

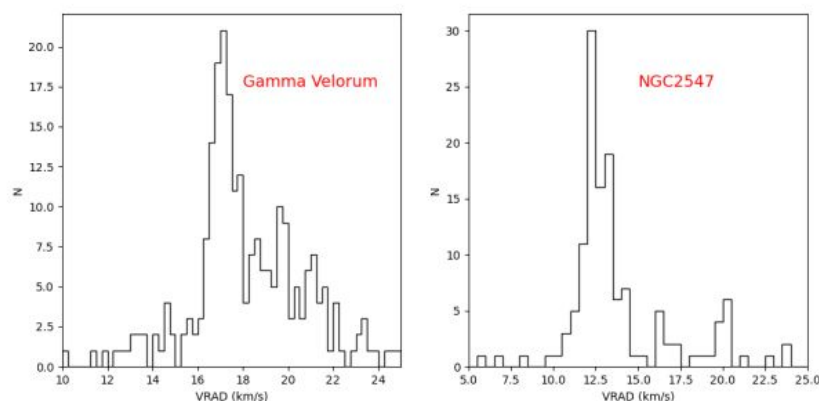
HIGHLIGHT

New release of radial velocities from the Gaia-ESO Survey

A [new catalogue](#) of radial velocities from the [Gaia-ESO Survey](#) has been released by the European Southern Observatory.

Gaia-ESO is a public spectroscopic survey carried out with the fiber-fed optical spectrograph FLAMES at the VLT, that observed more than 100,000 Galactic stars during 340 nights over almost 10 years. Observed stars belong to all the components of the Milky Way field and to a very large sample of star clusters. These observations are allowing a large community of astronomers to better understand the formation and evolution of our Galaxy, the physics behind the stellar evolution and the mechanisms driving the formation and dispersion of star clusters. This data release represents a new important milestone in this project, since radial velocities of the full sample of observed stars will now be available to the whole astronomical community.

Researchers from nine INAF institutes (Arcetri, Bologna, Capodimonte, Catania, Padova, Palermo, Roma, Torino and Trieste) are involved in this project. The Arcetri Observatory is leading the INAF contribution, since **Sofia Randich** is Co-PI of the project together with Gerry Gilmore (IoA, Cambridge); **Germano Sacco** is a member of the project office and coordinated the data reduction and the determination of the radial velocities in collaboration with researchers in Cambridge; **Elena Franciosini**, **Laura Magrini** and **Elena Pancino** held leading positions into the consortium; **Lorenzo Morbidelli**, **Marco Padovani**, **Nicoletta Sanna** and **Mathieu Van der Swaelmen** have contributed to the analysis of the data and to the scientific exploitation of the parameters derived from the spectra in collaboration with other colleagues.



Radial velocities distributions of the two young clusters Gamma Velorum and NGC2547, which show the presence of multiple subgroups discovered by [Jeffries et al. \(2014\)](#) and [Sacco et al. \(2015\)](#) with the Gaia-ESO data. Credits G.Sacco/Gaia-ESO consortium.

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V. Gelli

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TECHNOLOGICAL MILESTONES

ERIS arrived at VLT

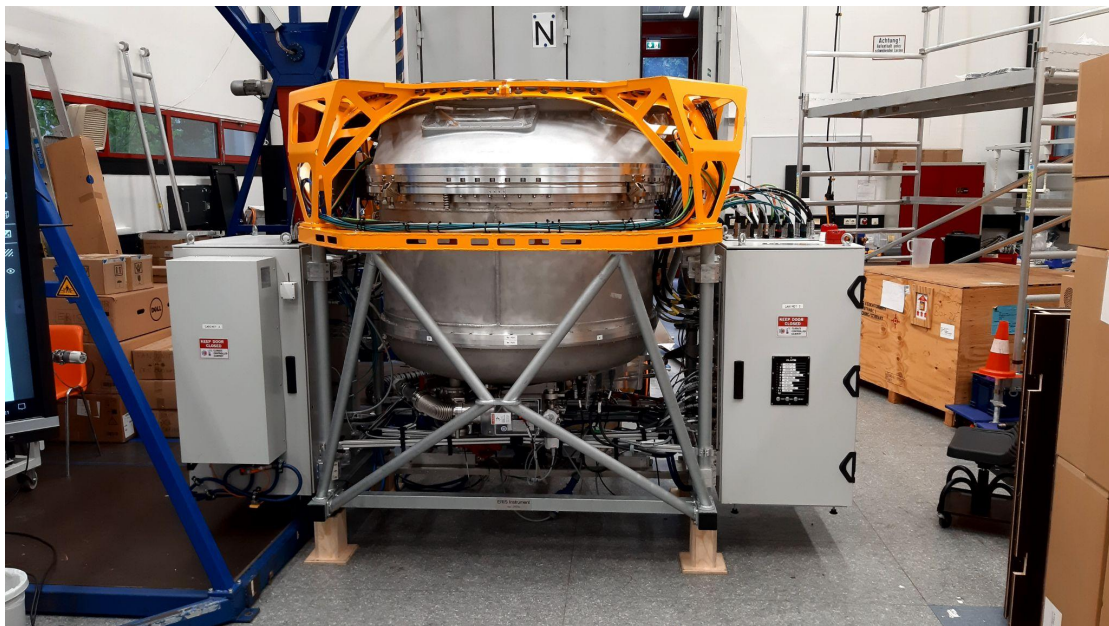
[ERIS](#) is the 1-5 μm instrument for the Cassegrain focus of the Yepun Telescope (UT4) at the VLT. INAF is part of the ERIS International Consortium together with Max Planck Institute (MPE), UK-ATC, ETH, NOVA and ESO.

After the PAE (Preliminary Acceptance in Europe) process, successfully ended in October, ERIS was partially dismantled to fit a cargo and shipped to Cerro Paranal in Chile, the VLT location. The boxes are now waiting for the ERIS Consortium team for reintegration and functionality check before mounting on the telescope. The INAF-OAA group has just arrived in Chile and it is moving to Paranal to start the reintegration process that will take 3 weeks. ERIS will be finally mounted on the telescope in the next run in January and will receive the first photons from the sky in the first Commissioning run in February to start the most exciting part of the ERIS life.

Link: <https://www.eso.org/sci/facilities/develop/instruments/eris.html>

INAF-OAA is responsible for the Adaptive Optics system of ERIS.

Team: Co-PI: Simone Esposito; AO SysEng: Armando Riccardi; SW and AIV: Alfio Puglisi, Paolo Grani; AIV: Runa Briguglio, Marco Bonaglia, Luca Carbonaro; Data analysis: Guido Agapito; Science Committee: Filippo Mannucci, Giovanni Cresci.



Credits: Briguglio/Riccardi/ INAF-Arcetri

NASA's DART mission has been launched

On Nov. 24 at 7:21 a.m. (Italian time) aboard a SpaceX Falcon 9, NASA's DART mission took off toward its target, the moonlet Dimorphos of the binary asteroid Didymos. The main objective of the mission is to test the kinetic impactor technology as a possible deflection strategy for a potential asteroid dangerous to Earth. On board of DART there is the Italian cubesat LICIACube that will be the witness of the impact and with its cameras will allow us to study the properties of a binary asteroid. At INAF-OAA **John Brucato** is involved as responsible for laboratory support to the observations of LICIACube and ground-based telescopes in order to study the properties of the material of the asteroid. Together with other INAF scientists they will also study the multicolor images collected by the LUKE camera.



Credits: NASA

PRIZES AND AWARDS

Viola Gelli won the Geppina Coppola award.

The Prize, at its first edition in 2021, is an award for best Master's Thesis in physics or astronomy, established by INAF-Osservatorio di Capodimonte and Associazione Geppina Coppola.

Viola Gelli graduated in Physical and Astrophysical Sciences in 2019 with the thesis “The stellar populations of high redshift dwarf galaxies”. She used state-of-art cosmological simulations to study the formation of galaxies during the first billion years of the Universe. Specifically, she demonstrated that the James Webb Space Telescope (to be launched this December) will allow us for the first time to detect and study small sources which, though very faint, are fundamental in cosmic history: dwarf satellite galaxies.

NEW ARRIVALS

PHD STUDENT

Marika Lepore



I've always been interested in discovering how things work, but my time as an undergraduate opened my eyes to the excitement and wider benefit of science.

I got a Bachelor's Degree in Physics at "La Sapienza" University of Rome in 2019, with a thesis entitled "Mappe del cielo nelle microonde e anisotropie del fondo cosmico" under the supervision of Prof. Paolo De Bernardis. Since the last year of my graduate studies, I've been interested in studying AGNs. I have conducted my Master thesis, entitled "AGN activity in dense environment", in the Extragalactic group at INAF-Observatory of Rome, under the supervision of Prof. Luigi Stella and Dr. Angela Bongiorno. I am really fascinated by how the presence of AGNs can affect the environment in which they live and also how the surrounding environment can affect the evolution of AGNs themselves. Here at INAF-OAA I will continue my work on this topic under the supervision of Dr. Paolo Tozzi.

POSTDOCTORAL FELLOW

Jonatan Martin Rodriguez



I started my Physics degree at University of Barcelona (UB) and later I moved to the Institut de Ciències de l'Espai (ICE-CSIC), also in Barcelona, to do my PhD with the group of High-Energy Astrophysics lead by Prof. Diego F. Torres. During my PhD, I developed the first version of the code TIDE. TIDE simulates pulsar wind nebula (PWN) spectra from radio to gamma-rays taking into account the evolution of the nebula in time, which has been useful in order to study the current known population of young (< 10 kyr) PWNe. After a one year postdoc in the same group, I started a period of 4 years working in the private sector as a teacher and software developer. I thought life was a bit sad for me without Astrophysics and I came back to work with my Phd supervisor. Finally, two years later, I had the opportunity to start this new adventure at Arcetri with the group of High-Energy Astrophysics. Hope to know you all soon!

TECHNOLOGIST

Vladimiro Noce



I got a PhD with a thesis about the co-engineering of *SPS (Shadow Position Sensor)*, a metrology system on-board the PROBA-3 space mission. My thesis for the Master degree in Physics regarded the design of the front-end electronics of the *LHCf (Large Hadron Collider forward)* multistrip silicon detector. Afterwards, I graduated in Electronics Engineering and realized the data interconnection board of *UlaOp*, an ultrasound research platform at *MSDLab (Microelectronics Systems Design lab)*. Since 2015 I have cooperated on several projects concerning Solar and Exoplanets observations, ground and space-based (AntarctiCor, ARIEL, PLATO, PROBA-3, Metis).

All my studies were accomplished at Florence University, while working for the *Italian Railway Network* in safety-critical roles (as station-chief and railway traffic controller/supervisor). Currently, I work as a System Engineer for the *Instrument Control Unit (ICU)* in the *ARIEL – Atmospheric Remote-sensing Infrared Exoplanet* project.