mars Express Mission. <i>Space Science Reviews</i> , 2007, 126, 113-164.	3.7	241
3	Solar Wind-Induced Atmospheric Erosion at Mars: First Results from ASPERA-3 on Mars Express. <i>Science</i> , 2004, 305, 1933-1936.	6.0	204
4	Birth of a comet magnetosphere: A spring of water ions. <i>Science</i> , 2015, 347, aaa0571.	6.0	107
5	Carbon dioxide photoelectron energy peaks at Mars. <i>Icarus</i> , 2006, 182, 371-382.	1.1	105
6	Mars Express and Venus Express multi-point observations of geoeffective solar flare events in December 2006. <i>Planetary and Space Science</i> , 2008, 56, 873-880.	0.9	102
7	A comet-like escape of ionospheric plasma from Mars. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	94
8	Structure of the martian wake. <i>Icarus</i> , 2006, 182, 329-336.	1.1	81
9	Locations of Atmospheric Photoelectron Energy Peaks Within the Mars Environment. <i>Space Science Reviews</i> , 2007, 126, 389-402.	3.7	81
10	Solar forcing and planetary ion escape from Mars. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	77
11	Evolution of the ion environment of comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2015, 583, A20.	2.1	76
12	Plasma transfer processes at the magnetopause. <i>Space Science Reviews</i> , 1999, 88, 207-283.	3.7	69
13	Simultaneous prenoon and postnoon observations of three field-aligned current systems from Viking and DMSP-F7. <i>Journal of Geophysical Research</i> , 1995, 100, 119.	3.3	63
14	Solar cycle effects on the ion escape from Mars. <i>Geophysical Research Letters</i> , 2013, 40, 6028-6032.	1.5	58
15	Seasonal variation of Martian pick-up ions: Evidence of breathing exosphere. <i>Planetary and Space Science</i> , 2015, 119, 54-61.	0.9	56
16	Evolution of the ion environment of comet 67P during the Rosetta mission as seen by RPC-ICA. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S252-S261.	1.6	55
17	Characteristics of high altitude oxygen ion energization and outflow as observed by Cluster: a statistical study. <i>Annales Geophysicae</i> , 2006, 24, 1099-1112.	0.6	55
18	Electron oscillations in the induced martian magnetosphere. <i>Icarus</i> , 2006, 182, 360-370.	1.1	54

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19	Atmospheric origin of cold ion escape from Mars. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	49
20	On the relation between plasma escape and the Martian crustal magnetic field. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	49
21	Ionospheric plasma acceleration at Mars: ASPERA-3 results. <i>Icarus</i> , 2006, 182, 308-319.	1.1	48
22	The interplanetary magnetic field $\langle B_{\text{sub}} \rangle$ effects on large-scale field-aligned currents near local noon: Contributions from cusp part and noncusp part. <i>Journal of Geophysical Research</i> , 1993, 98, 5761-5767.	3.3	44
23	Hydrogen exosphere at Mars: Pickup protons and their acceleration at the bow shock. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	43
24	Classification of Large-Scale and Meso-Scale Ion Dispersion Patterns Observed by Viking over the Cusp-Mantle Region. , 1994, , 99-109.		42
25	Wedge-like dispersion of sub-keV ions in the dayside magnetosphere: Particle simulation and Viking observation. <i>Journal of Geophysical Research</i> , 2001, 106, 29571-29584.	3.3	40
26	Ionospheric signature of the cusp as seen by incoherent scatter radar. <i>Journal of Geophysical Research</i> , 1996, 101, 10947-10963.	3.3	39
27	An assessment of the role of the centrifugal acceleration mechanism in high altitude polar cap oxygen ion outflow. <i>Annales Geophysicae</i> , 2008, 26, 145-157.	0.6	38
28	Ionospheric Response Observed by EISCAT During the 6 <sup>th</sup> 8 September 2017 Space Weather Event: Overview. <i>Space Weather</i> , 2018, 16, 1437-1450.	1.3	38
29	The low-latitude boundary layer at mid-altitudes: Relation to large-scale Birkeland currents. <i>Geophysical Research Letters</i> , 1993, 20, 2251-2254.	1.5	37
30	Boundary layer polarization and voltage in the 14 MLT region. <i>Journal of Geophysical Research</i> , 1995, 100, 7587.	3.3	32
31	Low-altitude acceleration of ionospheric ions at Mars. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	30
32	Heavy-ion flux enhancement in the vicinity of the Martian ionosphere during CIR passage: Mars Express ASPERA-3 observations. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	29
33	Auroral Plasma Acceleration Above Martian Magnetic Anomalies. <i>Space Science Reviews</i> , 2007, 126, 333-354.	3.7	28
34	Atmospheric loss from the dayside open polar region and its dependence on geomagnetic activity: implications for atmospheric escape on evolutionary timescales. <i>Annales Geophysicae</i> , 2017, 35, 721-731.	0.6	28
35	Freja observations of multiple injection events in cusp. <i>Geophysical Research Letters</i> , 1994, 21, 1919-1922.	1.5	27
36	On the origin of the energetic ion events measured upstream of the Earth's bow shock by STEREO, Cluster, and Geotail. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	26

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37	The interplanetary magnetic field $B_y$ -dependent field-aligned current in the dayside polar cap under quiet conditions. <i>Journal of Geophysical Research</i> , 1989, 94, 2684-2690.	3.3	25
38	Fast tailward flows in the plasma sheet boundary layer during a substorm on 9 March 2008: THEMIS observations. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	25
39	Lower-thermosphere-ionosphere (LTI) quantities: current status of measuring techniques and models. <i>Annales Geophysicae</i> , 2021, 39, 189-237.	0.6	25
40	Statistics of high-altitude and high-latitude $O^+$ ion outflows observed by Cluster/CIS. <i>Annales Geophysicae</i> , 2005, 23, 1909-1916.	0.6	25
41	The wave-assisted cusp model: Comparison to low-altitude observations. <i>Physics and Chemistry of the Earth</i> , 1997, 22, 729-734.	0.3	24
42	Growth Mechanism of Metal Clusters on a Graphene/Ru(0001) Template. <i>Advanced Materials Interfaces</i> , 2014, 1, 1300104.	1.9	24
43	Global Response of Martian Plasma Environment to an Interplanetary Structure: From Ena and Plasma Observations at Mars. <i>Space Science Reviews</i> , 2007, 126, 315-332.	3.7	23
44	Initial effect of the Fukushima accident on atmospheric electricity. <i>Geophysical Research Letters</i> , 2011, 38, .	1.5	23
45	Energetic Neutral Atoms (ENA) at Mars: Properties of the hydrogen atoms produced upstream of the martian bow shock and implications for ENA sounding technique around non-magnetized planets. <i>Icarus</i> , 2006, 182, 448-463.	1.1	22
46	Predicting interplanetary shock arrivals at Earth, Mars, and Venus: A real-time modeling experiment following the solar flares of 5 <sup>th</sup> 14 December 2006. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	22
47	$O^+$ outflow channels around Venus controlled by directions of the interplanetary magnetic field: Observations of high energy $O^+$ ions around the terminator. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	22
48	Comparison of accelerated ion populations observed upstream of the bow shocks at Venus and Mars. <i>Annales Geophysicae</i> , 2011, 29, 511-528.	0.6	22
49	A new type of ion injection event observed by Viking. <i>Geophysical Research Letters</i> , 1993, 20, 795-798.	1.5	21
50	IMF Direction Derived from Cycloid-Like Ion Distributions Observed by Mars Express. <i>Space Science Reviews</i> , 2007, 126, 239-266.	3.7	21
51	Mars Under Primordial Solar Wind Conditions: Mars Express Observations of the Strongest CME Detected at Mars Under Solar Cycle #24 and its Impact on Atmospheric Ion Escape. <i>Geophysical Research Letters</i> , 2017, 44, 10,805.	1.5	21
52	Earth atmospheric loss through the plasma mantle and its dependence on solar wind parameters. <i>Earth, Planets and Space</i> , 2019, 71, .	0.9	21
53	Meso-scale structures of radiation belt/ring current detected by low-energy ions. <i>Advances in Space Research</i> , 1996, 17, 171-174.	1.2	20
54	Source location of the wedge-like dispersed ring current in the morning sector during a substorm. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	20

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55	O <sup>+</sup> Escape During the Extreme Space Weather Event of 4 <sup>th</sup> 10 September 2017. <i>Space Weather</i> , 2018, 16, 1363-1376.	1.3	20
56	Terrestrial ion escape and relevant circulation in space. <i>Annales Geophysicae</i> , 2019, 37, 1197-1222.	0.6	20
57	Transients in oxygen outflow above the polar cap as observed by the Cluster spacecraft. <i>Annales Geophysicae</i> , 2008, 26, 3365-3373.	0.6	19
58	Secondary wind transport of radioactive materials after the Fukushima accident. <i>Earth, Planets and Space</i> , 2012, 64, e1-e4.	0.9	19
59	Role of the Ionosphere for the Atmospheric Evolution of Planets. <i>Astrobiology</i> , 2007, 7, 783-800.	1.5	17
60	Acceleration of solar wind ions to 1 MeV by electromagnetic structures upstream of the Earth's bow shock. <i>Europhysics Letters</i> , 2013, 102, 49001.	0.7	17
61	Characteristics of magnetospheric energetics during geomagnetic storms. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	15
62	Critical Issues on Magnetic Reconnection in Space Plasmas. <i>Space Science Reviews</i> , 2005, 116, 497-521.	3.7	14
63	Statistical properties of planetary heavy-ion precipitations toward the Martian ionosphere obtained from Mars Express. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 5348-5357.	0.8	14
64	THEMIS multipoint observations of Pi2 pulsations inside and outside the plasmasphere. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	13
65	A narrow region of electron beams at the poleward edge of the cusp. <i>Journal of Geophysical Research</i> , 1993, 98, 7585-7591.	3.3	12
66	Comparison of various cusp models with high- and low-resolution observations. <i>Space Science Reviews</i> , 2001, 95, 457-468.	3.7	12
67	Energy-angle dispersion of accelerated heavy ions at 67P/Churyumov-Gerasimenko: implication in the mass-loading mechanism. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S339-S345.	1.6	12
68	Energetic ion outflow from the dayside ionosphere and its relationship to the interplanetary magnetic field and substorm activity. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2000, 62, 485-493.	0.6	11
69	Energisation of O <sup>+</sup> and O <sup>2+</sup> Ions at Mars: An Analysis of a 3-D Quasi-Neutral Hybrid Model Simulation. <i>Space Science Reviews</i> , 2007, 126, 39-62.	3.7	11
70	Vorticity equation for MHD fast waves in geospace environment. <i>Journal of Geophysical Research</i> , 1993, 98, 13523-13528.	3.3	10
71	Unusually quick development of a 4000 nT substorm during the initial 10 min of the 29 October 2003 magnetic storm. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	10
72	Advanced method to derive the IMF direction near Mars from cycloidal proton distributions. <i>Planetary and Space Science</i> , 2008, 56, 1145-1154.	0.9	10

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73	Settlement process of radioactive dust to the ground inferred from the atmospheric electric field measurement. <i>Annales Geophysicae</i> , 2012, 30, 49-56.	0.6	10
74	Quantification of the total ion transport in the near-Earth plasma sheet. <i>Annales Geophysicae</i> , 2017, 35, 869-877.	0.6	10
75	Venusian bow shock as seen by the ASPERA-4 ion instrument on Venus Express. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	9
76	Oxygen foreshock of Mars. <i>Planetary and Space Science</i> , 2015, 119, 48-53.	0.9	9
77	Relative outflow enhancements during major geomagnetic storms – Cluster observations. <i>Annales Geophysicae</i> , 2017, 35, 1341-1352.	0.6	9
78	Signatures of direct magnetosheath plasma injections onto closed field-line regions based on observations at mid- and low-altitudes. <i>Geophysical Monograph Series</i> , 2003, , 179-188.	0.1	8
79	Dayside proton aurora associated with magnetic impulse events: South Pole observations. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	8
80	A sensitive geomagnetic activity index for space weather operation. <i>Space Weather</i> , 2010, 8, n/a-n/a.	1.3	8
81	Cluster observations of hot He <sup>+</sup> events in the inner magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2706-2716.	0.8	8
82	Future Missions Related to the Determination of the Elemental and Isotopic Composition of Earth, Moon and the Terrestrial Planets. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	8
83	Synthesis of studies on significant atmospheric electrical effects of major nuclear accidents in Chernobyl and Fukushima. <i>Science of the Total Environment</i> , 2020, 733, 139271.	3.9	8
84	Dayside Pc5 pulsation detected by Viking ion data at L=4. <i>Geophysical Research Letters</i> , 1996, 23, 2517-2520.	1.5	7
85	Sub-keV ring current ions as the tracer of substorm injection. <i>Annales Geophysicae</i> , 2006, 24, 355-366.	0.6	7
86	Dual source populations of substorm-associated ring current ions. <i>Annales Geophysicae</i> , 2009, 27, 1431-1438.	0.6	7
87	Structures of Sub-KeV Ions Inside the Ring Current Region. <i>Geophysical Monograph Series</i> , 0, , 41-46.	0.1	7
88	Energy conversion through mass loading of escaping ionospheric ions for different Kp values. <i>Annales Geophysicae</i> , 2018, 36, 1-12.	0.6	7
89	Solar Illumination Dependence of the Auroral Electrojet Intensity: Interplay Between the Solar Zenith Angle and Dipole Tilt. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 6636-6653.	0.8	7
90	Numerical simulation of large-scale field-aligned current generation from finite-amplitude magnetosonic waves. <i>Geophysical Research Letters</i> , 1994, 21, 851-854.	1.5	6

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91	Outflowing protons and heavy ions as a source for the sub-keV ring current. <i>Annales Geophysicae</i> , 2009, 27, 839-849.	0.6	6
92	Ion acceleration by multiple reflections at Martian bow shock. <i>Earth, Planets and Space</i> , 2012, 64, 61-71.	0.9	6
93	Cluster observation of few-hour-scale evolution of structured plasma in the inner magnetosphere. <i>Annales Geophysicae</i> , 2013, 31, 1569-1578.	0.6	6
94	Ion drift simulation of sudden appearance of sub-keV structured ions in the inner magnetosphere. <i>Annales Geophysicae</i> , 2014, 32, 83-90.	0.6	6
95	Magnetospheric solitary structure maintained by 3000 km/s ions as a cause of westward moving auroral bulge at 19 MLT. <i>Annales Geophysicae</i> , 2009, 27, 2947-2969.	0.6	6
96	Observations of an enhanced convection flow channel for northward turning IMF. <i>Geophysical Research Letters</i> , 1997, 24, 3137-3140.	1.5	5
97	Equatorially confined warm trapped ions at around 100 eV near the plasmapause. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	5
98	Independency of the day side field-aligned current system: A restriction to cusp models. <i>Geophysical Monograph Series</i> , 2000, , 245-252.	0.1	4
99	Unusual heavy ion injection events observed by Freja. <i>Annales Geophysicae</i> , 2005, 23, 535-543.	0.6	4
100	Dependence of the IMF sector structure on the solar dipole tilt angle. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	3
101	Effect of enhanced ionizing radiation on the cloud electricity after the Fukushima nuclear accident. <i>Earth, Planets and Space</i> , 2018, 70, .	0.9	3
102	Exploring solar-terrestrial interactions via multiple imaging observers. <i>Experimental Astronomy</i> , 0, , 1.	1.6	3
103	High-latitude crochet: solar-flare-induced magnetic disturbance independent from low-latitude crochet. <i>Annales Geophysicae</i> , 2020, 38, 1159-1170.	0.6	3
104	A New Technique to Diagnose the Geomagnetic Field Based on a Single Circular Current Loop Model. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022778.	1.4	3
105	Decreased Sun-Earth energy-coupling efficiency starting from 2006. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	2
106	The fate of O <sup>+</sup> ions observed in the plasma mantle: particle tracing modelling and cluster observations. <i>Annales Geophysicae</i> , 2020, 38, 645-656.	0.6	2
107	Foreshock ions observed behind the Martian bow shock. <i>Planetary and Space Science</i> , 2016, 127, 15-32.	0.9	1
108	Plasma-neutral gas interactions in various space environments: Assessment beyond simplified approximations as a Voyage 2050 theme. <i>Experimental Astronomy</i> , 0, , 1.	1.6	1

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109	The first EGS Alfvén Conference. Eos, 1997, 78, 125.	0.1	0