

Publications in Refereed Journals
Pankaj Jain

1. *Probing the morphology of the Gum Nebula through pulsar observables and a novel distance estimation method*, (A. Kumar, A. Deshpande, P. Jain), MNRAS, accepted
2. *Evolution of the 2021 Outburst of GX 339-4 with AstroSat*, (V. Sharma, R. Misra, J. S. Yadav, A. Garg, P. Jain), MNRAS, accepted
3. *VLBA astrometry of PSRs B0329+54 and B1133+16: Improved pulsar distances and comparison of global ionospheric models*, (A. Kumar, A. Deller, P. Jain, J. Moldon), PASA 42 (2025), e098
4. *Matter dipole and Hubble tension due to large wavelength perturbations*, (G. Kashyap, N. Singh, P. Jain), Phys. Rev. D. 112 (2025), 083524
5. *Discovery of a New Flaring Class in GRS 1915+105 Using AstroSat*, (R. Dhaka, J. S. Yadav, R. Misra, P. Jain), Astrophysical Journal 984 (2025), 118
6. *Resonant nuclear fusion at second order*, (H. Kumar, P. Jain), Phys. Rev. C, 112 (2025), 014624
7. *Exploring the Broadband Spectral and Timing Characteristics of GRS 1915+105 with AstroSat and NICER Observations*, (R. Dhaka, R. Misra, P. Jain and J. S. Yadav), Astrophys. J. 974 (2024) 1, 90.
8. *Low energy nuclear reactions through weak interactions*, (K. Ramkumar, H. Kumar, P. Jain), Phys. Rev. C 110 (2024) 4, 044605.
9. *Colour dependence of dipole in CatWISE2020 data*, (M. Panwar, P. Jain and A. Omar), MNRAS 535 (2024) 1, L63.
10. *Detection of Simultaneous Quasiperiodic Oscillation Triplets in 4U 1728-34 and Constraining the Neutron Star Mass and Moment of Inertia*, (K. Anand et al.), Astrophysical Journal 967 (2024) 2, 129.
11. *Probing atmospheric effects using GRAPES-3 plastic scintillator detectors*, (M. Zuberi et al.), European Physical Journal C, 84, 255 (2024).
12. *Probing the cosmological principle using the slope of log N-log S relationship for quasars*, (M. Panwar and P. Jain), JCAP 06 (2024) 019
13. *Evidence of a Hardening in the Cosmic Ray Proton Spectrum at around 166 TeV Observed by the GRAPES-3 Experiment*, (F. Varsi et al.), Phys. Rev. Lett. 132, 051002 (2024).
14. *A study of dipolar signal in distant Quasars with various observables*, (R. Kothari, M. Panwar, G. Singh, P. Tiwari and P. Jain), European Physical Journal C, 84, 75 (2024)
15. *Small-scale Cosmic-Ray Anisotropy Observed by the GRAPES-3 Experiment at TeV Energies*, (M. Chakraborty et al.), Astrophysical Journal, 961, 97 (2024)
16. *Correlations between QPO frequencies and spectral parameters of GRS 1915+105 using AstroSat observations*, (R. Dhaka, R. Misra, J. S. Yadav and P. Jain), MNRAS, stad2075 (2023)
17. *A Toy Model for Low Energy Nuclear Fusion*, (K. Ramkumar, H. Kumar and P. Jain), Pramana 97:109 (2023)

18. *Dipole Anisotropy in Gravitational Wave Source Distribution*, (G. Kashyap, N. K. Singh, K. S. Phukon, S. Caudill, P. Jain), JCAP, 06 (2023)042
19. *A GEANT4 based simulation framework for the large area muon telescope of the GRAPES-3 experiment*, (F. Varsi et al., Grapes-3 Collaboration), JINST 18 (2023), P03046
20. *The comptonizing medium of the black hole X-ray binary MAXI J1535571 through type-C quasi-periodic oscillations*, (D. Rawat et al), MNRAS, 520 (2023) 1, 113
21. *Probing cosmology beyond Λ CDM using SKA*, (S. Ghosh et al), J.Astrophys.Astron. 44 (2023) 1, 22
22. *Validating the improved angular resolution of the GRAPES-3 air shower array by observing the Moon shadow in cosmic rays*, (D. Pattnaik et al., Grapes-3 collaboration), Phys.Rev.D 106 (2022) 2, 022009
23. *Photon-induced low-energy nuclear reactions*, (P. Jain et al), Pramana J. Phys. (2022) 96
24. *Low Energy Nuclear fusion with Two Photon Emission*, (P. Jain et al), JCMNS 35, 1 (2022)
25. *Time-resolved spectroscopy on the heartbeat state of GRS 1915+ 105 using AstroSat* (D. Rawat, R. Misra, P. Jain and J. S. Yadav) MNRAS 511 (2022) 2, 1841
26. *Superhorizon Perturbations: A Possible Explanation of the Hubble-Lemaître Tension and the Large-scale Anisotropy of the Universe* (P. Tiwari, R. Kothari and P. Jain) Astrophys.J.Lett. 924 (2022) L36
27. *A mechanism to explain galaxy alignment over a range of scales* (P. Tiwari and P. Jain) MNRAS 513 (2022) 1, 604
28. *Explaining excess dipole in NVSS data using superhorizon perturbation* (K. Das, K. Sankharva and P. Jain) JCAP 07 (2021) 035
29. *Testing evolution of LFQPOs with mass accretion rate in GRS 1915+105 with Insight-HXMT* (H. Liu et al.) Astrophys.J. 909 (2021) 1, 63
30. *General Treatment of Reflection of Spherical Electromagnetic Waves from Spherical, Uneven Antarctic Surface and Its Implications for the Mystery Events Detected by ANITA* (P. Dasgupta and P. Jain) Astropart.Phys. 128 (2021) 102530
31. *Energy sensitivity of the GRAPES-3 EAS array for primary cosmic ray protons* (B. Hariharan et al.) Experimental Astronomy 50, 185198 (2020)
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36. *Identification of QPO frequency of GRS 1915+105 as the relativistic dynamic frequency of a truncated accretion disk*, (R. Misra, D. Rawat, J. S. Yadav and P. Jain) Astrophysical Journal 889 (2020), 2, L36
37. *A Pixel Space Method for Testing Dipole Modulation in the CMB Polarization* (S. Ghosh and P. Jain), MNRAS, 492, (2020), 3 3994-4004.
38. *The galaxy power spectrum from TGSS ADR1 and the effect of flux calibration systematics* (P. Tiwari, S. Ghosh and P. Jain), Astrophysical Journal 887, 175 (2019)
39. *Effect of orbital eccentricity on the dynamics of precessing compact binaries* (K. S. Phukon, A. Gupta, S. Bose and P. Jain), Phys. Rev. D 100, 124008 (2019)
40. *Cosmological Dark Matter in a Conformal Model* (P. Sanyal, A. C. Nayak, G. Kashyap and P. Jain) Phys. Rev. D 100, 115032 (2019)
41. *Weak Lensing Effect on CMB in the Presence of a Dipole Anisotropy*, (A. Agarwal, N. K. Singh, P. Jain and P. Tiwari), Eur. Phys. J. C79 no.7, 582 (2019).
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50. *Probing statistical isotropy of cosmological radio sources using SKA*, (S. Ghosh, P. Jain, G. Kashyap, R. Kothari, S. Nadkarni-Ghosh and P. Tiwari), J. Astrophys. Astron 37, 25 (2016).
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