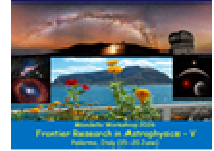




# MONDELLO WORKSHOP 2026

June 15-20, Mondello (Palermo), Italy

Frontier Research in Astrophysics - V



## TENTATIVE FINAL PROGRAM (31<sup>st</sup> May 2026)

### Sunday 14 Afternoon

15.30 REGISTRATION OF PARTICIPANTS

19.00 END OF REGISTRATION

19.30 WELCOME COCKTAIL PARTY

20.00 DINNER

### Monday 15 Morning

07.30 REGISTRATION OF PARTICIPANTS

08.20 END OF REGISTRATION

08.25 BEGINNING of the WORKSHOP

08.25 Franco GIOVANNELLI Welcome Address

### OPENING REMARKS

**Chairperson: PAUL MASON**

08.30 Franco GIOVANNELLI The wondrous journey to unravel the  
mysteries of the Universe

09.00 Gennady BISNOVATYI-  
KOGAN The Very Early Universe

09.30 Vladimir LIPUNOV Global Master Net's contribution to  
verifying Scenario Machine's

10.00 Eleonora FIORELLINO Understanding stellar and planet formation -  
A Review

10.30 Coffee Break

Organized by:

INAF – Istituto di Astrofisica e Planetologia Spaziali, Roma, Italy; INTA – Departamento de Cargas Útiles y Ciencias del Espacio, Madrid, Spain; INAF – Osservatorio Astronomico di Padova, Italy; RAS – Institute of Astronomy, Moscow, Russia; ASCR – Astronomical Institute, Ondrejov & Prague Technical University, Czech Republic;

St. John's College, Annapolis, MD, USA; IAC (Instituto de Astrofísica de Canarias), Tenerife, Spain; New Mexico State University, NM, USA; IAA, Universität Tübingen, Germany; CNR-IASI (Istituto di Analisi dei Sistemi ed Informatica), Roma, Italy; Dipartimento di Fisica, Università di Pisa, Italy; Fudan University, Shanghai, China

**Monday 15 Morning**

**OPENING REMARKS**

**Chairperson: GENNADY BISNOVATYI-KOGAN**

11.00	Carlotta PITTORI	The AGILE space mission – Highlights and Legacy in the Era of PeVatron Astronomy
11.30	Borja ANGUIANO	J-ATLAS: Javalambre Andromeda and Triangulum Legacy Astrophysical Survey
12.00	Elena ARBUZOVA	Solving the Primordial ${}^7\text{Li}$ Deficit via Primordial Black Hole Evaporation
12.20	Umberto BATTINO	Trans-Fe elements from type Ia supernovae I. Heavy element nucleosynthesis during the formation of near-Chandrasekhar WDs
12.40	Philipp FRANK	Geometric Variational Inference

**13.00** **I N T E R V A L**

**Monday 15 Afternoon**

**OPENING REMARKS**

**Chairperson: CARLOTTA PITTORI**

17.00	Alexandre VAZDEKIS	Why the Northern Hemisphere Needs a 30–40m Telescope and the Science at Stake
17.30	Alessio TURCHI	Survey of Survey spectroscopic catalog with machine learning parameters. Exploiting large datasets to increase accuracy.
17.50	René HUDEC	ML based analyses of digitized astronomical plates for modern astrophysics

**18.10** **END OF THE SESSION**

**GRAVITATIONAL WAVES**

**Chairperson: VLADIMIR LIPUNOV**

18.10	Rosa POGGIANI	Gravitational Wave – A Review
18.40	Dorota GONDEK-ROSINSKA	News from Gravitational Wave Astronomy
19.10	Rosa POGGIANI	Gravitational Wave and Dark Matter detection with Very Long Baseline Atom Interferometers

**19.40** **END OF THE SESSION**

**I N T E R V A L**

**Monday 15 Night**

**22.00** **V I O L I N C O N C E R T**  
**by**  
**Alessandro Perpich and Isabella Perpich**

**23.00** **I N T E R V A L**

**Tuesday 16 Morning**

**STAR FORMATION AND EVOLUTION**

**Chairperson: GUIDO DE MARCHI**

08.30	Rubén FEDRIANI	Star Formation - A Review
09.00	Itziar ARETXAGA	A panchromatic view of the star formation history of the Universe
09.30	José Eduardo MENDEZ DELGADO	Relations between nucleosynthesis, metallicity, and dust in star-forming regions in the era of SDSS-V LVM
09.50	Morten ANDERSEN	Low-Metallicity Star Formation Survey in Sh2-284
10.10	Paolo PERSI	The enigmatic highly-variable high-mass young stellar object Mol 12 A. A new extreme Herbig Be(photo) star.

**10.30 Coffee Break**

11.00	Marco MERAFINA	Dynamical evolution of Globular Clusters: the early distribution of star generations
11.30	Matteo TEODORI	Dynamical evolution of Globular Clusters: the degree of mass segregation from birth to nowadays

**11.50 END OF THE SESSION**

**COSMOLOGY**

**Chairperson: DOROTA GONDEK-ROSINSKA**

11.50	Simone VERONESE	Galaxy formation and evolution
12.20	Yosuke MIZUNO	Numerical Modeling and Constraint of the Shadow of the Supermassive Black Holes
12.50	Adriana GARGIULO	Stellar population gradients in massive quiescent galaxies at cosmic noon: insights from spectroscopy and emerging ML techniques

**13.10 INTERVAL**

Tuesday 16 Afternoon

**COSMOLOGY**

**Chairperson: ADRIANA GARGIULO**

- 16.30 Maria Giovanna DAINOTTI On the parametrization of the Hubble  
constant
- 17.00 Maria Giovanna DAINOTTI GRB Cosmology to test the evolution of dark  
energy

17.30 **END OF THE SESSION**

**HIGH ENERGY ASTROPHYSICS**

**Chairperson: ELEONORA FIORELLINO**

- 17.30 Alexander DOLGOV Black Holes and Antimatter in Milky Way
- 18.00 Alessandro Ederoclite Nova Explosions in 2040
- 18.20 Fabio LA MONACA X-ray polarization properties of Z-sources
- 18.50 Paul MASON Photometry of Magnetic CVs
- 19.20 Alessandro DI MARCO X-ray Polarization variability in  
non-pulsating weakly magnetized neutron  
stars: GX 13+1 and its serendipitous  
polarization angle rotation

19.40 **I N T E R V A L**

Tuesday 16 Night

**22.00 E T R U S C A N W I N E P A R T Y**

**24.00 I N T E R V A L**

Wednesday 17 Morning

**Postponed talk of the COSMOLOGY Session**

**Chairperson: ALEXANDER DOLGOV**

08.30 Ciriaco GODDI VAPOLA - A multi-epoch multi-band survey of  
AGN at (sub)mm-wavelengths with ALMA  
09.00 Cosimo BAMBI Probing the strong gravity region of black  
holes with eXTP

09.30 **End of the postpone talk**

**HIGH ENERGY ASTROPHYSICS**

**Chairperson: FABIO LA MONACA**

09.30 Nicolò Oreste  
PINCIROLI VAGO The hunt for new pulsating ultraluminous  
X-ray sources: A clustering approach  
09.50 Antonella TARANA From spectra to geometry: two decades of  
progress in Low-Mass X-ray Binaries

10.20 **O F F I C I A L P H O T O**

**Coffee Break**

**Chairperson: COSIMO BAMBI**

11.00 Clara DEHMAN Magnetars - A Review  
11.30 Andrzej ZDZIARSKI The origin of the PeV emission from Cyg X-3  
11.50 Andrzej ZDZIARSKI The spin of the black hole in Cyg X-1 from  
the XRISM observations  
12.10 Ingyin ZAW Intermediate Mass Black Holes - A Review

12.40 **I N T E R V A L**

Wednesday 17 Afternoon

**F R E E**

Wednesday 17 Night

22.00 **P E R F O R M A N C E I N P A L E R M O**  
(Splendid Hotel La Torre)

**HIC HABITAT FELICITAS**  
(Mozarterie dal Regno di Dietro)  
by  
Flavia Giovannelli e Lisa Colosimo

played by

**Anna Lisa Amodio and Flavia Giovannelli**

23.00 **I N T E R V A L**

**Thursday 18 Morning**

**HIGH ENERGY ASTROPHYSICS**

**Chairperson: ANDRZEJ ZDZIARSKI**

09.00	Simone PAGLIARELLA	The Impact of IXPE on the Knowledge of Extended Sources
09.30	Rosa POGGIANI	Search for Gamma-Ray Counterparts of a sample of IceCube Neutrino Events in the AGILE Public Archive
09.50	Andrea GOKUS	The blazar population at high energies

**10.20 Coffee Break**

**Chairperson: MARCO MERAFINA**

10.50	Andrea GOKUS	Tracing the most distant blazars at gamma-ray energies with Fermi-LAT
11.10	Swati RAVI	Soft X-ray Polarimetry - Current and Prospective

**11.30 END OF THE SESSION**

**JET SOURCES & GAMMA-RAY BURSTS**

**Chairperson: ROSA POGGIANI**

11.30	James BEALL	Astrophysical Jets in the Light of Recent and Historical Observations
12.00	Lorenzo AMATI	Cosmology and multi-messenger astrophysics with Gamma-Ray Bursts

**12.30 I N T E R V A L**

**Thursday 18 Afternoon**

**Advanced Talks of the Ongoing Experiments Session**

**Chairperson: SWATI RAVI**

17.00	Andrea SANTANGELO	The Enhanced X-ray Timing and Polarimetry Mission: Toward Launch in 2030
17.30	Andres MOYA	HAYDN: A Next-Generation ESA Mission Concept for Stellar Structure and Evolution and its impact on exoplanet and galaxy formation

**17.50 End of the Advanced Talk**

**JET SOURCES & GAMMA-RAY BURSTS**

17.50	James RODI	The GRB 241107A observed by INTEGRAL/IBIS/PICsIT
18.20	Andrea MELANDRI	Swift GRB light curves as observed by the XRT

**18.40 END OF THE SESSION**

**I N T E R V A L**

Thursday 18 Night

**SPECIAL NIGHT SESSION**

**Chairperson: GENNADY BISNOVATYI-KOGAN**

22.00 Paul MASON The Recent Emergence of Complex Life in the  
Milky Way

23.00 I N T E R V A L

Friday 19 Morning

**EXOPLANETS & HABITABILITY**

**Chairperson: JAMES RODI**

09.00 Guido DE MARCHI The Impact of Detection of Ices Outside the  
Milky Way

09.30 Marina RUMENSKIKH Transit spectroscopy of helium tails of hot  
exoplanets as a diagnostic tool of  
intrinsic magnetic fields

10.00 Grigory TSURIKOV Potentially observable UV biomarkers in the  
atmospheres of exoplanets

10.20 END OF THE SESSION

Coffee Break

10.50 Postponed talk of the Opening Remarks session

**Chairperson: PAUL MASON**

10.50 Maria Luisa CHIOFALO Terrestrial Very-Long Baseline Atom  
Interferometry: from conceptual setting  
to case studies

11.20 End of the Postponed talk

**ONGOING EXPERIMENTS**

11.20 Giuseppe PICCIONI Moons and Jupiter Imaging Spectrometer  
(MAJIS) on Jupiter Icy Moons Explorer  
(JUICE) - Scientific Objectives

11.50 Cosimo BAMBI An interstellar mission to the closest black  
hole?

12.20 I N T E R V A L

**Friday 19 Afternoon**

**ONGOING EXPERIMENTS**

**Chairperson: GIUSEPPE PICCIONI**

17.00	Filippo FRONTERA	Hard X-ray/Soft gamma-ray Laue Lenses for High Energy Astrophysics
17.30	Nicolas DE ANGELIS	Scientific Prospects of the POLAR-2 Mission
17.50	René HUDEC	ESA CHINA satellite SMILE and astrophysics
18.10	Abhay KUMAR	Probing Particle Acceleration in Solar Flares with Hard X-ray Polarimetry: The CUSP Mission Phase B Status and Future Outlook
18.30	Bruno Luigi MARTINO	Athena Mission's Monte Carlo Computing Cluster Upgrade

**18.50 I N T E R V A L**

**Friday 19 Night**

**SPECIAL NIGHT SESSION**

**Chairperson: GUIDO DE MARCHI**

22.00	Mauro BELLI	Space Radiation is a major challenge to human mission to Mars
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**23.00 I N T E R V A L**

**Saturday 20 Morning**

**ONGOING EXPERIMENTS**

**Chairperson: ANDREA GOKUS**

09.00 Zhixing LING The Einstein Probe Mission  
09.30 Yuya NAKAMURA GRAINE project: sub-GeV/GeV gamma-ray  
observations with high-angular  
resolution and polarization sensitivity -  
Latest results and Future Prospects

**10.00 END OF THE SESSION**

**Coffee Break**

**CONCLUDING REMARKS**

**Chairperson: MAURO BELLI**

10.30 Rubén FREDIANI: Concluding Remarks I  
10.50 Alexander DOLGOV: Concluding Remarks II  
11.10 Rosa POGGIANI: Concluding Remarks III  
11.30 René HUDEC: Concluding Remarks IV

**11.50 END OF THE SESSION**

**CONCLUDING ADDRESS**

11.50 Franco GIOVANNELLI Concluding Address

**12.20 E N D O F T H E W O R K S H O P**