

Leonard Burlaga

List of Publications by Year in descending order

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123
papers

6,111
citations

76326

40
h-index

76900

74
g-index

124
all docs

124
docs citations

124
times ranked

1832
citing authors

#	ARTICLE	IF	CITATIONS
1	First results from the Giotto magnetometer experiment at comet Halley. <i>Nature</i> , 1986, 321, 352-355.	27.8	331
2	In Situ Observations of Interstellar Plasma with Voyager 1. <i>Science</i> , 2013, 341, 1489-1492.	12.6	276
3	Intermittent turbulence in the solar wind. <i>Journal of Geophysical Research</i> , 1991, 96, 5847-5851.	3.3	222
4	Crossing the Termination Shock into the Heliosheath: Magnetic Fields. <i>Science</i> , 2005, 309, 2027-2029.	12.6	220
5	Magnetic fields at the solar wind termination shock. <i>Nature</i> , 2008, 454, 75-77.	27.8	205
6	Cosmic ray modulation and the distant heliospheric magnetic field: Voyager 1 and 2 observations from 1986 to 1989. <i>Journal of Geophysical Research</i> , 1993, 98, 1-11.	3.3	200
7	Micro-scale structures in the interplanetary medium. <i>Solar Physics</i> , 1968, 4, 67-92.	2.5	194
8	Cosmic ray modulation and turbulent interaction regions near 11 AU. <i>Journal of Geophysical Research</i> , 1985, 90, 12027-12039.	3.3	190
9	Directional discontinuities in the interplanetary magnetic field. <i>Solar Physics</i> , 1969, 7, 54-71.	2.5	161
10	Magnetic and thermal pressures in the solar wind. <i>Solar Physics</i> , 1970, 15, 61-71.	2.5	159
11	Magnetic Field Observations as Voyager 1 Entered the Heliosheath Depletion Region. <i>Science</i> , 2013, 341, 147-150.	12.6	158
12	Interplanetary flow systems associated with cosmic ray modulation in 1977â€“1980. <i>Journal of Geophysical Research</i> , 1984, 89, 6579-6587.	3.3	145
13	MHD processes in the outer heliosphere. <i>Space Science Reviews</i> , 1984, 39, 255.	8.1	137
14	Global configuration of a magnetic cloud. <i>Geophysical Monograph Series</i> , 1990, , 373-377.	0.1	118
15	Multifractal structure of the interplanetary magnetic field: Voyager 2 observations near 25 AU, 1987â€“1988. <i>Geophysical Research Letters</i> , 1991, 18, 69-72.	4.0	111
16	Interplanetary streams and their interaction with the earth. <i>Space Science Reviews</i> , 1975, 17, 327-352.	8.1	109
17	Interplanetary current sheets at 1 AU. <i>Journal of Geophysical Research</i> , 1977, 82, 3191-3200.	3.3	106
18	Dynamical evolution of interplanetary magnetic fields and flows between 0.3 AU and 8.5 AU: Entrainment. <i>Geophysical Research Letters</i> , 1983, 10, 413-416.	4.0	82

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19	Macro- and micro-structure of the interplanetary magnetic field. Canadian Journal of Physics, 1968, 46, S962-S965.	1.1	80
20	Voyager 2 plasma observations of the heliopause and interstellar medium. Nature Astronomy, 2019, 3, 1019-1023.	10.1	78
21	COMPRESSIBLE α -TURBULENCE OBSERVED IN THE HELIOSHEATH BY <i>VOYAGER 2</i> . Astrophysical Journal, 2009, 703, 311-324.	4.5	76
22	Diamagnetic boundary layers: A kinetic theory. Astrophysics and Space Science, 1976, 45, 303-325.	1.4	74
23	<i>VOYAGER 1</i> OBSERVATIONS OF THE INTERSTELLAR MAGNETIC FIELD AND THE TRANSITION FROM THE HELIOSHEATH. Astrophysical Journal, 2014, 784, 146.	4.5	72
24	IN SITU OBSERVATIONS OF MAGNETIC TURBULENCE IN THE LOCAL INTERSTELLAR MEDIUM. Astrophysical Journal Letters, 2015, 804, L31.	8.3	71
25	Magnetic Fields in the Heliosheath: Voyager 1 Observations. Astrophysical Journal, 2006, 642, 584-592.	4.5	69
26	Magnetic field and particle measurements made by Voyager 2 at and near the heliopause. Nature Astronomy, 2019, 3, 1007-1012.	10.1	69
27	PRECURSORS TO INTERSTELLAR SHOCKS OF SOLAR ORIGIN. Astrophysical Journal, 2015, 809, 121.	4.5	68
28	Three-dimensional Features of the Outer Heliosphere Due to Coupling between the Interstellar and Heliospheric Magnetic Field. V. The Bow Wave, Heliospheric Boundary Layer, Instabilities, and Magnetic Reconnection. Astrophysical Journal, 2017, 845, 9.	4.5	65
29	Multifractal structure of speed fluctuations in recurrent streams at 1 AU and near 6 AU. Geophysical Research Letters, 1991, 18, 1651-1654.	4.0	64
30	EVIDENCE FOR A SHOCK IN INTERSTELLAR PLASMA: <i>VOYAGER 1</i> . Astrophysical Journal Letters, 2013, 778, L3.	8.3	64
31	Turbulence in the Outer Heliosheath. Astrophysical Journal, 2018, 854, 20.	4.5	64
32	Cosmic-ray modulation, merged interaction regions, and multifractals. Astrophysical Journal, 1993, 407, 347.	4.5	63
33	Pickup protons and pressure-balanced structures: Voyager 2 observations in merged interaction regions near 35 AU. Journal of Geophysical Research, 1994, 99, 21511.	3.3	59
34	OBSERVATIONS OF THE INTERSTELLAR MAGNETIC FIELD IN THE OUTER HELIOSHEATH: <i>VOYAGER 1</i> . Astrophysical Journal, 2016, 829, 134.	4.5	59
35	Heliospheric magnetic field strength and polarity from 1 to 81 AU during the ascending phase of solar cycle 23. Journal of Geophysical Research, 2002, 107, SSH 20-1.	3.3	58
36	Surface waves on Saturn's magnetopause. Nature, 1981, 292, 750-753.	27.8	53

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37	PLASMA NEAR THE HELIOSHEATH: OBSERVATIONS AND MODELING. <i>Astrophysical Journal Letters</i> , 2011, 728, L21.	8.3	50
38	Trains of magnetic holes and magnetic humps in the heliosheath. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	48
39	Spacecraft studies of the interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2001, 106, 15803-15817.	3.3	45
40	Locations of the termination shock and the heliopause. <i>Journal of Geophysical Research</i> , 1995, 100, 17015.	3.3	44
41	Modeling Shocks Detected by Voyager 1 in the Local Interstellar Medium. <i>Astrophysical Journal Letters</i> , 2017, 843, L32.	8.3	41
42	ACR Proton Acceleration Associated with Reconnection Processes beyond the Heliospheric Termination Shock. <i>Astrophysical Journal</i> , 2019, 886, 144.	4.5	41
43	Tsallis Statistics of the Magnetic Field in the Heliosheath. <i>Astrophysical Journal</i> , 2006, 644, L83-L86.	4.5	40
44	OBSERVATIONS OF THE HELIOSHEATH AND SOLAR WIND NEAR THE TERMINATION SHOCK BY <i>VOYAGER 2</i> . <i>Astrophysical Journal</i> , 2009, 692, 1125-1130.	4.5	40
45	INTERSTELLAR MAGNETIC FIELDS OBSERVED BY <i>VOYAGER 1</i> BEYOND THE HELIOPAUSE. <i>Astrophysical Journal Letters</i> , 2014, 795, L19.	8.3	40
46	Multiscale structure of magnetic fields in the heliosheath. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	38
47	Tsallis distributions of magnetic field strength variations in the heliosphere: 5 to 90 AU. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	38
48	Magnetic Clouds. <i>Geophysical Monograph Series</i> , 0, , 157-168.	0.1	38
49	Jupiter's magnetic tail. <i>Nature</i> , 1979, 280, 799-802.	27.8	36
50	Multiscale structure of the magnetic field and speed at 1 AU during the declining phase of solar cycle 23 described by a generalized Tsallis probability distribution function. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	36
51	RADIAL VELOCITY ALONG THE <i>VOYAGER 1</i> TRAJECTORY: THE EFFECT OF SOLAR CYCLE. <i>Astrophysical Journal Letters</i> , 2012, 750, L4.	8.3	36
52	The Solar Wind in the Outer Heliosphere and Heliosheath. <i>Space Science Reviews</i> , 2013, 176, 217-235.	8.1	36
53	Magnetic Fields in the Heliosheath and Distant Heliosphere: <i>Voyager 1</i> and <i>2</i> Observations During 2005 and 2006. <i>Astrophysical Journal</i> , 2007, 668, 1246-1258.	4.5	34
54	Correlated solar wind speed, density, and magnetic field changes at Voyager 2. <i>Geophysical Research Letters</i> , 2003, 30, n/a-n/a.	4.0	32

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55	Interaction of global merged interaction region shock with the heliopause and its relation to the 2- and 3-kHz radio emissions. <i>Journal of Geophysical Research</i> , 1994, 99, 21457.	3.3	31
56	Source and consequences of a large shock near 79 AU. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	29
57	MAGNETIC FIELD STRENGTH FLUCTUATIONS AND TEMPERATURE IN THE HELIOSHEATH. <i>Astrophysical Journal</i> , 2009, 691, L82-L86.	4.5	29
58	Linear magnetic holes in a unipolar region of the heliosheath observed by Voyager 1. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	28
59	Sectors in the distant heliosphere: Voyager 1 and 2 observations from 1999 through 2002 between 57 and 83 AU. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	27
60	Multi-scale probability distributions of solar wind speed fluctuations at 1 AU described by a generalized Tsallis distribution. <i>Geophysical Research Letters</i> , 2004, 31, .	4.0	27
61	Tsallis distributions of the large-scale magnetic field strength fluctuations in the solar wind from 7 to 87 AU. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	27
62	Current sheets in the heliosheath: Voyager 1, 2009. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	27
63	MAGNETIC FIELD FLUCTUATIONS OBSERVED IN THE HELIOSHEATH AND INTERSTELLAR MAGNETIC FIELD BY<i>VOYAGER 1</i>AT 115.7-124.9 AU DURING 2011-2013. <i>Astrophysical Journal</i> , 2014, 792, 134.	4.5	27
64	Global patterns of heliospheric magnetic field polarities and elevation angles: 1990 through 1995. <i>Journal of Geophysical Research</i> , 1997, 102, 19731-19742.	3.3	26
65	Large-scale Magnetic Field Fluctuations and Development of the 1999-2000 Global Merged Interaction Region: 1-60 AU. <i>Astrophysical Journal</i> , 2003, 585, 1158-1168.	4.5	26
66	Merged interaction regions and large-scale magnetic field fluctuations during 1991: Voyager 2 observations. <i>Journal of Geophysical Research</i> , 1994, 99, 19341.	3.3	25
67	OBSERVATION OF BERNSTEIN WAVES EXCITED BY NEWBORN INTERSTELLAR PICKUP IONS IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2012, 745, 112.	4.5	25
68	MAGNETIC FIELD STRENGTH FLUCTUATIONS AND THE<i>q</i>-TRIPLET IN THE HELIOSHEATH:<i>VOYAGER 2</i>OBSERVATIONS FROM 91.0 TO 94.2 AU AT LATITUDE 30° S. <i>Astrophysical Journal</i> , 2013, 765, 35.	4.5	25
69	Magnetic Field and Plasma Density Observations of a Pressure Front by Voyager 1 during 2020 in the Very Local Interstellar Medium. <i>Astrophysical Journal</i> , 2021, 911, 61.	4.5	24
70	Large-scale speed fluctuations at 1 AU on scales from 1 hour to 1 year: 1999 and 1995. <i>Journal of Geophysical Research</i> , 2002, 107, SSH 18-1.	3.3	23
71	MAGNETIC FLUX CONSERVATION IN THE HELIOSHEATH. <i>Astrophysical Journal Letters</i> , 2013, 762, L14.	8.3	23
72	A model and observations of the multifractal spectrum of the heliospheric magnetic field strength fluctuations near 40 AU. <i>Geophysical Research Letters</i> , 2003, 30, n/a-n/a.	4.0	22

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73	MAGNETIC FIELD STRENGTH FLUCTUATIONS IN THE HELIOSHEATH: <i>VOYAGER 1</i> OBSERVATIONS DURING 2009. <i>Astrophysical Journal</i> , 2012, 744, 51.	4.5	22
74	Voyager observations of the magnetic field, interstellar pickup ions and solar wind in the distant heliosphere. <i>Space Science Reviews</i> , 1996, 78, 33-42.	8.1	21
75	A Foreshock Model for Interstellar Shocks of Solar Origin: Voyager 1 and 2 Observations. <i>Astronomical Journal</i> , 2021, 161, 11.	4.7	21
76	Observations of the Outer Heliosphere, Heliosheath, and Interstellar Medium. <i>Space Science Reviews</i> , 2022, 218, .	8.1	21
77	Voyager Observations of the Magnetic Field in the Distant Heliosphere. <i>Space Science Reviews</i> , 1998, 83, 105-121.	8.1	20
78	Fast and Slow Flows in the Solar Wind Near the Ecliptic at 1 AU?. <i>Space Science Reviews</i> , 1999, 87, 137-140.	8.1	20
79	TRIANGULATION OF THE INTERSTELLAR MAGNETIC FIELD. <i>Astrophysical Journal Letters</i> , 2015, 813, L20.	8.3	20
80	MULTIFRACTAL STRUCTURES DETECTED BY <i>VOYAGER 1</i> AT THE HELIOSPHERIC BOUNDARIES. <i>Astrophysical Journal Letters</i> , 2014, 793, L30.	8.3	19
81	Radial and solar cycle variations of the magnetic fields in the heliosheath: Voyager 1 observations from 2005 to 2008. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	17
82	Voyager 1 and 2 Observations of a Change in the Nature of Magnetic Fluctuations in the VLISM with Increasing Distance from the Heliopause. <i>Astronomical Journal</i> , 2020, 160, 40.	4.7	17
83	Terminology for ejecta in the solar wind. <i>Eos</i> , 2001, 82, 433-433.	0.1	16
84	On radial heliospheric magnetic fields: Voyager 2 observation and model. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	16
85	Signatures of Intermittency and Fine-scale Turbulence in the Very Local Interstellar Medium. <i>Astrophysical Journal Letters</i> , 2020, 897, L28.	8.3	16
86	Voyager observations of magnetic fields and cosmic rays in the heliosheath. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	15
87	Observation of Magnetic Waves Excited by Newborn Interstellar Pickup He+ Observed by the Voyager 2 Spacecraft at 30 au. <i>Astrophysical Journal</i> , 2017, 849, 61.	4.5	15
88	Magnetic Field Draping of the Heliopause and Its Consequences for Radio Emission in the Very Local Interstellar Medium. <i>Astrophysical Journal Letters</i> , 2021, 917, L20.	8.3	15
89	Shocks in the distant heliosphere. <i>Journal of Geophysical Research</i> , 1999, 104, 6721-6727.	3.3	14
90	Evolution of the multiscale statistical properties of corotating streams from 1 to 95 AU. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	14

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91	Correlation between energetic ion enhancements and heliospheric current sheet crossings in the outer heliosphere. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	14
92	Observations of the magnetic field and plasma in the heliosheath by Voyager 2 from 2007.7 to 2009.4. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	14
93	Transient shocks beyond the heliopause. <i>Journal of Physics: Conference Series</i> , 2015, 642, 012008.	0.4	14
94	Heliosheath Magnetic Field and Plasma Observed by Voyager 2 during 2015 Near Solar Maximum. <i>Astrophysical Journal</i> , 2018, 861, 9.	4.5	14
95	A Magnetic Pressure Front Upstream of the Heliopause and the Heliosheath Magnetic Fields and Plasma, Observed during 2017. <i>Astrophysical Journal</i> , 2019, 877, 31.	4.5	14
96	Possible plasma depletion layer ahead of an interplanetary ejecta. <i>Journal of Geophysical Research</i> , 1997, 102, 7087-7093.	3.3	13
97	HELIOSHEATH MAGNETIC FIELD AND PLASMA OBSERVED BY VOYAGER 2 DURING 2012 IN THE RISING PHASE OF SOLAR CYCLE 24. <i>Astrophysical Journal</i> , 2016, 818, 147.	4.5	13
98	Observations of Low-Frequency Magnetic Waves due to Newborn Interstellar Pickup Ions Using ACE, Ulysses, and Voyager Data. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012018.	0.4	13
99	Turbulence in the Very Local Interstellar Medium (VLISM). <i>Astrophysical Journal</i> , 2020, 900, 166.	4.5	13
100	Shocks in the Very Local Interstellar Medium. <i>Space Science Reviews</i> , 2022, 218, 27.	8.1	13
101	A Transition to Fast Flows and Its Effects on the Magnetic Fields and Cosmic Rays Observed by Voyager 2 near 70 AU. <i>Astrophysical Journal</i> , 2005, 618, 1074-1078.	4.5	11
102	Magnetic Field Observations in the Very Local Interstellar Medium by Voyagers 1 and 2. <i>Astrophysical Journal</i> , 2022, 932, 59.	4.5	11
103	Solar wind interaction with Comet Bennett (1969i). <i>Solar Physics</i> , 1973, 30, 211-222.	2.5	10
104	Evolution of a strong shock in the distant heliosphere. <i>Journal of Geophysical Research</i> , 1999, 104, 19787-19795.	3.3	10
105	North-south flows at 47 AU: A heliospheric vortex street?. <i>Journal of Geophysical Research</i> , 2000, 105, 10501-10507.	3.3	10
106	Transition from the Unipolar Region to the Sector Zone: Voyager 2, 2013 and 2014. <i>Astrophysical Journal</i> , 2017, 841, 47.	4.5	10
107	Origin of the Weak Plasma Emission Line Detected by Voyager 1 in the Interstellar Medium: Evidence for Suprathermal Electrons. <i>Astrophysical Journal</i> , 2021, 921, 62.	4.5	10
108	VOYAGER OBSERVATIONS OF MAGNETIC SECTORS AND HELIOSPHERIC CURRENT SHEET CROSSINGS IN THE OUTER HELIOSPHERE. <i>Astrophysical Journal</i> , 2016, 831, 115.	4.5	8

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109	Magnetic Fields Observed by Voyager 2 in the Heliosheath. <i>Astrophysical Journal</i> , 2021, 906, 119.	4.5	8
110	Magnetic field fluctuations observed in the heliosheath by Voyager 1 at 114±2 AU during 2010. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	7
111	Heliosheath magnetic field and plasma observed by Voyager 2 during 2011. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 6062-6073.	2.4	7
112	Global structure and dynamics of large-scale fluctuations in the solar wind: Voyager 2 observations during 2005 and 2006. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	6
113	Intermittency and q-Gaussian Distributions in the Magnetic Field of the Very Local Interstellar Medium (VLISM) Observed by Voyager 1 and Voyager 2. <i>Astrophysical Journal Letters</i> , 2020, 901, L2.	8.3	6
114	Using Magnetic Flux Conservation to Determine Heliosheath Speeds. <i>Astrophysical Journal Letters</i> , 2021, 919, L28.	8.3	5
115	Speed fluctuations near 60 AU on scales from 1 day to 1 year: Observations and model. <i>Journal of Geophysical Research</i> , 2002, 107, SSH 20-1.	3.3	3
116	Voyager 2 Observations Near the Heliopause. <i>Journal of Physics: Conference Series</i> , 2020, 1620, 012016.	0.4	3
117	Merged interaction regions and large-scale fluctuations observed by voyagers 1 and 2 in the distant heliosphere. <i>AIP Conference Proceedings</i> , 1996, , .	0.4	2
118	Magnetic fields in the heliosheath. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	2
119	Numerical modeling of the solar wind flow with observational boundary conditions. , 2012, , .		2
120	Numerical modeling of transient phenomena in the distant solar wind and in the heliosheath. , 2012, , .		2
121	Tsallis Distribution Functions in the Solar Wind: Magnetic Field and Velocity Observations. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	1
122	Unsteady processes in the vicinity of the heliopause: Are we in the LISM yet?. , 2013, , .		1
123	Heliospheric shocks and catastrophe theory. <i>Geophysical Research Letters</i> , 1990, 17, 1633-1636.	4.0	0