

**Publications in Refereed Journals**  
**Pankaj Jain**

1. *Probing atmospheric effects using GRAPES-3 plastic scintillator detectors*, (M. Zuberi et al.), European Physical Journal C, 84, 255 (2024).
2. *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).
3. *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)
4. *Small-scale Cosmic-Ray Anisotropy Observed by the GRAPES-3 Experiment at TeV Energies*, (M. Chakraborty et al.), Astrophysical Journal, 961, 97 (2024)
5. *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)
6. *A Toy Model for Low Energy Nuclear Fusion*, (K. Ramkumar, H. Kumar and P. Jain), Pramana 97:109 (2023)
7. *Dipole Anisotropy in Gravitational Wave Source Distribution*, (G. Kashyap, N. K. Singh, K. S. Phukon, S. Caudill, P. Jain), JCAP, 06 (2023)042
8. *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
9. *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
10. *Probing cosmology beyond  $\Lambda$ CDM using SKA*, (S. Ghosh et al), J.Astrophys.Astron. 44 (2023) 1, 22
11. *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
12. *Photon-induced low-energy nuclear reactions*, (P. Jain et al), Pramana J. Phys. (2022) 96
13. *Low Energy Nuclear fusion with Two Photon Emission*, (P. Jain et al), JCMNS 35, 1 (2022)
14. *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
15. *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
16. *A mechanism to explain galaxy alignment over a range of scales* (P. Tiwari and P. Jain) MNRAS 513 (2022) 1, 604
17. *Explaining excess dipole in NVSS data using superhorizon perturbation* (K. Das, K. Sankharva and P. Jain) JCAP 07 (2021) 035

18. *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
19. *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
20. *Energy sensitivity of the GRAPES-3 EAS array for primary cosmic ray protons* (B. Hariharan et al.) *Experimental Astronomy* 50, 185198 (2020)
21. *The angular resolution of GRAPES-3 EAS array after improved timing and shower front curvature correction based on age and size* (V. B. Jhansi et al.) *Journal of Cosmology and Astroparticle Physics* 07 (2020) 024
22. *Alignment of radio galaxy axes using FIRST catalogue*, (M. Panwar, P. Prabhakar, P. K. Sandhu, Y. Wadadekar and P. Jain) *Mon.Not.Roy.Astron.Soc.* 499 (2020) 1, 1226-1232
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24. *Simulation of atmospheric pressure dependence on GRAPES-3 particle density* (M. Zuberi et al), *Exper. Astron* 49 (2020), 1-2, 61-71.
25. *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
26. *A Pixel Space Method for Testing Dipole Modulation in the CMB Polarization* (S. Ghosh and P. Jain), *MNRAS*, 492, (2020), 3 3994-4004.
27. *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)
28. *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)
29. *Cosmological Dark Matter in a Conformal Model* (P. Sanyal, A. C. Nayak, G. Kashyap and P. Jain) *Phys. Rev. D* 100, 115032 (2019)
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37. *Antarctic Surface Reflectivity Measurements from the ANITA-3 and HiCal-1 Experiments*, (P. W. Gorham et al) J. Astron. Inst. 06, 1740002 (2017).
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49. *Noncommutative Geometry and the Primordial Dipolar Imaginary Power Spectrum* , (P. Rath and P. Jain), EPJC 75, 113 (2015).
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