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LIST OF PUBLICATIONS

Refereed publications

1. *Probing the morphology of polarized emission induced by fluctuation dynamo using Minkowski functionals*
Dutta, Riju; Sur, Sharanya, and **Basu, Aritra**
2024, *Astrophysical Journal*, 976, 168 [arXiv:2408.04581]
2. *The dispersion measure and rotation measure from fast radio burst host galaxies based on the IllustrisTNG50 simulation*
Kovács, Tímea; Mao, Sui Ann; **Basu, Aritra**; Ma, Yik Ki; Pakmor, Rüdiger; Spitler, Laura and Walker, Charles
2024, *Astronomy & Astrophysics*, 690, A47 [arXiv:2407.16748]
3. *A spatially resolved radio spectral study of the galaxy M51*
Gajović, Lovorka; Adebahr, Björn; **Basu, Aritra**; Heesen, Volker; Brügger, Marcus; de Gasperin, Francesco; Lara-Lopez, Maritza; Edler, Hendrik; Bomans, Dominik; Paladino, Rosita; Garduño, Luiz; López-Cruz, Omar; Stein, Michael; Fritz, Japoco; Piotrowska, Julia and Sinha, Akriti
2024, *Astronomy & Astrophysics*, 689, A68 [arXiv:2406.06689]
4. *Probing magnetic fields in the circumgalactic medium using polarization data from MIGHTEE*
Böckmann, Kathrin; Brügger, Marcus; Heesen, Volker; **Basu, Aritra**; O’Sullivan, Shane; Heywood, Ian; Jarvis, Matt; Scaife, Anna; Stil, Jeroen; Taylor, Russ; Adams, Nathan; Bowler, Rebecca and Tudorache, Madalina N.
2023, *Astronomy & Astrophysics*, 678, A56 [arXiv:2308.11391]
5. *RMTable2023 and PolSpectra2023: standards for reporting polarization and Faraday rotation measurements of radio sources*
Van Eck, Cameron L. Gaensler, Bryan M.; Hutschenreuter, Sebastian; Livingston, Jack; Ma, Yik Ki; Riseley, Chris J.; Thomson, Alec J. M.; Adebahr, Björn; **Basu, Aritra**; Birkinshaw, Mark; Enßlin, Torsten; Heald, George; Mao, Sui Ann and McClure-Griffiths, Naomi
2023, *Astrophysical Journal Supplement Series*, 267, 28. [arXiv:2305.16607]
6. *WIMP cross-section limits from LOFAR observations of dwarf spheroidal galaxies*
Gajović, Lovorka; Welzmüller, Finn; Heesen, Volker; de Gasperin, Francesco; Vollmann, Martin; Brügger, Marcus; **Basu, Aritra**, Beck, Rainer; Schwarz, Dominik J.; Bomans, Dominik; and Drabant, Alexander
2023, *Astronomy & Astrophysics*, 673, A108. [arXiv:2303.12155]
7. *Exploring diffuse radio emission in galaxy clusters and groups with the uGMRT and the SKA*
Paul, Surajit; Kale, Ruta; Datta, Abhirup; **Basu, Aritra**; Sur, Sharanya; Parekh, Viral; Gupta, Prateek; Chatterjee, Swarna; Salunkhe, Sameer; Iqbal, Asif; Pandey-Pommier, Mamta; Raja, Ramij; Rahman, Majidul; Raychaudhury, Somak; Nath, Biman and Majumdar, Subhabrata
2023, *Journal of Astrophysics & Astronomy*, 44, 38. [arXiv:2211.01393]
8. *A low frequency sub-arcsecond view of powerful radio galaxies in rich-cluster environments: 3C 34 and 3C 320*
Mahatma, Vijay; **Basu, Aritra**; Hardcastle, Martin; Morabito, Leah and van Weeren, Rainout

- 2023, *Monthly Notices of the Royal Astronomical Society*, 520, 4427–4442.
[arXiv:2302.01357]
9. *Diffusion of cosmic-ray electrons in M51 observed with LOFAR at 54 MHz*
Heesen, Volker; de Gasperin, Francesco; Schulz, Sebastian; **Basu, Aritra**; Beck, Rainer; Brüggen, Marcus; Dettmar, Ralf-Jürgen; Stein, Michael; Gajović, Lovorka; Tabatabaei, Fatemeh and Reichherzer, Patrick
2023, *Astronomy & Astrophysics*, 672, A21. [arXiv:2212.06585]
 10. *Detection of magnetic fields in the circumgalactic medium of nearby galaxies using Faraday rotation*
Heesen, Volker; O’Sullivan, Shane; Brüggen, Marcus; **Basu, Aritra**; Beck, Rainer; Seta, Amit; Carretti, Ettore; Krause, Martin; Haverkorn, Marijke; Hutschenreuter, Sebastian; Bracco, Andrea; Stein, Michael; Bomans, Dominik J.; Dettmar, Ralf-Jürgen; Chyży, Krzysztof; Heald, George; Paladino, Rosita and Horellou, Cathy
2023, *Astronomy & Astrophysics Letters*, 670, 23. [arXiv:2302.06617]
 11. *Nearby galaxies in the LOFAR Two-metre Sky Survey II. The magnetic field–gas relation*
Heesen, Volker; Klocke, Tim-Leon; Brüggen, Marcus; Schulz, Sebastian; Tabatabaei, Fatemeh; **Basu, Aritra**; Beck, Rainer; Drabent, Alexander; Paladino, Rosita and Stein, Michael
2023, *Astronomy & Astrophysics*, 669, A8. [arXiv:2208.11068]
 12. *Deep uGMRT observations of the ELAIS-North 1 field: statistical properties of radio–far infrared relations up to $z \sim 2$*
Sinha, Akriti; **Basu, Aritra**; Dutta, Abhirup and Chakraborty, Arnab
2022, *Monthly Notices of the Royal Astronomical Society*, 514, 4343–4362.
[arXiv:2111.08336]
 13. *Nearby galaxies in the LOFAR Two-metre Sky Survey I. Insights into the non-linearity of the radio–SFR relation*
Heesen, Volker; Staffehl, Milan; **Basu, Aritra**; Beck, Rainer; Stein, Michael; Tabatabaei, Fatemeh; Hardcastle, Martin J.; Chyży, Krzysztof T.; Shimwell, Timothy W.; Adebahr, Björn; Beswick, Robert; Bomans, Dominik J.; Botteon, Andrea; Brinks, Elias; Brüggen, Marcus; Dettmar, Ralf-Jürgen; Drabent, Alexander; de Gasperin, Francesco; Gürkan, Gülay; Heald, George H.; Horellou, Cathy; Nikiel-Wroczyński, Błażej; Paladino, Rosita; Piotrowska, Julia; Röttgering, Huub J. A.; Smith, Daniel J. B. and Tasse, Cyril
2022, *Astronomy & Astrophysics*, 664, A83. [arXiv:2204.00635]
 14. *Properties of Polarized Synchrotron Emission from Fluctuation Dynamo Action – II. Effects of Turbulence Driving in the ICM and Beam Smoothing*
Basu, Aritra and Sur, Sharanya
2021, *MDPI Galaxies*, 9, 62. Special issue on “A New Window on the Radio Emission from Galaxies, Galaxy Clusters and Cosmic Web: Current Status and Perspectives”.
 15. *Searching for axionlike particles under strong gravitational lenses*
Basu, Aritra; Goswami, Jishnu; Schwarz, Dominik J. and Urakawa, Yuko
2021, *Physical Review Letters*, 126, 191102. [arXiv:2007.01440]
 16. *Geometric optics in the presence of axionlike particles in curved spacetime*
Schwarz, Dominik, J.; Goswami, Jishnu and **Basu, Aritra**
2021, *Physical Review D Letters*, 103, L081306. [arXiv:2003.10205]
 17. *Properties of polarized synchrotron emission from fluctuation dynamo action – I. Application to galaxy clusters*
Sur, Sharanya; **Basu, Aritra** and Subramanian, Kandaswamy
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18. *The magnetized disk-halo transition region of M 51*
Kierdorf, Maja; Mao, Sui Ann; Beck, Rainer; **Basu, Aritra**; Fletcher, Andrew; Horellou, Cathy; Tabatabaei, Fatemeh; Ott, Jürgen and Haverkorn, Marijke
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19. *Magnetism Science with the Square Kilometre Array*
Heald, George; Mao, Sui Ann; Vacca, Valentina; Akahori, Takuya; Damas-Segovia, Ancor; Gaensler, B. M.; Hoeft, Matthias; Agudo, Ivan; **Basu, Aritra**; ...the SKA Magnetism Science Working Group
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20. *An in-depth investigation of Faraday depth spectrum using synthetic observations of turbulent MHD simulations*
Basu, Aritra; Fletcher, Andrew; Mao, Sui Ann; Burkhart, Blakesley; Beck, Rainer and Schnitzeler, Dominic
2019, *MDPI Galaxies*, 7, 89.
Invited Article: special issue on “New perspectives on galactic magnetism”.
21. *CHANG-ES XVI: An in-depth view of the cosmic-ray transport in the edge-on spiral galaxies NGC891 and NGC4565*
Schmidt, Philip; Krause, Marita; Heesen, Volker; **Basu, Aritra**; Beck, Rainer; Irwin, Judith A.; Heald, George; Rand, Richard J.; Li, Jiang-Tao and Murphy, Eric J.
2019, *Astronomy & Astrophysics*, 632, A12. [arXiv:1907.03789]
22. *CHANG-ES XV: Large-scale magnetic field reversals in the halo of NGC 4631*
Mora-Partiarroyo, Silvia Carolina; Krause, Marita; **Basu, Aritra**; Beck, Rainer; Weigert, Theresa; Irwin, Judith A.; Henriksen, Richard; Stein, Yelena; Vargas, Carlos J.; Heesen, Volker; Walterbros, René A. M.; Rand, Richard J.; Heald, George; Li-Jiang-Tao and Kamieneski, Patrick
2019, *Astronomy & Astrophysics*, 632, A11. [arXiv:1910.07590]
23. *CHANG-ES XIV: Cosmic-ray propagation and magnetic field strengths in the radio halo of NGC 4631*
Mora-Partiarroyo, Silvia Carolina; Krause, Marita; **Basu, Aritra**; Beck, Rainer; Weigert, Theresa; Irwin, Judith A.; Henriksen, Richard; Stein, Yelena; Vargas, Carlos J.; Heesen, Volker; Walterbros, René A. M.; Rand, Richard J.; Heald, George; Li-Jiang-Tao and Kamieneski, Patrick
2019, *Astronomy & Astrophysics*, 632, A10. [arXiv:1910.07588]
24. *CMB foreground measurements through broad-band radio spectro-polarimetry: prospects of the SKA-MPG telescope*
Basu, Aritra; Schwarz, Dominik, J.; Klöckner, Hans-Rainer; von Hausegger, Sebastian; Kramer, Michael; Wieching, Gundolf and Burkhart, Blakesley
2019, *Monthly Notices of the Royal Astronomical Society*, 488, 1618–1634.
[arXiv:1906.04788]
25. *A broadband spectro-polarimetric view of the NVSS rotation measure catalog – II: Effects of off-axis instrumental polarization*
Ma, Yik Ki; Mao, Sui Ann; Stil, Jeroen; **Basu, Aritra**; West, Jennifer; Heiles, Carl; Hill, Alex and Betti, Sarah
2019, *Monthly Notices of the Royal Astronomical Society*, 487, 3454–3469.
[arXiv:1905.04318]
26. *A broadband spectro-polarimetric view of the NVSS rotation measure catalog – I: Breaking the $n\pi$ -ambiguity*
Ma, Yik Ki; Mao, Sui Ann; Stil, Jeroen; **Basu, Aritra**; West, Jennifer; Heiles, Carl; Hill, Alex and Betti, Sarah
2019, *Monthly Notices of the Royal Astronomical Society*, 487, 3432–3453.
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27. *Calibrating the low-frequency radio–SFR relation in nearby galaxies at 1-kpc scale with LOFAR*
Heesen, Volker; Buie II, Edward; Huff, Cierra J.; Lopez, Lucia A.; Woolsey, Jacob D.; Rafferty, David A.; **Basu, Aritra**; Beck, Rainer; Brinks, Elias; Horellou, Cathy; Scannapieco, Evan; Brüggen, Marcus; Dettmar, Ralf-Jürgen; Sendlinger, Katharina; Nikiel-Wroczyński, Błażej; Chyży, Krzysztof; Best, Philip N.; Heald, George and Paladino, Rosita
2019, *Astronomy & Astrophysics* (special issue), 622, A8. [arXiv:1811.07968]
28. *Statistical properties of Faraday rotation measure in external galaxies – I: intervening disc galaxies*
Basu, Aritra; Mao, Sui Ann; Fletcher, Andrew; Kanekar, Nissim; Shukurov, Anvar; Schnitzeler, Dominic; Vacca, Valentina and Junklewitz, Henrik
2018, *Monthly Notices of the Royal Astronomical Society*, 477, 2528–2546.
[arXiv:1803.07896]
29. *Exploring the making of a galactic wind in the star-bursting dwarf irregular galaxy IC 10 with LOFAR*
Heesen, Volker; Rafferty, David; Horneffer, Andreas; Beck, Rainer; **Basu, Aritra**; Westcott, Jonathan; Hindson, Luke; Brinks, Elias; Chyży, Krzysztof; Scaife, Anna; Brüggen, Marcus; Heald, George; Fletcher, Andrew; Horellou, Cathy; Tabatabaei, Fatemeh; Paladino, Rosita; Nikiel-Wroczyński, Błażej; Hoeft, Matthias and Dettmar, Ralf-Jürgen
2018, *Monthly Notices of the Royal Astronomical Society*, 476, 1756–1764.
[arXiv:1802.01463]
30. *Investigation of the cosmic ray population and magnetic field strength in the halo of NGC 891*
Mulcahy, David D.; Horneffer, Andreas; Beck, Rainer; Krause, Marita; Schmidt, Philip; **Basu, Aritra**; Chyży, Krzysztof T.; Dettmar, Ralf-Jürgen; Haverkorn, Marijke; Heald, George; Heesen, Volker; Horellou, Cathy; Iacobelli, Marco; Nikiel-Wroczyński, Błażej; Paladino, Rosita; Scaife, Anna M. M.; Sarrvesh S. Sridhar; Strom, Richard G.; Tabatabaei, Fatemeh S.; Cantwell, T.; Carey, S. H.; Grainge, K.; Hickish, J.; Perrot, Y.; Razavi-Ghods, N.; Scott, P. and Titterton, D.
2018, *Astronomy & Astrophysics*, 615, A98. [arXiv:1804.00752]
31. *CHANG-ES X: Spatially-resolved Separation of Thermal Contribution from Radio Continuum Emission in Edge-on Galaxies*
Vargas, Carlos J.; Mora-Partiarroyo, Silvia Carolina; Schmidt, Philip; Rand, Richard J.; Stein, Yelena; Walterbos, Rene A. M.; Wang, Q. Daniel; **Basu, Aritra**; Patterson, Maria; Kepley, Amanda; Beck, Rainer; Irwin, Judith; Heald, George; Li, Jiangtao and Wiegert, Theresa
2018, *Astrophysical Journal*, 853, 128–147. [arXiv:1801.01892]
32. *Broadband radio spectro-polarimetric observations of high Faraday rotation measure AGN*
Pasetto, Alice; Carrasco-González, Carlos; O’Sullivan, Shane; **Basu, Aritra**; Bruni, Gabriele; Kraus, Alex; Curiel, Salvador and Mack, Karl-Heinz
2018, *Astronomy & Astrophysics*, 613, A74. [arXiv:1801.09731]
33. *Detection of microgauss coherent magnetic fields in a galaxy five billion years ago*
Mao, Sui Ann; Carilli, Christopher; Gaensler, Bryan M.; Wucknitz, Olaf; Keeton, Charles; **Basu, Aritra**; Beck, Rainer; Kronberg, Philipp P. and Zweibel, Ellen
2017, *Nature Astronomy*, 1, 621–626. [arXiv:1708.07844]
34. *New insights into the interstellar medium of the dwarf galaxy IC 10: connection between magnetic fields, the radio–infrared correlation and star formation*
Basu, Aritra; Roychowdhury, Sambit; Heesen, Volker; Beck, Rainer; Brinks, Elias; Westcott, Jonathan and Hindson, Luke
2017, *Monthly Notices of the Royal Astronomical Society*, 431, 337–354.
[arXiv:1706.06426]
35. *Detection of an ~ 20 kpc coherent magnetic field in the outskirts of merging spirals: the Antennae galaxies*

- Basu, Aritra**; Mao, Sui Ann; Kepley, Amanda A.; Robishaw, Timothy; Zweibel, Ellen G. and Gallagher, John. S., III
2017, *Monthly Notices of the Royal Astronomical Society*, 464, 1003–1017.
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36. *J021659-044920: a relic giant radio galaxy at $z \sim 1.3$*
Tamhane, Prathamesh; Wadadekar, Yogesh; **Basu, Aritra**; Singh, Veeresh; Ishwara-Chandra, C.H.; Beelen, Alexandre and Sirothia, Sandeep
2015, *Monthly Notices of the Royal Astronomical Society*, 453, 2438–2446.
[arXiv:1508.00030]
37. *Synchrotron spectral index and interstellar medium densities of star-forming galaxies*
Basu, Aritra; Beck, Rainer; Schmidt, Philip and Roy, Subhashis
2015, *Monthly Notices of the Royal Astronomical Society*, 449, 3879–3888.
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38. *Radio–Far-infrared Correlation in “Blue Cloud” Galaxies with $0 < z < 1.2$*
Basu, Aritra; Wadadekar, Yogesh; Beelen, Alexandre; Singh, Veeresh; Archana, K. N.; Sirothia, Sandeep and Ishwara-Chandra, C. H.
2015, *Astrophysical Journal*, 803, 51–67. [arXiv:1502.00330]
39. *GMRT radio continuum study of Wolf Rayet galaxies – I: NGC 4214 and NGC 4449*
Srivastava, Shweta; Kantharia, Nimisha; **Basu, Aritra**; Srivastava, D.C. and Ananthakrishnan, S.
2014, *Monthly Notices of the Royal Astronomical Society*, 443, 860–873.
[arXiv:1405.693]
40. *Multiwavelength characterization of faint ultra steep spectrum radio sources: A search for high-redshift radio galaxies*
Singh, Veeresh; Beelen, Alexandre; Wadadekar, Yogesh; Sirothia, Sandeep; Ishwara-Chandra C.H.; **Basu, Aritra**; Omont, Alain; McAlpine, Kim; Ivison, Rob; Oliver, Seb; Farrah, Duncan and Lacy, Mark
2014, *Astronomy & Astrophysics*, 569, A52. [arXiv:1405.1737]
41. *Magnetic fields in nearby normal galaxies: energy equipartition*
Basu, Aritra and Roy, Subhashis
2013, *Monthly Notices of the Royal Astronomical Society*, 433, 1675–1686.
[arXiv:1305.2746]
42. *Low-frequency radio–FIR correlation in normal galaxies at ~ 1 kpc scales*
Basu, Aritra; Roy, Subhashis and Mitra, Dipanjan
2012, *Astrophysical Journal*, 756, 141–148. [arXiv:1207.2555]
43. *GMRT 333-MHz observations of six nearby normal galaxies*
Basu, Aritra; Mitra, Dipanjan; Wadadekar, Yogesh and Ishwara-Chandra, C. H.
2012, *Monthly Notices of the Royal Astronomical Society*, 419, 1136–1152.
[arXiv:1109.0369]
44. *The discovery and Nature of optical transient CSS100217:102913+404220*
Drake, Andrew J.; Djorgovski, S. George; Mahabal, Ashish;... **Basu, Aritra**;... et al.
2011, *Astrophysical Journal*, 735, 106–127. [arXiv:1103.5514]

Proceedings and Astronomer’s Telegram

1. *A Collection of German Science Interests in the Next Generation Very Large Array*
Kadler, Matthias; Reichers, Dominik A.; Bacsko, Anne-Kathrin;... **Basu, Aritra**;... et al.
2023, eprint arXiv:2311.10056.

2. *Stellar feedback in dwarf irregular galaxies with radio continuum observations*
Heesen, Volker; **Basu, Aritra**; Brinks, Elias; Heald, George; Fletcher, Andrew; Horellou, Cathy; Hoeft, Matthias and Chyży, Krzysztof
2019, *Dwarf Galaxies: From the Deep Universe to the Present*, Proceedings of the International Astronomical Union, IAU Symposium, 344, 255–258.
3. *Statistical properties of Faraday rotation measure from large-scale magnetic fields in intervening disc galaxies*
Basu, Aritra; Mao, Sui Ann; Fletcher, Andrew; Kanekar, Nissim; Shukurov, Anvar; Schnitzeler, Dominic; Vacca, Valentina and Junklewitz, Henrik
2018, eprint arXiv:1810.03628 (Proceedings of FM8 *New Insights in Extragalactic Magnetic Fields*, XXXth General Assembly of the IAU, Vienna).
4. *From the NVSS RM Catalogue to Future Polarisation Surveys*
Ma, Yik Ki; Mao, Sui Ann; Stil, Jeroen; **Basu, Aritra**; West, Jennifer; Heiles, Carl; Hill, Alex S. and Betti, S. K.
2018, eprint arXiv:1810.03620 (Proceedings of FM8 *New Insights in Extragalactic Magnetic Fields*, XXXth General Assembly of the IAU, Vienna).
5. *The Magnetized Disk-Halo Transition Region of M51*
Kierdorf, Maja; Mao, Sui Ann; Fletcher, Andrew; Beck, Rainer; Haverkorn, Marijke; **Basu, Aritra**; Tabatabaei, Fatemeh and Ott, Jürgen
2018, eprint arXiv:1810.03638 (Proceedings of FM8 *New Insights in Extragalactic Magnetic Fields*, XXXth General Assembly of the IAU, Vienna).
6. *Probing Large Faraday Rotation Measure Environment of Compact Active Galactic Nuclei*
Pasetto, Alice; Carrasco-González, Carlos; O’Sullivan, Shane; **Basu, Aritra**; Bruni, Gabriele; Kraus, Alex; Curiel, Salvador and Mack, Karl-Heinz
2018, *Galaxy*, 6, 40 (Proceedings of *Polarised Emission from Astrophysical Jets* conference).
7. *Radio Polarisation Study of High Rotation Measure AGNs*
Ma, Yik Ki; Mao, Sui Ann; **Basu, Aritra**; Heiles, Carl and West, Jennifer
2017, *Galaxy*, 5, 66 (Proceedings of *Polarised Emission from Astrophysical Jets* conference).
8. *JVLA Wideband Polarimetry Observations on a Sample of High Rotation Measure Sources*
Pasetto, Alice; Carrasco-González, Carlos; Bruni, Gabriele; **Basu, Aritra**; O’Sullivan, Shane; Kraus, Alex and Mack, Karl-Heinz
2016, *Galaxy*, 4, 66 (Proceedings of *Blazars through Sharp Multi-Wavelength Eyes* conference).
9. *Unveiling the population of high-redshift radio galaxies using centimeter GMRT survey*
Singh, Veeresh; Beelen, Alexandre; Wadadekar, Yogesh; Sirothia, Sandeep; Ishwara-Chandra, C. H.; **Basu, Aritra**; Omont, Alain and McAlpine, Kim
2014, *ASI Conference Series*, 13, 249 (Proceedings of *The Metrewavelength Sky* conference).
10. *Equipartition magnetic fields in normal galaxies*
Basu, Aritra and Subhashis Roy
2014, *ASI Conference Series*, 13, 253 (Proceedings of *The Metrewavelength Sky* conference).
11. *The GMRT frequency spectrum of Wolf - Rayet Galaxies*
Srivastava, Shweta; Kantharia, N. G.; Srivastava, D. C. and **Basu, Aritra**
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12. *GMRT radio observations of SN 2014J in M82*
Chandra, Poonam; **Basu, Aritra**; Ray, Alak and Chakraborty, Sayan
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13. *GMRT upper limit of GRB 070610/SWIFT J195509.6+261406 in 610 MHz*

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Under review/advanced stages of preparation

1. *Exploring magnetised galactic outflows in starburst dwarf galaxies NGC 3125 and IC 4662*
Taziaux, Sam; Müller, Ancla; Adebahr, Björn; **Basu, Aritra**; Pfrommer, Christoph; Stein, Michael; Chyży, Krzysztof T; Bomans, Dominik J.; Enßlin, Torsten; Heesen, Volker; Kamphuis, Peter; Soida, Marian; Weżgowiec, Marek; Dettmar, Ralf-Jürgen; Das, Samata and Tjus, Julia
Submitted to the *Astronomy & Astrophysics*
2. *The low-frequency flattening of the radio spectrum of giant HII regions in M 101*
Gajović, Lovorka; Heesen, Volker; Brügggen, Marcus; Edler, Hendrik; Adebahr, Björn; Pasini, Thomas; de Gasperin, Francesco; **Basu, Aritra**; Weżgowiec, Marek; Horellou, Cathy; Bomans, Dominik J.; Dénes, H. and Vohl, D.
Submitted to the *Astronomy & Astrophysics*
3. *The halo magnetic field of a spiral galaxy at $z = 0.414$*
Kovács, Tímea; Mao, Sui Ann; **Basu, Aritra**; Ma, Yik Ki; Gaensler, Bryan et al.
To be submitted to the *Astronomy & Astrophysics*
4. *Radio emission from decaying turbulence in dwarf spheriodals: Distinguishing synchrotron emission from annihilating WIMPs*
Basu, Aritra; Hoeft, Matthias; Schwarz, Dominik, J.; Sur, Sharanya; Vollmann, Martin; Beck, Rainer; Heesen, Volker; Shukurov, Anvar; Gajović, Lovorka; et al.
To be submitted to the *Astronomy & Astrophysics*

Press releases of scientific works

1. *Giant magnetic ropes in the outskirts of a spiral galaxy*
<https://www.mpifr-bonn.mpg.de/pressreleases/2019/10>
National Radio Astronomy Observatory (NRAO) image release:
<https://public.nrao.edu/news/giant-magnetic-ropes/>
Based on — *CHANG-ES XV: Large-scale magnetic field reversals in the halo of NGC 4631*
2019, *Astronomy & Astrophysics*, 632, A11. [arXiv:1910.07590]
2. *A peek at the birth of the Universe*
https://ekvv.uni-bielefeld.de/blog/uninews/entry/a_peek_at_the_birth
Based on — *CMB foreground measurements through broad-band radio spectro-polarimetry: prospects of the SKA-MPG telescope*
2019, *Monthly Notices of the Royal Astronomical Society*, 488, 1618–1634.
[arXiv:1906.04788]
3. *The detection of magnetic fields in a galaxy 5 billion light years away*
<https://www.mpifr-bonn.mpg.de/pressreleases/2017/7>
Based on — *Detection of microgauss coherent magnetic fields in a galaxy five billion years ago*
2017, *Nature Astronomy*, 1, 621–626. [arXiv:1708.07844]
4. *GMRT discovers a dying, giant radio galaxy 9 billion light years away!*
<http://www.ncra.tifr.res.in/ncra/outreach/press-releases/gmrt-discovers-a-dying-giant-radio-galaxy-9-billion-light-years-away>
Based on — *J021659-044920: a relic giant radio galaxy at $z \sim 1.3$*
2015, *Monthly Notices of the Royal Astronomical Society*, 453, 2438–2446.
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