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Publications

PUBLICATIONS

- **Thermal Sunyaev-Zel'dovich Effect in the Circumgalactic Medium. II. Dependence on Star Formation (vol 991, 205, 2025)** *ASTROPHYSICAL JOURNAL*
  Das, S., Truong, N., Chiang, Y., Mathur, S.
  2026; 1005 (1)

- **Deep X-Ray Observation of NGC 3221: Everything Everywhere All at Once** *ASTROPHYSICAL JOURNAL*
  Das, S., Mathur, S., Lehmer, B. D., Allen, S. W., Krongold, Y., Gupta, A.
  2026; 997 (2)

- **Thermal Sunyaev-Zel'dovich Effect in the Circumgalactic Medium. II. Dependence on Star Formation** *ASTROPHYSICAL JOURNAL*
  Das, S., Truong, N., Chiang, Y., Mathur, S.
  2025; 991 (2)

- **Detecting the Effect of Nonthermal Sources on the Warm-hot Galactic Halo** *ASTROPHYSICAL JOURNAL LETTERS*
  Das, S.
  2024; 963 (2)

- **Detection of diffuse H i emission in the circumgalactic medium of NGC 891 and NGC 4565-II** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
  Das, S., Rickel, M., Leroy, A., Pingel, N. M., Pisano, D. J., Heald, G., Mathur, S., Kingsbury, J., Sardone, A.
  2023; 527 (4): 10358-10375

- **Detection of Thermal Sunyaev-Zel'dovich Effect in the Circumgalactic Medium of Low-mass Galaxies-A Surprising Pattern in Self-similarity and Baryon Sufficiency** *ASTROPHYSICAL JOURNAL*
  Das, S., Chiang, Y., Mathur, S.
  2023; 951 (2)

- **Discovery of a Very Hot Phase of the Milky Way Circumgalactic Medium with Non-solar Abundance Ratios** *ASTROPHYSICAL JOURNAL LETTERS*
  Das, S., Mathur, S., Nicastro, F., Krongold, Y.
  2019; 882 (2)

- **Diffuse H i Emission in the Circumgalactic Medium of NGC 891 and NGC 4565. III. Azimuthal Profiles** *ASTROPHYSICAL JOURNAL*
  Rickel, M., Das, S., Pingel, N. M., Pisano, D. J., Leroy, A., Mathur, S., Heald, G.
  2026; 1009 (2)
- **Thermal Structure and Chemical Enrichment of the North and South Polar Spurs: Supersolar N/O and Ne/O in the X-Ray Plasma** *ASTROPHYSICAL JOURNAL*
  Gupta, A., Mathur, S., Kingsbury, J., Taylor, A., Das, S., Bhattacharya, J., Roy, M., Krongold, Y.
  2026; 1004 (2)
- **Constraining the Subgalactic Relationship between Star Formation and the Hot Interstellar Medium in NGC 4254** *ASTROPHYSICAL JOURNAL*
  Monson, E. B., Lehmer, B. D., Amiri, A., Barboza, K., Barnes, A. T., Basu-Zych, A. R., Dale, D. A., Das, S., Dlamini, S., Glover, S., Kreckel, K., Lopez, L. A., Lopez, et al
  2026; 1001 (1)
- **Resolved H ii Regions in NGC 253: Ionized Gas Structure and Suggestions of a Universal Density-Surface Brightness Relation** *ASTROPHYSICAL JOURNAL*
  McClain, R. L., Leroy, A. K., Congiu, E., Barnes, A. T., Belfiore, F., Egorov, O., Emsellem, E., Rosolowsky, E., Amiri, A., Boquien, M., Chastenet, J., Chown, R., Dale, et al
  2026; 998 (1)
- **Where Is the Supervirial Gas? III. Insights from X-Ray Shadow Observations and a Revised Model for the Soft Diffuse X-Ray Background** *ASTROPHYSICAL JOURNAL*
  Gupta, A., Mathur, S., Kingsbury, J., Korkmaz, E., Das, S., Krongold, Y., Roy, M., Lara-DI, A.
  2025; 989 (2)
- **Galaxies, clusters, and intergalactic medium: A vision document for the Indian Astronomical Community** *JOURNAL OF ASTROPHYSICS AND ASTRONOMY*
  Kale, R., Muzahid, S., Khaire, V., Roy, N., Das, S., Chand, H., Chatterjee, S., Datta, A., Das, M., Hota, A., Jog, C. J., Kartha, S., Lal, et al
  2025; 46 (2)
- **Where is the Supervirial Gas? II. Insight from the Survey of Galactic Sightlines** *ASTROPHYSICAL JOURNAL*
  Roy, M., Mathur, S., Das, S., Lara-DI, A., Krongold, Y., Gupta, A.
  2025; 982 (1)
- **Where is the supervirial hot gas? I: a pilot study with sightlines to Galactic X-ray binaries** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
  Lara-DI, A., Krongold, Y., Mathur, S., Roy, M., McClain, R. L., Das, S., Gupta, A.
  2024; 533 (1): 287-291
- **A sub-solar Fe/O, log (T/K) # 7.5 gas component permeating the Milky Way's CGM** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
  Lara-Di, A., Krongold, Y., Mathur, S., Das, S., Gupta, A., Montero, O.
  2024; 531 (3): 3034-3041
- **Supervirial hot phase in Milky Way circumgalactic medium: further evidences** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
  McClain, R. L., Mathur, S., Das, S., Krongold, Y., Gupta, A.
  2023; 527 (3): 5093-5101
- **Probing the hot circumgalactic medium of external galaxies in X-ray absorption II: a luminous spiral galaxy at z ≈ 0.225** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
  Mathur, S., Das, S., Gupta, A., Krongold, Y.
  2023; 525 (1): L11-L16
- **The Hot Circumgalactic Medium of the Milky Way: New Insights from XMM-Newton Observations** *ASTROPHYSICAL JOURNAL*
  Bhattacharyya, J., Das, S., Gupta, A., Mathur, S., Krongold, Y.
  2023; 952 (1)
- **Thermal and chemical properties of the eROSITA bubbles from Suzaku observations** *NATURE ASTRONOMY*
  Gupta, A., Mathur, S., Kingsbury, J., Das, S., Krongold, Y.

2023

- **Detection of a Supervirial Hot Component in the Milky Way Circumgalactic Medium Along Multiple Sight Lines by Using the Stacking Technique** *ASTROPHYSICAL JOURNAL*
  Lara-Di, A., Mathur, S., Krongold, Y., Das, S., Gupta, A.
  2023; 946 (1)
- **The Hot Circumgalactic Medium of the Milky Way: Evidence for Supervirial, Virial, and Subvirial Temperatures; Nonsolar Chemical Composition; and Nonthermal Line Broadening** *ASTROPHYSICAL JOURNAL*
  Das, S., Mathur, S., Gupta, A., Krongold, Y.
  2021; 918 (2)
- **Supervirial Temperature or Neon Overabundance? Suzaku Observations of the Milky Way Circumgalactic Medium** *ASTROPHYSICAL JOURNAL*
  Gupta, A., Kingsbury, J., Mathur, S., Das, S., Galeazzi, M., Krongold, Y., Nicastro, F.
  2021; 909 (2)
- **Probing the Hot Circumgalactic Medium with Broad O VI and X-Rays** *ASTROPHYSICAL JOURNAL*
  Mathur, S., Gupta, A., Das, S., Krongold, Y., Nicastro, F.
  2021; 908 (1)
- **Empirical estimates of the Galactic halo contribution to the dispersion measures of extragalactic fast radio bursts using X-ray absorption** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
  Das, S., Mathur, S., Gupta, A., Nicastro, F., Krongold, Y.
  2021; 500 (1): 655-662
- **Detection of the Diffuse H I Emission in the Circumgalactic Medium of NGC 891 and NGC 4565** *ASTROPHYSICAL JOURNAL*
  Das, S., Sardone, A., Leroy, A. K., Mathur, S., Gallagher, M., Pingel, N. M., Pisano, D. J., Heald, G.
  2020; 898 (1)
- **The Warm-Hot, Extended, Massive Circumgalactic Medium of NGC 3221: An XMM-Newton Discovery** *ASTROPHYSICAL JOURNAL*
  Das, S., Mathur, S., Gupta, A.
  2020; 897 (1)
- **Multiple Temperature Components of the Hot Circumgalactic Medium of the Milky Way** *ASTROPHYSICAL JOURNAL*
  Das, S., Mathur, S., Gupta, A., Nicastro, F., Krongold, Y.
  2019; 887 (2)
- **Evidence for a Massive Warm?Hot Circumgalactic Medium around NGC 3221** *ASTROPHYSICAL JOURNAL*
  Das, S., Mathur, S., Gupta, A., Nicastro, F., Krongold, Y., Null, C.
  2019; 885 (2)
- **Modeling Type II-P/II-L Supernovae Interacting with Recent Episodic Mass Ejections from Their Presupernova Stars with MESA and SNEC** *ASTROPHYSICAL JOURNAL*
  Das, S., Ray, A.
  2017; 851 (2)
- **Evolution & Explosion of Massive Stars Leading to IIP-IIL SNe with MESA & SNEC**
  Das, S., Ray, A.
  edited by Marcowith, A., Renaud, M., Dubner, G., Ray, A., Bykov, A.
  CAMBRIDGE UNIV PRESS.2017: 11-16