

# DAY 1

Monday, May 22<sup>nd</sup>

- 08:30 – 09:00 Registration  
09:00 – 09:05 Welcome  
09:05 – 09:30 **Venturi - Introduction to the meeting: 40 years of VLBI in Italy**

## *Session: Synergies*

*Chair: M. Giroletti*

- 09:30 – 09:55 **Lico - The Event Horizon Telescope journey from the Earth to the heart of the Milky Way (invited)**  
09:55 – 10:10 Moriyama - Future prospects for constraining black hole space time  
10:10 – 10:25 Eppel - VLBI probes of jet physics in neutrino-candidate blazars  
10:25 – 10:40 Nanci - At the extremes of the electromagnetic spectrum: synergy of MAGIC and VLBI arrays  
10:40 – 11:10 Coffee break  
11:10 – 11:25 Roesch - The impact of Southern hemisphere VLBI blazar observations on Neutrino Astronomy  
11:25 – 11:50 **Timmerman - Low-frequency VLBI with the International LOFAR Telescope (invited)**  
11:50 – 12:05 Bondi - Deep International LOFAR observations of the NEP region

## *Session: Cosmology*

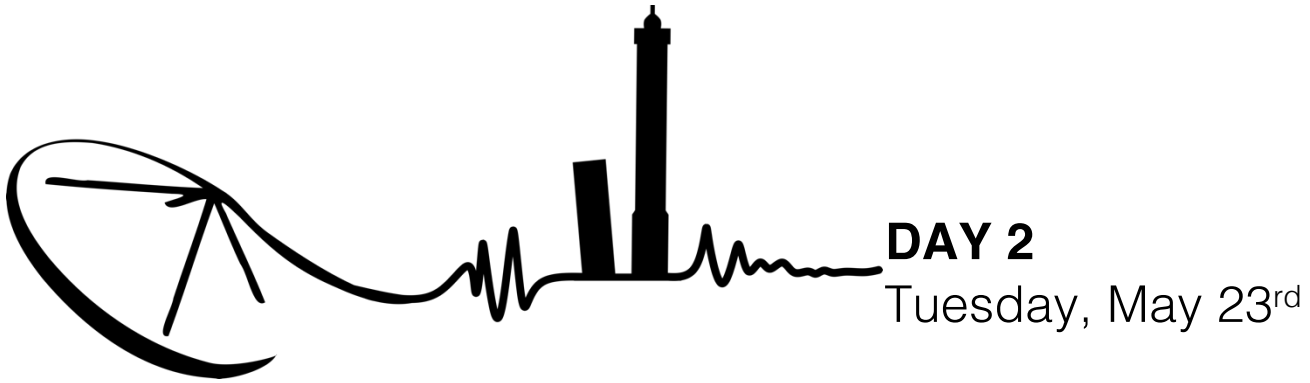
*Chair: M. Garrett*

- 12:05 – 12:30 **Radcliffe - Surveys using VLBI – the past, present, and its bright future (invited)**  
12:30 – 12:45 Communications about the social programme  
12:45 – 14:10 Lunch  
14:10 – 14:35 **Spingola - Cosmological studies with VLBI and strong gravitational lensing (invited)**  
14:35 – 14:50 Casadio - The SMILE project  
14:50 – 15:05 Pötzl - Results from the EVN follow-up study of a sample of milli-lens candidates  
15:05 – 15:20 McKean - Gravitational lensing in the age of ILT and SKA-VLBI  
15:20 – 15:35 Powell - Fuzzy dark matter constraints from a single VLBI observation of a gravitationally lensed radio jet  
15:35 – 16:05 Coffee break

## *Session: AGN*

*Chair: A. Zensus*

- 16:05 – 16:10 Zensus - Introduction to AGN session  
16:10 – 16:25 Lu - A sharp view of the AGN central engine in M87  
16:25 – 16:40 Ro - Transverse oscillations of the M87 jet revealed by KaVa observations: superluminal wave propagation along the jet  
16:40 – 16:55 Baldi - Parsec-scale jets of FR0 radio galaxies  
16:55 – 17:10 Yang - Intermediate mass black holes: episodic jet activity in dwarf galaxies  
17:10 – 17:25 Shetgaonkar - High-resolution low-frequency probes of X-ray emitting knots in blazar jets  
17:25 – 17:55 Discussion



*Session: Technology and methods*

*Chair: M. Rioja*

- 09:00 – 09:25 **Ros - Exploring New Frontiers: High-Frequency VLBI Prospects (invited)**  
09:25 – 09:50 **Jung - Technical Advances in High-Frequency VLBI:  
A Focus on Multi-Frequency Receivers and Their Applications (invited)**  
09:50 – 10:05 Orfei - Steps towards a millimeter VLBI facility in Medicina and Noto  
10:05 – 10:20 Brisken - VLBA technical developments  
10:20 – 10:35 Tornatore - Major threats and challenges for present and future radio astronomical observations and VLBI techniques
- 10:35 – 11:05 Coffee break

*Session: AGN*

*Chair: M. Orienti*

- 11:05 – 11:30 **Nagai - The 40-yr History of 3C84 and Future Prospects with VLBI and ALMA (invited)**  
11:30 – 11:45 Morganti - Cold gas in the heart of 3C84  
11:45 – 12:00 Sawada-Satoh - Gas morphology and kinematics of NGC4261: probing the AGN fuelling with VLBI  
12:00 – 12:15 Paraschos - A 20+ year overview of VLBI observations of the peculiar radio source 3C84  
12:15 – 12:30 Kam - The origin of Faraday rotation in 3C84 revealed by KVN and VLBA
- 12:30 – 14:00 Lunch

*Session: Technology and methods*

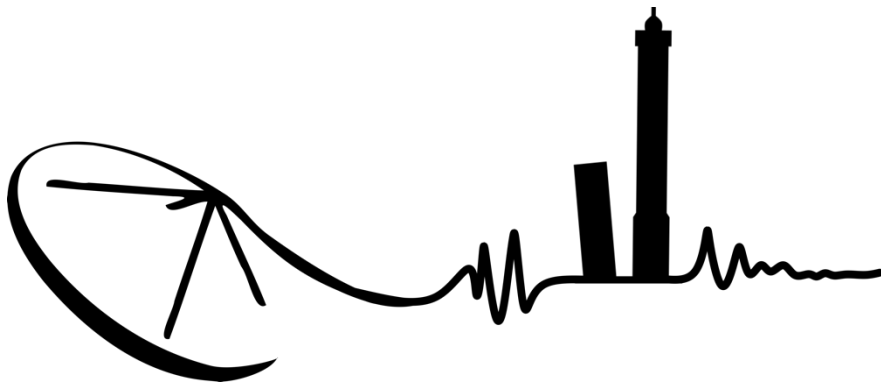
*Chair: P. de Vicente*

- 14:00 – 14:25 **Dodson - New methods for VLBI observations and the associated science opportunities (invited)**  
14:25 – 14:50 **Krasna - Celebrating 40 years of astrometric and geodetic VLBI data  
– a solid foundation for celestial and terrestrial reference frames (invited)**  
14:50 – 15:05 Hao - Introduction of Jingdong 120-m radio telescope  
15:05 – 15:20 Herbe-George - Synoptic Wide-field e-MERLIN EVN Programme
- 15:20 – 15:50 Coffee break

*Session: Spectral line*

*Chair: J. Conway*

- 15:50 – 16:15 **Humphreys - VLBI with ALMA in the field of maser studies (invited)**  
16:15 – 16:30 Burns - A Keplerian disk with a four-arm spiral birthing an episodically accreting high-mass protostar  
16:30 – 16:45 Bayandina - Exploring Episodic Accretion in Star Formation with the INAF VLBI Network  
16:45 – 17:00 Surcis - EVN monitoring of the polarized H<sub>2</sub>O maser emission around the massive protostars W75N(B)-VLA 1 and W75N(B)-VLA 2  
17:00 – 17:15 Tarchi - Extragalactic maser VLBI studies: past, present and future  
17:15 – 17:30 Ladu - IC485: Towards a new maser disk galaxy!?
- 17:30 – 18:00 Discussion



## DAY 3

Wednesday, May 24<sup>th</sup>

*Free morning for participants / Focus groups for discussion*

*In parallel 09:00 – 13:15 EVN CBD (Private session)*

11:00 – 11:30 Coffee break

*Session: Technology and methods*

*Chair: C. Reynolds*

11:30 – 11:45 Thyagarajan - Black hole morphology using closure invariants in VLBI  
11:45 – 12:00 Martí-Vidal - High-fidelity wideband VLBI polarimetry  
12:00 – 12:15 Kettenis - VLBI data processing in CASA  
12:15 – 12:30 Jiang - Source-frequency phase-referencing for low-luminosity AGN  
12:30 – 12:45 Tzioumis - No need for special VLBI hardware?  
12:45 – 13:15 Poster session (P1 – P20)

13:15 – 14:30 Lunch

*Session: Global VLBI Alliance*

*Chair: Z. Paragi*

14:30 – 14:45 Lobanov - Testing the event horizon paradigm with VLBI probes of magnetic field  
14:45 – 15:00 Panessa - Accretion and ejection in AGN: a VLBI view  
15:00 – 15:15 Vegetti - New insights into the Universe from strong gravitational lensing and very long baseline interferometry  
15:15 – 15:30 Moscadelli - Snapshot of a magnetohydrodynamic disk wind traced by water maser observations  
15:30 – 15:45 de Witt - Imaging of more than 730 K-band celestial reference frame sources at up to 87 epochs  
15:45 – 16:00 Marcote - PANTERAs: Revealing extreme stellar wind shocks from massive binaries

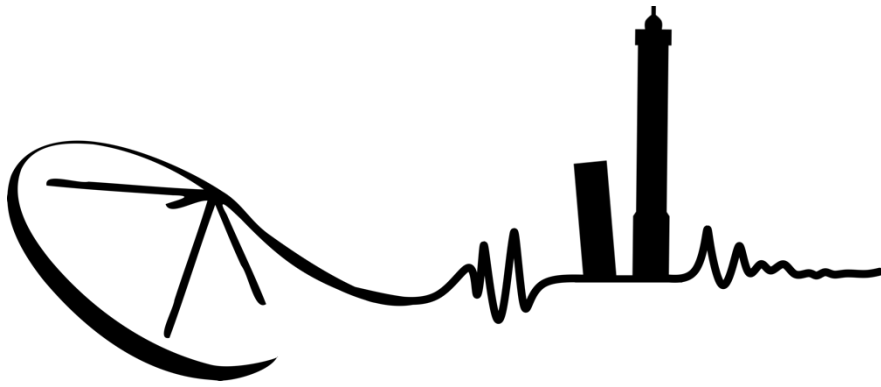
16:00 – 16:30 Coffee break

16:30 – 17:30 Paragi et al. - Open discussion: Potentials and synergies between different VLBI arrays in the world

17:30 *Buses leave for Medicina*

18:15 – 19:15 Dedication of the antenna  
19:30 – 22:00 Conference dinner

22:00 *Buses return to Bologna*



**DAY 4**

Thursday, May 25<sup>th</sup>

*Session: Transients*

*Chair: W. Bricken*

- 09:30 – 09:55 **Kirsten - Many needles in the haystack  
- on the contribution of VLBI to cracking the FRB puzzle (invited)**
- 09:55 – 10:10 Bhandari - The local radio environment of fast radio bursts and their progenitor implications
- 10:10 – 10:25 Atri - A VLBI search for pulsars without pulsations
- 10:25 – 10:40 Williams - Dynamic response to transients with e-MERLIN
- 10:40 – 11:10 Coffee break
- 11:10 – 11:35 Salafia – The role of VLBI observations in the context of multimessenger science (invited)**
- 11:35 – 11:50 Gourdji – Constraining jets from gravitational wave mergers with VLBI: challenges and opportunities
- 11:50 – 12:05 Giarratana – Studying the dynamics and the structure of Gamma-Ray Bursts with the VLBI
- 12:05 – 12:20 Bietenholz – SN 2014C: Shell structure and deceleration reveal details of ejecta colliding with a dense circumstellar medium
- 12:20 – 12:50 Poster session (P21-P39)
- 12:50 – 14:05 Lunch

*Session: Synergies*

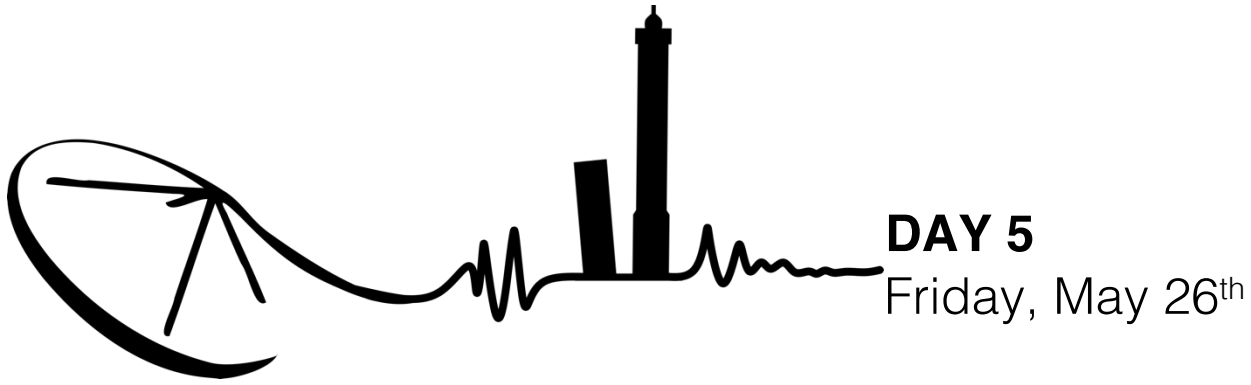
*Chair: A. de Witt*

- 14:05 – 14:30 **Zhang - Introduction to FAST VLBI System (invited)**
- 14:30 – 14:45 Marthi - Enabling VLBI for the upgraded GMRT
- 14:45 – 15:10 **Loinard - VLBI astrometry in the epoch of Gaia (invited)**
- 15:10 – 15:25 Garrington - Long Baseline Bistatic Radar
- 15:25 – 15:40 Md Said - A study of solar wind propagation using the Planetary Radio Interferometry and Doppler Experiment (PRIDE) technique
- 15:40 – 16:10 Coffee break

*Session: Transients*

*Chair: M. Pérez-Torres*

- 16:10 – 16:35 **Motta - Multi-wavelength studies of X-ray binaries: the role of VLBI in understanding accretion and feedback around stellar-mass compact objects (invited)**
- 16:35 – 16:50 Giroletti - Filming the evolution of symbiotic novae with VLBI
- 16:50 – 17:05 Guirado - Evidence of a radiation belt around a radio-emitting brown dwarf
- 17:05 – 17:20 Muxlow - 40 Years of Studying the Evolving Compact Radio Sources in M82
- 17:20 – 17:35 Léon Ortiz - VLBI architecture of a compact binary with exoplanet
- 17:35 – 18:05 Discussion



**DAY 5**

Friday, May 26<sup>th</sup>

*Session: Future*

*Chair: A. Słowikowska*

- 09:00 – 09:25 **Paragi - The future of the EVN (invited)**
- 09:25 – 09:50 **Johnson - ngVLA for the 2030s ICRF (invited)**
- 09:50 – 10:05 Reynolds - Future Science with the Long Baseline Array
- 10:05 – 10:20 Hunt - The Long Baselines of the Next-Generation Very Large Array
- 10:20 – 10:35 Garrett - New developments in SETI Long baseline Interferometry
- 10:35 – 11:05 Coffee break
- 11:05 – 11:30 **Deane - VLBI surveys en route to the SKA (invited)**
- 11:30 – 11:55 **Issaoun - Entering the Era of Black Hole Cinema with the Next Generation Event Horizon Telescope (invited)**

*Session: Conclusions*

*Chair: H. Kobayashi*

- 11:55 – 12:55 Round table
- 12:55 – 13:20 Diamond - Wrap up and concluding remarks
- 13:20 – 14:50 Lunch