Markus Fraenz

List of Publications by Year
in descending order

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135	4,441	93792	156644
papers	citations	39 h-index	58 g-index

142	142	142	1894
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Escape of CO₂⁺ and Other Heavy Minor Ions From the Ionosphere of Mars. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028608.	0.8	9
2	Bursty Ion Escape Fluxes at Mars. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028920.	0.8	6
3	Advection of Martian Crustal Magnetic Fields by Ionospheric Plasma Flow Observed by the MAVEN Spacecraft. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029242.	0.8	2
4	MAVEN Observations of Periodic Low-altitude Plasma Clouds at Mars. Astrophysical Journal Letters, 2021, 922, L33.	3.0	19
5	Induced Magnetic Fields and Plasma Motions in the Inner Part of the Martian Magnetosphere. Journal of Geophysical Research: Space Physics, 2021, 126, .	0.8	14
6	The correlation length of ULF waves around Venus: VEX observations. Planetary and Space Science, 2020, 180, 104761.	0.9	1
7	Wavelet analysis of low frequency plasma oscillations in the magnetosheath of Mars. Advances in Space Research, 2020, 65, 2090-2098.	1.2	6
8	Impact of Martian Crustal Magnetic Field on the Ion Escape. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028010.	0.8	19
9	Deflection of Global Ion Flow by the Martian Crustal Magnetic Fields. Astrophysical Journal Letters, 2020, 898, L54.	3.0	10
10	Expansion and Shrinking of the Martian Topside Ionosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 9725-9738.	0.8	16
11	The Induced Magnetosphere of Mars: Asymmetrical Topology of the Magnetic Field Lines. Geophysical Research Letters, 2019, 46, 12722-12730.	1.5	25
12	Reduced Atmospheric Ion Escape Above Martian Crustal Magnetic Fields. Geophysical Research Letters, 2019, 46, 11764-11772.	1.5	16
13	The Relationship Between Photoelectron Boundary and Steep Electron Density Gradient on Mars: MAVEN Observations. Journal of Geophysical Research: Space Physics, 2019, 124, 8015-8022.	0.8	10
14	The Induced Global Looping Magnetic Field on Mars. Astrophysical Journal Letters, 2019, 871, L27.	3.0	20
15	Influence of the Interplanetary Convective Electric Field on the Distribution of Heavy Pickup Ions Around Mars. Journal of Geophysical Research: Space Physics, 2018, 123, 473-484.	0.8	6
16	Solar Wind Deflection by Mass Loading in the Martian Magnetosheath Based on MAVEN Observations. Geophysical Research Letters, 2018, 45, 2574-2579.	1.5	21
17	Corotation Plasma Environment Model: An Empirical Probability Model of the Jovian Magnetosphere. IEEE Transactions on Plasma Science, 2018, 46, 2126-2145.	0.6	1
18	Martian ionosphere observed by MAVEN. 3. Influence of solar wind and IMF on upper ionosphere. Planetary and Space Science, 2018, 160, 56-65.	0.9	17

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19	Ultra low frequency waves at Venus: Observations by the Venus Express spacecraft. Planetary and Space Science, 2017, 146, 55-65.	0.9	18
20	Martian ionosphere observed by Mars Express. 2. Influence of solar irradiance on upper ionosphere and escape fluxes. Planetary and Space Science, 2017, 145, 1-8.	0.9	14
21	Effects of solar irradiance on the upper ionosphere and oxygen ion escape at Mars: MAVEN observations. Journal of Geophysical Research: Space Physics, 2017, 122, 7142-7152.	0.8	30
22	The Effect of Solar Wind Variations on the Escape of Oxygen Ions From Mars Through Different Channels: MAVEN Observations. Journal of Geophysical Research: Space Physics, 2017, 122, 11,285.	0.8	44
23	Ablation of Venusian oxygen ions by unshocked solar wind. Science Bulletin, 2017, 62, 1669-1672.	4.3	7
24	Response of the Martian ionosphere to solar activity including SEPs and ICMEs in a two-week period starting on 25 February 2015. Planetary and Space Science, 2017, 145, 28-37.	0.9	13
25	A survey of superthermal electron flux depressions, or â€œelectron holes,â€•within the illuminated Martian induced magnetosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 4835-4857.	0.8	22
26	Formation of a collisionless shock wave in a multi-component plasma. Physics of Plasmas, 2016, 23, .	0.7	1
27	Martian ionosphere observed by Mars Express. 1. Influence of the crustal magnetic fields. Planetary and Space Science, 2016, 124, 62-75.	0.9	32
28	The Mass Spectrum Analyzer (MSA) on board the BepiColombo MMO. Journal of Geophysical Research: Space Physics, 2016, 121, 6749-6761.	0.8	11
29	An induced global magnetic field looping around the magnetotail of Venus. Journal of Geophysical Research: Space Physics, 2016, 121, 688-698.	0.8	13
30	Annual variations in the Martian bow shock location as observed by the Mars Express mission. Journal of Geophysical Research: Space Physics, 2016, 121, 11,474.	0.8	44
31	The morphology of the topside ionosphere of Mars under different solar wind conditions: Results of a multi-instrument observing campaign by Mars Express in 2010. Planetary and Space Science, 2016, 120, 24-34.	0.9	12
32	Space weather effects on the bow shock, the magnetic barrier, and the ion composition boundary at Venus. Journal of Geophysical Research: Space Physics, 2015, 120, 4613-4627.	0.8	14
33	Cold ion escape from the Martian ionosphere. Planetary and Space Science, 2015, 119, 92-102.	0.9	26
34	Solar zenith angleâ€dependent asymmetries in Venusian bow shock location revealed by Venus Express. Journal of Geophysical Research: Space Physics, 2015, 120, 4446-4451.	0.8	11
35	Discrepancy between ionopause and photoelectron boundary determined from Mars Express measurements. Geophysical Research Letters, 2014, 41, 8221-8227.	1.5	21
36	Magnetic fields in the Venus ionosphere: Dependence on the IMF directionâ€”Venus express observations. Journal of Geophysical Research: Space Physics, 2014, 119, 7587-7600.	0.8	20

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37	Effects of a strong ICME on the Martian ionosphere as detected by Mars Express and Mars Odyssey. Journal of Geophysical Research: Space Physics, 2014, 119, 5891-5908.	0.8	41
38	Oxygen escape from the Earth during geomagnetic reversals: Implications to mass extinction. Earth and Planetary Science Letters, 2014, 394, 94-98.	1.8	56
39	Evidence of strong energetic ion acceleration in the near-Earth magnetotail. Geophysical Research Letters, 2014, 41, 3724-3730.	1.5	24
40	Magnetic fields in the Mars ionosphere of a noncrustal origin: Magnetization features. Geophysical Research Letters, 2014, 41, 6329-6334.	1.5	7
41	IMF control of the location of Venusian bow shock: The effect of the magnitude of IMF component tangential to the bow shock surface. Journal of Geophysical Research: Space Physics, 2014, 119, 9464-9475.	0.8	21
42	Can a nightside geomagnetic Delta H observed at the equator manifest a penetration electric field?. Journal of Geophysical Research: Space Physics, 2013, 118, 3557-3567.	0.8	5
43	Transport of cold ions from the polar ionosphere to the plasma sheet. Journal of Geophysical Research: Space Physics, 2013, 118, 5467-5477.	0.8	32
44	Toroidal and poloidal magnetic fields at Venus. Venus Express observations. Planetary and Space Science, 2013, 87, 19-29.	0.9	16
45	Determination of local plasma densities with the MARSIS radar: Asymmetries in the highâ€'altitude Martian ionosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 6228-6242.	0.8	38
46	Mars ionospheric response to solar wind variability. Journal of Geophysical Research: Space Physics, 2013, 118, 6558-6587.	0.8	42
47	Plasma in the near Venus tail: Venus Express observations. Journal of Geophysical Research: Space Physics, 2013, 118, 7624-7634.	0.8	31
48	Solar cycle effects on the ion escape from Mars. Geophysical Research Letters, 2013, 40, 6028-6032.	1.5	58
49	Upper ionosphere of Mars is not axially symmetrical. Earth, Planets and Space, 2012, 64, 113-120.	0.9	19
50	The transterminator ion flow at Venus at solar minimum. Planetary and Space Science, 2012, 73, 341-346.	0.9	1
51	A teardrop-shaped ionosphere at Venus in tenuous solar wind. Planetary and Space Science, 2012, 73, 254-261.	0.9	15
52	Bursty escape fluxes in plasma sheets of Mars and Venus. Geophysical Research Letters, 2012, 39, .	1.5	48
53	Enhanced atmospheric oxygen outflow on Earth and Mars driven by a corotating interaction region. Journal of Geophysical Research, 2012, 117, .	3.3	40
54	Analysis of energetic electron drop-outs in the upper atmosphere of Titan during flybys in the dayside magnetosphere of Saturn. Icarus, 2012, 218, 1020-1027.	1.1	0

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55	Excitation of low frequency oscillations in a planetary magnetosheath by supersonic shear flow. Nonlinear Processes in Geophysics, 2011, 18, 209-221.	0.6	3
56	Ion Energization and Escape on Mars and Venus. Space Science Reviews, 2011, 162, 173-211.	3.7	145
57	The Induced Magnetospheres of Mars, Venus, and Titan. Space Science Reviews, 2011, 162, 113-171.	3.7	111
58	Magnetic states of the ionosphere of Venus observed by Venus Express. Planetary and Space Science, 2011, 59, 327-337.	0.9	22
59	Comparison of accelerated ion populations observed upstream of the bow shocks at Venus and Mars. Annales Geophysicae, 2011, 29, 511-528.	0.6	22
60	The Induced Magnetospheres of Mars, Venus, and Titan. Space Sciences Series of ISSI, 2011, , 113-171.	0.0	5
61	Ion Energization and Escape on Mars and Venus. Space Sciences Series of ISSI, 2011, , 173-211.	0.0	18
62	A comparison of global models for the solar wind interaction with Mars. Icarus, 2010, 206, 139-151.	1.1	108
63	Transterminator ion flow in the Martian ionosphere. Planetary and Space Science, 2010, 58, 1442-1454.	0.9	56
64	Spectral characteristics of protons in the Earth's plasmasheet: statistical results from Cluster CIS and RAPID. Annales Geophysicae, 2010, 28, 1483-1498.	0.6	32
65	Rosetta swing-by at Mars â€“ an analysis of the ROMAP measurements in comparison with results of 3-D multi-ion hybrid simulations and MEX/ASPERA-3 data. Annales Geophysicae, 2009, 27, 2383-2398.	0.6	10
66	The mass spectrum analyzer (MSA) onboard BEPI COLOMBO MMO: Scientific objectives and prototype results. Advances in Space Research, 2009, 43, 869-874.	1.2	11
67	Longâ€lived auroral structures and atmospheric losses through auroral flux tubes on Mars. Geophysical Research Letters, 2009, 36, .	1.5	24
68	Atmospheric origin of cold ion escape from Mars. Geophysical Research Letters, 2009, 36, .	1.5	49
69	Correction to â€œPlasma environment of Venus: Comparison of Venus Express ASPERAâ€4 measurements with 3â€D hybrid simulationsâ€. Journal of Geophysical Research, 2009, 114, .	3.3	5
70	Simultaneous measurements of Martian plasma boundaries by Rosetta and Mars Express. Planetary and Space Science, 2009, 57, 1085-1096.	0.9	13
71	Plasma environment of Venus: Comparison of Venus Express ASPERAâ€4 measurements with 3â€D hybrid simulations. Journal of Geophysical Research, 2009, 114, .	3.3	37
72	Ionospheric storms on Mars: Impact of the corotating interaction region. Geophysical Research Letters, 2009, 36, .	1.5	61

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73	Plasma boundary variability at Mars as observed by Mars Global Surveyor and Mars Express. Annales Geophysicae, 2009, 27, 3537-3550.	0.6	70
74	Rosetta and Mars Express observations of the influence of high solar wind pressure on the Martian plasma environment. Annales Geophysicae, 2009, 27, 4533-4545.	0.6	21
75	Field-aligned currents and parallel electric field potential drops at Mars. Scaling from the Earthâ€™ aurora. Planetary and Space Science, 2008, 56, 868-872.	0.9	32
76	Location of the bow shock and ion composition boundaries at Venusâ€”initial determinations from Venus Express ASPERA-4. Planetary and Space Science, 2008, 56, 780-784.	0.9	64
77	Mars Express and Venus Express multi-point observations of geoeffective solar flare events in December 2006. Planetary and Space Science, 2008, 56, 873-880.	0.9	102
78	Asymmetry of plasma fluxes at Mars. ASPERA-3 observations and hybrid simulations. Planetary and Space Science, 2008, 56, 832-835.	0.9	20
79	Ionospheric photoelectrons at Venus: Initial observations by ASPERA-4 ELS. Planetary and Space Science, 2008, 56, 802-806.	0.9	48
80	Energetic electron asymmetries at Mars: ASPERA-3 observations. Planetary and Space Science, 2008, 56, 836-839.	0.9	2
81	Suprathermal electron fluxes on the nightside of Mars: ASPERA-3 observations. Planetary and Space Science, 2008, 56, 846-851.	0.9	23
82	First observation of energetic neutral atoms in the Venus environment. Planetary and Space Science, 2008, 56, 807-811.	0.9	19
83	ENA detection in the dayside of Mars: ASPERA-3 NPD statistical study. Planetary and Space Science, 2008, 56, 840-845.	0.9	18
84	Structure and dynamics of the solar wind/ionosphere interface on Mars: MEXâ€ASPERAâ€3 and MEXâ€MARSIS observations. Geophysical Research Letters, 2008, 35, .	1.5	74
85	A cometâ€like escape of ionospheric plasma from Mars. Geophysical Research Letters, 2008, 35, .	1.5	94
86	Plasma environment of Mars as observed by simultaneous MEXâ€ASPERAâ€3 and MEXâ€MARSIS observations. Journal of Geophysical Research, 2008, 113, .	3.3	54
87	Plasma and fields in the wake of Rhea: 3-D hybrid simulation and comparison with Cassini data. Annales Geophysicae, 2008, 26, 619-637.	0.6	50
88	Access of solar wind electrons into the Martian magnetosphere. Annales Geophysicae, 2008, 26, 3511-3524.	0.6	28
89	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. , 2007, , 355-372.		0
90	Low frequency wave sources in the outer magnetosphere, magnetosheath, and near Earth solar wind. Annales Geophysicae, 2007, 25, 2217-2228.	0.6	20

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91	Observations of linear and nonlinear processes in the foreshock wave evolution. Nonlinear Processes in Geophysics, 2007, 14, 361-371.	0.6	28
92	Coherent whistler emissions in the magnetosphere â€“ Cluster observations. Annales Geophysicae, 2007, 25, 303-315.	0.6	27
93	Local plasma processes and enhanced electron densities in the lower ionosphere in magnetic cusp regions on Mars. Planetary and Space Science, 2007, 55, 2164-2172.	0.9	57
94	The loss of ions from Venus through the plasma wake. Nature, 2007, 450, 650-653.	13.7	168
95	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. Space Science Reviews, 2007, 126, 355-372.	3.7	20
96	Plasma Morphology at Mars. Aspera-3 Observations. Space Science Reviews, 2007, 126, 209-238.	3.7	102
97	IMF Direction Derived from Cycloid-Like Ion Distributions Observed by Mars Express. Space Science Reviews, 2007, 126, 239-266.	3.7	21
98	Plasma Moments in the Environment of Mars. Space Science Reviews, 2007, 126, 165-207.	3.7	77
99	Plasma Morphology at Mars. ASPERA-3 Observations. , 2007, , 209-238.		4
100	Comparison of plasma data from ASPERA-3/Mars-Express with a 3-D hybrid simulation. Annales Geophysicae, 2007, 25, 1851-1864.	0.6	29
101	Hydrogen exosphere at Mars: Pickup protons and their acceleration at the bow shock. Geophysical Research Letters, 2006, 33, .	1.5	43
102	Direct Measurements of Energetic Neutral Hydrogen in the Interplanetary Medium. Astrophysical Journal, 2006, 644, 1317-1325.	1.6	32
103	Electric fields within the martian magnetosphere and ion extraction: ASPERA-3 observations. Icarus, 2006, 182, 337-342.	1.1	54
104	Solar wind plasma protrusion into the martian magnetosphere: ASPERA-3 observations. Icarus, 2006, 182, 343-349.	1.1	21
105	First ENA observations at Mars: Subsolar ENA jet. Icarus, 2006, 182, 413-423.	1.1	42
106	First ENA observations at Mars: ENA emissions from the martian upper atmosphere. Icarus, 2006, 182, 424-430.	1.1	53
107	Structure of the martian wake. Icarus, 2006, 182, 329-336.	1.1	81
108	First ENA observations at Mars: Charge exchange ENAs produced in the magnetosheath. Icarus, 2006, 182, 431-438.	1.1	39

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109	Electron oscillations in the induced martian magnetosphere. Icarus, 2006, 182, 360-370.	1.1	54
110	Observations of magnetic anomaly signatures in Mars Express ASPERA-3 ELS data. Icarus, 2006, 182, 396-405.	1.1	36
111	Ionospheric plasma acceleration at Mars: ASPERA-3 results. Icarus, 2006, 182, 308-319.	1.1	48
112	Numerical interpretation of high-altitude photoelectron observations. Icarus, 2006, 182, 383-395.	1.1	56
113	Plasma intrusion above Mars crustal fieldsâ€”Mars Express ASPERA-3 observations. Icarus, 2006, 182, 406-412.	1.1	35
114	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. Icarus, 2006, 182, 448-463.	1.1	22
115	First ENA observations at Mars: Solar-wind ENAs on the nightside. Icarus, 2006, 182, 439-447.	1.1	27
116	Carbon dioxide photoelectron energy peaks at Mars. Icarus, 2006, 182, 371-382.	1.1	105
117	CLUSTER spacecraft observation of a thin current sheet at the Earthâ€™s magnetopause. Advances in Space Research, 2006, 37, 1363-1372.	1.2	21
118	Ion escape at Mars: Comparison of a 3-D hybrid simulation with Mars Express IMA/ASPERA-3 measurements. Icarus, 2006, 182, 350-359.	1.1	34
119	Mass composition of the escaping plasma at Mars. Icarus, 2006, 182, 320-328.	1.1	103
120	Plasma Acceleration Above Martian Magnetic Anomalies. Science, 2006, 311, 980-983.	6.0	111
121	Cluster observations of a structured magnetospheric cusp. Annales Geophysicae, 2006, 24, 1015-1027.	0.6	7
122	Statistical phase propagation and dispersion analysis of low frequency waves in the magnetosheath. Annales Geophysicae, 2005, 23, 3339-3349.	0.6	13
123	AlfvÃ©n waves in the foreshock propagating upstream in the plasma rest frame: statistics from Cluster observations. Annales Geophysicae, 2004, 22, 2315-2323.	0.6	38
124	Cluster mission and data analysis for the March 2001 magnetic storm. Geofisica International, 2004, 43, 217-223.	0.2	1
125	Cusp structures: combining multi-spacecraft observations with ground-based observations. Annales Geophysicae, 2003, 21, 2031-2041.	0.6	20
126	Heliospheric coordinate systems. Planetary and Space Science, 2002, 50, 217-233.	0.9	77

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127	Energetic particle abundances at CIR shocks. Geophysical Research Letters, 1999, 26, 17-20.	1.5	21
128	Energetic particle anisotropies and remote magnetic connection at high solar latitudes. Advances in Space Research, 1997, 19, 855-858.	1.2	3
129	Recurrent variations of anomalous oxygen in association with a corotating interaction region. Annales Geophysicae, 1996, 14, 585-588.	0.6	4
130	Observations of energetic particles with EPAC on Ulysses in polar latitudes of the heliosphere. Science, 1995, 268, 1013-1016.	6.0	25
131	Anomalous cosmic ray oxygen gradients throughout the heliosphere. Geophysical Research Letters, 1995, 22, 341-344.	1.5	41
132	Three-dimensional particle anisotropies in and near the plasma sheet of Jupiter observed by the EPAC experiment onboard the Ulysses spacecraft. Planetary and Space Science, 1993, 41, 953-966.	0.9	20
133	An Overview of Energetic Particle Measurements in the Jovian Magnetosphere with the EPAC Sensor on Ulysses. Science, 1992, 257, 1553-1557.	6.0	21
134	Energetic particle composition variations during the March 1991 events measured with the Ulysses EPAC instrument. Geophysical Research Letters, 1992, 19, 1255-1258.	1.5	9
135	Diffusive shock acceleration and the March 1991 solar events. Geophysical Research Letters, 1992, 19, 1259-1262.	1.5	5