

Publication List

(A) International Refereed Journals:

Astrophysics

1. J. S. Deneva¹, K. Stovall, M. A. McLaughlin, S. D. Bates, P. C. C. Freire, F. Jenet, **M. Bagchi**, “Goals, Strategies and First Discoveries of AO327, the Arecibo All-Sky 327 MHz Drift Pulsar Survey” - submitted to *Astrophys. J.*
2. **M. Bagchi**, D. R. Lorimer, S. Wolfe, “On the detectability of eccentric binary pulsars” - *Mon. Not. R. Astron. Soc.* 432 (2013) 1303.
3. J. Chennamangalam, D. R. Lorimer, I. Mandel, **M. Bagchi**, “Constraining the luminosity function parameters and population size of radio pulsars in globular clusters” - *Mon. Not. R. Astron. Soc.* 431 (2013) 874.
4. **M. Bagchi**, “Periastron Advance in Neutron Star - Black Hole Binaries” - *Mon. Not. R. Astron. Soc.* 428 (2013) 1201.
5. **M. Bagchi**, A. Cortes Nieves, M. McLaughlin, “A search for dispersed radio bursts in archival Parkes Multibeam Pulsar Survey data”, - *Mon. Not. R. Astron.* 425 (2012) 2501.
6. **M. Bagchi**, D. R. Lorimer, J. Chennamangalam, “Luminosities of recycled radio pulsars in globular clusters” - *Mon. Not. R. Astron. Soc.* 418 (2011) 477.
7. **M. Bagchi**, “The role of binding energies of neutron stars on the accretion driven evolution” - *Mon. Not. R. Astron. Soc.* 413 (2011) L47.
8. **M. Bagchi**, “Rotational parameters of strange stars in comparison with neutron stars” - *New Astronomy* 15 (2010) 126.
9. A. Gopakumar, **M. Bagchi**, A. Ray, “Ruling out Kozai resonance in highly eccentric galactic binary millisecond pulsar PSR J1903 + 0327” - *Mon. Not. R. Astron. Soc.* 399 (2009) L123.
10. **M. Bagchi**, A. Ray, “Radio pulsar binaries in globular clusters: their orbital eccentricities and stellar interactions” - *Astrophys. J.* 701 (2009) 1161.
11. **M. Bagchi**, A. Ray, “Orbital eccentricity of binary radio pulsars in globular clusters and interaction between stars” - *Astrophys. J. Letters* 693 (2009) L91.
12. **M. Bagchi**, J. Dey, S. Konar, G. Bhattacharya, M. Dey, “Members of the double pulsar system PSR J0737-3039: neutron stars or strange stars?” - *New Astronomy* 14 (2009) 37.
13. **M. Bagchi**, J. Staff, R. Ouyed, S. Ray, M. Dey, J. Dey, “Chromo-thermal oscillations and collapse of strange stars to black holes: astrophysical implications” - *Mon. Not. R. Astron. Soc.* 387 (2008) 115.
14. P. Jaikumar, **M. Bagchi**, R. Ouyed, “High-density skyrmion matter and neutron stars” - *Astrophys. J.* 678 (2008) 360.
15. J. Staff, R. Ouyed, **M. Bagchi**, “A three-stage model for the inner engine of gamma-ray bursts: prompt emission and early afterglow” - *Astrophys. J.* 667 (2007) 340.
16. **M. Bagchi**, S. Ray, M. Dey, J. Dey, “Possible evidence for strange stars from joint observations of harmonic absorption bands and of redshifted spectral lines” - *Mon. Not. R. Astron. Soc.* 368 (2006) 971.
17. **M. Bagchi**, S. Ray, M. Dey, J. Dey, “Compact strange stars with medium dependence of gluons at finite temperature” - *Astron. & Astrophys.* 450 (2006) 431.
18. R. D. Ray Mandal, M. Sinha, **M. Bagchi**, S. Konar, M. Dey, J. Dey, “Strange pulsar hypothesis” - *Mon. Not. R. Astron. Soc.* 365 (2006) 1383.
19. **M. Bagchi**, M. Sinha, M. Dey, J. Dey, S. Bhowmick, “Newtonian and general relativistic contribution of gravity to surface tension of strange stars” - *Astron. & Astrophys.* 440 (2005) L33.

High Energy Physics

20. **M. Bagchi**, J. Dey, M. Dey, T. Gangopadhyay, S. Laha, S. Ray, M. Sinha, “Bound for entropy and viscosity ratio for strange quark matter” - Physics Letters B 666 (2008) 145.
21. **M. Bagchi**, S. Daw, M. Dey, J. Dey, “Mean field baryon magnetic moments and sumrules” - Europhys. Lett. 75 (2006) 548.
22. **M. Bagchi**, M. Sinha, M. Dey, J. Dey, “Decoupling of pion coupling f_π from quarks at high density in three models, and its possible observational consequences” - Phys. Lett. B 618 (2005) 115.
23. **M. Bagchi**, M. Dey, S. Daw, J. Dey, “A model finding a new Richardson potential with different scales for confinement and asymptotic freedom, by fitting the properties of Δ^{++} and Ω^- ” - Nucl. Phys. A 740 (2004) 109.
24. M. Sinha, **M. Bagchi**, J. Dey, M. Dey, S. Ray, S. Bhowmick, “Incompressibility of strange matter” - Phys. Lett. B 590 (2004) 120.

(B) Invited Reviews:*Astrophysics*

1. **M. Bagchi**, “Luminosities of Radio Pulsars” - Invited review; Int. J. Mod. Phys. D 22 (2013) 1330021 (arXiv:1306.2152).

(C) Conference Proceedings:*Astrophysics*

1. J. Chennamangalam, D. R. Lorimer, I. Mandel, **M. Bagchi**, “Constraining the luminosity function parameters and population size of radio pulsars in globular clusters” - Proceedings of IAUS 291 “Neutron Stars and Pulsars: Challenges and Opportunities after 80 years”, J. van Leeuwen (ed.); arXiv:1210.5472.
2. **M. Bagchi**, D. R. Lorimer, “The luminosity function of cluster pulsars” - AIP Conference Proceedings (the proceedings of “Radio Pulsars: a key to unlock the secrets of the Universe” in Sardinia, October 10-15, 2010); arXiv: 1012.4705.
3. **M. Bagchi**, A. Ray, “Orbital parameters of binary radio pulsars in globular clusters and stellar interactions” - ASP Conference Proceedings ASPC 407 (2009) 353 (the proceedings of “The Low-Frequency Radio Universe” at National Centre for Radio Astrophysics (NCRA), Pune, India; December 8-12, 2008); arXiv: 0909.3062.
4. **M. Bagchi**, S. Ray, M. Dey, J. Dey, “Strange Stars: an interesting member of the compact object family” - AIP Conference Proceedings 968 (2008) 209 (the proceedings of the international conference on “Astrophysics Of Compact Objects” in Huangshan, China, July 1-7, 2007); arXiv : 0802.1337.
5. S. Ray, **M. Bagchi**, M. Dey, J. Dey, “Strange stars at finite temperature” - J. Phys. Conf. Ser. 31 (2006) 107 (the proceedings of the third 21COE symposium, at the Department of Physics, Waseda University, Tokyo, Japan, September 1-3, 2005); arXiv: astro-ph/0602095.
6. **M. Bagchi**, S. Ray, M. Dey, J. Dey, “Strange star Equation of State with a modified Richardson potential” - Adv. Space Res. 38 (2006) 2912 (the proceedings of COSPAR Colloquium on “Spectra and Timing of Compact X-Ray Binaries” at TIFR, Mumbai, January 17 - 21, 2005); arXiv: astro-ph/0509703.

(D) Invited Chapters in Books:*Astrophysics*

1. **M. Bagchi**, “Orbital parameters of binary radio pulsars: revealing their structure, formation, evolution and dynamic history” - Invited chapter in “Pulsars: Theory, Categories and Applications”, Editor: Alexander D. Morozov, 2010, Nova Science Publishers, ISBN: 978-1-61668-919-3; arXiv: 1004.2730.
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