FranÃ§ois Leblanc

List of Publications by Year
in descending order

110	4,976	39	68
papers	citations	h-index	g-index
		81900	95266

112	112	112	2469
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ion density and phase space density distribution of planetary ions Na+, O+ and He+ in Mercuryâ€™s magnetosphere. Icarus, 2022, 372, 114734.	2.5	4
2	Marsâ€™ plasma system. Scientific potential of coordinated multipoint missions: â€œThe next generationâ€. Experimental Astronomy, 2022, 54, 641-676.	3.7	9
3	The Mars system revealed by the Martian Moons eXploration mission. Earth, Planets and Space, 2022, 74, .	2.5	11
4	Comparative Na and K Mercury and Moon Exospheres. Space Science Reviews, 2022, 218, 1.	8.1	12
5	Modeling of Diffuse Auroral Emission at Mars: Contribution of MeV Protons. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	10
6	Modeling the Impact of a Strong Xâ€Class Solar Flare on the Planetary Ion Composition in Mercury's Magnetosphere. Geophysical Research Letters, 2022, 49, .	4.0	1
7	Effect of Meteoric Ions on Ionospheric Conductance at Jupiter. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	6
8	Seasonal variations of Mg and Ca in the exosphere of Mercury. Icarus, 2022, 384, 115081.	2.5	1
9	Study of the hydrogen escape rate at Mars during martian years 28 and 29 from comparisons between SPICAM/Mars express observations and GCM-LMD simulations. Icarus, 2021, 353, 113498.	2.5	16
10	SERENA: Particle Instrument Suite for Determining the Sun-Mercury Interaction from BepiColombo. Space Science Reviews, 2021, 217, 11.	8.1	26
11	Volatiles and Refractories in Surface-Bounded Exospheres in the Inner Solar System. Space Science Reviews, 2021, 217, 61.	8.1	12
12	Marsâ€™ atmospheric neon suggests volatile-rich primitive mantle. Icarus, 2021, 370, 114685.	2.5	7
13	A Possible Dust Origin for an Unusual Feature in Ioâ€™s Sodium Neutral Clouds. Astronomical Journal, 2021, 162, 190.	4.7	4
14	MOSAIC: A Satellite Constellation to Enable Groundbreaking Mars Climate System Science and Prepare for Human Exploration. Planetary Science Journal, 2021, 2, 211.	3.6	6
15	Mars' Ionospheric Interaction With Comet C/2013 A1 Siding Spring's Coma at Their Closest Approach as Seen by Mars Express. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027344.	2.4	3
16	Influence of the Solar Wind Dynamic Pressure on the Ion Precipitation: MAVEN Observations and Simulation Results. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028183.	2.4	6
17	Investigating Mercuryâ€™s Environment with the Two-Spacecraft BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	71
18	PHEBUS on Bepi-Colombo: Post-launch Update and Instrument Performance. Space Science Reviews, 2020, 216, 1.	8.1	21

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19	Simulations of ion sputtering at Ganymede. Icarus, 2020, 351, 113918.	2.5	14
20	Constraining Ganymede's neutral and plasma environments through simulations of its ionosphere and Galileo observations. Icarus, 2020, 343, 113691.	2.5	12
21	Influence of Extreme Ultraviolet Irradiance Variations on the Precipitating Ion Flux From MAVEN Observations. Geophysical Research Letters, 2019, 46, 7761-7768.	4.0	5
22	Dawn/Dusk Asymmetry of the Martian UltraViolet Terminator Observed Through Suprathermal Electron Depletions. Journal of Geophysical Research: Space Physics, 2019, 124, 7283-7300.	2.4	6
23	Recovery Timescales of the Dayside Martian Magnetosphere to IMF Variability. Geophysical Research Letters, 2019, 46, 10977-10986.	4.0	15
24	Origin of the Extended Mars Radar Blackout of September 2017. Journal of Geophysical Research: Space Physics, 2019, 124, 4556-4568.	2.4	27
25	First 3D test particle model of Ganymede's ionosphere. Icarus, 2019, 330, 42-59.	2.5	19
26	First In Situ Evidence of Mars Nonthermal Exosphere. Geophysical Research Letters, 2019, 46, 4144-4150.	4.0	7
27	The Origin and Fate of O 2 $mbox{O}_{2}$ in Europaâ€™s Ice: An Atmospheric Perspective. Space Science Reviews, 2019, 215, 1.	8.1	9
28	Dusk over dawn O2 asymmetry in Europa's near-surface atmosphere. Planetary and Space Science, 2019, 167, 23-32.	1.7	21
29	Variability of Precipitating Ion Fluxes During the September 2017 Event at Mars. Journal of Geophysical Research: Space Physics, 2019, 124, 420-432.	2.4	6
30	Effect of the Lateral Exospheric Transport on the Horizontal Hydrogen Distribution Near the Exobase of Mars. Journal of Geophysical Research: Space Physics, 2018, 123, 2441-2454.	2.4	6
31	Dusk/dawn atmospheric asymmetries on tidally-locked satellites: O2 at Europa. Icarus, 2018, 305, 50-55.	2.5	14
32	On Mars's Atmospheric Sputtering After MAVEN's First Martian Year of Measurements. Geophysical Research Letters, 2018, 45, 4685-4691.	4.0	25
33	The LatHyS database for planetary plasma environment investigations: Overview and a case study of data/model comparisons. Planetary and Space Science, 2018, 150, 13-21.	1.7	10
34	Reply to comment â€œOn the hydrogen escape: Comment to variability of the hydrogen in the Martian upper atmosphere as simulated by a 3D atmosphere-exosphere coupling by J.-Y. Chaufray etÂal.â€•by V. Krasnopolsky, Icarus, 281, 262. Icarus, 2018, 301, 132-135.	2.5	2
35	Effects of the Crustal Magnetic Fields and Changes in the IMF Orientation on the Magnetosphere of Mars: MAVEN Observations and LatHyS Results. Journal of Geophysical Research: Space Physics, 2018, 123, 5315-5333.	2.4	21
36	Evidence for Crustal Magnetic Field Control of Ions Precipitating Into the Upper Atmosphere of Mars. Journal of Geophysical Research: Space Physics, 2018, 123, 8572-8586.	2.4	16

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37	Loss of the Martian atmosphere to space: Present-day loss rates determined from MAVEN observations and integrated loss through time. Icarus, 2018, 315, 146-157.	2.5	216
38	A Survey of Visible <scp>S⁺</scp> Emission in Io's Plasma Torus During the Hisaki Epoch. Journal of Geophysical Research: Space Physics, 2018, 123, 5610-5624.	2.4	13
39	Responses of the Martian Magnetosphere to an Interplanetary Coronal Mass Ejection: MAVEN Observations and LatHyS Results. Geophysical Research Letters, 2018, 45, 7891-7900.	4.0	19
40	Energetic Particle Showers Over Mars from Comet C/2013 A1 Siding Spring. Journal of Geophysical Research: Space Physics, 2018, 123, 8778-8796.	2.4	11
41	MAVEN and the total electron content of the Martian ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 3526-3537.	2.4	12
42	Photochemical escape of oxygen from Mars: First results from MAVEN in situ data. Journal of Geophysical Research: Space Physics, 2017, 122, 3815-3836.	2.4	106
43	MAVEN observations on a hemispheric asymmetry of precipitating ions toward the Martian upper atmosphere according to the upstream solar wind electric field. Journal of Geophysical Research: Space Physics, 2017, 122, 1083-1101.	2.4	19
44	On the orbital variability of Ganymede's atmosphere. Icarus, 2017, 293, 185-198.	2.5	47
45	Global Structure and Sodium Ion Dynamics in Mercury's Magnetosphere With the Offset Dipole. Journal of Geophysical Research: Space Physics, 2017, 122, 10,990.	2.4	15
46	SPICAM on Mars Express: A 10 year in-depth survey of the Martian atmosphere. Icarus, 2017, 297, 195-216.	2.5	64
47	On the Origins of Mars' Exospheric Nonthermal Oxygen Component as Observed by MAVEN and Modeled by HELIOSARES. Journal of Geophysical Research E: Planets, 2017, 122, 2401-2428.	3.6	27
48	Global distribution and parameter dependences of gravity wave activity in the Martian upper thermosphere derived from MAVEN/NGIMS observations. Journal of Geophysical Research: Space Physics, 2017, 122, 2374-2397.	2.4	66
49	Effect of the planet shine on the corona: Application to the Martian hot oxygen. Journal of Geophysical Research: Space Physics, 2016, 121, 11,413.	2.4	4
50	A fullâ€particle Martian upper thermosphereâ€exosphere model using the DSMC method. Journal of Geophysical Research E: Planets, 2016, 121, 1429-1444.	3.6	5
51	Cometary sputtering of the Martian atmosphere during the Siding Spring encounter. Icarus, 2016, 272, 301-308.	2.5	6
52	Formation and Evolution of Protoatmospheres. Space Science Reviews, 2016, 205, 153-211.	8.1	68
53	Marsâ€solar wind interaction: LatHyS, an improved parallel 3â€D multispecies hybrid model. Journal of Geophysical Research: Space Physics, 2016, 121, 6378-6399.	2.4	54
54	3D magnetospheric parallel hybrid multi-grid method applied to planetâ€“plasma interactions. Journal of Computational Physics, 2016, 309, 295-313.	3.8	15

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55	Observations of the nightside venusian hydrogen corona with SPICAV/VEX. Icarus, 2015, 262, 1-8.	2.5	26
56	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. Space Science Reviews, 2015, 195, 357-422.	8.1	99
57	Response of Mars O⁺ pickup ions to the 8 March 2015 ICME: Inferences from MAVEN dataâ€based models. Geophysical Research Letters, 2015, 42, 9095-9102.	4.0	47
58	THEMIS Na exosphere observations of Mercury and their correlation with in-situ magnetic field measurements by MESSENGER. Planetary and Space Science, 2015, 115, 102-109.	1.7	30
59	Mars heavy ion precipitating flux as measured by Mars Atmosphere and Volatile EvolutioN. Geophysical Research Letters, 2015, 42, 9135-9141.	4.0	39
60	Statistical studies on Mars atmospheric sputtering by precipitating pickup O⁺: Preparation for the MAVEN mission. Journal of Geophysical Research E: Planets, 2015, 120, 34-50.	3.6	26
61	The Mars Atmosphere and Volatile Evolution (MAVEN) Mission. Space Science Reviews, 2015, 195, 3-48.	8.1	563
62	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. Science, 2015, 350, aad0210.	12.6	166
63	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. Science, 2015, 350, aad0459.	12.6	90
64	Variability of the hydrogen in the martian upper atmosphere as simulated by a 3D atmosphereâ€“exosphere coupling. Icarus, 2015, 245, 282-294.	2.5	77
65	Three-dimensional Martian ionosphere model: II. Effect of transport processes due to pressure gradients. Journal of Geophysical Research E: Planets, 2014, 119, 1614-1636.	3.6	51
66	Modelling Ganymedeâ€™s neutral environment: A 3D test-particle simulation. Icarus, 2014, 229, 157-169.	2.5	30
67	Modeling of the O⁺ pickup ion sputtering efficiency dependence on solar wind conditions for the Martian atmosphere. Journal of Geophysical Research E: Planets, 2014, 119, 93-108.	3.6	23
68	Solar control of sodium escape from Io. Journal of Geophysical Research E: Planets, 2014, 119, 404-415.	3.6	12
69	Mercury exosphere. III: Energetic characterization of its sodium component. Icarus, 2013, 223, 963-974.	2.5	13
70	Radiative transfer of emission lines with non-Maxwellian velocity distribution function: Application to Mercury D2 sodium lines. Icarus, 2013, 223, 975-985.	2.5	6
71	Dynamical evolution of sodium anisotropies in the exosphere of Mercury. Planetary and Space Science, 2013, 82-83, 1-10.	1.7	22
72	Thermal evolution of an early magma ocean in interaction with the atmosphere. Journal of Geophysical Research E: Planets, 2013, 118, 1155-1176.	3.6	173

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73	The fate of early Mars' lost water: The role of serpentinization. Journal of Geophysical Research E: Planets, 2013, 118, 1123-1134.	3.6	59
74	Threeâ€dimensional Martian ionosphere model: I. The photochemical ionosphere below 180 km. Journal of Geophysical Research E: Planets, 2013, 118, 2105-2123.	3.6	118
75	Effects of the surface conductivity and the IMF strength on the dynamics of planetary ions in Mercury's magnetosphere. Journal of Geophysical Research: Space Physics, 2013, 118, 3233-3242.	2.4	15
76	A global hybrid model for Mercury's interaction with the solar wind: Case study of the dipole representation. Journal of Geophysical Research, 2012, 117, .	3.3	43
77	Resonance scattering polarization in the magnetosphere of Mercury. Icarus, 2012, 220, 1104-1111.	2.5	7
78	Mars exospheric thermal and non-thermal components: Seasonal and local variations. Icarus, 2012, 221, 682-693.	2.5	51
79	Hydrogen density in the dayside venusian exosphere derived from Lyman-Î± observations by SPICAV on Venus Express. Icarus, 2012, 217, 767-778.	2.5	47
80	Mercury and Moon He exospheres: Analysis and modeling. Icarus, 2011, 216, 551-559.	2.5	25
81	Mercury exosphere. Icarus, 2011, 211, 10-20.	2.5	14
82	Spatial variations of the sodium/potassium ratio in Mercuryâ€™s exosphere uncovered by high-resolution spectroscopy. Icarus, 2010, 207, 1-8.	2.5	7
83	PHEBUS: A double ultraviolet spectrometer to observe Mercury's exosphere. Planetary and Space Science, 2010, 58, 201-223.	1.7	42
84	Mercury exosphere I. Global circulation model of its sodium component. Icarus, 2010, 209, 280-300.	2.5	68
85	Formation of a sodium ring in Mercury's magnetosphere. Journal of Geophysical Research, 2010, 115, .	3.3	27
86	METALLIC SPECIES IN MERCURYâ€™S EXOSPHERE: EMMI/NEW TECHNOLOGY TELESCOPE OBSERVATIONS. Astronomical Journal, 2009, 137, 3859-3863.	4.7	9
87	Detection of a southern peak in Mercury's sodium exosphere with the TNG in 2005. Icarus, 2009, 201, 424-431.	2.5	10
88	Shortâ€term variations of Mercury's Na exosphere observed with very high spectral resolution. Geophysical Research Letters, 2009, 36, .	4.0	34
89	Mars Environment and Magnetic Orbiter Scientific and Measurement Objectives. Astrobiology, 2009, 9, 71-89.	3.0	4
90	Martian oxygen density at the exobase deduced from O I 130.4â€nm observations by Spectroscopy for the Investigation of the Characteristics of the Atmosphere of Mars on Mars Express. Journal of Geophysical Research, 2009, 114, .	3.3	71

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91	Exospheres and Atmospheric Escape. Space Science Reviews, 2008, 139, 355-397.	8.1	103
92	Observation of the hydrogen corona with SPICAM on Mars Express. Icarus, 2008, 195, 598-613.	2.5	139
93	Monte Carlo model of electron transport for the calculation of Mars dayglow emissions. Journal of Geophysical Research, 2008, 113, .	3.3	68
94	High latitude peaks in Mercury's sodium exosphere: Spectral signature using THEMIS solar telescope. Geophysical Research Letters, 2008, 35, .	4.0	33
95	Discovery of the Atomic Iron Tail of Comet M c Naught Using the Heliospheric Imager on STEREO. Astrophysical Journal, 2007, 661, L93-L96.	4.5	48
96	Mars solar wind interaction: Formation of the Martian corona and atmospheric loss to space. Journal of Geophysical Research, 2007, 112, .	3.3	115
97	Martian corona: Nonthermal sources of hot heavy species. Journal of Geophysical Research, 2007, 112, .	3.3	47
98	The combined effects of escape and magnetic field histories at Mars. Planetary and Space Science, 2007, 55, 343-357.	1.7	70
99	Ion energization during substorms at Mercury. Planetary and Space Science, 2007, 55, 1502-1508.	1.7	16
100	Origins of the Martian aurora observed by Spectroscopy for Investigation of Characteristics of the Atmosphere of Mars (SPICAM) on board Mars Express. Journal of Geophysical Research, 2006, 111, .	3.3	58
101	Origins of Europa Na cloud and torus. Icarus, 2005, 178, 367-385.	2.5	34
102	Discovery of an aurora on Mars. Nature, 2005, 435, 790-794.	27.8	203
103	Mars atmospheric escape and evolution; interaction with the solar wind. Planetary and Space Science, 2004, 52, 1039-1058.	1.7	164
104	Mercury's sodium exosphere. Icarus, 2003, 164, 261-281.	2.5	131
105	Mercury's sodium exosphere: Magnetospheric ion recycling. Journal of Geophysical Research, 2003, 108, .	3.3	37
106	A quantitative model of the planetary Na⁺ contribution to Mercuryâ€™s magnetosphere. Annales Geophysicae, 2003, 21, 1723-1736.	1.6	106
107	Some expected impacts of a solar energetic particle event at Mars. Journal of Geophysical Research, 2002, 107, SIA 5-1.	3.3	54
108	Role of molecular species in pickup ion sputtering of the Martian atmosphere. Journal of Geophysical Research, 2002, 107, 5-1.	3.3	90

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109	Sputtering of the Martian atmosphere by solar wind pick-up ions. Planetary and Space Science, 2001, 49, 645-656.	1.7	83
110	The Physics and Chemistry of Sputtering by Energetic Plasma Ions. Astrophysics and Space Science, 2001, 277, 259-269.	1.4	5