Ronan Modolo

List of Publications by Year
in descending order

57 papers	2,486 citations	201674 27 h-index	197818 49 g-index
70 all docs	70 docs citations	70 times ranked	1470 citing authors

#	Article	IF	Citations
1	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
2	MAVEN observations of the response of Mars to an interplanetary coronal mass ejection. Science, 2015, 350, aad0210.	12.6	166
3	Influence of the solar EUV flux on the Martian plasma environment. Annales Geophysicae, 2005, 23, 433-444.	1.6	129
4	Mars solar wind interaction: Formation of the Martian corona and atmospheric loss to space. Journal of Geophysical Research, 2007, 112, .	3.3	115
5	The spatial distribution of planetary ion fluxes near Mars observed by MAVEN. Geophysical Research Letters, 2015, 42, 9142-9148.	4.0	115
6	A comparison of global models for the solar wind interaction with Mars. Icarus, 2010, 206, 139-151.	2.5	108
7	Characterizing Atmospheric Escape from Mars Today and Through Time, with MAVEN. Space Science Reviews, 2015, 195, 357-422.	8.1	99
8	Electron densities in the upper ionosphere of Mars from the excitation of electron plasma oscillations. Journal of Geophysical Research, 2008, 113, .	3.3	97
9	Early MAVEN Deep Dip campaign reveals thermosphere and ionosphere variability. Science, 2015, 350, aad0459.	12.6	90
10	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
11	Structure and dynamics of the solar wind/ionosphere interface on Mars: MEXâ€ASPERAâ€3 and MEXâ€MARSIS observations. Geophysical Research Letters, 2008, 35, .	4.0	74
12	Plasma boundary variability at Mars as observed by Mars Global Surveyor and Mars Express. Annales Geophysicae, 2009, 27, 3537-3550.	1.6	70
13	Ionospheric storms on Mars: Impact of the corotating interaction region. Geophysical Research Letters, 2009, 36, .	4.0	61
14	NATURE OF THE MHD AND KINETIC SCALE TURBULENCE IN THE MAGNETOSHEATH OF SATURN: <i>CASSINI</i> OBSERVATIONS. Astrophysical Journal Letters, 2015, 813, L29.	8.3	57
15	Simulated solar wind plasma interaction with the Martian exosphere: influence of the solar EUV flux on the bow shock and the magnetic pile-up boundary. Annales Geophysicae, 2006, 24, 3403-3410.	1.6	56
16	Plasma environment of Mars as observed by simultaneous MEXâ€ASPERAâ€3 and MEXâ€MARSIS observations. Journal of Geophysical Research, 2008, 113, .	3.3	54
17	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
18	Mars exospheric thermal and non-thermal components: Seasonal and local variations. Icarus, 2012, 221, 682-693.	2.5	51

#	Article	IF	Citations
19	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
20	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
21	On the orbital variability of Ganymede's atmosphere. Icarus, 2017, 293, 185-198.	2.5	47
22	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
23	Plasma environment in the wake of Titan from hybrid simulation: A case study. Geophysical Research Letters, 2007, 34, .	4.0	39
24	Mars heavy ion precipitating flux as measured by Mars Atmosphere and Volatile EvolutioN. Geophysical Research Letters, 2015, 42, 9135-9141.	4.0	39
25	MAVEN and MEX Multiâ€instrument Study of the Dayside of the Martian Induced Magnetospheric Structure Revealed by Pressure Analyses. Journal of Geophysical Research: Space Physics, 2019, 124, 8564-8589.	2.4	39
26	Dynamic Martian magnetosphere: Transient twist induced by a rotation of the IMF. Geophysical Research Letters, 2012, 39, .	4.0	31
27	Modelling Ganymedeâ€™s neutral environment: A 3D test-particle simulation. Icarus, 2014, 229, 157-169.	2.5	30
28	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
29	Modeling of Venus, Mars, and Titan. Space Science Reviews, 2011, 162, 267-307.	8.1	26
30	Cold ionospheric plasma in Titan's magnetotail. Geophysical Research Letters, 2007, 34, .	4.0	25
31	Capture of solar wind alphaâ€particles by the Martian atmosphere. Geophysical Research Letters, 2009, 36, .	4.0	25
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 Induced Magnetosphere of Mars: Asymmetrical Topology of the Magnetic Field Lines. Geophysical Research Letters, 2019, 46, 12722-12730.	4.0	25
34	Automated Multi-Dataset Analysis (AMDA): An on-line database and analysis tool for heliospheric and planetary plasma data. Planetary and Space Science, 2021, 201, 105214.	1.7	24
35	Far plasma wake of Titan from the RPWS observations: A case study. Geophysical Research Letters, 2007, 34, .	4.0	22
36	Oxygen Ion Energization at Mars: Comparison of MAVEN and Mars Express Observations to Global Hybrid Simulation. Journal of Geophysical Research: Space Physics, 2018, 123, 1678-1689.	2.4	21

#	Article	IF	Citations
37	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
38	Asymmetry of plasma fluxes at Mars. ASPERA-3 observations and hybrid simulations. Planetary and Space Science, 2008, 56, 832-835.	1.7	20
39	3D hybrid simulations of the interaction of a magnetic cloud with a bow shock. Journal of Geophysical Research: Space Physics, 2015, 120, 6133-6151.	2.4	20
40	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
41	Solar Wind Interaction and Atmospheric Escape. , 2017, , 464-496.		18
42	3D magnetospheric parallel hybrid multi-grid method applied to planetâ€"plasma interactions. Journal of Computational Physics, 2016, 309, 295-313.	3.8	15
43	Comparison of Global Martian Plasma Models in the Context of MAVEN Observations. Journal of Geophysical Research: Space Physics, 2018, 123, 3714-3726.	2.4	15
44	Recovery Timescales of the Dayside Martian Magnetosphere to IMF Variability. Geophysical Research Letters, 2019, 46, 10977-10986.	4.0	15
45	Induced Magnetic Fields and Plasma Motions in the Inner Part of the Martian Magnetosphere. Journal of Geophysical Research: Space Physics, 2021, 126, .	2.4	14
46	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
47	First In Situ Evidence of Mars Nonthermal Exosphere. Geophysical Research Letters, 2019, 46, 4144-4150.	4.0	7
48	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
49	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
50	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
51	Influence of Extreme Ultraviolet Irradiance Variations on the Precipitating Ion Flux From MAVEN Observations. Geophysical Research Letters, 2019, 46, 7761-7768.	4.0	5
52	Outflow and plasma acceleration in Titan's induced magnetotail: Evidence of magnetic tension forces. Journal of Geophysical Research: Space Physics, 2014, 119, 9992.	2.4	4
53	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
54	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

#	Article	IF	Citations
55	LatHyS global hybrid simulation of the BepiColombo second Venus flyby. Planetary and Space Science, 2022, 218, 105499.	1.7	2
56	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
57	Seasonal variations of Mg and Ca in the exosphere of Mercury. Icarus, 2022, 384, 115081.	2.5	1