

Elias Roussos

List of Publications by Year in descending order

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144
papers

3,374
citations

126858

33
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167
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167
docs citations

167
times ranked

1874
citing authors

#	ARTICLE	IF	CITATIONS
1	Cassini Finds an Oxygen&Carbon Dioxide Atmosphere at Saturn&TM's Icy Moon Rhea. <i>Science</i> , 2010, 330, 1813-1815.	6.0	116
2	Plasma Morphology at Mars. <i>Aspera-3 Observations. Space Science Reviews</i> , 2007, 126, 209-238.	3.7	102
3	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&A&U. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 7865-7890.	0.8	87
4	Plasma Moments in the Environment of Mars. <i>Space Science Reviews</i> , 2007, 126, 165-207.	3.7	77
5	Location of the bow shock and ion composition boundaries at Venus&TM initial determinations from Venus Express ASPERA-4. <i>Planetary and Space Science</i> , 2008, 56, 780-784.	0.9	64
6	Sources and losses of energetic protons in Saturn's magnetosphere. <i>Icarus</i> , 2008, 197, 519-525.	1.1	64
7	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.	3.3	63
8	Saturn's inner magnetospheric convection pattern: Further evidence. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	60
9	The Source of Saturn's G Ring. <i>Science</i> , 2007, 317, 653-656.	6.0	59
10	Fundamental Plasma Processes in Saturn's Magnetosphere. , 2009, , 281-331.		59
11	Enceladus' Varying Imprint on the Magnetosphere of Saturn. <i>Science</i> , 2006, 311, 1412-1415.	6.0	57
12	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.	0.9	56
13	Discovery of a transient radiation belt at Saturn. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	54
14	The Dust Halo of Saturn's Largest Icy Moon, Rhea. <i>Science</i> , 2008, 319, 1380-1384.	6.0	53
15	Energetic particle phase space densities at Saturn: Cassini observations and interpretations. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	51
16	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.	0.6	50
17	Electron Acceleration to MeV Energies at Jupiter and Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9110-9129.	0.8	46
18	Processes forming and sustaining Saturn&TM's proton radiation belts. <i>Icarus</i> , 2013, 222, 323-341.	1.1	45

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37	Azimuthal plasma flow in the Kronian magnetosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	32
38	Signatures of magnetospheric injections in Saturn's aurora. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 1922-1933.	0.8	32
39	Spatial and temporal dependence of the convective electric field in Saturn's inner magnetosphere. <i>Icarus</i> , 2014, 229, 57-70.	1.1	32
40	Energetic charged particle weathering of Saturn's inner satellites. <i>Planetary and Space Science</i> , 2012, 61, 60-65.	0.9	31
41	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.	1.1	31
42	Analysis of Cassini magnetic field observations over the poles of Rhea. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	30
43	Comparison of plasma data from ASPERA-3/Mars-Express with a 3-D hybrid simulation. <i>Annales Geophysicae</i> , 2007, 25, 1851-1864.	0.6	29
44	Low energy electron microsignatures at the orbit of Tethys: Cassini MIMI/LEMMS observations. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	28
45	Asymmetries in Saturn's radiation belts. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	28
46	Access of solar wind electrons into the Martian magnetosphere. <i>Annales Geophysicae</i> , 2008, 26, 3511-3524.	0.6	28
47	Evidence of Enceladus and Tethys microsignatures. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	27
48	Extreme densities in Titan's ionosphere during the T85 magnetosheath encounter. <i>Geophysical Research Letters</i> , 2013, 40, 2879-2883.	1.5	27
49	The variable extension of Saturn's electron radiation belts. <i>Planetary and Space Science</i> , 2014, 104, 3-17.	0.9	27
50	The vertical thickness of Jupiter's Europa gas torus from charged particle measurements. <i>Geophysical Research Letters</i> , 2016, 43, 9425-9433.	1.5	27
51	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.	1.1	27
52	A radiation belt of energetic protons located between Saturn and its rings. <i>Science</i> , 2018, 362, .	6.0	27
53	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.	1.1	26
54	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.	0.9	25

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55	Energetic electron observations of Rhea's magnetospheric interaction. <i>Icarus</i> , 2012, 221, 116-134.	1.1	24
56	The lens feature on the inner saturnian satellites. <i>Icarus</i> , 2014, 234, 155-161.	1.1	24
57	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.	0.9	24
58	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.	0.9	24
59	Close Cassini flybys of Saturn's ring moons Pan, Daphnis, Atlas, Pandora, and Epimetheus. <i>Science</i> , 2019, 364, .	6.0	24
60	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.	3.0	24
61	Ion composition in interchange injection events in Saturn's magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9761-9772.	0.8	23
62	Magnetospheric considerations for solar system ice state. <i>Icarus</i> , 2018, 302, 560-564.	1.1	23
63	Energetic electron signatures of Saturn's smaller moons: Evidence of an arc of material at Methone. <i>Icarus</i> , 2008, 193, 455-464.	1.1	22
64	The interaction between Saturn's moons and their plasma environments. <i>Physics Reports</i> , 2015, 602, 1-65.	10.3	21
65	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.	0.8	21
66	An Active Plume Eruption on Europa During Galileo Flyby E26 as Indicated by Energetic Proton Depletions. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087806.	1.5	21
67	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. <i>Space Science Reviews</i> , 2007, 126, 355-372.	3.7	20
68	Asymmetry of plasma fluxes at Mars. ASPERA-3 observations and hybrid simulations. <i>Planetary and Space Science</i> , 2008, 56, 832-835.	0.9	20
69	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.	1.6	20
70	The Formation of Saturn's and Jupiter's Electron Radiation Belts by Magnetospheric Electric Fields. <i>Astrophysical Journal Letters</i> , 2020, 905, L10.	3.0	20
71	The evolution of Saturn's radiation belts modulated by changes in radial diffusion. <i>Nature Astronomy</i> , 2017, 1, 872-877.	4.2	18
72	Surface charging of Saturn's plasma-absorbing moons. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	17

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73	Mimasâ€™ far-UV albedo: Spatial variations. <i>Icarus</i> , 2012, 220, 922-931.	1.1	17
74	Numerical simulation of energetic electron microsignature drifts at Saturn: Methods and applications. <i>Icarus</i> , 2013, 226, 1595-1611.	1.1	17
75	Cassini observations of Saturn's southern polar cusp. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 3006-3030.	0.8	17
76	Energetic particle measurements in the vicinity of Dione during the three Cassini encounters 2005â€™2011. <i>Icarus</i> , 2013, 226, 617-628.	1.1	16
77	Magnetospheric Studies: A Requirement for Addressing Interdisciplinary Mysteries in the Ice Giant Systems. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	16
78	Magnetic Structure and Propagation of Two Interacting CMEs From the Sun to Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, .	0.8	16
79	Modeling of the energetic ion observations in the vicinity of Rhea and Dione. <i>Icarus</i> , 2015, 258, 402-417.	1.1	15
80	Reconnection Acceleration in Saturnâ€™s Dayside Magnetodisk: A Multicase Study with Cassini. <i>Astrophysical Journal Letters</i> , 2018, 868, L23.	3.0	15
81	The Cassini Enceladus encounters 2005â€™2010 in the view of energetic electron measurements. <i>Icarus</i> , 2012, 218, 433-447.	1.1	14
82	Heliospheric Conditions at Saturn During Cassini's Ringâ€™Grazing and Proximal Orbits. <i>Geophysical Research Letters</i> , 2018, 45, 10812-10818.	1.5	14
83	Recurrent Magnetic Dipolarization at Saturn: Revealed by Cassini. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8502-8517.	0.8	14
84	Dipolarization Fronts With Associated Energized Electrons in Saturn's Magnetotail. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 2714-2735.	0.8	14
85	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.	0.8	14
86	Pulsations of the polar cusp aurora at Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 11,952.	0.8	13
87	Sources, Sinks, and Transport of Energetic Electrons Near Saturn's Main Rings. <i>Geophysical Research Letters</i> , 2019, 46, 3590-3598.	1.5	13
88	Detection of a strongly negative surface potential at Saturn's moon Hyperion. <i>Geophysical Research Letters</i> , 2014, 41, 7011-7018.	1.5	12
89	MeV proton flux predictions near Saturn's D ring. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 8586-8602.	0.8	12
90	Evidence for dust-driven, radial plasma transport in Saturnâ€™s inner radiation belts. <i>Icarus</i> , 2016, 274, 272-283.	1.1	12

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91	Spectral Signatures of Adiabatic Electron Acceleration at Saturn Through Corotation Drift Cancellation. <i>Geophysical Research Letters</i> , 2019, 46, 10240-10249.	1.5	12
92	Io's Effect on Energetic Charged Particles as Seen in Juno Data. <i>Geophysical Research Letters</i> , 2019, 46, 13615-13620.	1.5	12
93	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.	0.8	11
94	Suprathermal electron penetration into the inner magnetosphere of Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 5436-5448.	0.8	11
95	Evolution of the Auroral Signatures of Jupiter's Magnetospheric Injections. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8489-8501.	0.8	11
96	Local-time averaged maps of H ³⁺ emission, temperature and ion winds. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20180405.	1.6	11
97	The in-situ exploration of Jupiter's radiation belts. <i>Experimental Astronomy</i> , 2022, 54, 745-789.	1.6	11
98	A source of very energetic oxygen located in Jupiter's inner radiation belts. <i>Science Advances</i> , 2022, 8, eabm4234.	4.7	11
99	On the Energization of Pickup Ions Downstream of the Heliospheric Termination Shock by Comparing 0.52–55 keV Observed Energetic Neutral Atom Spectra to Ones Inferred from Proton Hybrid Simulations. <i>Astrophysical Journal Letters</i> , 2022, 931, L21.	3.0	11
100	Energetic electron microsignatures as tracers of radial flows and dynamics in Saturn's innermost magnetosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	10
101	Mechanisms of Saturn's Near-Noon Transient Aurora: In Situ Evidence From Cassini Measurements. <i>Geophysical Research Letters</i> , 2017, 44, 11,217.	1.5	10
102	Auroral Storm and Polar Arcs at Saturn's Final Cassini/LVIS Auroral Observations. <i>Geophysical Research Letters</i> , 2018, 45, 6832-6842.	1.5	10
103	Auroral Beads at Saturn and the Driving Mechanism: Cassini Proximal Orbits. <i>Astrophysical Journal Letters</i> , 2019, 885, L16.	3.0	10
104	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.	0.8	10
105	Jupiter's Ion Radiation Belts Inward of Europa's Orbit. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028925.	0.8	10
106	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.	0.8	10
107	Variation in Cosmic-Ray Intensity Lags Sunspot Number: Implications of Late Opening of Solar Magnetic Field. <i>Astrophysical Journal</i> , 2022, 928, 157.	1.6	10
108	Auroral spirals at Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 8633-8643.	0.8	9

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109	Saturn's Innermost Radiation Belt Throughout and Inward of the Dâ€Ring. Geophysical Research Letters, 2018, 45, 10,912.	1.5	9
110	Galactic Cosmic Rays Access to the Magnetosphere of Saturn. Journal of Geophysical Research: Space Physics, 2019, 124, 166-177.	0.8	9
111	Magnetospheric Interactions of Saturn's Moon Dione (2005â€2015). Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027688.	0.8	9
112	The role of plasma slowdown in the generation of Rhea's AlfvÃ©n wings. Journal of Geophysical Research: Space Physics, 2017, 122, 1778-1788.	0.8	8
113	Statistical Study of the Energetic Proton Environment at Titan's Orbit From the Cassini Spacecraft. Journal of Geophysical Research: Space Physics, 2018, 123, 4820-4834.	0.8	8
114	Energetic Neutral and Charged Particle Measurements in the Inner Saturnian Magnetosphere During the Grand Finale Orbits of Cassini 2016/2017. Geophysical Research Letters, 2018, 45, 10,847.	1.5	8
115	Jovian Cosmic-Ray Protons in the Heliosphere: Constraints by Cassini Observations. Astrophysical Journal, 2019, 871, 223.	1.6	8
116	Photometric Analyses of Saturnâ€™s Small Moons: Aegaeon, Methone, and Pallene Are Dark; Helene and Calypso Are Bright. Astronomical Journal, 2020, 159, 129.	1.9	8
117	Acceleration of Ions in Jovian Plasmoids: Does Turbulence Play a Role?. Journal of Geophysical Research: Space Physics, 2019, 124, 5056-5069.	0.8	7
118	Inflow Speed Analysis of Interchange Injections in Saturn's Magnetosphere. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028299.	0.8	7
119	Cassini Observation of Relativistic Electron Butterfly Distributions in Saturnâ€™s Inner Radiation Belts: Evidence for Acceleration by Local Processes. Geophysical Research Letters, 2021, 48, e2021GL092690.	1.5	7
120	Callisto's Atmosphere and Its Space Environment: Prospects for the Particle Environment Package on Board JUICE. Earth and Space Science, 2022, 9, .	1.1	6
121	Correction to â€œPlasma environment of Venus: Comparison of Venus Express ASPERAâ€™4 measurements with 3â€ hybrid simulationsâ€; Journal of Geophysical Research, 2009, 114, .	3.3	5
122	Energetic Electron Periodicities During the Cassini Grand Finale. Journal of Geophysical Research: Space Physics, 2017, 122, 12,229-12,235.	0.8	5
123	Energetic Electron Pitch Angle Distributions During the Cassini Final Orbits. Geophysical Research Letters, 2018, 45, 2911-2917.	1.5	5
124	Zebra Stripe Patterns in Energetic Ion Spectra at Saturn. Geophysical Research Letters, 2022, 49, .	1.5	5
125	Energetic electron measurements near Enceladus by Cassini during 2005â€2015. Icarus, 2018, 306, 256-274.	1.1	4
126	Mapping Saturn's Nightside Plasma Sheet Using Cassini's Proximal Orbits. Geophysical Research Letters, 2018, 45, 6798-6804.	1.5	4

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127	Long-standing Small-scale Reconnection Processes at Saturn Revealed by Cassini. <i>Astrophysical Journal Letters</i> , 2019, 884, L14.	3.0	4
128	Ice giant system exploration within ESA's Voyage 2050. <i>Experimental Astronomy</i> , 2022, 54, 1015-1025.	1.6	4
129	Large-scale episodic enhancements of relativistic electron intensities in Jupiter's radiation belt. <i>Earth and Planetary Physics</i> , 2021, 5, 1-13.	0.4	4
130	Plasma Morphology at Mars. ASPERA-3 Observations. , 2007, , 209-238.		4
131	Spectra of Saturn's proton belts revealed. <i>Icarus</i> , 2022, 376, 114795.	1.1	4
132	Plasma, Neutral Atmosphere, and Energetic Radiation Environments of Planetary Rings. , 0, , 363-398.		3
133	Saturn's Nightside Ring Current During Cassini's Grand Finale. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028605.	0.8	3
134	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.	1.5	3
135	Energetic electron asymmetries at Mars: ASPERA-3 observations. <i>Planetary and Space Science</i> , 2008, 56, 836-839.	0.9	2
136	Open science questions and missing measurements in the radiation belts of Jupiter. , 2021, 53, .		2
137	Magnetospheric Electron Flows In The Martian Ionosphere. Detection And Implications. AIP Conference Proceedings, 2006, , .	0.3	1
138	Corotation Plasma Environment Model: An Empirical Probability Model of the Jovian Magnetosphere. <i>IEEE Transactions on Plasma Science</i> , 2018, 46, 2126-2145.	0.6	1
139	Dawn-to-Dusk Asymmetry in Energetic (>20 keV) Particles Adjacent to Saturn's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028264.	0.8	1
140	Enceladus and Titan: emerging worlds of the Solar System. <i>Experimental Astronomy</i> , 0, , 1.	1.6	1
141	Mars: Determination of the most appropriate electron energy for the bow shock identification, using MGS data. AIP Conference Proceedings, 2006, , .	0.3	0
142	Investigation of the Influence of Magnetic Anomalies on Ion Distributions at Mars. , 2007, , 355-372.		0
143	Missing link found?. <i>Nature Astronomy</i> , 2018, 2, 621-622.	4.2	0
144	The response of Saturn's dawn field-aligned currents to magnetospheric and ring current conditions during Cassini's proximal orbits: Evidence for a Region 2 response at Saturn. <i>Journal of Geophysical Research: Space Physics</i> , 0, , .	0.8	0