Herbert Gunell

List of Publications by Year
in descending order

117 papers	3,121 citations	172457 29 h-index	175258 52 g-index
138 all docs	138 docs citations	138 times ranked	1882 citing authors

#	Article	IF	Citations
1	Cometary plasma science. Experimental Astronomy, 2022, 54, 1129-1167.	3.7	3
2	Ion acoustic waves near a comet nucleus: Rosetta observations at comet 67P/Churyumovâ€“Gerasimenko. Annales Geophysicae, 2021, 39, 53-68.	1.6	3
3	In Which Magnetotail Hemisphere is a Satellite? Problems Using in Situ Magnetic Field Data. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028923.	2.4	0
4	Tailward Flows in the Vicinity of Fast Earthward Flows. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028978.	2.4	1
5	Warm protons at comet 67P/Churyumovâ€“Gerasimenko â€“ implications for the infant bow shock. Annales Geophysicae, 2021, 39, 379-396.	1.6	9
6	Groundâ€Based Magnetometer Response to Impacting Magnetosheath Jets. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029115.	2.4	7
7	Waves and boundaries in plasmas at comets and planets - experimental aspects. , 2021, , .		0
8	The Effect of Cosmic Rays on Cometary Nuclei. I. Dose Deposition. Astrophysical Journal, 2020, 890, 89.	4.5	18
9	Evolution of Highâ€Speed Jets and Plasmoids Downstream of the Quasiâ€Perpendicular Bow Shock. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027667.	2.4	13
10	The Effect of Cosmic Rays on Cometary Nuclei. II. Impact on Ice Composition and Structure. Astrophysical Journal, 2020, 901, 136.	4.5	13
11	The fate of O⁺ ions observed in the plasma mantle: particle tracing modelling and cluster observations. Annales Geophysicae, 2020, 38, 645-656.	1.6	2
12	Solar wind charge exchange in cometary atmospheres. Astronomy and Astrophysics, 2020, 640, C3.	5.1	4
13	Effect of the Surface Roughness of Icy Grains on Molecular Oxygen Chemistry in Molecular Clouds. Astrophysical Journal, 2019, 882, 131.	4.5	0
14	Solar wind charge exchange in cometary atmospheres. Astronomy and Astrophysics, 2019, 630, A36.	5.1	11
15	Oscillatory Flows in the Magnetotail Plasma Sheet: Cluster Observations of the Distribution Function. Journal of Geophysical Research: Space Physics, 2019, 124, 2736-2754.	2.4	1
16	Oxygen Ion Flow Reversals in Earth's Magnetotail: A Cluster Statistical Study. Journal of Geophysical Research: Space Physics, 2019, 124, 8928-8942.	2.4	0
17	Solar wind charge exchange in cometary atmospheres. Astronomy and Astrophysics, 2019, 630, A37.	5.1	21
18	Can Reconnection be Triggered as a Solar Wind Directional Discontinuity Crosses the Bow Shock? AÂCaseÂof Asymmetric Reconnection. Journal of Geophysical Research: Space Physics, 2019, 124, 8507-8523.	2.4	10

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19	Polarisation of a small-scale cometary plasma environment. Astronomy and Astrophysics, 2019, 631, A174.	5.1	7
20	Solar wind charge exchange in cometary atmospheres. Astronomy and Astrophysics, 2019, 630, A35.	5.1	14
21	A Method to Estimate the Physical Properties of Magnetospheric Generators From Observations of Quiet Discrete Auroral Arcs. Journal of Geophysical Research: Space Physics, 2019, 124, 10283-10293.	2.4	2
22	Dynamic unmagnetized plasma in the diamagnetic cavity around comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2018, 475, 4140-4147.	4.4	19
23	Bow Shock Generator Current Systems: MMS Observations of Possible Current Closure. Journal of Geophysical Research: Space Physics, 2018, 123, 242-258.	2.4	8
24	The infant bow shock: a new frontier at a weak activity comet. Astronomy and Astrophysics, 2018, 619, L2.	5.1	32
25	Size of a plasma cloud matters. Astronomy and Astrophysics, 2018, 616, A50.	5.1	26
26	Extremely Lowâ€Frequency Waves Inside the Diamagnetic Cavity of Comet 67P/Churyumovâ€Gerasimenko. Geophysical Research Letters, 2018, 45, 3854-3864.	4.0	14
27	Why an intrinsic magnetic field does not protect a planet against atmospheric escape. Astronomy and Astrophysics, 2018, 614, L3.	5.1	69
28	Energy conversion in cometary atmospheres. Astronomy and Astrophysics, 2018, 616, A81.	5.1	14
29	Ion acoustic waves at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2017, 600, A3.	5.1	28
30	The Delayed Time Response of Geomagnetic Activity to the Solar Wind. Journal of Geophysical Research: Space Physics, 2017, 122, 11,109.	2.4	29
31	Halogens as tracers of protosolar nebula material in comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 472, 1336-1345.	4.4	44
32	Hybrid modelling of cometary plasma environments. Astronomy and Astrophysics, 2017, 604, A73.	5.1	37
33	Evolution of the ion environment of comet 67P during the Rosetta mission as seen by RPC-ICA. Monthly Notices of the Royal Astronomical Society, 2017, 469, S252-S261.	4.4	55
34	Plasma waves confined to the diamagnetic cavity of comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S84-S92.	4.4	19
35	Investigating short-time-scale variations in cometary ions around comet 67P. Monthly Notices of the Royal Astronomical Society, 2017, 469, S522-S534.	4.4	24
36	Observations of multiharmonic ion cyclotron waves due to inverse ion cyclotron damping in the northern magnetospheric cusp. Geophysical Research Letters, 2017, 44, 22-29.	4.0	10

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37	Evidence for distributed gas sources of hydrogen halides in the coma of comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S695-S711.	4.4	27
38	The atmosphere of comet 67P/Churyumov-Gerasimenko diagnosed by charge-exchanged solar wind alpha particles. Astronomy and Astrophysics, 2016, 587, A154.	5.1	33
39	Ion chemistry in the coma of comet 67P near perihelion. Monthly Notices of the Royal Astronomical Society, 2016, 462, S67-S77.	4.4	28
40	Oxygen ion response to proton bursty bulk flows. Journal of Geophysical Research: Space Physics, 2016, 121, 7535-7546.	2.4	11
41	2D photochemical model for forbidden oxygen line emission for comet 1P/Halley. Monthly Notices of the Royal Astronomical Society, 2016, 462, S116-S123.	4.4	1
42	Can the downward current region of the aurora be simulated in the laboratory?. Plasma Physics and Controlled Fusion, 2016, 58, 054003.	2.1	1
43	Photochemistry of forbidden oxygen lines in the inner coma of 67P/Churyumovâ€Gerasimenko. Journal of Geophysical Research: Space Physics, 2016, 121, 804-816.	2.4	10
44	Investigation Into Relativistic Magnetic Flux Amplification. IEEE Transactions on Plasma Science, 2016, 44, 2-6.	1.3	0
45	Acceleration of ions and nano dust at a comet in the solar wind. Planetary and Space Science, 2015, 119, 13-23.	1.7	9
46	On the origin of magnetosheath plasmoids and their relation to magnetosheath jets. Journal of Geophysical Research: Space Physics, 2015, 120, 7390-7403.	2.4	56
47	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
48	The use of the power density for identifying reconnection regions. Journal of Geophysical Research: Space Physics, 2015, 120, 8644-8662.	2.4	4
49	Evolution of the ion environment of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A20.	5.1	76
50	Correcting peak deformation in Rosetta's ROSINA/DFMS mass spectrometer. International Journal of Mass Spectrometry, 2015, 393, 41-51.	1.5	6
51	Birth of a comet magnetosphere: A spring of water ions. Science, 2015, 347, aaa0571.	12.6	107
52	Vlasov simulations of trapping and loss of auroral electrons. Annales Geophysicae, 2015, 33, 279-293.	1.6	4
53	Self-consistent electrostatic simulations of reforming double layers in the downward current region of the aurora. Annales Geophysicae, 2015, 33, 1331-1342.	1.6	3
54	Waves in high-speed plasmoids in the magnetosheath and at the magnetopause. Annales Geophysicae, 2014, 32, 991-1009.	1.6	37

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55	Quasiperiodic mode hopping in competing ionization waves. Plasma Physics and Controlled Fusion, 2014, 56, 015003.	2.1	1
56	Numerical and laboratory simulations of auroral acceleration. Physics of Plasmas, 2013, 20, 102901.	1.9	3
57	Vlasov simulations of parallel potential drops. Annales Geophysicae, 2013, 31, 1227-1240.	1.6	7
58	Relativistic magnetic flux amplification. , 2013, , .		0
59	Plasma penetration of the dayside magnetopause. Physics of Plasmas, 2012, 19, .	1.9	33
60	Oxygen ion energization observed at high altitudes. Annales Geophysicae, 2010, 28, 907-916.	1.6	10
61	On the interpretation of Langmuir probe data inside a spacecraft sheath. Review of Scientific Instruments, 2010, 81, 105106.	1.3	19
62	Numerical experiments on plasmoids entering a transverse magnetic field. Physics of Plasmas, 2009, 16, 112901.	1.9	10
63	Shear driven waves in the induced magnetosphere of Mars: parameter dependence. Astrophysics and Space Sciences Transactions, 2009, 5, 39-42.	1.0	3
64	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.	1.7	64
65	The Venusian induced magnetosphere: A case study of plasma and magnetic field measurements on the Venus Express mission. Planetary and Space Science, 2008, 56, 796-801.	1.7	22
66	Mars Express and Venus Express multi-point observations of geoeffective solar flare events in December 2006. Planetary and Space Science, 2008, 56, 873-880.	1.7	102
67	Ionospheric photoelectrons at Venus: Initial observations by ASPERA-4 ELS. Planetary and Space Science, 2008, 56, 802-806.	1.7	48
68	First observation of energetic neutral atoms in the Venus environment. Planetary and Space Science, 2008, 56, 807-811.	1.7	19
69	Comparative analysis of Venus and Mars magnetotails. Planetary and Space Science, 2008, 56, 812-817.	1.7	48
70	Energetic neutral atom imaging of comets. Geophysical Research Letters, 2008, 35, .	4.0	3
71	Tailward flow of energetic neutral atoms observed at Venus. Journal of Geophysical Research, 2008, 113, .	3.3	20
72	Tailward flow of energetic neutral atoms observed at Mars. Journal of Geophysical Research, 2008, 113, .	3.3	30

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73	Simulations of a plasmoid penetrating a magnetic barrier. Plasma Physics and Controlled Fusion, 2008, 50, 074013.	2.1	16
74	Shear driven waves in the induced magnetosphere of Mars. Plasma Physics and Controlled Fusion, 2008, 50, 074018.	2.1	22
75	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. , 2007, , 355-372.		0
76	Simulations of solar wind charge exchange X-ray emissions at Venus. Geophysical Research Letters, 2007, 34, .	4.0	16
77	The Analyser of Space Plasmas and Energetic Atoms (ASPERA-4) for the Venus Express mission. Planetary and Space Science, 2007, 55, 1772-1792.	1.7	214
78	The loss of ions from Venus through the plasma wake. Nature, 2007, 450, 650-653.	27.8	168
79	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. Space Science Reviews, 2007, 126, 355-372.	8.1	20
80	Energetic Hydrogen and Oxygen Atoms Observed on the Nightside of Mars. Space Science Reviews, 2007, 126, 267-297.	8.1	24
81	The Hydrogen Exospheric Density Profile Measured with ASPERA-3/NPD. Space Science Reviews, 2007, 126, 447-467.	8.1	42
82	Energisation of O+ and O+ 2 Ions at Mars: An Analysis of a 3-D Quasi-Neutral Hybrid Model Simulation. Space Science Reviews, 2007, 126, 39-62.	8.1	11
83	The Analyzer of Space Plasmas and Energetic Atoms (ASPERA-3) for the Mars Express Mission. Space Science Reviews, 2007, 126, 113-164.	8.1	241
84	Energetic Hydrogen and Oxygen Atoms Observed on the Nightside of Mars. , 2007, , 267-297.		3
85	The Hydrogen Exospheric Density Profile Measured with ASPERA-3/NPD. , 2007, , 447-467.		2
86	The Analyzer of Space Plasmas and Energetic Atoms (ASPERA-3) for the Mars Express Mission. , 2007, , 113-164.		2
87	Energisation of O+ and O 2 + Ions at Mars: An Analysis of A 3-D Quasi-Neutral Hybrid Model Simulation. , 2007, , 39-62.		0
88	First observation of Mars with XMM-Newton. Astronomy and Astrophysics, 2006, 451, 709-722.	5.1	110
89	Direct Measurements of Energetic Neutral Hydrogen in the Interplanetary Medium. Astrophysical Journal, 2006, 644, 1317-1325.	4.5	32
90	First ENA observations at Mars: Subsolar ENA jet. Icarus, 2006, 182, 413-423.	2.5	42

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91	First ENA observations at Mars: ENA emissions from the martian upper atmosphere. Icarus, 2006, 182, 424-430.	2.5	53
92	First ENA observations at Mars: Charge exchange ENAs produced in the magnetosheath. Icarus, 2006, 182, 431-438.	2.5	39
93	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.	2.5	22
94	First ENA observations at Mars: Solar-wind ENAs on the nightside. Icarus, 2006, 182, 439-447.	2.5	27
95	Planetary ENA imaging: Effects of different interaction models for Mars. Planetary and Space Science, 2006, 54, 117-131.	1.7	18
96	Loss of hydrogen and oxygen from the upper atmosphere of Venus. Planetary and Space Science, 2006, 54, 1445-1456.	1.7	106
97	Ion escape at Mars: Comparison of a 3-D hybrid simulation with Mars Express IMA/ASPERA-3 measurements. Icarus, 2006, 182, 350-359.	2.5	34
98	Mass composition of the escaping plasma at Mars. Icarus, 2006, 182, 320-328.	2.5	103
99	Planetary ENA Imaging: Venus and a comparison with Mars. Planetary and Space Science, 2005, 53, 433-441.	1.7	28
100	Simulations of X-rays from solar wind charge exchange at Mars: Parameter dependence. Advances in Space Research, 2005, 36, 2057-2065.	2.6	9
101	The NUADU experiment on TC-2 and the first Energetic Neutral Atom (ENA) images recorded by this instrument. Annales Geophysicae, 2005, 23, 2825-2849.	1.6	10
102	Electron pitch angle variations recorded at the high magnetic latitude boundary layer by the NUADU instrument on the TC-2 spacecraft. Annales Geophysicae, 2005, 23, 2953-2959.	1.6	1
103	Ion loss on Mars caused by the Kelvinâ€“Helmholtz instability. Planetary and Space Science, 2004, 52, 1157-1167.	1.7	71
104	X rays from solar wind charge exchange at Mars: A comparison of simulations and observations. Geophysical Research Letters, 2004, 31, .	4.0	27
105	Electrostatic degrees of freedom in non-Maxwellian plasma. Physics of Plasmas, 2002, 9, 1931-1937.	1.9	16
106	Electrostatic fluctuations in plasmas with distribution functions described by simple pole expansions. Physics of Plasmas, 2002, 9, 2585-2592.	1.9	7
107	Weakly damped acoustic-like ion waves in plasmas with non-Maxwellian ion distributions. Physics of Plasmas, 2001, 8, 3550-3557.	1.9	16
108	Experiments on anomalous electron currents to a positive probe in a magnetized plasma stream. Geophysical Research Letters, 2000, 27, 161-164.	4.0	3

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109	A localised high frequency discharge formed in an electron-beam-produced plasma. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 241, 281-286.	2.1	4
110	Interacting eigenmodes of a plasma diode with a density gradient. Physics of Plasmas, 1998, 5, 590-600.	1.9	9
111	Flexible simple-pole expansion of distribution functions. Physics of Plasmas, 1997, 4, 3469-3476.	1.9	13
112	Electric field spikes formed by electron beamâ€“plasma interaction in plasma density gradients. Physics of Plasmas, 1997, 4, 2805-2812.	1.9	11
113	Bursts of high-frequency plasma waves at an electric double layer. Journal Physics D: Applied Physics, 1996, 29, 643-654.	2.8	17
114	Formation of Electric Field Spikes in Electron-Beamâ€“Plasma Interaction. Physical Review Letters, 1996, 77, 5059-5062.	7.8	20
115	A high frequency probe for absolute measurements of electric fields in plasmas. Journal Physics D: Applied Physics, 1995, 28, 595-599.	2.8	14
116	Waves and fluctuations in non-Maxwellian plasmas. , 0, , .		0
117	Upstream solar wind speed at comet 67P. Reconstruction method, model comparison, and results. Astronomy and Astrophysics, 0, , .	5.1	3