DR. DIPAK DEBNATH'S LIST OF PUBLICATIONS

PUBLICATIONS IN REFEREED JOURNALS

Published/Accepted :

1. **Accretion Flow Properties of MAXI J1834-021 During Its Double-Outbursts In 2023** by **D. Debnath**, and H.-K. Chang in **AdSpR, (2026)** (in press) (arXiv:2504.16398) (DOI: 10.1016/j.asr.2026.10.032).

2. **Multi-mission Observations of GS 1354-64 during the 2025-26 Outburst: First Results** by **D. Debnath**, H.-K. Chang, S. Srimani, and A. Nandi in **ApJ, 1004, 238 (2026)** (arXiv:2605.27415) (DOI: 10.3847/1538-4357/ae6f0c)

3. **Evolution of Time-Lags of Swift J1727.8-1613 during the Rising Phase of Its Discovery Outburst** by S. K. Nath, **D. Debnath**, and H.-K. Chang in **MNRAS, 547, 1 (2026)** (arXiv:2603.03750) (DOI: 10.1093/mnras/stag436) [Journal Impact Factor: 5.235; ISSN: 0035-8711 (Print Edition), 1365-2966 (Online Edition)]

4. **Jet X-ray Properties of EXO 1846-031 During its 2019 Outburst** by R. Bhowmick, S. K. Nath, **D. Debnath**, and H.-K. Chang in **Universe MDPI, 11, 398 (2025)** (DOI:10.3390/universe11120398). [Journal Impact Factor: 2,6; ISSN: 2218-1997 (Online Edition)]

5. **Accretion Flow Properties of Swift J1727.8-1613 During Its Rising Phase of the Discovery Outburst: Estimation of Mass from Spectro-Temporal Study** by **D. Debnath**, H.-K. Chang, S. K. Nath, and L. Titarchuk in **ApJ, 994, 138 (2025)** (arXiv:2504.16391) (DOI: 10.3847/1538-4357/ae0e1d). [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

6. **Detection of X-ray Polarization in the Hard State of IGR J17091-3624: Spectro-Polarimetric Study with IXPE and NuSTAR Data** by **D. Debnath**, S. Srimani, and H.-K. Chang in **ApJ, 989, 165 (2025)** (arXiv:2504.16402) (DOI: 10.3847/1538-4357/adf1e6). [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

7. **Investigating the Anti-Correlation between Photon Index and Flux of the Crab using RXTE and NuSTAR** by D. Chatterjee, H.-K. Chang, **D. Debnath**, K. A. Augustine, and T.-H. Lin in **ApJ, 988, 105 (2025)** (arXiv:2506.17899) (DOI: 10.3847/1538-4357/ade9bd) [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

8. **Detection of QPO Soft Lag during Outburst of Swift J1727.8-1613: Estimation of Instrinsic Parameters from Spectral Study** by **D. Debnath**, S. K. Nath, D. Chatterjee, K. Chatterjee and H.-K. Chang in **ApJ, 975, 194 (2024)** (arXiv:2409.14286) (DOI: 10.3847/1538-4357/ad7a76). [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

9. **Accretion Flow Properties of EXO 1846-031 During its Multi-Peaked Outburst After Long Quiescence** by S. K. Nath, **D. Debnath**, K. Chatterjee, H.-K. Chang, S. K. Chakrabarti, and R. Bhowmick in **ApJ, 960, 5 (2024)** (arXiv:2307.04522) (DOI: 10.3847/1538-4357/ad0735) [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

10. **MAXI J0637-430: A Possible Candidate for Bulk Motion Comptonization?** by K. Chatterjee, **D. Debnath**, S. K. Nath, and H.-K. Chang in **ApJ, 956, 55 (2023)** (DOI: 10.3847/1538-4357/acf463) [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

11. **Properties of 2017-18 'failed' Outburst of GX 339-4** by **D. Debnath**, K. Chatterjee, S. K. Nath, H.-K. Chang and R. Bhowmick in **AdSpR, 71, 3508-3520 (2023)** (arXiv:2111.13403) (DOI: 10.1016/j.asr.2022.12.011). [Journal Impact Factor: 2.611; ISSN: 0273-1177]

12. **Study of accretion flow dynamics of MAXI J1910-057/Swift J1910.2-0546 during its 2012-13 outburst** by S. K. Nath, **D. Debnath**, K. Chatterjee, A. Jana, D. Chatterjee and R. Bhowmick in **AdSpR, 71, 1045-1058 (2023)** (arXiv:2108.07456). (DOI: 10.1016/j.asr.2022.08.013) [Journal Impact Factor: 2.611; ISSN: 0273-1177]

13. **Properties of MAXI J1348-630 During Its Second Outburst in 2019** by R. Bhowmick, **D. Debnath**, K. Chatterjee, A. Jana and S. K. Nath in **Galaxies MDPI, 10, 95 (2022)** (arXiv:2209.02502) (DOI: 10.3390/galaxies10050095). [Journal Impact Factor: 3.171; ISSN: 1674-4527 (Print Edition), 2397-6209 (Online Edition)]

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15. **Transonic accretion and winds around Pseudo-Kerr black holes and comparison with general relativistic solution** by A. Bhattacharjee, S. K. Chakrabarti and **D. Debnath** in **RAA, 22, 035016 (2022)** (arXiv:2201.04383) (DOI: 10.1088/1674-4527/ac4889) [Journal Impact Factor: 1.469; ISSN: 1674-4527 (Print Edition), 2397-6209 (Online Edition)]

16. **Anamolous nature of outbursts in the black hole candidate 4U 1630-472** by K. Chatterjee, **D. Debnath**, R. Bhowmick, S. K. Nath and D. Chatterjee in **MNRAS, 510, 1128-1135 (2022)** (DOI: 10.1093/mnras/stab3570) (arXiv:2106.14445). [Journal Impact Factor: 5.235; ISSN: 0035-8711 (Print Edition), 1365-2966 (Online Edition)]

17. **Accretion Flow Properties of GRS 1915+105 During Its θ Class State Using Astrosat Data** by A. Banerjee, A. Bhattacharjee, D. Chatterjee, **D. Debnath**, S. K. Chakrabarti, T. Kotoch, and H. M. Antia in **ApJ, 916, 68 (2021)** (DOI: 10.3847/1538-4357/ac0150) (arXiv:2020.05273). [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

18. *AstroSat* **observation of non-resonant type-C QPOs in MAXI J1535-571** by D. Chatterjee, **D. Debnath**, A. Jana, J. -R. Shang, S. K. Chakrabarti, H.-K. Chang, A. Banerjee, A. Bhattacharjee, K. Chatterjee, R. Bhowmick and S. Nath in **Ap&SS, 366, 82 (2021)** (DOI: 10.1007/s10509-021-03988-6) (arXiv:2006.09077). [Journal Impact Factor: 1.830; ISSN: 0004-640X (Print Edition), 1572-946X (Online Edition)]

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20. **Study of Accretion Dynamics of V404 Cygni during its 2015 Outburst** by A. Jana, J.-R. Shang, **D. Debnath**, S. K. Chakrabarti, D. Chatterjee, H.-K. Chang in **Galaxies MDPI, 9, 39 (2021)** (DOI: 10.3390/galaxies9020039) (arXiv:2006.03310). [Journal Impact Factor: 3.171; ISSN: 2075-4434 (Online Edition)]

21. **Jet Properties of XTE J1752-223 During Its 2009-10 Outburst** by **D. Debnath**, K. Chatterjee, D. Chatterjee, A. Jana, and S. K. Chakrabarti in **MNRAS, 504, 4242-4251 (2021)** (DOI:

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24. **Relation Between Quiescence and Outbursting Properties of GX 339-4** by R. Bhowmick, **D. Debnath**, K. Chatterjee, S. Nagarkoti, S. K. Chakrabarti, R. Sarkar, D. Chatterjee, and A. Jana in **ApJ, 910, 138 (2021)** (DOI: 10.3847/1538-4357/abe134) (arXiv:2102.02030). [Journal Impact Factor: 5.874; ISSN: 0004-637X (Print Edition), 1538-4357 (Online Edition)]

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29. **Inference on Disk-Jet Connection of MAXI J1836-194 from Spectral Analysis with the TCAF Solution** by A. Jana, **D. Debnath**, S. K. Chakrabarti, and D. Chatterjee in **RAA, 20, 28 (2020)** (DOI: 10.1088/16744527/20/3/28) (arXiv:1812.10767). [Journal Impact Factor: 1.469; ISSN: 1674-4527 (Print Edition), 2397-6209 (Online Edition)]

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39. **Estimation of the mass of the black hole candidate MAXI J1659-152 using TCAF and POS models** by A. A. Molla, **D. Debnath**, S. K. Chakrabarti, S. Mondal, and A. Jana in **MNRAS, 460, 3163-3169 (2016)** (DOI: 10.1093/mnras/stw860) (arXiv:1605.07282). [Journal Impact Factor: 5.235; ISSN: 0035-8711 (Print Edition), 1365-2966 (Online Edition)]

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47. **Implementation of Two Component Advective Flow Solution in XSPEC** by **D. Debnath**, S. K. Chakrabarti, and S. Mondal in **MNRAS LETTERS, 440, L121-L125 (2014)** (DOI: 10.1093/mnrasl/slu024) (arXiv:1402.0989). [Journal Impact Factor: 5.287; ISSN: 1745-3933 (Online Edition)]

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52. **Instruments of RT-2 Experiment onboard CORONAS-PHOTON and their test and evaluation I: RT-2/S and RT-2/G Payloads** by **D. Debnath**, A. Nandi, A. R. Rao, J. P. Malkar, M. K. Hingar, T. B. Kotoch, S. Sreekumar, V. P. Madhav, and S. K. Chakrabarti, in **Exp. Astron., 29, 1-25 (2011)** (DOI: 10.1007/s10686-010-9205-2) (arXiv:1011.3326). [Journal Impact Factor: 2.155; ISSN: 0922-6435 (Print Edition), 1572-9508 (Online Edition)]

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55. **Instruments of RT-2 Experiment onboard CORONAS-PHOTON and their test and evaluation IV: Background Simulations using GEANT-4 Toolkit** by R. Sarkar, S. Mandal, **D. Debnath**, T. B. Kotoch, A. Nandi, A. R. Rao, and S. K. Chakrabarti, in **Exp. Astron., 29, 85-107 (2011)** (DOI 10.1007/s10686-010-9208-z) (arXiv:1011.3340). [Journal Impact Factor: 2.155; ISSN: 0922-6435 (Print Edition), 1572-9508 (Online Edition)]

56. **Instruments of RT-2 Experiment onboard CORONAS-PHOTON and their test and evaluation V: Onboard software, Data Structure, Telemetry and Telecommand** by S. Sreekumar, P. Vinod, E. Samuel, J. P. Malkar, A. R. Rao, M. K. Hingar, V. P. Madhav, **D. Debnath**, T. B. Kotoch, A. Nandi, S. S. Begum, and S. K. Chakrabarti, in **Exp. Astron., 29, 109-133 (2011)** (DOI: 10.1007/s10686-010-9185-2) (arXiv:1011.3344). [Journal Impact Factor: 2.155; ISSN: 0922-6435 (Print Edition), 1572-9508 (Online Edition)]

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PUBLICATIONS AS TECHNICAL REPORTS

1. Prepared status reports of Laboratory, Qualification and flight models of RT-2 payloads (RT-2/S, G, CZT, E) as a RT-2 team member during 2005-2008. These were presented in front of the project-management board (PMB) members of ISRO and senior scientists, engineers from various academic institutions of India.

2. Test & Evaluation report of RT-2 payloads in different stages of the development had been prepared as an active RT-2 team member during 2006-2008.

3. Prepared user manuals for operation, coupling of RT-2 scientific payloads (RT-2/S, G, CZT) with electronic payload (RT-2/E) using LabVIEW program, which were mostly coded by me.

4. User manual for raw data analysis of RT-2 scientific payloads using LabVIEW and IDL programs.

5. Report of channel-energy calibration of RT-2 spectra, using programs written by IDL. These are later included in instumentation papers in refereed journal (Experiemtal Astronomy, published in 2011).