

Marina Galand

List of Publications by Year in descending order

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126
papers

4,607
citations

76326

40
h-index

118850

62
g-index

135
all docs

135
docs citations

135
times ranked

3487
citing authors

#	ARTICLE	IF	CITATIONS
1	A chemical survey of exoplanets with ARIEL. <i>Experimental Astronomy</i> , 2018, 46, 135-209.	3.7	249
2	Negative ion chemistry in Titan's upper atmosphere. <i>Planetary and Space Science</i> , 2009, 57, 1558-1572.	1.7	240
3	Time variability and heterogeneity in the coma of 67P/Churyumov-Gerasimenko. <i>Science</i> , 2015, 347, aaa0276.	12.6	222
4	Aerosol growth in Titan's ionosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 2729-2734.	7.1	126
5	XUV-driven mass loss from extrasolar giant planets orbiting active stars. <i>Icarus</i> , 2015, 250, 357-367.	2.5	123
6	Energy deposition and primary chemical products in Titan's upper atmosphere. <i>Icarus</i> , 2011, 213, 233-251.	2.5	121
7	On the ionospheric structure of Titan. <i>Planetary and Space Science</i> , 2009, 57, 1821-1827.	1.7	119
8	EChO. <i>Experimental Astronomy</i> , 2012, 34, 311-353.	3.7	98
9	On the amount of heavy molecular ions in Titan's ionosphere. <i>Planetary and Space Science</i> , 2009, 57, 1857-1865.	1.7	96
10	Auroral Processes at the Giant Planets: Energy Deposition, Emission Mechanisms, Morphology and Spectra. <i>Space Science Reviews</i> , 2015, 187, 99-179.	8.1	86
11	On magnetospheric electron impact ionisation and dynamics in Titan's ram-side and polar ionosphere – a Cassini case study. <i>Annales Geophysicae</i> , 2007, 25, 2359-2369.	1.6	78
12	The Ionosphere of Titan: Ideal Diurnal and Nocturnal Cases. <i>Icarus</i> , 1999, 140, 92-105.	2.5	77
13	Ionospheric electrical conductances produced by auroral proton precipitation. <i>Journal of Geophysical Research</i> , 2001, 106, 117-125.	3.3	77
14	Energy Deposition in Planetary Atmospheres by Charged Particles and Solar Photons. <i>Space Science Reviews</i> , 2008, 139, 3-62.	8.1	77
15	TandEM: Titan and Enceladus mission. <i>Experimental Astronomy</i> , 2009, 23, 893-946.	3.7	77
16	Spectral morphology of the X-ray emission from Jupiter's aurorae. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	75
17	Ionospheric plasma of comet 67P probed by Rosetta at 3 AU from the Sun. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S331-S351.	4.4	75
18	Cross Sections and Reaction Rates for Comparative Planetary Aeronomy. <i>Space Science Reviews</i> , 2008, 139, 63-105.	8.1	74

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19	Diurnal variations of Titan's ionosphere. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	69
20	RPC observation of the development and evolution of plasma interaction boundaries at 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S9-S22.	4.4	62
21	Electron temperature of Titan's sunlit ionosphere. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	61
22	The CH ₄ structure in Titan's upper atmosphere revisited. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	61
23	Numerical simulations of ion and electron temperatures in the ionosphere of Mars: Multiple ions and diurnal variations. <i>Icarus</i> , 2014, 227, 78-88.	2.5	60
24	The 2016 Feb 19 outburst of comet 67P/CG: an ESA Rosetta multi-instrument study. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S220-S234.	4.4	60
25	The profile of the hydrogen H α emission line in proton aurora. <i>Journal of Geophysical Research</i> , 2001, 106, 23-31.	3.3	55
26	Latitudinal variations in Saturn's ionosphere: Cassini measurements and model comparisons. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	55
27	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.	4.4	55
28	PREDICTIONS OF ION PRODUCTION RATES AND ION NUMBER DENSITIES WITHIN THE DIAMAGNETIC CAVITY OF COMET 67P/CHURYUMOV-GERASIMENKO AT PERIHELION. <i>Astrophysical Journal</i> , 2013, 772, 33.	4.5	51
29	Diamagnetic region(s): structure of the unmagnetized plasma around Comet 67P/CG. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S372-S379.	4.4	51
30	Response of Saturn's auroral ionosphere to electron precipitation: Electron density, electron temperature, and electrical conductivity. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	50
31	Magnetosphere-atmosphere coupling at Saturn: 1. Response of thermosphere and ionosphere to steady state polar forcing. <i>Icarus</i> , 2012, 221, 481-494.	2.5	50
32	Solar primary and secondary ionization at Saturn. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	48
33	Proton transport model in the ionosphere: 1. Multistream approach of the transport equations. <i>Journal of Geophysical Research</i> , 1997, 102, 22261-22272.	3.3	46
34	Ionization sources in Titan's deep ionosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	44
35	Uranus Pathfinder: exploring the origins and evolution of Ice Giant planets. <i>Experimental Astronomy</i> , 2012, 33, 753-791.	3.7	44
36	Response of the upper atmosphere to auroral protons. <i>Journal of Geophysical Research</i> , 2001, 106, 127-139.	3.3	43

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37	ROSINA/DFMS and IES observations of 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. <i>Astronomy and Astrophysics</i> , 2015, 583, A2.	5.1	43
38	Introduction to special section: Proton precipitation into the atmosphere. <i>Journal of Geophysical Research</i> , 2001, 106, 1-6.	3.3	42
39	Plasma temperatures in Saturn's ionosphere. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	41
40	Sources of Ionospheric Variability at Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 9670-9684.	2.4	40
41	Vertical structure of the near-surface expanding ionosphere of comet 67P probed by Rosetta. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S118-S129.	4.4	39
42	Ion transport in Titan's upper atmosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	38
43	Day-to-night transport in the Martian ionosphere: Implications from total electron content measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 2333-2346.	2.4	38
44	Plasma source and loss at comet 67P during the Rosetta mission. <i>Astronomy and Astrophysics</i> , 2018, 618, A77.	5.1	38
45	Simultaneous Cassini VIMS and UVIS observations of Saturn's southern aurora: Comparing emissions from H ₂ and H ₃ ⁺ at a high spatial resolution. <i>Geophysical Research Letters</i> , 2011, 38, .	4.0	37
46	On the thermal electron balance in Titan's sunlit upper atmosphere. <i>Icarus</i> , 2013, 223, 234-251.	2.5	35
47	Saturn ring rain: Model estimates of water influx into Saturn's atmosphere. <i>Icarus</i> , 2015, 245, 355-366.	2.5	35
48	Emission of OI(630 nm) in proton aurora. <i>Journal of Geophysical Research</i> , 2001, 106, 141-148.	3.3	33
49	ON THE ELECTRON-TO-NEUTRAL NUMBER DENSITY RATIO IN THE COMA OF COMET 67P/CHURYUMOV-GERASIMENKO: GUIDING EXPRESSION AND SOURCES FOR DEVIATIONS. <i>Astrophysical Journal</i> , 2015, 812, 54.	4.5	31
50	The EChO science case. <i>Experimental Astronomy</i> , 2015, 40, 329-391.	3.7	31
51	Magnetic mirroring in an incident proton beam. <i>Journal of Geophysical Research</i> , 1999, 104, 4447-4455.	3.3	30
52	Ionization by energetic protons in Thermosphere-Ionosphere Electrodynamics General Circulation Model. <i>Journal of Geophysical Research</i> , 1999, 104, 27973-27989.	3.3	30
53	Effective ion speeds at $\sim 200\text{--}250\text{ km}$ from comet 67P/Churyumov-Gerasimenko near perihelion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S142-S148.	4.4	29
54	Electron and proton aurora observed spectroscopically in the far ultraviolet. <i>Journal of Geophysical Research</i> , 2002, 107, SIA 14-1.	3.3	28

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55	Ion chemistry in the coma of comet 67P near perihelion. Monthly Notices of the Royal Astronomical Society, 2016, 462, S67-S77.	4.4	28
56	Ion composition at comet 67P near perihelion: Rosetta observations and model-based interpretation. Monthly Notices of the Royal Astronomical Society, 2017, 469, S427-S442.	4.4	28
57	Proton transport model in the ionosphere. 2. Influence of magnetic mirroring and collisions on the angular redistribution in a proton beam. Annales Geophysicae, 1998, 16, 1308-1321.	1.6	27
58	Theoretical predictions of the effect of cusp and dayside precipitation on the polar ionosphere. Journal of Geophysical Research, 2001, 106, 28857-28865.	3.3	26
59	Effect of stellar flares on the upper atmospheres of HD 189733b and HD 209458b. Astronomy and Astrophysics, 2017, 608, A75.	5.1	26
60	Cometary plasma response to interplanetary corotating interaction regions during 2016 June–September: a quantitative study by the Rosetta Plasma Consortium. Monthly Notices of the Royal Astronomical Society, 2018, 480, 4544-4556.	4.4	26
61	Response of Saturn's ionosphere to solar radiation: Testing parameterizations for thermal electron heating and secondary ionization processes. Planetary and Space Science, 2009, 57, 1699-1705.	1.7	25
62	Contribution of proton precipitation to space-based auroral FUV observations. Journal of Geophysical Research, 2004, 109, .	3.3	24
63	MODEL-OBSERVATION COMPARISONS OF ELECTRON NUMBER DENSITIES IN THE COMA OF 67P/CHURYUMOV–GERASIMENKO DURING 2015 JANUARY. Astronomical Journal, 2016, 152, 59.	4.7	24
64	Proton aurora observed from the ground. Journal of Atmospheric and Solar-Terrestrial Physics, 2006, 68, 1488-1501.	1.6	23
65	EnVision: taking the pulse of our twin planet. Experimental Astronomy, 2012, 33, 337-363.	3.7	23
66	The electron thermal structure in the dayside Martian ionosphere implied by the MGS radio occultation data. Journal of Geophysical Research E: Planets, 2015, 120, 278-286.	3.6	22
67	Ionization balance in Titan's nightside ionosphere. Icarus, 2015, 248, 539-546.	2.5	22
68	On the origin of molecular oxygen in cometary comae. Nature Communications, 2018, 9, 2580.	12.8	22
69	Suprathermal electron spectra in the Venus ionosphere. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	21
70	Building a Weakly Outgassing Comet from a Generalized Ohm's Law. Physical Review Letters, 2019, 123, 055101.	7.8	21
71	Solar wind charge exchange in cometary atmospheres. Astronomy and Astrophysics, 2019, 630, A37.	5.1	21
72	Impact of a cometary outburst on its ionosphere. Astronomy and Astrophysics, 2017, 607, A34.	5.1	21

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73	The implications of the H ₂ variability in Titan's exosphere. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	20
74	Auroral electron precipitation and flux tube erosion in Titan's upper atmosphere. <i>Icarus</i> , 2013, 226, 186-204.	2.5	20
75	Proton-electron precipitation effects on the electron production and density above EISCAT (Troms) and ESR. <i>Annales Geophysicae</i> , 1998, 16, 1299-1307.	1.6	19
76	EUV-driven ionospheres and electron transport on extrasolar giant planets orbiting active stars. <i>Astronomy and Astrophysics</i> , 2016, 587, A87.	5.1	19
77	First 3D test particle model of Ganymede's ionosphere. <i>Icarus</i> , 2019, 330, 42-59.	2.5	19
78	Spectral imaging of proton aurora and twilight at Troms, Norway. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	18
79	Plasma properties of suprathermal electrons near comet 67P/Churyumov-Gerasimenko with Rosetta. <i>Astronomy and Astrophysics</i> , 2019, 630, A42.	5.1	18
80	Current-voltage relation for the Saturnian system. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 3214-3222.	2.4	16
81	Titan's ionosphere. , 2014, , 376-418.		16
82	Auroral processes in the solar system. <i>Geophysical Monograph Series</i> , 2002, , 55-76.	0.1	15
83	ON THE POSSIBILITY OF SIGNIFICANT ELECTRON DEPLETION DUE TO NANOGRAIN CHARGING IN THE COMA OF COMET 67P/CHURYUMOV-GERASIMENKO NEAR PERIHELION. <i>Astrophysical Journal</i> , 2015, 798, 130.	4.5	15
84	N ₂ state population in Titan's atmosphere. <i>Icarus</i> , 2015, 260, 29-59.	2.5	15
85	Comparative study of photo-produced ionosphere in the close environment of comets. <i>Astronomy and Astrophysics</i> , 2019, 630, A47.	5.1	15
86	Characterizing the limitations to the coupling between Saturn's ionosphere and middle magnetosphere. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	14
87	Simulations of ion sputtering at Ganymede. <i>Icarus</i> , 2020, 351, 113918.	2.5	14
88	ROSINA ion zoo at Comet 67P. <i>Astronomy and Astrophysics</i> , 2020, 642, A27.	5.1	14
89	Enhanced incoherent scatter plasma lines. <i>Annales Geophysicae</i> , 1996, 14, 1462-1472.	1.6	13
90	Diurnal variation of electron density in Saturn's ionosphere: Model comparisons with Saturn Electrostatic Discharge (SED) observations. <i>Icarus</i> , 2012, 221, 508-516.	2.5	12

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91	Constraining Ganymede's neutral and plasma environments through simulations of its ionosphere and Galileo observations. <i>Icarus</i> , 2020, 343, 113691.	2.5	12
92	Far-ultraviolet aurora identified at comet 67P/Churyumov-Gerasimenko. <i>Nature Astronomy</i> , 2020, 4, 1084-1091.	10.1	11
93	High resolution measurements and modeling of auroral hydrogen emission line profiles. <i>Annales Geophysicae</i> , 2003, 21, 1629-1643.	1.6	11
94	Influence of local ionization on ionospheric densities in Titan's upper atmosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 5899-5921.	2.4	10
95	Modelling H ₃ ⁺ in planetary atmospheres: effects of vertical gradients on observed quantities. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20190067.	3.4	10
96	First ground-based optical analysis of H<sub>2</sub> Doppler profiles close to local noon in the cusp. <i>Annales Geophysicae</i> , 2006, 24, 2543-2552.	1.6	9
97	The Rosetta campaign to detect an exosphere at Lutetia. <i>Planetary and Space Science</i> , 2012, 66, 165-172.	1.7	9
98	INCREASING POSITIVE ION NUMBER DENSITIES BELOW THE PEAK OF ION-ELECTRON PAIR PRODUCTION IN TITAN'S IONOSPHERE. <i>Astrophysical Journal</i> , 2014, 786, 69.	4.5	9
99	SUPRATHERMAL ELECTRONS IN TITAN'S SUNLIT IONOSPHERE: MODEL-OBSERVATION COMPARISONS. <i>Astrophysical Journal</i> , 2016, 826, 131.	4.5	8
100	Enhanced incoherent scatter plasma lines. <i>Annales Geophysicae</i> , 1996, 14, 1462.	1.6	8
101	The Evolution of the Electron Number Density in the Coma of Comet 67P at the Location of Rosetta from 2015 November through 2016 March. <i>Astrophysical Journal</i> , 2019, 881, 6.	4.5	7
102	Energy deposition in Saturn's equatorial upper atmosphere. <i>Icarus</i> , 2022, 372, 114724.	2.5	7
103	First in-situ detection of the cometary ammonium ion NH ₄ ⁺ (protonated ammonia NH ₄ ⁺) Tj ETQq1 1 0.784314 rgBT /Overlock 1 Society, O, , stw3370.	4.4	6
104	Multi-instrument analysis of far-ultraviolet aurora in the southern hemisphere of comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2021, 647, A119.	5.1	6
105	Observation of O ⁺ and O ²⁺ (⁴P-⁴D⁰) lines in electron aurora over Svalbard. <i>Annales Geophysicae</i> , 2004, 22, 2805-2817.	1.6	5
106	Observation of O ⁺ 4P-4D⁰ lines in proton aurora over Svalbard. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	5
107	The science of EChO. <i>Proceedings of the International Astronomical Union</i> , 2010, 6, 359-370.	0.0	5
108	PREDICTION OF FORBIDDEN ULTRAVIOLET AND VISIBLE EMISSIONS IN COMET 67P/CHURYUMOV-GERASIMENKO. <i>Astrophysical Journal</i> , 2016, 818, 102.	4.5	5

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109	Field-Aligned Photoelectron Energy Peaks at High Altitude and on the Nightside of Titan. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006252.	3.6	5
110	Science goals and new mission concepts for future exploration of Titan's atmosphere, geology and habitability: titan POLar scout/orbitEr and in situ lake lander and DrONE explorer (POSEIDON). Experimental Astronomy, 2022, 54, 911-973.	3.7	5
111	Quasiperiodic $\sim 1/45$ -60 s fluctuations of VLF signals propagating in the Earth-ionosphere waveguide: A result of pulsating auroral particle precipitation?. Journal of Geophysical Research, 1997, 102, 347-361.	3.3	4
112	Influence of collisions on ion dynamics in the inner comae of four comets. Astronomy and Astrophysics, 2019, 630, A48.	5.1	4
113	Electron dynamics near diamagnetic regions of comet 67P/Churyumov-Gerasimenko. Planetary and Space Science, 2020, 187, 104924.	1.7	4
114	AMBITION " comet nucleus cryogenic sample return. Experimental Astronomy, 2022, 54, 1077-1128.	3.7	4
115	Separating and quantifying ionospheric responses to proton and electron precipitation over Svalbard. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	3
116	Saturn's Ionosphere. , 2018, , 196-223.		3
117	Ionospheric total electron content of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2020, 635, A51.	5.1	3
118	Cometary plasma science. Experimental Astronomy, 2022, 54, 1129-1167.	3.7	3
119	Energy Deposition in Planetary Atmospheres by Charged Particles and Solar Photons. Space Sciences Series of ISSI, 2008, , 3-62.	0.0	3
120	Effects of the convective field on weakly outgassing comets. Monthly Notices of the Royal Astronomical Society, 2017, 469, S824-S841.	4.4	2
121	Cross Sections and Reaction Rates for Comparative Planetary Aeronomy. Space Sciences Series of ISSI, 2008, , 63-105.	0.0	2
122	A collisional test particle model of electrons at a comet. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	1
123	Heliophysics: A Field With Its Own Universal Laws?: AGU Chapman Conference on Universal Heliophysical Processes; Savannah, Georgia, 10-14 November 2008. Eos, 2009, 90, 131.	0.1	0
124	Aurora on Jupiter: A Magnetic Connection with the Sun and the Medicean Moons. Proceedings of the International Astronomical Union, 2010, 6, 71-79.	0.0	0
125	Auroral Processes at the Giant Planets: Energy Deposition, Emission Mechanisms, Morphology and Spectra. Space Sciences Series of ISSI, 2016, , 99-179.	0.0	0
126	ON THE IMPORTANCE OF THE CROSS-BODY APPROACH IN PLANETARY AERONOMY. , 0, , 239-248.		0