Francesca Zuccarello

List of Publications by Year
in descending order

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140 papers	7,402 citations	136950 32 h-index	54911 84 g-index
141 all docs	141 docs citations	141 times ranked	10206 citing authors

#	Article	IF	Citations
1	The Solar Activity Monitor Network â€“ SAMNet. Journal of Space Weather and Space Climate, 2022, 12, 2.	3.3	16
2	On the Evolution of a Sub-C Class Flare: A Showcase for the Capabilities of the Revamped Catania Solar Telescope. Solar Physics, 2022, 297, 1.	2.5	4
3	Quo vadis, European Space Weather community?. Journal of Space Weather and Space Climate, 2021, 11, 26.	3.3	1
4	Search for magnetically-induced signatures in the arrival directions of ultra-high-energy cosmic rays measured at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 017-017.	5.4	10
5	A 3â€Year Sample of Almost 1,600 Elves Recorded Above South America by the Pierre Auger Cosmicâ€Ray Observatory. Earth and Space Science, 2020, 7, e2019EA000582.	2.6	9
6	Continuum Enhancements, Line Profiles, and Magnetic Field Evolution during Consecutive Flares. Astrophysical Journal, 2020, 889, 65.	4.5	5
7	Cosmic-Ray Anisotropies in Right Ascension Measured by the Pierre Auger Observatory. Astrophysical Journal, 2020, 891, 142.	4.5	39
8	On the Magnetic Nature of an Exploding Granule as Revealed by Sunrise/IMaX. Astrophysical Journal, 2020, 896, 62.	4.5	6
9	Restoring Process of Sunspot Penumbra. Astrophysical Journal, 2020, 899, 129.	4.5	8
10	Differences in Periodic Magnetic Helicity Injection Behavior between Flaring and Non-flaring Active Regions: Case Study. Astrophysical Journal Letters, 2020, 897, L23.	8.3	10
11	Properties of the Umbral Filament Observed in Active Region NOAA 12529. Astrophysical Journal, 2019, 880, 34.	4.5	14
12	Probing the origin of ultra-high-energy cosmic rays with neutrinos in the EeV energy range using the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 022-022.	5.4	64
13	Data-driven estimation of the invisible energy of cosmic ray showers with the Pierre Auger Observatory. Physical Review D, 2019, 100, .	4.7	20
14	Limits on point-like sources of ultra-high-energy neutrinos with the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 004-004.	5.4	18
15	Multi-Messenger Physics With the Pierre Auger Observatory. Frontiers in Astronomy and Space Sciences, 2019, 6, .	2.8	20
16	IRIS Observations of Magnetic Interactions in the Solar Atmosphere between Preexisting and Emerging Magnetic Fields. II. UV Emission Properties. Astrophysical Journal, 2019, 871, 82.	4.5	19
17	Height Dependence of the Penumbral Fine-scale Structure in the Inner Solar Atmosphere. Astrophysical Journal, 2019, 873, 126.	4.5	15
18	Measurement of the average shape of longitudinal profiles of cosmic-ray air showers at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 018-018.	5.4	10

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19	Impact of small-scale emerging flux from the photosphere to the corona: a case study from IRIS. Proceedings of the International Astronomical Union, 2019, 15, 439-442.	0.0	0
20	Formation of Penumbra in a Sample of Active Regions Observed by the SDO Satellite. Astrophysical Journal, 2018, 855, 58.	4.5	14
21	IRIS Observations of Magnetic Interactions in the Solar Atmosphere between Preexisting and Emerging Magnetic Fields. I. Overall Evolution. Astrophysical Journal, 2018, 856, 127.	4.5	31
22	An Indication of Anisotropy in Arrival Directions of Ultra-high-energy Cosmic Rays through Comparison to the Flux Pattern of Extragalactic Gamma-Ray Sources[*]. Astrophysical Journal Letters, 2018, 853, L29.	8.3	165
23	Remote sensing of the solar photosphere: a tale of two methods. Journal of Physics: Conference Series, 2018, 956, 012006.	0.4	1
24	Large-scale Cosmic-Ray Anisotropies above 4 EeV Measured by the Pierre Auger Observatory. Astrophysical Journal, 2018, 868, 4.	4.5	77
25	Observation of inclined EeV air showers with the radio detector of the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 026-026.	5.4	30
26	ON THE FORMATION OF A STABLE PENUMBRA IN A REGION OF FLUX EMERGENCE IN THE SUN. Astrophysical Journal, 2017, 834, 76.	4.5	23
27	Impact of atmospheric effects on the energy reconstruction of air showers observed by the surface detectors of the Pierre Auger Observatory. Journal of Instrumentation, 2017, 12, P02006-P02006.	1.2	8
28	Polarized Kink Waves in Magnetic Elements: Evidence for Chromospheric Helical Waves. Astrophysical Journal, 2017, 840, 19.	4.5	25
29	Plasma flows and magnetic field interplay during the formation of a pore. Astronomy and Astrophysics, 2017, 600, A102.	5.1	9
30	Multi-resolution anisotropy studies of ultrahigh-energy cosmic rays detected at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 026-026.	5.4	14
31	Muon counting using silicon photomultipliers in the AMIGA detector of the Pierre Auger observatory. Journal of Instrumentation, 2017, 12, P03002-P03002.	1.2	16
32	A Targeted Search for Point Sources of EeV Photons with the Pierre Auger Observatory. Astrophysical Journal Letters, 2017, 837, L25.	8.3	21
33	A Statistical Study of CME Properties and of the Correlation Between Flares and CMEs over Solar Cycles 23 and 24. Solar Physics, 2017, 292, 1.	2.5	46
34	Comparison of different populations of granular features in the solar photosphere. Astronomy and Astrophysics, 2017, 605, A87.	5.1	11
35	Multi-messenger Observations of a Binary Neutron Star Merger[*]. Astrophysical Journal Letters, 2017, 848, L12.	8.3	2,805
36	Spectral calibration of the fluorescence telescopes of the Pierre Auger Observatory. Astroparticle Physics, 2017, 95, 44-56.	4.3	7

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37	Observation of a large-scale anisotropy in the arrival directions of cosmic rays above 8 Ã— 10 ¹⁸ eV. Science, 2017, 357, 1266-1270.	12.6	261
38	Observational Evidence of a Flux Rope within a Sunspot Umbra. Astrophysical Journal Letters, 2017, 846, L16.	8.3	19
39	The 2013 February 17 Sunquake in the Context of the Active Region's Magnetic Field Configuration. Astrophysical Journal, 2017, 849, 40.	4.5	10
40	Inferences on mass composition and tests of hadronic interactions from 0.3 to 100ÂEeV using the water-Cherenkov detectors of the Pierre Auger Observatory. Physical Review D, 2017, 96, .	4.7	82
41	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. Astrophysical Journal Letters, 2017, 850, L35.	8.3	135
42	Comprehensive Analysis of the Geoeffective Solar Event of 21 June 2015: Effects on the Magnetosphere, Plasmasphere, and Ionosphere Systems. Solar Physics, 2017, 292, 1.	2.5	62
43	HÎ± and HÎ² Emission in a C3.3 Solar Flare: Comparison between Observations and Simulations. Astrophysical Journal, 2017, 850, 36.	4.5	10
44	The Pierre Auger Observatory status and latest results. EPJ Web of Conferences, 2017, 136, 02017.	0.3	2
45	The Pierre Auger Observatory Upgrade. EPJ Web of Conferences, 2017, 136, 02003.	0.3	0
46	Exploiting the radio signal from air showers: the AERA progress. EPJ Web of Conferences, 2017, 136, 02013.	0.3	0
47	Calibration of the logarithmic-periodic dipole antenna (LPDA) radio stations at the Pierre Auger Observatory using an octocopter. Journal of Instrumentation, 2017, 12, T10005-T10005.	1.2	21
48	Astrophysical interpretation of Pierre Auger Observatory measurements of the UHECR energy spectrum and mass composition. EPJ Web of Conferences, 2017, 136, 02002.	0.3	0
49	FORMATION OF THE PENUMBRA AND START OF THE EVERSHED FLOW. Astrophysical Journal, 2016, 825, 75.	4.5	32
50	THE PRE-PENUMBRAL MAGNETIC CANOPY IN THE SOLAR ATMOSPHERE. Astrophysical Journal Letters, 2016, 831, L4.	8.3	8
51	Ultrahigh-energy neutrino follow-up of gravitational wave events GW150914 and GW151226 with the Pierre Auger Observatory. Physical Review D, 2016, 94, .	4.7	38
52	Multiâ€spectral observations of flares. Astronomische Nachrichten, 2016, 337, 1070-1077.	1.2	1
53	A MULTI-INSTRUMENT ANALYSIS OF A C4.1 FLARE OCCURRING IN A Î´ SUNSPOT. Astrophysical Journal, 2016, 819, 157.	4.5	7
54	Evidence for a mixed mass composition at the â€˜ankleâ€™ in the cosmic-ray spectrum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 762, 288-295.	4.1	84

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55	Search for ultrarelativistic magnetic monopoles with the Pierre Auger observatory. Physical Review D, 2016, 94, .	4.7	15
56	Kinematics and Magnetic Properties of a Light Bridge in a Decaying Sunspot. Solar Physics, 2016, 291, 1939-1955.	2.5	11
57	Azimuthal asymmetry in the risetime of the surface detector signals of the Pierre Auger Observatory. Physical Review D, 2016, 93, .	4.7	21
58	Energy estimation of cosmic rays with the Engineering Radio Array of the Pierre Auger Observatory. Physical Review D, 2016, 93, .	4.7	80
59	Measurement of the Radiation Energy in the Radio Signal of Extensive Air Showers as a Universal Estimator of Cosmic-Ray Energy. Physical Review Letters, 2016, 116, 241101.	7.8	91
60	Testing Hadronic Interactions at Ultrahigh Energies with Air Showers Measured by the Pierre Auger Observatory. Physical Review Letters, 2016, 117, 192001.	7.8	154
61	Nanosecond-level time synchronization of autonomous radio detector stations for extensive air showers. Journal of Instrumentation, 2016, 11, P01018-P01018.	1.2	20
62	Search for correlations between the arrival directions of IceCube neutrino events and ultrahigh-energy cosmic rays detected by the Pierre Auger Observatory and the Telescope Array. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 037-037.	5.4	31
63	Prototype muon detectors for the AMIGA component of the Pierre Auger Observatory. Journal of Instrumentation, 2016, 11, P02012-P02012.	1.2	38
64	Recurrent flares in active region NOAA 11283. Astronomy and Astrophysics, 2015, 582, A55.	5.1	29
65	The Pierre Auger Cosmic Ray Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 798, 172-213.	1.6	442
66	Measurement of the cosmic ray spectrum above 4 Ã— 10¹⁸eV using inclined events detected with the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 049-049.	5.4	20
67	SEARCHES FOR ANISOTROPIES IN THE ARRIVAL DIRECTIONS OF THE HIGHEST ENERGY COSMIC RAYS DETECTED BY THE PIERRE AUGER OBSERVATORY. Astrophysical Journal, 2015, 804, 15.	4.5	146
68	Improved limit to the diffuse flux of ultrahigh energy neutrinos from the Pierre Auger Observatory. Physical Review D, 2015, 91, .	4.7	125
69	ADAHELI+: exploring the fast, dynamic Sun in theÂx-ray, optical, and near-infrared. Journal of Astronomical Telescopes, Instruments, and Systems, 2015, 1, 044006.	1.8	8
70	Muons in air showers at the Pierre Auger Observatory: Mean number in highly inclined events. Physical Review D, 2015, 91, .	4.7	152
71	Time Evolution of Force-Free Parameter and Free Magnetic Energy in Active Region NOAA 10365. Solar Physics, 2015, 290, 491-506.	2.5	8
72	The magnetic structure of surges in small-scale emerging flux regions. Astronomy and Astrophysics, 2015, 576, A4.	5.1	21

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73	Search for patterns by combining cosmic-ray energy and arrival directions at the Pierre Auger Observatory. European Physical Journal C, 2015, 75, 269.	3.9	12
74	LARGE SCALE DISTRIBUTION OF ULTRA HIGH ENERGY COSMIC RAYS DETECTED AT THE PIERRE AUGER OBSERVATORY WITH ZENITH ANGLES UP TO 80Â°. Astrophysical Journal, 2015, 802, 111.	4.5	49
75	The Signature of Flare Activity in Multifractal Measurements of Active Regions Observed by SDO/HMI. Solar Physics, 2015, 290, 507-525.	2.5	6
76	DYNAMIC PROPERTIES ALONG THE NEUTRAL LINE OF A DELTA SPOT INFERRED FROM HIGH-RESOLUTION OBSERVATIONS. Astrophysical Journal, 2014, 789, 162.	4.5	12
77	EVOLUTION OF THE MAGNETIC FIELD INCLINATION IN A FORMING PENUMBRA. Astrophysical Journal, 2014, 784, 10.	4.5	29
78	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. I. Measurements at energies above<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:msup><mml:mrow><mml:mn>0</mml:mn></mml:mrow><mml:mrow><mm Physical Review D, 2014, 90, .	4.7	266
79	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. II. Composition implications. Physical Review D, 2014, 90, .	4.7	213
80	PENUMBRAL-LIKE FILAMENTS IN THE SOLAR PHOTOSPHERE AS A MANIFESTATION OF FLUX EMERGENCE. Astrophysical Journal Letters, 2014, 786, L22.	8.3	7
81	EVOLUTION OF THE MAGNETIC HELICITY FLUX DURING THE FORMATION AND ERUPTION OF FLUX ROPES. Astrophysical Journal, 2014, 794, 118.	4.5	23
82	High-resolution observations of a light bridge in a decaying sunspot. , 2014, , .		0
83	OBSERVATIONAL EVIDENCE OF TORUS INSTABILITY AS TRIGGER MECHANISM FOR CORONAL MASS EJECTIONS: THE 2011 AUGUST 4 FILAMENT ERUPTION. Astrophysical Journal, 2014, 785, 88.	4.5	55
84	Fractal and Multifractal Properties of Active Regions as Flare Precursors: A Case Study Based on SOHO/MDI and SDO/HMI Observations. Solar Physics, 2014, 289, 2525-2545.	2.5	13
85	EVOLUTION AND DYNAMICS OF ORPHAN PENUMBRAE IN THE SOLAR PHOTOSPHERE: ANALYSIS FROM MULTI-INSTRUMENT OBSERVATIONS. Astrophysical Journal, 2014, 787, 57.	4.5	17
86	VELOCITY AND MAGNETIC FIELD DISTRIBUTION IN A FORMING PENUMBRA. Astrophysical Journal Letters, 2013, 771, L3.	8.3	29
87	Solar activity and its evolution across the corona: recent advances. Journal of Space Weather and Space Climate, 2013, 3, A18.	3.3	10
88	Shearing motions and torus instability in the 2010 April 3 filament eruption. Proceedings of the International Astronomical Union, 2013, 8, 475-476.	0.0	0
89	The role of photospheric shearing motions in a filament eruption related to the 2010 April 3 coronal mass ejection. Astronomy and Astrophysics, 2012, 537, A28.	5.1	6
90	A Comparative Analysis of Photospheric Bright Points in an Active Region and in the Quiet Sun. Solar Physics, 2012, 280, 407-416.	2.5	32

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91	THE ROLE OF STREAMERS IN THE DEFLECTION OF CORONAL MASS EJECTIONS: COMPARISON BETWEENSTEREOTHREE-DIMENSIONAL RECONSTRUCTIONS AND NUMERICAL SIMULATIONS. Astrophysical Journal, 2012, 744, 66.	4.5	93
92	High cadence spectropolarimetry of moving magnetic features observed around a pore. Astronomy and Astrophysics, 2012, 546, A26.	5.1	16
93	The role of filament activation in a solar eruption. Astronomy and Astrophysics, 2012, 539, A27.	5.1	1
94	A solar eruption triggered by the interaction between two magnetic flux systems with opposite magnetic helicity. Astronomy and Astrophysics, 2011, 525, A13.	5.1	31
95	Filament destabilization and CME release during a long duration flare. Astronomy and Astrophysics, 2011, 533, A100.	5.1	3
96	HIGH-RESOLUTION OBSERVATIONS OF SIPHON FLOWS IN A SOLAR MAGNETIC PORE. Astrophysical Journal Letters, 2011, 743, L9.	8.3	5
97	The role of streamers in the deflection of coronal mass ejections. Proceedings of the International Astronomical Union, 2011, 7, 134-138.	0.0	0
98	Magnetic helicity balance during a filament eruption that occurred in active region NOAA 9682. Astronomy and Astrophysics, 2011, 530, A36.	5.1	12
99	Flare occurrence and the spatial distribution of the magnetic helicity flux. Astronomy and Astrophysics, 2011, 535, A1.	5.1	19
100	Solar flares: observations vs simulations. Proceedings of the International Astronomical Union, 2010, 6, 182-184.	0.0	0
101	CME evolution and 3D reconstruction with STEREO Data. Proceedings of the International Astronomical Union, 2010, 6, 165-167.	0.0	5
102	Magnetic helicity evolution inside a hexagonal convective cell. Proceedings of the International Astronomical Union, 2010, 6, 192-194.	0.0	0
103	The EST project. Proceedings of the International Astronomical Union, 2010, 6, 310-313.	0.0	0
104	MULTIWAVELENGTH OBSERVATIONS OF SMALL-SCALE RECONNECTION EVENTS TRIGGERED BY MAGNETIC FLUX EMERGENCE IN THE SOLAR ATMOSPHERE. Astrophysical Journal, 2010, 724, 1083-1098.	4.5	90
105	Trend of photospheric magnetic helicity flux in active regions generating halo coronal mass ejections. Astronomy and Astrophysics, 2010, 521, A56.	5.1	24
106	Magnetic evolution of superactive regions. Astronomy and Astrophysics, 2009, 506, 1429-1436.	5.1	12
107	Modelling the initiation of coronal mass ejections: magnetic flux emergence versus shearing motions. Astronomy and Astrophysics, 2009, 507, 441-452.	5.1	34
108	The X17.2 flare occurred in NOAA 10486: an example of filament destabilization caused by a domino effect. Astronomy and Astrophysics, 2009, 493, 629-637.	5.1	45

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109	Observation of bipolar moving magnetic features streaming out from a naked spot. Astronomy and Astrophysics, 2009, 500, L5-L8.	5.1	31
110	Solar Weather Event Modelling andÂPrediction. Space Science Reviews, 2009, 147, 121-185.	8.1	31
111	Multi-wavelength observations of flares and eruptive filaments. Acta Geophysica, 2009, 57, 24-30.	2.0	0
112	Emergence and evolution of active and ephemeral regions: Comparison between observations and models. Acta Geophysica, 2009, 57, 15-23.	2.0	5
113	Flare forecasting based on sunspot-groups characteristics. Acta Geophysica, 2009, 57, 52-63.	2.0	8
114	Evolution of an eruptive flare loop system. Astronomy and Astrophysics, 2009, 498, 901-907.	5.1	6
115	Magnetic helicity and active filament configuration. Astronomy and Astrophysics, 2009, 506, 895-900.	5.1	7
116	Morphological and dynamical properties of small-scale chromospheric features deduced from IBIS observations. Astronomy and Astrophysics, 2009, 507, 1625-1633.	5.1	5
117	Observations of a solar flare and filament eruption in Lyman $mathsf{alpha}$ and X-rays. Astronomy and Astrophysics, 2009, 507, 1005-1014.	5.1	30
118	Hinode Observations of Chromospheric Brightenings in the Ca <scp>ii</scp> H Line during Small-Scale Flux Emergence Events. Astrophysical Journal, 2008, 688, L111-L114.	4.5	27
119	Initiation of Coronal Mass Ejections by Magnetic Flux Emergence in the Framework of the Breakout Model. Astrophysical Journal, 2008, 689, L157-L160.	4.5	25
120	A C-level flare observed in an arch filament system: reconnection between pre-existing and emerging field lines?. Astronomy and Astrophysics, 2008, 488, 1117-1123.	5.1	17
121	Plasma motions in a short-lived filament related to a magnetic flux cancellation. Astronomy and Astrophysics, 2007, 468, 299-305.	5.1	14
122	An M1.5 Flare Triggered by a Multireconnection Process. Solar Physics, 2007, 240, 49-61.	2.5	2
123	Photospheric magnetic evolution of super active regions. Astronomy and Astrophysics, 2007, 474, 633-637.	5.1	24
124	A statistical analysis of sunspot groups hosting M and X flares. Astronomische Nachrichten, 2006, 327, 36-43.	1.2	24
125	Cancelling magnetic feature and filament activation. Astronomische Nachrichten, 2006, 327, 674-679.	1.2	6
126	RHESSI and TRACE observations of an Mâ€‰2.5 flare: a direct application of the Kopp and Pneuman model. Astronomy and Astrophysics, 2006, 458, 297-300.	5.1	2

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127	Observational evidence of the primary role played by photospheric motions in magnetic helicity transport before a filament eruption. Astronomy and Astrophysics, 2005, 433, 683-690.	5.1	32
128	AFS dynamics in a short-lived active region. Astronomy and Astrophysics, 2005, 442, 661-671.	5.1	17
129	AFS dynamic evolution during the emergence of an active region. Astronomy and Astrophysics, 2004, 425, 309-319.	5.1	36
130	Eruption of a helically twisted prominence. Solar Physics, 2003, 214, 313-323.	2.5	45
131	Themis, BBSO, MDI and trace observations of a filament eruption. Solar Physics, 2003, 216, 173-188.	2.5	18
132	Magnetic helicity transport in corona and filament eruptions. Solar Physics, 2003, 218, 137-150.	2.5	16
133	Angular velocity during the cycle deduced using the sunspot group age selection methodology. Astronomische Nachrichten, 2003, 324, 464-473.	1.2	11
134	Flare activity in solar active region 8421 observed by the TRACE satellite. Astronomy and Astrophysics, 2003, 402, 1085-1102.	5.1	1
135	Description of a Procedure to Analyze EUV Loops. Solar Physics, 2001, 199, 97-105.	2.5	1
136	Coronal loops and their modeling. Symposium - International Astronomical Union, 1996, 176, 433-448.	0.1	2
137	Flow in coronal loops with a mass source. Solar Physics, 1983, 88, 193.	2.5	3
138	Basic Parameters Determining X-Ray Emission Level in Stars of Spectral Type Later than F5. International Astronomical Union Colloquium, 1983, 71, 633-635.	0.1	0
139	X-ray emission of late-type stars. Astrophysical Journal, 1983, 275, L1.	4.5	3
140	Basic Parameters Determining X-Ray Emission Level in Stars of Spectral Type Later Than F5. Astrophysics and Space Science Library, 1983, , 633-635.	2.7	0