

Franco Vazza

List of Publications by Year in descending order

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Version: 2024-02-01

124
papers

5,094
citations

71102

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106344

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all docs

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docs citations

124
times ranked

2472
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Turbulent magnetic fields in the merging galaxy cluster MACS J0717.5+3745. <i>Astronomy and Astrophysics</i> , 2022, 657, A2. | 5.1 | 13 |
| 2 | Exploring the relation between turbulent velocity and density fluctuations in the stratified intracluster medium. <i>Astronomy and Astrophysics</i> , 2022, 658, A149. | 5.1 | 11 |
| 3 | The galaxy group NGC 507: Newly detected AGN remnant plasma transported by sloshing. <i>Astronomy and Astrophysics</i> , 2022, 661, A92. | 5.1 | 20 |
| 4 | Deep Low-frequency Radio Observations of A2256. I. The Filamentary Radio Relic. <i>Astrophysical Journal</i> , 2022, 927, 80. | 4.5 | 16 |
| 5 | Filamentary baryons and where to find them. <i>Astronomy and Astrophysics</i> , 2022, 662, A87. | 5.1 | 5 |
| 6 | Mapping “out-of-the-box” the properties of the baryons in massive halos. <i>Astronomy and Astrophysics</i> , 2022, 663, L6. | 5.1 | 9 |
| 7 | The redshift evolution of extragalactic magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 515, 256-270. | 4.4 | 12 |
| 8 | The Coma Cluster at LOFAR Frequencies. II. The Halo, Relic, and a New Accretion Relic. <i>Astrophysical Journal</i> , 2022, 933, 218. | 4.5 | 29 |
| 9 | The Complexity and Information Content of Simulated Universes. <i>Emergence, Complexity and Computation</i> , 2021, , 29-56. | 0.3 | 0 |
| 10 | FIGARO simulation: Filaments & GALactic RadiO simulation. <i>Publications of the Astronomical Society of Australia</i> , 2021, 38, . | 3.4 | 6 |
| 11 | The intracluster magnetic field in the double relic galaxy cluster Abell 2345. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 502, 2518-2535. | 4.4 | 18 |
| 12 | Physical insights from the spectrum of the radio halo in MACS J0717.5+3745. <i>Astronomy and Astrophysics</i> , 2021, 646, A135. | 5.1 | 28 |
| 13 | Understanding the radio relic emission in the galaxy cluster MACS J0717.5+3745: Spectral analysis. <i>Astronomy and Astrophysics</i> , 2021, 646, A56. | 5.1 | 18 |
| 14 | Ultra-steep-spectrum Radio “Jellyfish” Uncovered in A2877. <i>Astrophysical Journal</i> , 2021, 909, 198. | 4.5 | 16 |
| 15 | On the alignment of haloes, filaments and magnetic fields in the simulated cosmic web. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 503, 4016-4031. | 4.4 | 4 |
| 16 | Voyage through the hidden physics of the cosmic web. <i>Experimental Astronomy</i> , 2021, 51, 1043-1079. | 3.7 | 9 |
| 17 | Discovery of magnetic fields along stacked cosmic filaments as revealed by radio and X-ray emission. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 4178-4196. | 4.4 | 30 |
| 18 | Exploring the spectral properties of radio relics “ α ”: integrated spectral index and Mach number. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 506, 396-414. | 4.4 | 32 |

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|----|--|-----|-----------|
| 19 | The Cluster HEritage project with <i>XMM-Newton</i> : Mass Assembly and Thermodynamics at the Endpoint of structure formation. <i>Astronomy and Astrophysics</i> , 2021, 650, A104. | 5.1 | 36 |
| 20 | New constraints on the magnetic field in cosmic web filaments. <i>Astronomy and Astrophysics</i> , 2021, 652, A80. | 5.1 | 16 |
| 21 | Morphology of radio relics – II. Properties of polarized emission. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 507, 2714-2734. | 4.4 | 12 |
| 22 | Simulating the transport of relativistic electrons and magnetic fields injected by radio galaxies in the intracluster medium. <i>Astronomy and Astrophysics</i> , 2021, 653, A23. | 5.1 | 24 |
| 23 | Dissecting nonthermal emission in the complex multiple-merger galaxy cluster Abell 2744: Radio and X-ray analysis. <i>Astronomy and Astrophysics</i> , 2021, 654, A41. | 5.1 | 30 |
| 24 | Proprieties of clumps and filaments around galaxy clusters. <i>Astronomy and Astrophysics</i> , 2021, 653, A171. | 5.1 | 10 |
| 25 | The Coma Cluster at LOw Frequency ARray Frequencies. I. Insights into Particle Acceleration Mechanisms in the Radio Bridge. <i>Astrophysical Journal</i> , 2021, 907, 32. | 4.5 | 34 |
| 26 | Convolutional deep denoising autoencoders for radio astronomical images. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 509, 990-1009. | 4.4 | 17 |
| 27 | Radio relics radio emission from multishock scenario. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 509, 1160-1174. | 4.4 | 10 |
| 28 | Bent It Like FRs: Extended Radio AGN in the COSMOS Field and Their Large-Scale Environment. <i>Galaxies</i> , 2021, 9, 93. | 3.0 | 5 |
| 29 | Magnetogenesis and the Cosmic Web: A Joint Challenge for Radio Observations and Numerical Simulations. <i>Galaxies</i> , 2021, 9, 109. | 3.0 | 20 |
| 30 | Spectropolarimetric observations of the CIZA J2242.8+5301 northern radio relic: no evidence of high-frequency steepening. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 498, 1628-1637. | 4.4 | 13 |
| 31 | Redshift estimates for fast radio bursts and implications on intergalactic magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 498, 4811-4829. | 4.4 | 11 |
| 32 | The Quantitative Comparison Between the Neuronal Network and the Cosmic Web. <i>Frontiers in Physics</i> , 2020, 8, . | 2.1 | 21 |
| 33 | Turbulent pressure support and hydrostatic mass bias in the intracluster medium. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 495, 864-885. | 4.4 | 47 |
| 34 | Magnetism Science with the Square Kilometre Array. <i>Galaxies</i> , 2020, 8, 53. | 3.0 | 41 |
| 35 | Multiwavelength cross-correlation analysis of the simulated cosmic web. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 494, 5603-5618. | 4.4 | 10 |
| 36 | Shock waves in the magnetized cosmic web: the role of obliquity and cosmic ray acceleration. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 496, 3648-3667. | 4.4 | 17 |

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|----|--|------|-----------|
| 37 | Discovering the most elusive radio relic in the sky: diffuse shock acceleration caught in the act?. Monthly Notices of the Royal Astronomical Society: Letters, 2020, 496, L48-L53. | 3.3 | 27 |
| 38 | The Northern Cross fast radio burst project â€“ I. Overview and pilot observations at 408 MHz. Monthly Notices of the Royal Astronomical Society, 2020, 494, 1229-1236. | 4.4 | 14 |
| 39 | New constraints on the magnetization of the cosmic web using LOFAR Faraday rotation observations. Monthly Notices of the Royal Astronomical Society, 2020, 495, 2607-2619. | 4.4 | 44 |
| 40 | How complex is the cosmic web?. Monthly Notices of the Royal Astronomical Society, 2020, 491, 5447-5463. | 4.4 | 2 |
| 41 | Second-order Fermi Reacceleration Mechanisms and Large-Scale Synchrotron Radio Emission in Intracluster Bridges. Physical Review Letters, 2020, 124, 051101. | 7.8 | 49 |
| 42 | Fundamental physics with the Square Kilometre Array. Publications of the Astronomical Society of Australia, 2020, 37, . | 3.4 | 179 |
| 43 | Limiting the shock acceleration of cosmic ray protons in the ICM. Monthly Notices of the Royal Astronomical Society: Letters, 2020, 495, L112-L117. | 3.3 | 20 |
| 44 | Analytical model for cluster radio relics. Monthly Notices of the Royal Astronomical Society, 2020, 493, 2306-2317. | 4.4 | 22 |
| 45 | New mysteries and challenges from the Toothbrush relic: wideband observations from 550 MHz to 8 GHz. Astronomy and Astrophysics, 2020, 636, A30. | 5.1 | 42 |
| 46 | A perfect power-law spectrum even at the highest frequencies: The Toothbrush relic. Astronomy and Astrophysics, 2020, 642, L13. | 5.1 | 19 |
| 47 | Morphology of radio relics â€“ I. What causes the substructure of synchrotron emission?. Monthly Notices of the Royal Astronomical Society, 2020, 500, 795-816. | 4.4 | 28 |
| 48 | Simulations and observational tests of primordial magnetic fields from Cosmic Microwave Background constraints. Monthly Notices of the Royal Astronomical Society, 2020, 500, 5350-5368. | 4.4 | 16 |
| 49 | Polarization of radio relics in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2019, 490, 3987-4006. | 4.4 | 31 |
| 50 | Fast radio burst dispersion measures and rotation measures and the origin of intergalactic magnetic fields. Monthly Notices of the Royal Astronomical Society, 2019, 488, 4220-4238. | 4.4 | 27 |
| 51 | A radio ridge connecting two galaxy clusters in a filament of the cosmic web. Science, 2019, 364, 981-984. | 12.6 | 96 |
| 52 | A survey of the thermal and non-thermal properties of cosmic filaments. Monthly Notices of the Royal Astronomical Society, 2019, 486, 981-1002. | 4.4 | 27 |
| 53 | Dynamical evolution of magnetic fields in the intracluster medium. Monthly Notices of the Royal Astronomical Society, 2019, 486, 623-638. | 4.4 | 45 |
| 54 | Shocks and Non-thermal Particles in Clusters of Galaxies. Space Science Reviews, 2019, 215, 1. | 8.1 | 36 |

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|----|---|-----|-----------|
| 55 | The intergalactic magnetic field probed by a giant radio galaxy. <i>Astronomy and Astrophysics</i> , 2019, 622, A16. | 5.1 | 37 |
| 56 | Non-thermal pressure support in X-COP galaxy clusters. <i>Astronomy and Astrophysics</i> , 2019, 621, A40. | 5.1 | 108 |
| 57 | Universal thermodynamic properties of the intracluster medium over two decades in radius in the X-COP sample. <i>Astronomy and Astrophysics</i> , 2019, 621, A41. | 5.1 | 128 |
| 58 | Detecting shocked intergalactic gas with X-ray and radio observations. <i>Astronomy and Astrophysics</i> , 2019, 627, A5. | 5.1 | 32 |
| 59 | Simulations of ultra-high energy cosmic rays in the local Universe and the origin of cosmic magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 475, 2519-2529. | 4.4 | 45 |
| 60 | Probing the origin of extragalactic magnetic fields with Fast Radio Bursts. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 480, 3907-3915. | 4.4 | 30 |
| 61 | Constraining magnetic fields in galaxy clusters. <i>Proceedings of the International Astronomical Union</i> , 2018, 14, 299-302. | 0.0 | 1 |
| 62 | Magnetic fields in the intergalactic medium and in the cosmic web. <i>Proceedings of the International Astronomical Union</i> , 2018, 14, 303-306. | 0.0 | 0 |
| 63 | The Challenge of Detecting Intracluster Filaments with Faraday Rotation. <i>Galaxies</i> , 2018, 6, 128. | 3.0 | 12 |
| 64 | Magnetic Field Amplification in Galaxy Clusters and Its Simulation. <i>Space Science Reviews</i> , 2018, 214, 1. | 8.1 | 88 |
| 65 | The turbulent pressure support in galaxy clusters revisited. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2018, 481, L120-L124. | 3.3 | 42 |
| 66 | LOFAR discovery of radio emission in MACSJ0717.5+3745. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 478, 2927-2938. | 4.4 | 39 |
| 67 | The primordial magnetic field in our cosmic backyard. <i>Classical and Quantum Gravity</i> , 2018, 35, 154001. | 4.0 | 17 |
| 68 | Deep learning based detection of cosmological diffuse radio sources. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 480, 3749-3761. | 4.4 | 21 |
| 69 | Resolved magnetic dynamo action in the simulated intracluster medium. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 474, 1672-1687. | 4.4 | 93 |
| 70 | Observations of a nearby filament of galaxy clusters with the Sardinia Radio Telescope. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 479, 776-806. | 4.4 | 38 |
| 71 | Turbulence and vorticity in Galaxy clusters generated by structure formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 464, 210-230. | 4.4 | 86 |
| 72 | Evolution of vorticity and enstrophy in the intracluster medium. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 471, 3212-3225. | 4.4 | 27 |

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|----|--|-----|-----------|
| 73 | Enhancing the Spectral Hardening of Cosmic TeV Photons by Mixing with Axionlike Particles in the Magnetized Cosmic Web. <i>Physical Review Letters</i> , 2017, 119, 101101. | 7.8 | 29 |
| 74 | On the complexity and the information content of cosmic structures. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 465, 4942-4955. | 4.4 | 6 |
| 75 | Simulations of extragalactic magnetic fields and of their observables. <i>Classical and Quantum Gravity</i> , 2017, 34, 234001. | 4.0 | 82 |
| 76 | On the Connection between Turbulent Motions and Particle Acceleration in Galaxy Clusters. <i>Astrophysical Journal Letters</i> , 2017, 843, L29. | 8.3 | 51 |
| 77 | Testing cosmic ray acceleration with radio relics: a high-resolution study using MHD and tracers. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 464, 4448-4462. | 4.4 | 54 |
| 78 | Observations of the galaxy cluster CIZA J2242.8+5301 with the Sardinia Radio Telescope. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 472, 3605-3623. | 4.4 | 21 |
| 79 | Sardinia Radio Telescope observations of Abell 194. <i>Astronomy and Astrophysics</i> , 2017, 603, A122. | 5.1 | 51 |
| 80 | Galaxy Cluster Outskirts from the Thermal SZ and Non-Thermal Synchrotron Link. <i>Galaxies</i> , 2016, 4, 73. | 3.0 | 2 |
| 81 | The impact of the SZ effect on cm-wavelength ($1\text{--}30$ GHz) observations of galaxy cluster radio relics. <i>Astronomy and Astrophysics</i> , 2016, 591, A142. | 5.1 | 27 |
| 82 | On the Non-Thermal Energy Content of Cosmic Structures. <i>Galaxies</i> , 2016, 4, 60. | 3.0 | 7 |
| 83 | Studying the Effect of Shock Obliquity on the $\hat{\Gamma}^3$ -ray and Diffuse Radio Emission in Galaxy Clusters. <i>Galaxies</i> , 2016, 4, 71. | 3.0 | 15 |
| 84 | Constraining the efficiency of cosmic ray acceleration by cluster shocks. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 459, 70-83. | 4.4 | 68 |
| 85 | Propagation of ultrahigh energy cosmic rays in extragalactic magnetic fields: a view from cosmological simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, 3660-3671. | 4.4 | 38 |
| 86 | A shock front at the radio relic of Abell 2744. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 461, 1302-1307. | 4.4 | 55 |
| 87 | ALMA-SZ DETECTION OF A GALAXY CLUSTER MERGER SHOCK AT HALF THE AGE OF THE UNIVERSE. <i>Astrophysical Journal Letters</i> , 2016, 829, L23. | 8.3 | 26 |
| 88 | Evolution of cosmic filaments and of their galaxy population from MHD cosmological simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, 448-463. | 4.4 | 37 |
| 89 | Numerical cosmology on the GPU with Enzo and Ramses. <i>Journal of Physics: Conference Series</i> , 2015, 640, 012058. | 0.4 | 5 |
| 90 | Forecasts for the detection of the magnetised cosmic web from cosmological simulations. <i>Astronomy and Astrophysics</i> , 2015, 580, A119. | 5.1 | 61 |

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|-----|---|-----|-----------|
| 91 | Properties of cosmological filaments extracted from Eulerian simulations. Monthly Notices of the Royal Astronomical Society, 2015, 453, 1164-1185. | 4.4 | 32 |
| 92 | Radio haloes in Sunyaev-Zel'dovich-selected clusters of galaxies: the making of a halo?. Monthly Notices of the Royal Astronomical Society, 2015, 454, 3391-3402. | 4.4 | 22 |
| 93 | Electron and proton acceleration efficiency by merger shocks in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2015, 451, 2198-2211. | 4.4 | 58 |
| 94 | Gas clumping in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2015, 447, 2198-2208. | 4.4 | 70 |
| 95 | Influence of adaptive mesh refinement and the hydro solver on shear-induced mass stripping in a minor-merger scenario. Astronomy and Computing, 2015, 9, 49-63. | 1.7 | 8 |
| 96 | Turbulence in the Intracluster Medium. Astrophysics and Space Science Library, 2015, , 599-614. | 2.7 | 10 |
| 97 | Unravelling the origin of large-scale magnetic fields in galaxy clusters and beyond through Faraday Rotation Measures with the SKA. , 2015, , . | | 5 |
| 98 | Filaments of the radio cosmic web: opportunities and challenges for SKA. , 2015, , . | | 4 |
| 99 | On the amplification of magnetic fields in cosmic filaments and galaxy clusters... Monthly Notices of the Royal Astronomical Society, 2014, 445, 3706-3722. | 4.4 | 97 |
| 100 | A new double radio relic in PSZ1 G096.89+24.17 and a radio relic mass-luminosity relation. Monthly Notices of the Royal Astronomical Society, 2014, 444, 3130-3138. | 4.4 | 81 |
| 101 | Simulations of cosmic rays in large-scale structures: numerical and physical effects. Monthly Notices of the Royal Astronomical Society, 2014, 439, 2662-2677. | 4.4 | 23 |
| 102 | Do radio relics challenge diffusive shock acceleration?. Monthly Notices of the Royal Astronomical Society, 2014, 437, 2291-2296. | 4.4 | 80 |
| 103 | Thermal and non-thermal traces of AGN feedback: results from cosmological AMR simulations. Monthly Notices of the Royal Astronomical Society, 2013, 428, 2366-2388. | 4.4 | 40 |
| 104 | Properties of gas clumps and gas clumping factor in the intra-cluster medium. Monthly Notices of the Royal Astronomical Society, 2013, 429, 799-814. | 4.4 | 79 |
| 105 | Measurements and simulation of Faraday rotation across the Coma radio relic. Monthly Notices of the Royal Astronomical Society, 2013, 433, 3208-3226. | 4.4 | 73 |
| 106 | The X-ray/SZ view of the virial region. Astronomy and Astrophysics, 2013, 551, A22. | 5.1 | 71 |
| 107 | The X-ray/SZ view of the virial region. Astronomy and Astrophysics, 2013, 551, A23. | 5.1 | 50 |
| 108 | Discovery of radio haloes and double relics in distant MACS galaxy clusters: clues to the efficiency of particle acceleration. Monthly Notices of the Royal Astronomical Society, 2012, 426, 40-56. | 4.4 | 118 |

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|-----|--|-----|-----------|
| 109 | Turbulence in the ICM from mergers, cool-core sloshing, and jets: results from a new multi-scale filtering approach. <i>Astronomy and Astrophysics</i> , 2012, 544, A103. | 5.1 | 73 |
| 110 | Why are central radio relics so rare?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 421, 1868-1873. | 4.4 | 54 |
| 111 | Modelling injection and feedback of cosmic rays in grid-based cosmological simulations: effects on cluster outskirts. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 421, 3375-3398. | 4.4 | 52 |
| 112 | The gas distribution in the outer regions of galaxy clusters. <i>Astronomy and Astrophysics</i> , 2012, 541, A57. | 5.1 | 116 |
| 113 | The scatter in the radial profiles of X-ray luminous galaxy clusters as diagnostic of the thermodynamical state of the ICM. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 413, 2305-2313. | 4.4 | 34 |
| 114 | Massive and refined. <i>Astronomy and Astrophysics</i> , 2011, 529, A17. | 5.1 | 140 |
| 115 | The entropy core in galaxy clusters: numerical and physical effects in cosmological grid simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 410, 461-483. | 4.4 | 24 |
| 116 | A comparison of cosmological codes: properties of thermal gas and shock waves in large-scale structures. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 418, 960-985. | 4.4 | 83 |
| 117 | Massive and refined: A sample of large galaxy clusters simulated at high resolution. I: Thermal gas and properties of shock waves. <i>New Astronomy</i> , 2010, 15, 695-711. | 1.8 | 59 |
| 118 | The mixing and transport properties of the intra cluster medium: a numerical study using tracers particles. <i>Astronomy and Astrophysics</i> , 2010, 513, A32. | 5.1 | 32 |
| 119 | Turbulent motions and shocks waves in galaxy clusters simulated with adaptive mesh refinement. <i>Astronomy and Astrophysics</i> , 2009, 504, 33-43. | 5.1 | 172 |
| 120 | Shock waves in Eulerian cosmological simulations: main properties and acceleration of cosmic rays. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 395, 1333-1354. | 4.4 | 144 |
| 121 | Turbulent velocity fields in smoothed particle hydrodynamics simulated galaxy clusters: scaling laws for the turbulent energy. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2006, 369, L14-L18. | 3.3 | 58 |
| 122 | Turbulent gas motions in galaxy cluster simulations: the role of smoothed particle hydrodynamics viscosity. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 364, 753-772. | 4.4 | 259 |
| 123 | Particle re-acceleration and Faraday-complex structures in the RXCÂJ1314.4-2515 galaxy cluster. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , . | 4.4 | 18 |
| 124 | Joint inference on the redshift distribution of fast radio burst and on the intergalactic baryon content. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, , . | 4.4 | 2 |