

Elias Roussos

List of Publications by Citations

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141
papers

2,718
citations

31
h-index

43
g-index

167
ext. papers

3,036
ext. citations

5.8
avg. IF

4.54
L-index

#	Paper	IF	Citations
141	Cassini finds an oxygen-carbon dioxide atmosphere at Saturn's icy moon Rhea. <i>Science</i> , 2010 , 330, 1813-533	33.3	108
140	Plasma Morphology at Mars. Aspera-3 Observations. <i>Space Science Reviews</i> , 2007 , 126, 209-238	7.5	86
139	Interplanetary coronal mass ejection observed at STEREO-A, Mars, comet 67P/Churyumov-Gerasimenko, Saturn, and New Horizons en route to Pluto: Comparison of its Forbush decreases at 1.4, 3.1, and 9.9 AU. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 7865-7890	2.6	66
138	Plasma Moments in the Environment of Mars. <i>Space Science Reviews</i> , 2007 , 126, 165-207	7.5	66
137	Sources and losses of energetic protons in Saturn's magnetosphere. <i>Icarus</i> , 2008 , 197, 519-525	3.8	60
136	Electron microdiffusion in the Saturnian radiation belts: Cassini MIMI/LEMMS observations of energetic electron absorption by the icy moons. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		58
135	Fundamental Plasma Processes in Saturn's Magnetosphere 2009 , 281-331		57
134	Saturn's inner magnetospheric convection pattern: Further evidence. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		56
133	Enceladus' varying imprint on the magnetosphere of Saturn. <i>Science</i> , 2006 , 311, 1412-5	33.3	56
132	Location of the bow shock and ion composition boundaries at Venus: Initial determinations from Venus Express ASPERA-4. <i>Planetary and Space Science</i> , 2008 , 56, 780-784	2	52
131	Discovery of a transient radiation belt at Saturn. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	51
130	The dust halo of Saturn's largest icy moon, Rhea. <i>Science</i> , 2008 , 319, 1380-4	33.3	50
129	The source of Saturn's G ring. <i>Science</i> , 2007 , 317, 653-6	33.3	50
128	Energetic particle phase space densities at Saturn: Cassini observations and interpretations. <i>Journal of Geophysical Research</i> , 2011 , 116,		46
127	Plasma and fields in the wake of Rhea: 3-D hybrid simulation and comparison with Cassini data. <i>Annales Geophysicae</i> , 2008 , 26, 619-637	2	46
126	Energetic particles in Saturn's magnetosphere during the Cassini nominal mission (July 2004-July 2008). <i>Planetary and Space Science</i> , 2009 , 57, 1754-1768	2	43
125	Processes forming and sustaining Saturn's proton radiation belts. <i>Icarus</i> , 2013 , 222, 323-341	3.8	41

124	The science case for an orbital mission to Uranus: Exploring the origins and evolution of ice giant planets. <i>Planetary and Space Science</i> , 2014 , 104, 122-140	2	41
123	A noon-to-midnight electric field and nightside dynamics in Saturn's inner magnetosphere, using microsignature observations. <i>Icarus</i> , 2012 , 220, 503-513	3.8	40
122	Mapping Magnetospheric Equatorial Regions at Saturn from Cassini Prime Mission Observations. <i>Space Science Reviews</i> , 2011 , 164, 1-83	7.5	39
121	Long- and short-term variability of Saturn's ionic radiation belts. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		37
120	Anti-planetward auroral electron beams at Saturn. <i>Nature</i> , 2006 , 439, 699-702	50.4	37
119	Uranus Pathfinder: exploring the origins and evolution of Ice Giant planets. <i>Experimental Astronomy</i> , 2012 , 33, 753-791	1.3	36
118	Europa's near-surface radiation environment. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	36
117	Quasi-periodic injections of relativistic electrons in Saturn's outer magnetosphere. <i>Icarus</i> , 2016 , 263, 101-116	3.8	34
116	Transport of energetic electrons into Saturn's inner magnetosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		34
115	Transient auroral features at Saturn: Signatures of energetic particle injections in the magnetosphere. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		33
114	Signatures of magnetospheric injections in Saturn's aurora. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 1922-1933	2.6	32
113	Cusp observation at Saturn's high-latitude magnetosphere by the Cassini spacecraft. <i>Geophysical Research Letters</i> , 2014 , 41, 1382-1388	4.9	31
112	Azimuthal plasma flow in the Kronian magnetosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		31
111	Plasma intrusion above Mars crustal fields Mars Express ASPERA-3 observations. <i>Icarus</i> , 2006 , 182, 406-412	3.8	31
110	Energetic charged particle weathering of Saturn's inner satellites. <i>Planetary and Space Science</i> , 2012 , 61, 60-65	2	30
109	Spatial and temporal dependence of the convective electric field in Saturn's inner magnetosphere. <i>Icarus</i> , 2014 , 229, 57-70	3.8	30
108	Effects of radial motion on interchange injections at Saturn. <i>Icarus</i> , 2016 , 264, 342-351	3.8	29
107	Ice Giant Systems: The scientific potential of orbital missions to Uranus and Neptune. <i>Planetary and Space Science</i> , 2020 , 191, 105030	2	26

106	Plasma environment of Venus: Comparison of Venus Express ASPERA-4 measurements with 3-D hybrid simulations. <i>Journal of Geophysical Research</i> , 2009 , 114,		26
105	Evidence of Enceladus and Tethys microsignatures. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	26
104	Access of solar wind electrons into the Martian magnetosphere. <i>Annales Geophysicae</i> , 2008 , 26, 3511-3524		26
103	Solar Energetic Particles (SEP) and Galactic Cosmic Rays (GCR) as tracers of solar wind conditions near Saturn: Event lists and applications. <i>Icarus</i> , 2018 , 300, 47-71	3.8	25
102	Statistical analysis and multi-instrument overview of the quasi-periodic 1-hour pulsations in Saturn's outer magnetosphere. <i>Icarus</i> , 2016 , 271, 1-18	3.8	25
101	The variable extension of Saturn's electron radiation belts. <i>Planetary and Space Science</i> , 2014 , 104, 3-17	2	25
100	Asymmetries in Saturn's radiation belts. <i>Journal of Geophysical Research</i> , 2010 , 115,		25
99	Low energy electron microsignatures at the orbit of Tethys: Cassini MIMI/LEMMS observations. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	25
98	Formation of Saturn's ring spokes by lightning-induced electron beams. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	25
97	Energetic Ion Moments and Polytopic Index in Saturn's Magnetosphere using Cassini/MIMI Measurements: A Simple Model Based on Distribution Functions. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 8066-8086	2.6	25
96	Electron Acceleration to MeV Energies at Jupiter and Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 9110-9129	2.6	24
95	Analysis of Cassini magnetic field observations over the poles of Rhea. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		23
94	Comparison of plasma data from ASPERA-3/Mars-Express with a 3-D hybrid simulation. <i>Annales Geophysicae</i> , 2007 , 25, 1851-1864	2	23
93	Ion composition in interchange injection events in Saturn's magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 9761-9772	2.6	22
92	Energetic electron signatures of Saturn's smaller moons: Evidence of an arc of material at Methone. <i>Icarus</i> , 2008 , 193, 455-464	3.8	22
91	Intervals of Intense Energetic Electron Beams Over Jupiter's Poles. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 1989	2.6	21
90	Drift-resonant, relativistic electron acceleration at the outer planets: Insights from the response of Saturn's radiation belts to magnetospheric storms. <i>Icarus</i> , 2018 , 305, 160-173	3.8	21
89	Extreme densities in Titan's ionosphere during the T85 magnetosheath encounter. <i>Geophysical Research Letters</i> , 2013 , 40, 2879-2883	4.9	21

88	The lens feature on the inner saturnian satellites. <i>Icarus</i> , 2014 , 234, 155-161	3.8	20
87	Evolution of electron pitch angle distributions across Saturn's middle magnetospheric region from MIMI/LEMMS. <i>Planetary and Space Science</i> , 2014 , 104, 18-28	2	20
86	Energetic electron observations of Rhea's magnetospheric interaction. <i>Icarus</i> , 2012 , 221, 116-134	3.8	20
85	A radiation belt of energetic protons located between Saturn and its rings. <i>Science</i> , 2018 , 362,	33.3	19
84	Access of energetic particles to Titan's exobase: A study of Cassini's T9 flyby. <i>Planetary and Space Science</i> , 2016 , 130, 40-53	2	18
83	Surface charging and electrostatic dust acceleration at the nucleus of comet 67P during periods of low activity. <i>Planetary and Space Science</i> , 2015 , 119, 24-35	2	18
82	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. <i>Space Science Reviews</i> , 2007 , 126, 355-372	7.5	18
81	The vertical thickness of Jupiter's Europa gas torus from charged particle measurements. <i>Geophysical Research Letters</i> , 2016 , 43, 9425-9433	4.9	17
80	Mimas's far-UV albedo: Spatial variations. <i>Icarus</i> , 2012 , 220, 922-931	3.8	17
79	Asymmetry of plasma fluxes at Mars. ASPERA-3 observations and hybrid simulations. <i>Planetary and Space Science</i> , 2008 , 56, 832-835	2	17
78	The evolution of Saturn's radiation belts modulated by changes in radial diffusion. <i>Nature Astronomy</i> , 2017 , 1, 872-877	12.1	16
77	Numerical simulation of energetic electron microsignature drifts at Saturn: Methods and applications. <i>Icarus</i> , 2013 , 226, 1595-1611	3.8	16
76	Surface charging of Saturn's plasma-absorbing moons. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		16
75	Close Cassini flybys of Saturn's ring moons Pan, Daphnis, Atlas, Pandora, and Epimetheus. <i>Science</i> , 2019 , 364,	33.3	15
74	Energetic particle measurements in the vicinity of Dione during the three Cassini encounters 2005-2011. <i>Icarus</i> , 2013 , 226, 617-628	3.8	15
73	Magnetospheric considerations for solar system ice state. <i>Icarus</i> , 2018 , 302, 560-564	3.8	14
72	The interaction between Saturn's moons and their plasma environments. <i>Physics Reports</i> , 2015 , 602, 1-65	27.7	13
71	An Active Plume Eruption on Europa During Galileo Flyby E26 as Indicated by Energetic Proton Depletions. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL087806	4.9	13

70	The Cassini Enceladus encounters 2005-2010 in the view of energetic electron measurements. <i>Icarus</i> , 2012 , 218, 433-447	3.8	13
69	Pulsations of the polar cusp aurora at Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 11,952-11,963	2.6	13
68	Modeling of the energetic ion observations in the vicinity of Rhea and Dione. <i>Icarus</i> , 2015 , 258, 402-417	3.8	12
67	Cassini observations of Saturn's southern polar cusp. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 3006-3030	2.6	12
66	Heliospheric Conditions at Saturn During Cassini's Ring-Grazing and Proximal Orbits. <i>Geophysical Research Letters</i> , 2018 , 45, 10812-10818	4.9	12
65	Reconnection Acceleration in Saturn's Dayside Magnetodisk: A Multicase Study with Cassini. <i>Astrophysical Journal Letters</i> , 2018 , 868, L23	7.9	12
64	Dipolarization Fronts With Associated Energized Electrons in Saturn's Magnetotail. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 2714-2735	2.6	12
63	Sources, Sinks, and Transport of Energetic Electrons Near Saturn's Main Rings. <i>Geophysical Research Letters</i> , 2019 , 46, 3590-3598	4.9	11
62	Recurrent Magnetic Dipolarization at Saturn: Revealed by Cassini. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 8502-8517	2.6	11
61	Evidence for dust-driven, radial plasma transport in Saturn's inner radiation belts. <i>Icarus</i> , 2016 , 274, 272-283	3.8	10
60	Detection of a strongly negative surface potential at Saturn's moon Hyperion. <i>Geophysical Research Letters</i> , 2014 , 41, 7011-7018	4.9	10
59	Long- and Short-term Variability of Galactic Cosmic-Ray Radial Intensity Gradients between 1 and 9.5 au: Observations by Cassini, BESS, BESS-Polar, PAMELA, and AMS-02. <i>Astrophysical Journal</i> , 2020 , 904, 165	4.7	10
58	Heavy Ion Charge States in Jupiter's Polar Magnetosphere Inferred From Auroral Megavolt Electric Potentials. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2020JA028052	2.6	10
57	Magnetospheric Studies: A Requirement for Addressing Interdisciplinary Mysteries in the Ice Giant Systems. <i>Space Science Reviews</i> , 2020 , 216, 1	7.5	10
56	Survey of pickup ion signatures in the vicinity of Titan using CAPS/IMS. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 8317-8328	2.6	9
55	Mechanisms of Saturn's Near-Noon Transient Aurora: In Situ Evidence From Cassini Measurements. <i>Geophysical Research Letters</i> , 2017 , 44, 11,217-11,228	4.9	9
54	MeV proton flux predictions near Saturn's D ring. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 8586-8602	2.6	9
53	Auroral spirals at Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 8633-8643	2.6	9

52	Io's Effect on Energetic Charged Particles as Seen in Juno Data. <i>Geophysical Research Letters</i> , 2019 , 46, 13615-13620	4.9	9
51	Suprathermal electron penetration into the inner magnetosphere of Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 5436-5448	2.6	8
50	Spectral Signatures of Adiabatic Electron Acceleration at Saturn Through Corotation Drift Cancellation. <i>Geophysical Research Letters</i> , 2019 , 46, 10240-10249	4.9	8
49	Energetic electron microsignatures as tracers of radial flows and dynamics in Saturn's innermost magnetosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		8
48	Auroral Storm and Polar Arcs at Saturn: Final Cassini/UVIS Auroral Observations. <i>Geophysical Research Letters</i> , 2018 , 45, 6832-6842	4.9	8
47	Galactic Cosmic Rays Access to the Magnetosphere of Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 166-177	2.6	7
46	Auroral Beads at Saturn and the Driving Mechanism: Cassini Proximal Orbits. <i>Astrophysical Journal Letters</i> , 2019 , 885, L16	7.9	7
45	The role of plasma slowdown in the generation of Rhea's Alfvén wings. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 1778-1788	2.6	7
44	Combined ~10 eV to ~344 MeV Particle Spectra and Pressures in the Heliosheath along the Voyager 2 Trajectory. <i>Astrophysical Journal Letters</i> , 2020 , 905, L24	7.9	7
43	Evolution of the Auroral Signatures of Jupiter's Magnetospheric Injections. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 8489-8501	2.6	7
42	Saturn's Innermost Radiation Belt Throughout and Inward of the D-Ring. <i>Geophysical Research Letters</i> , 2018 , 45, 10,912	4.9	7
41	Energetic Neutral and Charged Particle Measurements in the Inner Saturnian Magnetosphere During the Grand Finale Orbits of Cassini 2016/2017. <i>Geophysical Research Letters</i> , 2018 , 45, 10,847	4.9	7
40	Jovian Cosmic-Ray Protons in the Heliosphere: Constraints by Cassini Observations. <i>Astrophysical Journal</i> , 2019 , 871, 223	4.7	6
39	Saturn's Nightside Dynamics During Cassini's F Ring and Proximal Orbits: Response to Solar Wind and Planetary Period Oscillation Modulations. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2020JA027907	2.6	6
38	The Formation of Saturn's and Jupiter's Electron Radiation Belts by Magnetospheric Electric Fields. <i>Astrophysical Journal Letters</i> , 2020 , 905, L10	7.9	6
37	Energetic Electron Periodicities During the Cassini Grand Finale. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 12,229-12,235	2.6	5
36	Sustaining Saturn's Electron Radiation Belts Through Episodic, Global-Scale Relativistic Electron Flux Enhancements. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2019JA027621	2.6	5
35	Magnetospheric Interactions of Saturn's Moon Dione (2005-2015). <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2019JA027688	2.6	5

34	Long-standing Small-scale Reconnection Processes at Saturn Revealed by Cassini. <i>Astrophysical Journal Letters</i> , 2019 , 884, L14	7.9	4
33	Local-time averaged maps of H emission, temperature and ion winds. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019 , 377, 20180405	3	4
32	Photometric Analyses of Saturn's Small Moons: Aegaeon, Methone, and Pallene Are Dark; Helene and Calypso Are Bright. <i>Astronomical Journal</i> , 2020 , 159, 129	4.9	4
31	Energetic electron measurements near Enceladus by Cassini during 2005-2015. <i>Icarus</i> , 2018 , 306, 256-274	3.8	4
30	Acceleration of Ions in Jovian Plasmoids: Does Turbulence Play a Role?. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 5056-5069	2.6	4
29	Correction to Plasma environment of Venus: Comparison of Venus Express ASPERA-4 measurements with 3-D hybrid simulations. <i>Journal of Geophysical Research</i> , 2009 , 114,		4
28	Jupiter's Ion Radiation Belts Inward of Europa's Orbit. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028925	2.6	4
27	Statistical Study of the Energetic Proton Environment at Titan's Orbit From the Cassini Spacecraft. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 4820-4834	2.6	4
26	Mapping Saturn's Nightside Plasma Sheet Using Cassini's Proximal Orbits. <i>Geophysical Research Letters</i> , 2018 , 45, 6798-6804	4.9	4
25	Energetic Electron Pitch Angle Distributions During the Cassini Final Orbits. <i>Geophysical Research Letters</i> , 2018 , 45, 2911-2917	4.9	3
24	Inflow Speed Analysis of Interchange Injections in Saturn's Magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2020JA028299	2.6	3
23	The Radiation Belts of Jupiter and Saturn. <i>Geophysical Monograph Series</i> , 2021 , 499-514	1.1	3
22	Plasma, Neutral Atmosphere, and Energetic Radiation Environments of Planetary Rings	363-398	2
21	Energetic electron asymmetries at Mars: ASPERA-3 observations. <i>Planetary and Space Science</i> , 2008 , 56, 836-839	2	2
20	Spectra of Saturn's proton belts revealed. <i>Icarus</i> , 2022 , 376, 114795	3.8	2
19	Galileo/EPD user guide		2
18	Ice giant system exploration within ESA's Voyage 2050. <i>Experimental Astronomy</i> , 1	1.3	2
17	Saturn's Inner Magnetospheric Convection in the View of Zebra Stripe Patterns in Energetic Electron Spectra. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2021JA029600	2.6	2

16	Plasma Morphology at Mars. ASPERA-3 Observations 2007 , 209-238		2
15	Variation in Cosmic-Ray Intensity Lags Sunspot Number: Implications of Late Opening of Solar Magnetic Field. <i>Astrophysical Journal</i> , 2022 , 928, 157	4.7	2
14	Magnetospheric Electron Flows In The Martian Ionosphere. Detection And Implications. <i>AIP Conference Proceedings</i> , 2006 ,	0	1
13	A source of very energetic oxygen located in Jupiter's inner radiation belts.. <i>Science Advances</i> , 2022 , 8, eabm4234	14.3	1
12	Zebra stripe patterns in energetic ion spectra at Saturn. <i>Geophysical Research Letters</i> ,	4.9	1
11	Magnetic Structure and Propagation of Two Interacting CMEs from the Sun to Saturn. <i>Journal of Geophysical Research: Space Physics</i> ,	2.6	1
10	Open science questions and missing measurements in the radiation belts of Jupiter 2021 , 53,		1
9	Cassini Observation of Relativistic Electron Butterfly Distributions in Saturn's Inner Radiation Belts: Evidence for Acceleration by Local Processes. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL092690	4.9	1
8	Reply to Comment on "An Active Plume Eruption on Europa During Galileo Flyby E26 as Indicated by Energetic Proton Depletions" <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL095240	4.9	1
7	The in-situ exploration of Jupiter's radiation belts. <i>Experimental Astronomy</i> ,1	1.3	0
6	Saturn's Nightside Ring Current During Cassini's Grand Finale. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028605	2.6	0
5	Dawn-Dusk Asymmetry in Energetic (>20 keV) Particles Adjacent to Saturn's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028264	2.6	0
4	On the Energization of Pickup Ions Downstream of the Heliospheric Termination Shock by Comparing 0.52-5 keV Observed Energetic Neutral Atom Spectra to Ones Inferred from Proton Hybrid Simulations. <i>Astrophysical Journal Letters</i> , 2022 , 931, L21	7.9	0
3	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars 2007 , 355-372		
2	Enceladus and Titan: emerging worlds of the Solar System. <i>Experimental Astronomy</i> ,1	1.3	
1	. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 2126-2145	1.3	