



MONDELLO WORKSHOP 2026

June 15-20, Mondello (Palermo), Italy
Frontier Research in Astrophysics - V



TENTATIVE FINAL PROGRAM (23rd 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 END OF THE SESSION

Coffee Break

COSMOLOGY

Chairperson: DOROTA GONDEK-ROSINSKA

11.00	Simone VERONESE	Galaxy formation and evolution
11.30	Yosuke MIZUNO	Numerical Modeling and Constraint of the Shadow of the Supermassive Black Holes
12.00	Adriana GARGIULO	Stellar population gradients in massive quiescent galaxies at cosmic noon: insights from spectroscopy and emerging ML techniques
12.20	Maria Giovanna DAINOTTI	On the parametrization of the Hubble constant
12.50	Maria Giovanna DAINOTTI	GRB Cosmology to test the evolution of dark energy

13.20 END OF THE SESSION

INTERVAL

Tuesday 16 Afternoon

HIGH ENERGY ASTROPHYSICS

Chairperson: ELEONORA FIORELLINO

17.00	Alexander DOLGOV	Black Holes and Antimatter in Milky Way
17.30	Alessandro Ederoclite	Nova Explosions in 2040
17.50	Fabio LA MONACA	X-ray polarization properties of Z-sources
18.20	Paul MASON	Photometry of Magnetic CVs
18.50	Alessandro DI MARCO	X-ray Polarization variability in non-pulsating weakly magnetized neutron stars: GX 13+1 and its serendipitous polarization angle rotation
19.10	Nicolò Oreste PINCIROLI VAGO	The hunt for new pulsating ultraluminous X-ray sources: A clustering approach

19.30 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

09.30 Antonella TARANA From spectra to geometry: two decades of
progress in Low-Mass X-ray Binaries
10.00 Clara DEHMAN Magnetars - A Review

10.30 O F F I C I A L P H O T O

Coffee Break

Chairperson: COSIMO BAMBI

11.20 Andrzej ZDZIARSKI The origin of the PeV emission from Cyg X-3
11.40 Andrzej ZDZIARSKI The spin of the black hole in Cyg X-1 from
the XRISM observations
12.00 Ingyin ZAW Intermediate Mass Black Holes - A Review

12.30 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

08.30	Marco MERAFFINA	Dynamical evolution of Globular Clusters: the early distribution of star generations
09.00	Matteo TEODORI	Dynamical evolution of Globular Clusters: the degree of mass segregation from birth to nowadays
09.20	Simone PAGLIARELLA	The Impact of IXPE on the Knowledge of Extended Sources
09.50	Rosa POGGIANI	Search for Gamma-Ray Counterparts of a sample of IceCube Neutrino Events in the AGILE Public Archive
10.10	Andrea GOKUS	The blazar population at high energies

10.40 Coffee Break

Chairperson: MARCO MERAFFINA

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

11.50 END OF THE SESSION

JET SOURCES & GAMMA-RAY BURSTS

Chairperson: ROSA POGGIANI

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

12.50 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

Friday 19 Morning

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

23.00 I N T E R V A L

Saturday 14 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

Saturday 20 Morning

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