

Jakobus A Le Roux

List of Publications by Year in descending order

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64
papers

1,933
citations

236612

25
h-index

253896

43
g-index

64
all docs

64
docs citations

64
times ranked

927
citing authors

#	ARTICLE	IF	CITATIONS
1	PARTICLE ACCELERATION VIA RECONNECTION PROCESSES IN THE SUPERSONIC SOLAR WIND. <i>Astrophysical Journal</i> , 2014, 797, 28.	1.6	185
2	DIFFUSIVE SHOCK ACCELERATION AND RECONNECTION ACCELERATION PROCESSES. <i>Astrophysical Journal</i> , 2015, 814, 137.	1.6	156
3	Perpendicular diffusion coefficient for charged particles of arbitrary energy. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	125
4	A KINETIC TRANSPORT THEORY FOR PARTICLE ACCELERATION AND TRANSPORT IN REGIONS OF MULTIPLE CONTRACTING AND RECONNECTING INERTIAL-SCALE FLUX ROPES. <i>Astrophysical Journal</i> , 2015, 801, 112.	1.6	124
5	SMALL-SCALE MAGNETIC ISLANDS IN THE SOLAR WIND AND THEIR ROLE IN PARTICLE ACCELERATION. I. DYNAMICS OF MAGNETIC ISLANDS NEAR THE HELIOSPHERIC CURRENT SHEET. <i>Astrophysical Journal</i> , 2015, 808, 181.	1.6	106
6	SMALL-SCALE MAGNETIC ISLANDS IN THE SOLAR WIND AND THEIR ROLE IN PARTICLE ACCELERATION. II. PARTICLE ENERGIZATION INSIDE MAGNETICALLY CONFINED CAVITIES. <i>Astrophysical Journal</i> , 2016, 827, 122.	1.6	80
7	A transport model for the diffusive shock acceleration and modulation of anomalous cosmic rays in the heliosphere. <i>Journal of Geophysical Research</i> , 1996, 101, 4791-4803.	3.3	73
8	An evaluation of perpendicular diffusion models regarding cosmic ray modulation on the basis of a hydromagnetic description for solar wind turbulence. <i>Journal of Geophysical Research</i> , 1999, 104, 24845-24862.	3.3	69
9	Automated Detection of Small-scale Magnetic Flux Ropes in the Solar Wind: First Results from the Wind Spacecraft Measurements. <i>Astrophysical Journal, Supplement Series</i> , 2018, 239, 12.	3.0	58
10	TIME-DEPENDENT ACCELERATION OF INTERSTELLAR PICKUP IONS AT THE HELIOSPHERIC TERMINATION SHOCK USING A FOCUSED TRANSPORT APPROACH. <i>Astrophysical Journal</i> , 2009, 693, 534-551.	1.6	57
11	Toward a Greater Understanding of the Reduction of Drift Coefficients in the Presence of Turbulence. <i>Astrophysical Journal</i> , 2017, 841, 107.	1.6	56
12	Particle Acceleration at 5 au Associated with Turbulence and Small-scale Magnetic Flux Ropes. <i>Astrophysical Journal</i> , 2019, 872, 4.	1.6	55
13	Self-consistent Energetic Particle Acceleration by Contracting and Reconnecting Small-scale Flux Ropes: The Governing Equations. <i>Astrophysical Journal</i> , 2018, 864, 158.	1.6	51
14	COMBINING DIFFUSIVE SHOCK ACCELERATION WITH ACCELERATION BY CONTRACTING AND RECONNECTING SMALL-SCALE FLUX ROPES AT HELIOSPHERIC SHOCKS. <i>Astrophysical Journal</i> , 2016, 827, 47.	1.6	50
15	A Focused Transport Approach to Pickup Ion Shock Acceleration: Implications for the Termination Shock. <i>Astrophysical Journal</i> , 2007, 662, 350-371.	1.6	48
16	An energeticâ€particleâ€mediated termination shock observed by Voyager 2. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	43
17	ACR Proton Acceleration Associated with Reconnection Processes beyond the Heliospheric Termination Shock. <i>Astrophysical Journal</i> , 2019, 886, 144.	1.6	41
18	Nonlinear Cosmicâ€Ray Diffusive Transport in Combined Twoâ€dimensional and Slab Magnetohydrodynamic Turbulence: A BGKâ€Boltzmann Approach. <i>Astrophysical Journal</i> , 2007, 667, 930-955.	1.6	36

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19	Current Sheets, Plasmoids and Flux Ropes in the Heliosphere. <i>Space Science Reviews</i> , 2021, 217, 1.	3.7	32
20	Pickup ion acceleration by turbulent field-aligned electric fields in the slow low-latitude solar wind. <i>Journal of Geophysical Research</i> , 2002, 107, SSH 9-1.	3.3	30
21	A GENERALIZED NONLINEAR GUIDING CENTER THEORY FOR THE COLLISIONLESS ANOMALOUS PERPENDICULAR DIFFUSION OF COSMIC RAYS. <i>Astrophysical Journal</i> , 2010, 716, 671-692.	1.6	29
22	Current Sheets, Magnetic Islands, and Associated Particle Acceleration in the Solar Wind as Observed by Ulysses near the Ecliptic Plane. <i>Astrophysical Journal</i> , 2019, 881, 116.	1.6	29
23	A FOCUSED TRANSPORT APPROACH TO THE TIME-DEPENDENT SHOCK ACCELERATION OF SOLAR ENERGETIC PARTICLES AT A FAST TRAVELING SHOCK. <i>Astrophysical Journal</i> , 2012, 746, 104.	1.6	26
24	Particle Acceleration Due to Cosmic-ray Viscosity and Fluid Shear in Astrophysical Jets. <i>Astrophysical Journal</i> , 2018, 855, 31.	1.6	26
25	Flux Ropes, Turbulence, and Collisionless Perpendicular Shock Waves: High Plasma Beta Case. <i>Astrophysical Journal</i> , 2021, 913, 127.	1.6	26
26	Analysis of Small-scale Magnetic Flux Ropes Covering the Whole Ulysses Mission. <i>Astrophysical Journal</i> , 2019, 881, 58.	1.6	25
27	Modeling Energetic Particle Acceleration and Transport in a Solar Wind Region with Contracting and Reconnecting Small-scale Flux Ropes at Earth Orbit. <i>Astrophysical Journal</i> , 2019, 887, 77.	1.6	25
28	Current Sheets, Plasmoids and Flux Ropes in the Heliosphere. <i>Space Science Reviews</i> , 2021, 217, 1.	3.7	24
29	Pickup ion acceleration by turbulent electric fields in the slow solar wind. <i>Geophysical Research Letters</i> , 2001, 28, 3831-3834.	1.5	20
30	Pitch angle distributions of energetic particles near the heliospheric termination shock. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	17
31	Energetic Charged Particle Transport and Energization in Dynamic Two-dimensional Turbulence. <i>Astrophysical Journal</i> , 2004, 602, 396-414.	1.6	15
32	Evidence for Iroshnikov-Kraichnan-Type Turbulence in the Solar Wind Upstream of Interplanetary Traveling Shocks. <i>Astrophysical Journal</i> , 2008, 675, L45-L48.	1.6	15
33	Automated Detection of Small-scale Magnetic Flux Ropes and Their Association with Shocks. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012024.	0.3	15
34	Particle Acceleration by Cosmic Ray Viscosity in Radio-jet Shear Flows. <i>Astrophysical Journal</i> , 2019, 881, 123.	1.6	15
35	Nonlinear Energetic Charged Particle Transport and Energization in Enhanced Compressive Wave Turbulence near Shocks. <i>Astrophysical Journal</i> , 2005, 626, 1116-1130.	1.6	14
36	Dynamical small-scale magnetic islands as a source of local acceleration of particles in the solar wind. <i>Journal of Physics: Conference Series</i> , 2015, 642, 012033.	0.3	14

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37	Particle acceleration by combined diffusive shock acceleration and downstream multiple magnetic island acceleration. <i>Journal of Physics: Conference Series</i> , 2015, 642, 012031.	0.3	14
38	Acceleration of Solar Wind Particles by Traveling Interplanetary Shocks. <i>Astrophysical Journal</i> , 2019, 878, 144.	1.6	14
39	TRANSPORT OF COSMIC-RAY PROTONS IN INTERMITTENT HELIOSPHERIC TURBULENCE: MODEL AND SIMULATIONS. <i>Astrophysical Journal</i> , 2014, 781, 93.	1.6	9
40	ANGULAR DISTRIBUTION OF SOLAR WIND MAGNETIC FIELD VECTOR AT 1 AU. <i>Astrophysical Journal</i> , 2015, 801, 58.	1.6	9
41	Anomalous and classical diffusion of cosmic rays due to nonlinear two-dimensional structures and random magnetic fields. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	8
42	Energetic Ion Acceleration by Small-scale Solar Wind Flux Ropes. <i>Journal of Physics: Conference Series</i> , 2015, 642, 012015.	0.3	8
43	Observational Analysis of Small-scale Magnetic Flux Ropes from Ulysses In-situ Measurements. <i>Journal of Physics: Conference Series</i> , 2018, 1100, 012006.	0.3	8
44	A Focused Transport-based Kinetic Fractional Diffusion-advection Equation for Energetic Particle Trapping and Reconnection-related Acceleration by Small-scale Magnetic Flux Ropes in the Solar Wind. <i>Astrophysical Journal</i> , 2021, 913, 84.	1.6	8
45	Cosmic-Ray Acceleration in Radio-jet Shear Flows: Scattering Inside and Outside the Jet. <i>Astrophysical Journal</i> , 2020, 894, 95.	1.6	8
46	PARTICLE ACCELERATION AT THE HELIOSPHERIC TERMINATION SHOCK WITH A STOCHASTIC SHOCK OBLIQUITY APPROACH. <i>Astrophysical Journal Letters</i> , 2013, 772, L26.	3.0	6
47	Re-Acceleration of Energetic Particles in Large-Scale Heliospheric Magnetic Cavities. <i>Proceedings of the International Astronomical Union</i> , 2017, 13, 75-81.	0.0	6
48	Drift Kinetic Theory and Cosmic Rays. , 2009, , .		5
49	Investigating Particle Acceleration by Dynamic Small-scale Flux Ropes behind Interplanetary Shocks in the Inner Heliosphere. <i>Astrophysical Journal</i> , 2022, 933, 80.	1.6	4
50	Acceleration of Solar Energetic Particles at a Fast Traveling Shock in Non-uniform Coronal Conditions. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012013.	0.3	3
51	Cosmic ray transport in a vortex flow. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	2
52	Structure and properties of the termination shock. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	2
53	Low-energy particle acceleration and compression at the termination shock and in the heliosheath. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	2
54	Investigation of different small-scale flux-rope acceleration scenarios for energetic particles in the solar wind near Earth. <i>Journal of Physics: Conference Series</i> , 2018, 1100, 012015.	0.3	2

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55	Radial evolution of the properties of small-scale magnetic flux ropes in the solar wind. Journal of Physics: Conference Series, 2019, 1332, 012005.	0.3	2
56	Investigating 1st and 2nd order Fermi acceleration of energetic particles by small-scale magnetic flux ropes at 1AU. Journal of Physics: Conference Series, 2020, 1620, 012008.	0.3	2
57	Investigating Superdiffusive Shock Acceleration at a Parallel Shock with a Fractional Parker Equation for Energetic-particle Interaction with Small-scale Magnetic Flux Ropes. Astrophysical Journal, 2022, 930, 125.	1.6	1
58	Energetic Particle Transport in Regions of Enhanced Compressive Wave Turbulence. AIP Conference Proceedings, 2004, , .	0.3	0
59	Energetic Particle Transport in Strong Compressive Wave Turbulence Near Shocks. AIP Conference Proceedings, 2005, , .	0.3	0
60	A BGK-Boltzmann Approach to Nonlinear Cosmic Ray Transport in 2D and Slab Turbulence. AIP Conference Proceedings, 2007, , .	0.3	0
61	Time-dependent Acceleration of Solar Wind Particles at Interplanetary Traveling Shocks. AIP Conference Proceedings, 2008, , .	0.3	0
62	Time-dependent Acceleration of Pickup Ions at The Heliospheric Termination Shock. AIP Conference Proceedings, 2008, , .	0.3	0
63	Particle acceleration and reconnection in the solar wind. AIP Conference Proceedings, 2016, , .	0.3	0
64	Evidence of magnetic flux ropes downstream of the heliospheric termination shock. Journal of Physics: Conference Series, 2020, 1620, 012027.	0.3	0