

Publications 2024 - INAF-IRA radio telescopes

A small (highly incomplete) number of Proceedings and ATs found in ADS is included.
Some papers based on data from previous publications are also listed.

Summary 2024:

14 single-dish publications
33 astronomical VLBI publications
2 Northern Cross publications
5 geodetic VLBI publications

Single Dish

1) Patterns in water maser emission of evolved stars on the timescale of decades

Brand, J., et al. 2024

Cosmic Masers: Proper Motion Toward the Next-Generation Large Projects, held 20-24 March, 2023 in Kagoshima, Japan. Proceedings of the International Astronomical Union, Volume 380, pp. 319-323

<https://www.cambridge.org/core/journals/proceedings-of-the-international-astronomical-union/article/patterns-in-water-maser-emission-of-evolved-stars-on-the-timescale-of-decades/6B80A21BFBF39196798D353FC1C3E644>

Medicina

2) Giant radio flare of Cyg X-3 observed with Medicina and SRT in April 2024

Egron, E. et al., 2024

The Astronomer's Telegram, No. 16574

<https://www.astronomerstelegram.org/?read=16574>

Medicina, SRT

3) ATA detections of radio flares from Cyg X3

Farah, W. et al., 2024

The Astronomer's Telegram, No. 16577

<https://www.astronomerstelegram.org/?read=16577>

Medicina, SRT

4) Tracking the X-Ray Polarization of the Black Hole Transient Swift J1727.8–1613 during a State Transition

A. Ingram et al., 2024

The Astrophysical Journal, Volume 968, Issue 2, id.76, 16 pp.

<https://iopscience.iop.org/article/10.3847/1538-4357/ad3faf>

5) The SOLARIS observatory: a smart Solar imaging system at high radio frequency for continuous Solar monitoring and space weather applications

A. Pellizzoni et al., 2024

Proceedings of the SPIE, Volume 13094, id. 130941R 14 pp. (2024).

<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/13094/3018772/The-SOLARIS-observatory--a-smart-Solar-imaging-system-at/10.1117/12.3018772.full>

Medicina, SRT

6) A wiggling filamentary jet at the origin of the blazar multi-wavelength behaviour

C. M. Raiteri et al., 2024

Astronomy & Astrophysics, Volume 692, id.A48, 14 pp.

https://www.aanda.org/articles/aa/full_html/2024/12/aa52311-24/aa52311-24.html

Medicina, SRT

7) The variability patterns of the TeV blazar PG 1553 + 113 from a decade of MAGIC and multiband observations

MAGIC Collaboration., 2024

Monthly Notices of the Royal Astronomical Society, Volume 529, Issue 4, pp.3894-3911

<https://academic.oup.com/mnras/article/529/4/3894/7619156?login=false>

8) Study of solar brightness profiles in the 18–26 GHz frequency range with INAF radio telescopes - II. Evidence of coronal emission

M. Marongiu et al., 2024

Astronomy & Astrophysics, Volume 684, id.A123, 12 pp.

https://www.aanda.org/articles/aa/full_html/2024/04/aa48770-23/aa48770-23.html

Medicina, SRT

9) Study of solar brightness profiles in the 18–26 GHz frequency range with INAF radio telescopes - I. Solar radius

M. Marongiu et al., 2024

Astronomy & Astrophysics, Volume 684, id.A122, 18 pp.

https://www.aanda.org/articles/aa/full_html/2024/04/aa48768-23/aa48768-23.html

Medicina, SRT

10) Single-dish solar imaging at high radio frequencies: SunDish & Solaris Projects

S. Mulas et al., 2024

European Geosciences Union General Assembly 2024 (EGU24), held 14-19 April, 2024 in Vienna, Austria. Online at <https://egu23.eu>, id.8939

<https://meetingorganizer.copernicus.org/EGU24/EGU24-8939.html>

Medicina, SRT

11) Cygnus X-3 revealed as a Galactic ultraluminous X-ray source by IXPE

A. Veledina et al., 2024

Nature Astronomy, Volume 8, p. 1031-1046

<https://www.nature.com/articles/s41550-024-02294-9>

Medicina

12) Multiwavelength observations of the lensed quasar PKS 1830-211 during the 2019 γ -ray flare

S. Vercellone et al., 2024

Monthly Notices of the Royal Astronomical Society, Volume 527, Issue 3, pp.5717-5731

<https://academic.oup.com/mnras/article/527/3/5717/7420511?login=false>

13) Most powerful maser in the Galaxy is source G25.65+1.05 and the most powerful emitter in the Universe AGN S 0528+134

A. E. Volvach et al., 2024
Journal of Astrophysics and Astronomy 45, 32
<https://link.springer.com/article/10.1007/s12036-024-10023-x#citeas>
Medicina

14) Water vapour masers in long-period variable stars - III. Mira variables U Her and RR Aql
A. Winnberg et al., 2024
Astronomy & Astrophysics, Volume 686, id.A251, 53 pp.
https://www.aanda.org/articles/aa/full_html/2024/06/aa48567-23/aa48567-23.html

Astronomical VLBI

Per ogni entry e' indicato quali telescopi sono coinvolti.

1) Broadband multi-wavelength properties of M87 during the 2018 EHT campaign including a very high energy flaring episode
Algaba, J. C. et al., 2024
Astronomy & Astrophysics, Volume 692, id.A140, 44 pp.
https://www.aanda.org/articles/aa/full_html/2024/12/aa50497-24/aa50497-24.html
Medicina, SRT

2) Proper motion study of the 6.7 GHz methanol maser rings - I. A sample of sources with little variation
Bartkiewicz, A. et al., 2024
Astronomy & Astrophysics, Volume 686, id.A275, 23 pp.
https://www.aanda.org/articles/aa/full_html/2024/06/aa49491-24/aa49491-24.html
Medicina, Noto

3) Windy or Not: Radio Parsec-scale Evidence for a Broad-line Region Wind in Radio-quiet Quasars
Chen, S. et al., 2024
The Astrophysical Journal, Volume 975, Issue 1, id.35, 18 pp.
<https://iopscience.iop.org/article/10.3847/1538-4357/ad74fc>
Medicina, Noto

4) Two Radio Cores in GPS J1543-0757: A New Dual Supermassive Black Hole System?
Cheng, X., et al., 2024
The Astrophysical Journal, Volume 974, Issue 2, id.155, 11 pp.
<https://iopscience.iop.org/article/10.3847/1538-4357/ad6df9>
Medicina

5) Unveiling the bent-jet structure and polarization of OJ 287 at 1.7 GHz with space VLBI
Cho, I., et al., 2024
Astronomy & Astrophysics, Volume 683, id.A248, 15 pp.
https://www.aanda.org/articles/aa/full_html/2024/03/aa47157-23/aa47157-23.html#tabs
Medicina

6) High-resolution radio imaging of the two particle-accelerating colliding-wind binaries HD 167971 and HD 168112

De Becker, M. et al., 2024

Astronomy & Astrophysics, Volume 682, id.A160, 8 pp.

https://www.aanda.org/articles/aa/full_html/2024/02/aa48622-23/aa48622-23.html

Medicina, Noto

7) A Radio Study of Persistent Radio Sources in Nearby Dwarf Galaxies: Implications for Fast Radio Bursts

Dong, Y. et al., 2024

The Astrophysical Journal, Volume 973, Issue 2, id.133, 19 pp.

<https://iopscience.iop.org/article/10.3847/1538-4357/ad6568>

Medicina, SRT

8) Mapping Obscured Star Formation in the Host Galaxy of FRB 20201124A

Dong, Y., et al., 2024

The Astrophysical Journal, Volume 961, Issue 1, id.44, 15 pp.

<https://iopscience.iop.org/article/10.3847/1538-4357/ad0cbd>

Medicina, Noto

9) New look at old friends. EVN imaging of prominent radio-loud active galactic nuclei with extremely large radio–optical positional offsets

Frey, S. et al., 2024

Proceedings of the 16th EVN Symposium, Edited by E. Ros, P. Benke, S.A. Dzib, I. Rottmann, & J.A. Zensus. Bonn: Max-Planck-Institut für Radioastronomie, 2024, pp.141-144

<https://events.mpifr-bonn.mpg.de/indico/event/371/session/20/contribution/39/material/paper/0.pdf>

Medicina, Noto

10) Revisiting a Core–Jet Laboratory at High Redshift: Analysis of the Radio Jet in the Quasar PKS 2215+020 at $z = 3.572$

Frey, S. et al., 2024

Universe, Volume 10, Issue 2, id.97

<https://www.mdpi.com/2218-1997/10/2/97>

Medicina

11) The expansion of the GRB 221009A afterglow

Giarratana, S. et al., 2024

Astronomy & Astrophysics, Volume 690, id.A74, 16 pp.

https://www.aanda.org/articles/aa/full_html/2024/10/aa48524-23/aa48524-23.html#T2

Medicina, Noto

12) Milliarcsecond localization of the hyperactive repeating FRB 20220912A

Hewitt, D. M. et al., 2024

Monthly Notices of the Royal Astronomical Society, Volume 529, Issue 2, pp.1814-1826

<https://academic.oup.com/mnras/article/529/2/1814/7623035?login=false>

Medicina, Noto

13) A Repeating Fast Radio Burst Source in a Low-luminosity Dwarf Galaxy

Hewitt, D. M. et al. 2024.

The Astrophysical Journal Letters, Volume 977, Issue 1, id.L4, 17 pp.

<https://iopscience.iop.org/article/10.3847/2041-8213/ad8ce1>

Medicina

14) VLBI detection of the AE Aqr twin, LAMOST J024048.51+195226.9

Jiang, P. et al., 2024

Monthly Notices of the Royal Astronomical Society: Letters, Volume 528, Issue 1, pp.L112-L116

<https://academic.oup.com/mnrasl/article/528/1/L112/7442097?login=false>

Medicina, Noto

15) A Census of the Deep Radio Sky with the VLA. I. 10 GHz Survey of the GOODS-N Field²

Jiménez-Andrade, E. F., et al., 2024

The Astrophysical Journal, Volume 972, Issue 1, id.89, 18 pp.

<https://iopscience.iop.org/article/10.3847/1538-4357/ad5b5c>

Medicina, Noto

16) VLBI Analysis of a Potential High-Energy Neutrino Emitter Blazar

Kómíves, J. et al., 2024

Universe, Volume 10, Issue 2, id.78

<https://www.mdpi.com/2218-1997/10/2/78>

Medicina

17) Proper motion of the radio jets in two blazars at redshift above 3 Krezinger, M. et al., 2024

Monthly Notices of the Royal Astronomical Society, Volume 530, Issue 4, pp.4614-4625

<https://academic.oup.com/mnras/article/530/4/4614/7611710?login=false>

Medicina, Noto

18) Revealing faint compact radio jets at redshifts above 5 with very long baseline interferometry

Krezinger, M. et al., 2024

Astronomy & Astrophysics, Volume 690, id.A321, 14 pp.

https://www.aanda.org/articles/aa/full_html/2024/10/aa51025-24/aa51025-24.html

Medicina, Noto

19) IC 485: A new candidate disc-maser galaxy at ~100 Mpc - Milliarcsecond resolution study of the galaxy nucleus and the H₂O megamaser

Ladu, E. et al., 2024

Astronomy & Astrophysics, Volume 682, id.A25, 13 pp.

https://www.aanda.org/articles/aa/full_html/2024/02/aa47795-23/aa47795-23.html

Medicina, Noto

20) EVN 5 GHz e-VLBI Observations of SN2023ixf in M101

Lee, D. et al., 2024

Research Notes of the AAS, Volume 8, Issue 5, id.121, 0 pp.

<https://iopscience.iop.org/article/10.3847/2515-5172/ad454e>

Medicina, Noto

21) High-resolution imaging of the evolving bipolar outflows in symbiotic novae: The case of the RS Ophiuchi 2021 nova outburst

Lico, R. et al., 2024

Astronomy & Astrophysics, Volume 692, id.A107, 8 pp.

https://www.aanda.org/articles/aa/full_html/2024/12/aa51364-24/aa51364-24.html

Medicina, Noto

22) Lessons from the apparent peculiar nature of the star TYC 6544-3483-1

Martí, J., et al. 2024

Astronomische Nachrichten, Volume 345, Issue 4, article id. e20230128

https://onlinelibrary.wiley.com/doi/10.1002/asna.20230128?_cf_chl_tk=UF_4oh54cDQd1loWpckkgYGH_TBbTpNv7I7v.y2wy8l-1770854239-1.0.1.1-zSHUFRQQd6M4dZscgchf9PF2OZ1wQ3h8L6tuzeDkl9o

Medicina, Noto

23) A Relook at the Black Hole Binary Candidate J1328+2752 with VLBI

Nandi, S., et al., 2024

The Astrophysical Journal, Volume 965, Issue 1, id.9, 8 pp.

<https://iopscience.iop.org/article/10.3847/1538-4357/ad2c92>

Medicina, Noto

24) The VLBA CANDELS GOODS-North Survey. II – Wide-field source catalogue comparison between the VLBA, EVN, e-MERLIN, and VLA

Njeri, A., et al., 2024

Monthly Notices of the Royal Astronomical Society, Volume 528, Issue 4, pp.6141-6158

<https://academic.oup.com/mnras/article/528/4/6141/7602412?login=false>

Medicina, Noto

25) A comprehensive analysis towards the Fermi-LAT source 4FGL J1846.9–0227: jets of a protoplanetary nebula producing γ -rays?

Ortega, M. E. et al. 2024

Monthly Notices of the Royal Astronomical Society, Volume 532, Issue 4, pp.4446-4462

<https://academic.oup.com/mnras/article/532/4/4446/7710749?login=false>

Noto

26) Evidence of a toroidal magnetic field in the core of 3C 84

Paraschos, G. F. et al., 2024

Astronomy & Astrophysics, Volume 686, id.L5, 10 pp.

https://www.aanda.org/articles/aa/full_html/2024/06/aa50218-24/aa50218-24.html

Medicina

27) Discovery of Limb Brightening in the Parsec-scale Jet of NGC 315 through Global Very Long Baseline Interferometry Observations and Its Implications for Jet Models

Park, J., et al., 2024

The Astrophysical Journal Letters, Volume 973, Issue 2, id.L45, 18 pp.

<https://iopscience.iop.org/article/10.3847/2041-8213/ad7137>

Medicina, Noto

28) Observational evidence to support a dense ambient medium shaping the jet in 3C 84

Park, J., et al., 2024

Astronomy & Astrophysics, Volume 685, id.A115, 18 pp.

https://www.aanda.org/articles/aa/full_html/2024/05/aa47562-23/aa47562-23.html

Medicina, Noto

29) Hard X-ray emission from blazars associated with high-energy neutrinos

Plavin, A.V. et al., 2024

Journal of Cosmology and Astroparticle Physics, Volume 2024, Issue 05, id.133, 22 pp.

<https://iopscience.iop.org/article/10.1088/1475-7516/2024/05/133>

30) EVN PRECISE localization of FRB 20240114A

Snelders, M. P. et al., 2024

The Astronomer's Telegram, No. 16542

<https://www.astronomerstelegam.org/?read=16542>

Noto

31) A JVLBA, LOFAR, e-Merlin, VLBA, and EVN study of RBS 797: can binary supermassive black holes explain the outburst history of the central radio galaxy?

Ubertosi, F., et al., 2024

Astronomy & Astrophysics, Volume 688, id.A86, 19 pp.

https://www.aanda.org/articles/aa/full_html/2024/08/aa49011-23/aa49011-23.html

Medicina, Noto

32) European VLBI Network observations of the peculiar radio source 4C 35.06 overlapping with a compact group of nine galaxies

Veres, P. M., et al., 2024

Astronomy & Astrophysics, Volume 684, id.A188, 7 pp.

https://www.aanda.org/articles/aa/full_html/2024/04/aa48729-23/aa48729-23.html

Medicina, Noto

33) Unveiling the Small-scale Jets in the Rapidly Growing Supermassive Black Hole IZw1

Yang, X., et al., 2024

The Astrophysical Journal, Volume 966, Issue 2, id.151, 13 pp.

<https://iopscience.iop.org/article/10.3847/1538-4357/ad343c>

Medicina

Northern Cross

1) Operational Angular Track Reconstruction in Space Surveillance Radars through an Adaptive Beamforming Approach

Montaruli, M. F. et al., 2024

Aerospace, Volume 11, Issue 6, id.451

<https://www.mdpi.com/2226-4310/11/6/451>

2) The Northern Cross Fast Radio Burst project IV. Multi-wavelength study of the actively repeating FRB 20220912A

Pellicciari, D. et al. 2024

Astronomy & Astrophysics, Volume 690, id.A219, 11 pp.

https://www.aanda.org/articles/aa/full_html/2024/10/aa50271-24/aa50271-24.html

Geodetic VLBI

Per ogni entry e' indicato quali telescopi sono coinvolti.

1) Combining atmospheric and non-tidal ocean loading effects to correct high precision gravity time-series *Open Access*

Antokoletz, E. D. et al., 2024

Geophysical Journal International, Volume 236, Issue 1, pp.88-98

<https://academic.oup.com/gji/article/236/1/88/7283145?login=false>

Medicina

2) The first absolute gravity and height reference network in Sicily

Greco, F. et al. 2024

Scientific Data, Volume 11, Issue 1, article id.357

<https://www.nature.com/articles/s41597-024-03177-4>

Noto

3) Optical clock comparison at intercontinental scale using the high-frequency VLBI

Heo, M.-S. et al., 2024

45th COSPAR Scientific Assembly. Held 13-21 July, 2024. Online at <https://cospar2024.org/>.

Abstract H0.5-0005-24.

Medicina

4) Mitigating the effect of source structure in geodetic VLBI by re-weighting observations using closure delays and baseline-to-jet orientation

Kareinen, N. et al., 2024

Journal of Geodesy, Volume 98, Issue 5, id.38

<https://link.springer.com/article/10.1007/s00190-024-01837-2>

Medicina

5) Performance of the IVS R1 and R4 sessions

Thomas, C. C. et al., 2024

Advances in Space Research, Volume 73, Issue 1, p. 317-336

<https://www.sciencedirect.com/science/article/pii/S0273117723005550>

Medicina, Noto