

**VULCANO WORKSHOP 2026**  
**Frontier Objects in AstroPhysics and Particle Physics**  
**May 24th-30th, Ischia, NA, Italy**

**Tentative Scientific Program**

**Sunday, May 24th - Arrivals**

19:30

*Welcome cocktail*

**Monday, May 25th**

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09:00 Antonella Antonelli & Roberto Fusco Femiano Welcome address

**Gravitation, GW and electromagnetic counterpart**

**Chair:**

09:15 Alessandro Cardini The Einstein Telescope, the next generation detector for gravitational-wave observation  
09:40 Maria Alessandra Papa Latest results on GW  
10:05 Irene Dipalma Multi-messenger observations, status and future perspectives  
10:30 Gonzalo Rodriguez Fernandez Dark matter indirect search  
10:55 *Coffe break*

**Chair:**

11:15 Yexin Wang Far-side and polar laser instruments for gravitational physics and lunar geodesy  
11:40 Giada Bargiacchi Gravity tests with 5 approved lunar-laser missions (2025-2028)  
12:05 David Lucchesi New physics with laser ranged satellites (Galileo, LAGEOS, LARES)  
12:30 Eleonora Loffredo Theory of Kilonovae from binary mergers  
12:55 Fancesco D'Eugenio Early Massive Black Holes and AGN  
13:20 *END*  
13:30 *Lunch*

**Astrophysics/Cosmology**

**Chair:**

17:00 Anjan Ananda Sen H0 tension: current data and possible solutions  
17:25 David Elbaz Galaxies at the Cosmic Dawn and the little red dots  
17:50 Paola Santini Properties of high-z galaxies observed with JWST  
18:15 Andrea Lapi Little ADO about everything:  $\Lambda$ CDM, a new stochastic model of the universe  
18:40 Marta Burgay Recent developments from Fast Radio Bursts  
19:05 Marco Castellano The impact of JWST observations on galaxy formation  
19:30 *END*  
20:00 *Dinner*

**Tuesday, May 26th**

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**Astrophysics/Cosmology**

**Chair:**

09:00 William Giare The impact of the DESI results on the nature of Dark Energy  
09:25 Lorenzo Marra Results from IXPE  
09:50 Giovanni De Lellis Neutrino Physics with SND  
10:15 Alessandra Re Towards JUNO experiment  
10:40 *Coffe break*

**Chair:**

11:00 Enrico Peretti PeVatron  
11:25 Carla Aramo The VHE universe from present facilities to the Cherenkov Telescope Array Observatory  
11:50 Binbin Zhang Transient universe with Einstein Probe  
12:15 Susanna Vergani GRBs: an observational view  
12:40 Alessandra Lamastra Gamma-ray and neutrino emission from Seyfert galaxies  
13:05 Carlotta Pittori Agile legacy  
13:30 *END*  
13:30 *Lunch*

**Cosmic Rays, Gamma Rays**

**Chair:**

17:00 Fabrizio Nicastro A review of searches of missing baryons from radio to X-rays  
17:25 Carlo Gustavino The baryon density of the Universe from an improved rate of deuterium burning  
17:50 Bruce Allen Pulsar timing arrays  
18:15 Juan Carlos Arteaga Velazquez Recent Results in Cosmic-Ray Astrophysics  
18:40 Sara Cutini Lighting up the sky: What gamma rays reveal about supernova remnant shocks  
19:05 Melissa Pesce Rollins 16 years of gamma-ray observations by the Fermi Large Area Telescope  
19:30 *END*  
20:00 *Dinner*

**Wednesday, May 27th**

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**Cosmic Rays, Gamma Rays**

**Chair:**

09:00 Giovanni Pareschi The ASTRI Mini Array gamma-ray experiment  
09:25 Giada Peron Interpreting the Galactic Diffuse emission from GeV to PeV  
09:50 Diego Torres Gamma-ray pulsars  
10:15 Min Zha LHAASO recent results  
10:40 *Coffe break*

**Chair:**

11:00 Roberta Colalillo Extragalactic Cosmic Rays  
11:25 Juan Carlos Diaz Vélez CR anisotropy  
11:50 Carmelo Evoli Galactic Cosmic Rays at the Knee: What Have We Learned?

12:15 Sergey Ostapchenko LHC physics for cosmic rays  
12:40 Giovanni Morlino Star clusters as cosmic ray factories  
13:05 Luigi Lavitola SWGO  
13:30 *END*  
13:30 *Lunch*

### Dark Matter and Particle

**Chair:**  
17:00 Marc Shumann Direct Detection of Dark Matter: Status, Challenges, and Future Prospects  
17:25 Babette Dobrich Dark matter at low mass  
17:50 Gaia Lanfranchi Dark Matter at heavy flavour factories  
18:15 Mauro Raggi Dark Matter searches at dump experiments  
18:40 Giada Mancini PADME recent results  
19:05 *END*

20:00 *GALA DINNER*

## Thursday, May 28th

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### Dark Matter

**Chair:**  
09:00 Roberta Calabrese DARKSIDE  
09:25 Massimo Stiavelli Searching for Dark Matter and Dark Energy with JWST  
09:50 Francesco de Palma DAMPE in his tenth year of mission  
10:15 Anna di Giorgio Results from Euclid  
10:40 *Coffee break*

### Particle

**Chair:**  
11:00 Alejandro Nisati Higgs boson physics recent results  
11:25 Marco Cipriani W Mass measurement at CMS  
11:50 Michelangelo Mangano Particle physics at future Colliders  
12:15 Stefano Giagu AI for HEP  
12:40 *END*  
13:00 *Lunch*

15:00 *EXCURSION TO LA MORTELLA GARDENS*

## Friday May 29th

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### Particle

**Chair:**  
09:00 Ludovico Vittorio The Present and Future of Flavor  
09:25 Vincenzo Vagnoni Highlights from flavor physics and rare decays from LHC and Belle  
09:50 Francesco Brizioli Latest results on rare Kaon decays NA62  
10:15 Rainer Wanke CKM measurements at NA62  
10:40 *Coffe break*

### Neutrino

**Chair:**  
11:00 Francesco Terranova Current status of neutrino oscillations  
11:25 Silvia Celli First observation of an UHE neutrino event with KM3NeT  
11:50 Markus Ahlers IceCube: the First Decade of Neutrino Astronomy  
12:15 Alexey Lokhov Direct neutrino mass measurements  
12:40 Francesca Di Lodovico Advancing the Neutrino Frontier to the Megaton Regime: Science Case and Status  
13:05 Luke Pickering New physics in neutrino oscillations with DUNE  
13:30 *END*  
13:30 *Lunch*

**Chair:**  
17:00 Kirsty Duffy Microboone recent results  
17:25 Riccardo Triozzi ICARUS at the Short Baseline Neutrino Program: First Results  
17:50 Salvatore Capozziello Current and future trends in gravitational physics  
18:15 Elisabetta Bissaldi GRB at high energies and high-z  
18:40 *END*  
20:00 *Dinner*

## Saturday May 30th - Departures