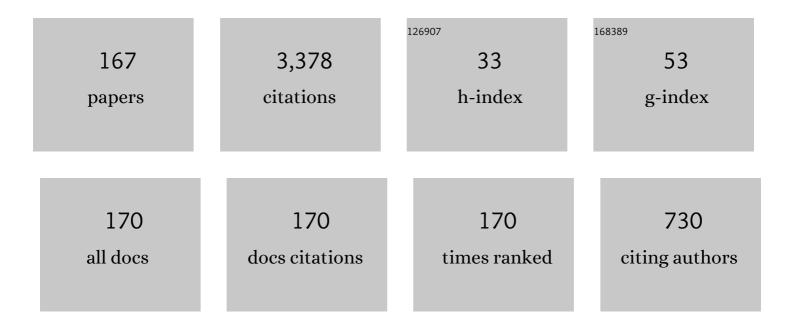
Boris V Somov

List of Publications by Year in descending order

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RODIS V SOMOV

#	Article	IF	CITATIONS
1	Collisionless Reconnection and Highâ€Energy Particle Acceleration in Solar Flares. Astrophysical Journal, 1997, 485, 859-868.	4.5	248
2	Physical Processes in Solar Flares. Astrophysics and Space Science Library, 1992, , .	2.7	214
3	Photospheric vortex flows as a cause for two-ribbon flares: A topological model. Solar Physics, 1988, 117, 77-88.	2.5	118
4	Hydrodynamic response of the solar chromosphere to an elementary flare burst. Solar Physics, 1981, 73, 145.	2.5	107
5	The Motions of the Hard Xâ€Ray Sources in Solar Flares: Images and Statistics. Astrophysical Journal, 2005, 630, 561-572.	4.5	104
6	Particle acceleration in reconnecting current sheets. Solar Physics, 1993, 146, 127-133.	2.5	99
7	Evidence for prolonged acceleration based on a detailed analysis of the long-duration solar gamma-ray flare of June 15, 1991. Solar Physics, 1996, 166, 107-134.	2.5	96
8	Physical processes in the solar atmosphere associated with flares. Uspekhi Fizicheskikh Nauk, 1976, 19, 813-835.	0.3	88
9	Magnetic Reconnection Scenario of the Bastille Day 2000 Flare. Astrophysical Journal, 2002, 579, 863-873.	4.5	80
10	Relativistic acceleration of protons in reconnecting current sheets of solar flares. Solar Physics, 1995, 158, 317-330.	2.5	73
11	Cosmic Plasma Physics. Astrophysics and Space Science Library, 2000, , .	2.7	69
12	The flares of April 1980. Solar Physics, 1983, 85, 157-184.	2.5	57
13	Magnetic reconnection in a high-temperature plasma of solar flares. Solar Physics, 1985, 102, 79-96.	2.5	54
14	Thermal electrons runaway from a hot plasma during a flare in the reverse-current model and their X-ray bremsstrahlung. Solar Physics, 1988, 116, 119.	2.5	52
15	Generalized analytical models of Syrovatskii's current sheet. Astronomy Letters, 2011, 37, 113-130.	1.0	50
16	Interpretation of the Observed Plasma ``Turbulent'' Velocities as a Result of Magnetic Reconnection in Solar Flares. Astrophysical Journal, 1996, 456, 833.	4.5	50
17	Analytical model of magnetic reconnection in the presence of shock waves attached to a current sheet. Astronomy Letters, 2007, 33, 130-136.	1.0	49
18	Hydrodynamic response of the solar chromosphere to an elementary flare burst. Solar Physics, 1982, 81, 281-292.	2.5	47

#	Article	IF	CITATIONS
19	X-ray heating of a low-temperature region in chromospheric flares. Solar Physics, 1975, 42, 235-246.	2.5	46
20	Tearing instability of reconnecting current sheets in space plasmas. Space Science Reviews, 1993, 65, 253-288.	8.1	46
21	MAGNETIC RECONNECTION DURING THE TWO-PHASE EVOLUTION OF A SOLAR ERUPTIVE FLARE. Astrophysical Journal, 2009, 706, 1438-1450.	4.5	46
22	Collisionless Threeâ€dimensional Reconnection in Impulsive Solar Flares. Astrophysical Journal, 1998, 497, 943-956.	4.5	45
23	The betatron effect in collapsing magnetic traps. Astronomy Letters, 2003, 29, 621-628.	1.0	45
24	Flares in accretion disk coronae. Advances in Space Research, 2003, 32, 1087-1096.	2.6	44
25	Evolution of a flaring loop after injection of energetic electrons. Solar Physics, 1983, 88, 257.	2.5	41
26	Magnetic reconnection in the temperature minimum region and prominence formation. Solar Physics, 1994, 151, 265-270.	2.5	41
27	Comparison of the Fermi and betatron acceleration efficiencies in collapsing magnetic traps. Astronomy Letters, 2005, 31, 537-545.	1.0	41
28	Analytical description of charged particle motion in a reconnecting current sheet. Astronomy Letters, 2009, 35, 195-206.	1.0	39
29	Thermal trigger for solar flares and coronal loops formation. Solar Physics, 1982, 75, 237-244.	2.5	38
30	Magnetic reconnection in a high-temperature plasma of solar flares. Solar Physics, 1989, 120, 93-115.	2.5	36
31	Effect of Coulomb collisions on the particle acceleration in collapsing magnetic traps. Astronomy Letters, 2009, 35, 57-69.	1.0	36
32	Magnetic reconnection on the separator as a cause of a two-ribbon flare. Advances in Space Research, 1990, 10, 105-108.	2.6	35
33	Nonthermal electrons in the thick-target reverse-current model for hard X-ray bremsstrahlung. Solar Physics, 1991, 131, 319-336.	2.5	33
34	Magnetohydrodynamic discontinuities in space plasmas: Interrelation between stability and structure. Space Science Reviews, 1996, 78, 443.	8.1	32
35	Formation of power-law electron spectra in collapsing magnetic traps. Astronomy Letters, 2007, 33, 54-62.	1.0	30
36	Flare loops heated by thermal conduction. Solar Physics, 1984, 93, 95-104.	2.5	30

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37	The magnetic field of a rotating cloud and magneto-rotational explosions. Astrophysics and Space Science, 1971, 11, 264-283.	1.4	29
38	Peculiarities of entropy and magnetosonic waves in optically thin cosmic plasma. Astronomy Letters, 2007, 33, 309-318.	1.0	29
39	Current sheets as the source of heating for solar active regions. Solar Physics, 1977, 55, 393-399.	2.5	28
40	Modeling large solar flares. Advances in Space Research, 2003, 32, 2439-2450.	2.6	28
41	Purely coronal flare-like variations. Solar Physics, 1983, 85, 313-337.	2.5	27
42	Large-scale reconnection in a large flare. Advances in Space Research, 2005, 35, 1712-1722.	2.6	27
43	The role of collisions in the particle acceleration in solar-flare magnetic traps. Astronomy Letters, 2003, 29, 409-415.	1.0	26
44	EVIDENCE OF SOLAR FLARE TRIGGERING DUE TO LOOP-LOOP INTERACTION CAUSED BY FOOTPOINT SHEAR MOTION. Astrophysical Journal, 2010, 723, 1651-1664.	4.5	25
45	On the acceleration of solar-flare charged particles in a collapsing magnetic trap with an electric potential. Astronomy Letters, 2002, 28, 488-493.	1.0	24
46	Motion of the HXR sources in solar flares: Yohkoh images and statistics. Advances in Space Research, 2005, 35, 1700-1706.	2.6	23
47	On upward motions of coronal hard X-ray sources in solar flares. Advances in Space Research, 2005, 35, 1690-1699.	2.6	23
48	Evolution of the photospheric magnetic field and coronal null points before solar flares. Astronomy Letters, 2009, 35, 207-213.	1.0	23
49	On discontinuous plasma flows in the vicinity of reconnecting current sheets in solar flares. Astronomy Letters, 2011, 37, 131-140.	1.0	23
50	On the topological trigger of large eruptive solar flares. Astronomy Letters, 2008, 34, 635-645.	1.0	22
51	A new scenario for impulsive bursts of hard electromagnetic radiation in space plasma. Astronomy Letters, 2011, 37, 679-691.	1.0	22
52	Magnetic-topology evolution in NOAA AR 10501 on 2003 November 18. Astronomy and Astrophysics, 2012, 538, A138.	5.1	22
53	On the magnetic reconnection of electric currents in solar flares. Astronomy Letters, 2012, 38, 128-138.	1.0	22
54	Magnetic Reconnection. Astrophysics and Space Science Library, 2013, , 1-17.	2.7	22

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55	Features of mass supply and flows related with reconnection in the solar corona. Space Science Reviews, 1994, 70, 161-166.	8.1	21
56	Heat-transfer mechanisms in solar flares. 1: Classical and anomalous heat conduction. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2011, 66, 286-291.	0.4	21
57	ls it possible to accelerate ions in collapsing magnetic traps?. Advances in Space Research, 2002, 30, 55-60.	2.6	20
58	Magnetic reconnection, electric field, and particle acceleration in the July 14, 2000 solar flare. Astronomy Letters, 2008, 34, 327-336.	1.0	20
59	Heat-transfer mechanisms in solar flares. 2: Consideration of heat-flux relaxation. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2011, 66, 292-297.	0.4	20
60	A Scenario for the Large-Scale Magnetic Field Evolution in CMEs. Journal of Geomagnetism and Geoelectricity, 1991, 43, 31-36.	0.9	20
61	Aspects of the Global MHD Equilibria and Filament Eruptions in the Solar Corona. Space Science Reviews, 2001, 95, 67-77.	8.1	19
62	Magnetic reconnection in a high-temperature plasma of solar flares. Solar Physics, 1985, 95, 141-153.	2.5	18
63	Three-dimensional reconnection at the sun: space observations and collisionless models. Advances in Space Research, 2002, 29, 1035-1044.	2.6	18
64	Hard X-ray bremsstrahlung produced by electrons escaping a high-temperature thermal source in a solar flare. Solar Physics, 1985, 97, 81-105.	2.5	17
65	Magnetic Reconnection and Turbulence. Astrophysics and Space Science Library, 2013, , 377-396.	2.7	17
66	Evidence of Reconnection in Solar Flares. Astrophysics and Space Science Library, 2013, , 67-90.	2.7	17
67	Particle Acceleration in Current Layers. Astrophysics and Space Science Library, 2013, , 293-320.	2.7	17
68	Magnetic reconnection in solar flares. Physics-Uspekhi, 2010, 53, 954-958.	2.2	16
69	Magnetic reconnection in high-temperature plasma of solar flares. Solar Physics, 1988, 117, 89-95.	2.5	14
70	Signatures of Magnetic Reconnection in Solar Eruptive Flares: A Multi-wavelength Perspective. Thirty Years of Astronomical Discovery With UKIRT, 2012, , 29-41.	0.3	14
71	New theoretical models of solar flares. Uspekhi Fizicheskikh Nauk, 1985, 28, 271-272.	0.3	13
72	On the heat conduction in a high-temperature plasma in solar flares. Astronomy Letters, 2011, 37, 726-736.	1.0	12

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73	Reverse-current effect in present-day models of solar flares: Theory and high-accuracy observations. Astronomy Letters, 2014, 40, 499-509.	1.0	12
74	Possible mechanism of surge formation in the solar atmosphere. Solar Physics, 1973, 30, 139-147.	2.5	11
75	On the low-temperature region of chromospheric flares. Solar Physics, 1974, 39, 415-430.	2.5	11
76	Magnetically driven coronal transients. Advances in Space Research, 1991, 11, 179-185.	2.6	9
77	A simple analytic model of reconnection in a high-temperature turbulent sheet. Astronomy Letters, 2000, 26, 750-755.	1.0	9
78	Hydrodynamic shock wave formation in the solar chromosphere and corona during flares. Space Science Reviews, 1982, 32, 27.	8.1	8
79	An analysis of magnetic field and magnetosphere of neutron star under effect of a shock wave. Advances in Space Research, 2015, 56, 964-969.	2.6	8
80	The kinetic description of the accelerated-electron flux in solar flares. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2011, 66, 466-472.	0.4	7
81	Thermal instability of the reconnecting current layer in solar flares. Astronomy Letters, 2016, 42, 841-849.	1.0	7
82	X-ray and microwave emissions from the July 19, 2012 solar flare: Highly accurate observations and kinetic models. Astronomy Letters, 2016, 42, 531-543.	1.0	7
83	Magnetic reconnection and acceleration of particles on the sun. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 735-737.	0.6	6
84	On the nature of the transition region between the solar corona and chromosphere. Astronomy Letters, 2012, 38, 801-812.	1.0	6
85	Heat transfer in solar flares. Solar Physics, 1978, 60, 315-321.	2.5	5
86	Energy release in flares. Advances in Space Research, 1986, 6, 177-185.	2.6	5
87	Acceleration of charged particles in collapsing magnetic traps during solar flares. Astronomy Reports, 2001, 45, 157-161.	0.9	5
88	Fast magnetic reconnection and particle acceleration in the non-equilibrium magnetosphere of a relativistic star. Astronomy Reports, 2011, 55, 962-977.	0.9	5
89	Interpretation of the observed motions of hard X-ray sources in solar flares. Astronomy Letters, 2010, 36, 514-519.	1.0	4
90	On continuous transitions between discontinuous MHD solutions in the magnetic reconnection problem. Astronomy Letters, 2012, 38, 744-753.	1.0	4

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91	Continuous transitions between discontinuous magnetohydrodynamic flows of plasma and its heating. Journal of Experimental and Theoretical Physics, 2013, 117, 1164-1172.	0.9	4
92	MHD discontinuities in solar flares: Continuous transitions and plasma heating. Advances in Space Research, 2015, 56, 2779-2792.	2.6	4
93	Physical properties of the quiet solar chromosphere–corona transition region. Astronomy Letters, 2016, 42, 825-840.	1.0	4
94	Electron acceleration in solar-flare magnetic traps: Model properties and their observational confirmations. Astronomy Letters, 2017, 43, 614-623.	1.0	4
95	Solar flare physics. Proceedings of the International Astronomical Union, 2004, 2004, 417-424.	0.0	3
96	Current state of the problem of solar flares: New observations and new models. Solar System Research, 2006, 40, 85-92.	0.7	3
97	On the classic heat conduction in the chromosphere-corona transition region of the solar atmosphere. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo) Tj ETQq1 1 0.7	′84310 4.4 gBT	/O 8erlock 10
98	SergeÄ-Ivanovich SyrovatskiÄ-(Obituary). Uspekhi Fizicheskikh Nauk, 1980, 23, 274-275.	0.3	2
99	The flares of April, 1980. Advances in Space Research, 1982, 2, 101-104.	2.6	2
100	Magnetic reconnection in a high-temperature plasma of solar flares. Advances in Space Research, 1984, 4, 183-185.	2.6	2
101	Studying coronal holes through observations of an Hel infrared line and the Hα line. Astronomy Reports, 2000, 44, 401-406.	0.9	2
102	The He I 10830 Ã Line as an Indicator of Solar Activity. Solar System Research, 2003, 37, 227-237.	0.7	2
103	Role of anisotropy of the initial particle distribution in the acceleration in collapsing solar-flare traps. Astronomy Letters, 2003, 29, 111-115.	1.0	2
104	Topological model for the large solar flare of July 14, 2000. Astronomy Reports, 2004, 48, 246-253.	0.9	2
105	An interpretation of rapid changes in the magnetic field associated with solar flares. Astronomische Nachrichten, 2008, 329, 786-789.	1.2	2
106	Method of conformal mappings for calculation of electric currents in magnetospheres of compact stars. Journal of Mathematical Sciences, 2011, 172, 852-858.	0.4	2
107	Analytical Models of Generalized Syrovatskii's Current Layer with MHD ShockWaves. Thirty Years of Astronomical Discovery With UKIRT, 2012, , 133-144.	0.3	2
108	On bremsstrahlung radiation of accelerated electrons in solar flares. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2012, 67, 102-108.	0.4	2

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109	Wave-Particle Interaction in Astrophysical Plasma. Astrophysics and Space Science Library, 2013, , 129-146.	2.7	2
110	Analytical solution to the problem of interaction between a shock wave and a neutron star's magnetosphere. Doklady Physics, 2014, 59, 355-359.	0.7	2
111	Thermal instability of a reconnecting current layer as a trigger for solar flares. Journal of Experimental and Theoretical Physics, 2017, 125, 347-356.	0.9	2
112	Observational support of reconnection in solar flares. Space Science Reviews, 1994, 68, 129-130.	8.1	1
113	XUV lines emitted from plasma accelerated during magnetic reconnection. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1995, 17, 1149-1153.	0.4	1
114	Basic physics of collisionless three-dimensional reconnection in the solar corona related to Yohkoh observations. Advances in Space Research, 2000, 25, 1821-1824.	2.6	1
115	A Simple Topological Model of the Bastille Day Flare (2000, July 14). AIP Conference Proceedings, 2004, ,	0.4	1
116	On the causes of the observed magnetic field imbalance in solar active regions. Astronomy Letters, 2006, 32, 787-793.	1.0	1
117	Instability of entropy waves in cosmic plasma. Cosmic Research, 2008, 46, 392-395.	0.6	1
118	Determination of the gradient magnetic field above a sunspot based on observations of the HeI and FeI infrared lines. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo) Tj ETQq0 0 0 rg	gBT Øverlo	ock 110 Tf 50 3
119	Methods of complex analysis in model calculations of the magnetospheres of relativistic stars. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta,) Tj ETQq1 1 0.78	43 104 4gBT	/Overlock 10
120	On the stability of the solar chromosphere-corona transition region. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2011, 66, 462-465.	0.4	1
121	Predicting the main parameters of solar cycle 24 by the number of spotless days in the previous minimum. Izvestiya - Atmospheric and Oceanic Physics, 2012, 48, 717-723.	0.9	1
122	Motion of a Charged Particle in Given Fields. Astrophysics and Space Science Library, 2013, , 87-113.	2.7	1
123	Adiabatic Invariants in Astrophysical Plasma. Astrophysics and Space Science Library, 2013, , 115-127.	2.7	1
124	Multi-Fluid Models of Astrophysical Plasma. Astrophysics and Space Science Library, 2013, , 211-221.	2.7	1
125	The Generalized Ohm's Law in Plasma. Astrophysics and Space Science Library, 2013, , 223-236.	2.7	1
126	Single-Fluid Models for Astrophysical Plasma, Astrophysics and Space Science Library, 2013, 237-262	97	1

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127	Plasma flows in the quiet solar chromosphere-corona transition region. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2015, 70, 153-159.	0.4	1
128	On the most typical structure of three-dimensional magnetic reconnection. Astronomy Letters, 2016, 42, 774-781.	1.0	1
129	Reconnection in Action. Astrophysics and Space Science Library, 2013, , 91-107.	2.7	1
130	Electrodynamic conversion of energy: Magnetic field amplification in the solar photosphere. Advances in Space Research, 1990, 10, 179-183.	2.6	0
131	Electric currents in magnetic flux-tubes. Advances in Space Research, 1993, 13, 23-26.	2.6	0
132	Non-evolutionarity of a reconnecting current sheet as a cause of its splitting into MHD shocks. Solar Physics, 1995, 158, 43-69.	2.5	0
133	Theoretical perspectives on the study of coronal dynamic phenomena. Advances in Space Research, 1996, 17, 251-259.	2.6	0
134	A two-dimensional model of the magnetosphere of a compact star with an accretion disc. Prikladnaya Matematika I Mekhanika, 2004, 68, 405-412.	0.4	0
135	On ejection of solar plasma enriched with 3He and Fe I at boundaries of coronal holes. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2009, 64, 334-338.	0.4	0
136	Some properties of discontinuous flows near magnetic reconnection regions. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2010, 65, 126-131.	0.4	0
137	On the Problem of Heat Transport in the Solar Atmosphere. Thirty Years of Astronomical Discovery With UKIRT, 2012, , 39-46.	0.3	0
138	Evolutionary of Discontinuous Plasma Flows in the Vicinity of Reconnecting Current Layers. Thirty Years of Astronomical Discovery With UKIRT, 2012, , 117-131.	0.3	0
139	Plasma heating by discontinuous MHD flows in the vicinity of a magnetic reconnection region. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta,) Tj ETQq1 1 0.784	3 1044 gBT	/Oøerlock 10
140	Solar-Type Flares in Laboratory and Space. Astrophysics and Space Science Library, 2013, , 275-291.	2.7	0
141	Structural Instability of Reconnecting Current Layers. Astrophysics and Space Science Library, 2013, , 321-349.	2.7	0
142	Reconnection in Weakly-Ionized Plasma. Astrophysics and Space Science Library, 2013, , 397-414.	2.7	0
143	Generalized Analytical Models of Reconnection. Astrophysics and Space Science Library, 2013, , 47-65.	2.7	0
144	Electric Currents Related to Reconnection. Astrophysics and Space Science Library, 2013, , 143-175.	2.7	0

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145	Particles and Fields: Exact Self-consistent Description. Astrophysics and Space Science Library, 2013, , 1-17.	2.7	0
146	Propagation of Fast Particles in Plasma. Astrophysics and Space Science Library, 2013, , 59-85.	2.7	0
147	Stationary Flows in a Magnetic Field. Astrophysics and Space Science Library, 2013, , 429-453.	2.7	0
148	Plasma Equilibrium in Magnetic Field. Astrophysics and Space Science Library, 2013, , 403-427.	2.7	0
149	Particle Acceleration by Shock Waves. Astrophysics and Space Science Library, 2013, , 387-401.	2.7	0
150	Evolutionarity of MHD Discontinuities. Astrophysics and Space Science Library, 2013, , 363-386.	2.7	0
151	Macroscopic Description of Astrophysical Plasma. Astrophysics and Space Science Library, 2013, , 181-210.	2.7	0
152	Statistical Description of Interacting Particle Systems. Astrophysics and Space Science Library, 2013, , 19-36.	2.7	0
153	Weakly-Coupled Systems with Binary Collisions. Astrophysics and Space Science Library, 2013, , 37-57.	2.7	0
154	Coulomb Collisions in Astrophysical Plasma. Astrophysics and Space Science Library, 2013, , 147-180.	2.7	0
155	Magnetohydrodynamics in Astrophysics. Astrophysics and Space Science Library, 2013, , 263-283.	2.7	0
156	Plasma Flows in a Strong Magnetic Field. Astrophysics and Space Science Library, 2013, , 285-306.	2.7	0
157	MHD Waves in Astrophysical Plasma. Astrophysics and Space Science Library, 2013, , 307-332.	2.7	0
158	Discontinuous Flows in a MHD Medium. Astrophysics and Space Science Library, 2013, , 333-361.	2.7	0
159	Discontinuous plasma flows near reconnecting current layers in solar flares. Astronomy Reports, 2017, 61, 239-255.	0.9	0
160	On an efficient shock wave generation mechanism in the quiet solar transition region. Astronomy Letters, 2017, 43, 567-572.	1.0	0
161	The Bastille Day Flare and Similar Solar Flares. Astrophysics and Space Science Library, 2013, , 109-141.	2.7	0
162	Reconnection in a Strong Magnetic Field. Astrophysics and Space Science Library, 2013, , 19-45.	2.7	0

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163	Magnetic Reconnection of Electric Currents. Astrophysics and Space Science Library, 2013, , 415-437.	2.7	Ο
164	Tearing Instability of Reconnecting Current Layers. Astrophysics and Space Science Library, 2013, , 351-376.	2.7	0
165	Fast Particles in Solar Flares. Astrophysics and Space Science Library, 2013, , 439-457.	2.7	0
166	Models of Reconnecting Current Layers. Astrophysics and Space Science Library, 2013, , 177-211.	2.7	0
167	Collapsing Magnetic Traps in Solar Flares. Astrophysics and Space Science Library, 2013, , 213-274.	2.7	0