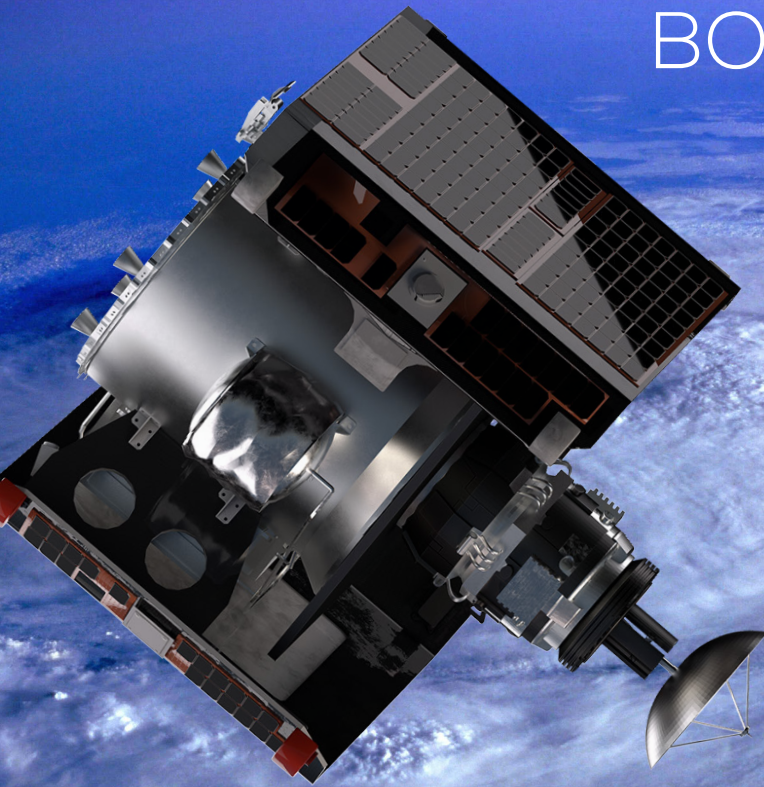




WISH UPON A STAR

MISSION BOOKLET



Mission name: Wish Upon a Star
Carrier name: ION SCV Marvelous Mathias

Fino Mornasco, Italy, March 15th, 2025 — On March 14th, 2025, D-Orbit, a leader in space logistics and orbital transportation, launched **Wish Upon a Star**, the **17th commercial mission** of its Orbital Transfer Vehicle (OTV), **ION Satellite Carrier (ION)**.

The OTV was launched aboard SpaceX's Transporter-13 mission at **23:43 PT (06:43 UTC - March 15th)** from the **Launch Complex 4 (SLC-4E) at Vandenberg Space Force Base in California**. One hour after liftoff, the ION vehicle, SCV Marvelous Mathias, was deployed into a 510-km Sun Synchronous Orbit.

ION Satellite Carrier is a versatile space vehicle capable of **transporting and releasing satellites into distinct orbital slots**. It can also accommodate third-party payloads, including innovative technologies, research experiments, and instruments requiring in-orbit testing. Additionally, ION can support edge computing and space cloud services, providing satellite operators with advanced storage and computational capabilities in orbit.

D-Orbit's mission control team is now conducting the **Launch and Early Orbit Phase (LEOP)**, setting the stage for the upcoming operational phase.



Photo credit: SpaceX

A note about the name of the satellite carrier

The name of the satellite carrier is "ION Marvelous Mathias", a combination of the acronym "ION", which stands for "InOrbit NOW", and the satellite's first name. This format follows the naming conventions of naval vessels used in navies around the World. The name "Mathias" was drawn at random from a bowl containing the names of all D-Orbit's employees. The company will continue to follow this procedure in the future to honor the skills, energy, passion, and commitment to its people.



ION SCV Marvelous Mathias and team

2025/03/05 15:01



Name of payload: HERMES 1-6 (High Energy Rapid Modular Ensemble of Satellites)

Form factor: 3U

POC: Dr. Barbara Negri
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fabrizio.fiore@inaf.it

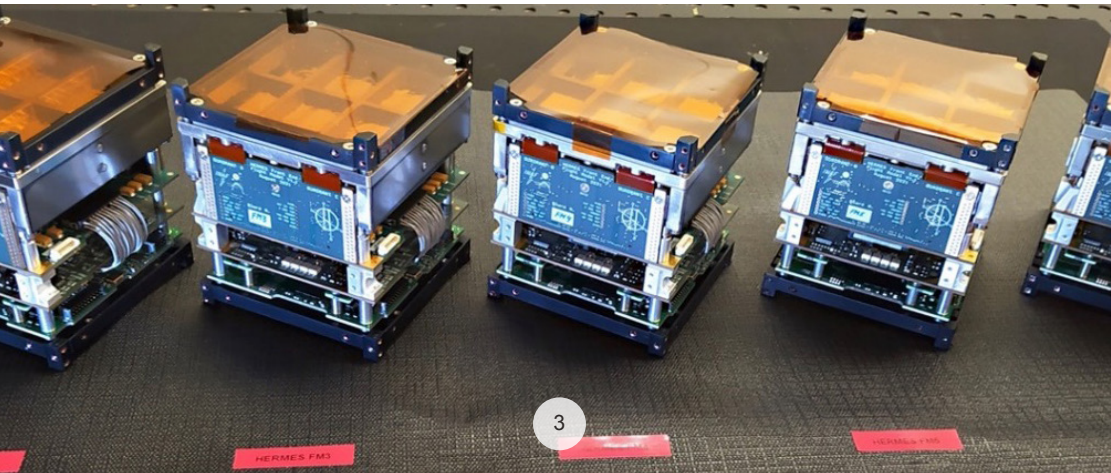
Prof. Michèle Lavagna
michelle.lavagna@polimi.it

The H.E.R.M.E.S. (High Energy Rapid Modular Ensemble of Satellites) Pathfinder mission implements the revolutionary concept of distributed sensors in space for a new science era, through a pathfinder constellation of 6 CubeSats which, by operating in triplets shall detect, localize and rapidly disseminate over the scientific community the occurrence of random astronomical events such as the Gamma Rays Bursts (GRBs).

The mission, mainly financed by the Agenzia Spaziale italiana (ASI) and with the contribution of Istituto Nazionale di Astrofisica (INAF), Politecnico di Milano (POLIMI), Università degli Studi di Cagliari (UNICA) and the European Commission (EC), embarks an innovative miniaturized spectrometer, conceived and developed by INAF, on a 3U very agile platform designed, developed and tested by the PoliMi ASTRALab. The constellation can continuously monitor almost the whole sky and can transfer shortly the occurred cosmic events coordinates, thanks to its co-pointing capabilities, within few minutes to scientists by use of a continuous link with the Iridium constellation, the dedicated ground stations network, the Scientific Operations Center and the Mission Operations Center all implemented thanks to national ASI funding.

H.E.R.M.E.S. represents a breakthrough in the high energy multi-messenger astrophysics domain by paving the way to smaller, sophisticated distributed space assets larger utilisation thanks to a fruitful collaboration among the national scientific and academic excellences.

Photo credit: ASI, INAF, POLIMI



COMPANY PROFILE - AGENZIA SPAZIALE ITALIANA

Website: www.asi.it

The Agenzia Spaziale Italiana (ASI) was established in 1988 as the national authority with the task of drawing up and enacting Italian space policy in compliance with governmental guidelines, establishing itself as one of the world's foremost players in space science, satellite technology and the development of vehicles for exploring the cosmos. It plays a leading role both at European level, where Italy is the third highest contributor to the European Space Agency (ESA), and worldwide, thanks to its portfolio international cooperations. It has three operational bases in addition to its headquarter in Rome: Matera and Cagliari, in Italy, and Malindi in Kenya.

COMPANY PROFILE - ISTITUTO NAZIONALE DI ASTROFISICA

Website: www.inaf.it

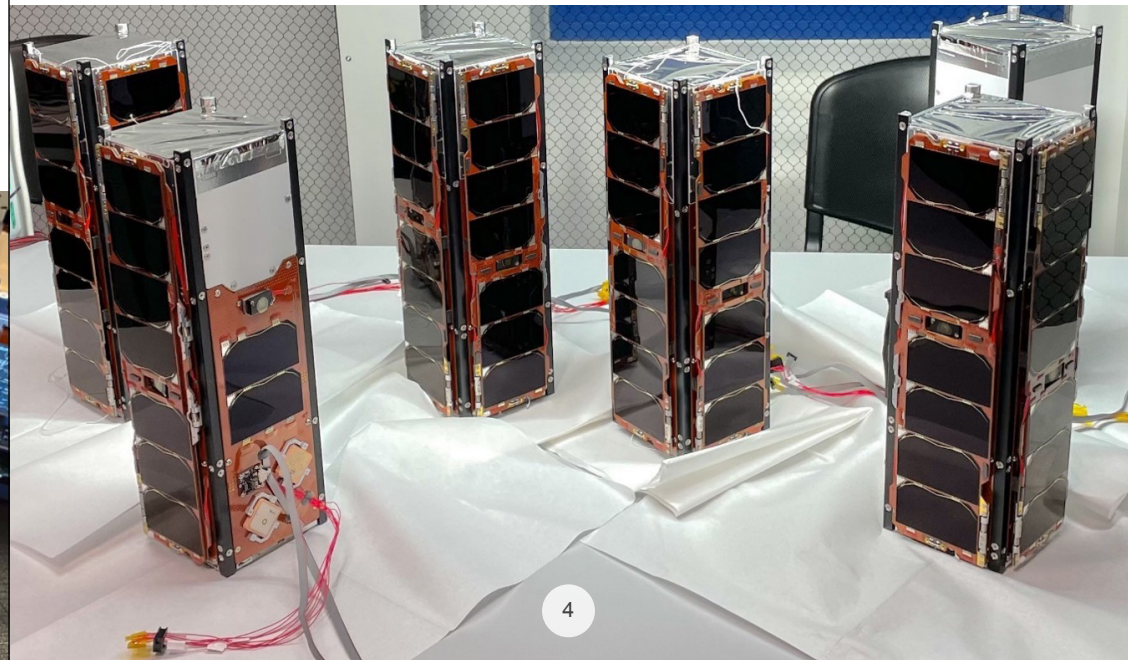
INAF (ISTITUTO NAZIONALE DI ASTROFISICA) is the public research organisation that promotes, performs, and co-ordinates astrophysics and astronomy research in Italy; INAF cooperates with Universities and other national and international organisations. INAF coordinates the European Commission H2020 HERMES-Scientific Pathfinder project, including eleven European partners, which managed the realization of three of the six HERMES cubesats

COMPANY PROFILE - POLITECNICO DI MILANO

Website: www.polimi.it

Founded in 1863, today Politecnico di Milano (POLIMI) is the largest and first ranked scientific-technological university in Italy, and among the first 20 universities in the world for the Aeronautical and few other Engineering disciplines. The University has always focused on the quality and innovation of its teaching and research, developing a fruitful relationship with business and productive world by means of experimental research and technological transfer. The ASTRA lab of the Department of Aerospace Science and Technology is largely involved in applied research for advanced space technologies and cooperates with many leading space actors all over the world.

Photo credit: ASI, INAF, POLIMI





Name of payload: DARK

Type of payload: Thrusters

POC: Adelina Balan
adelina.balan@arkadiaspace.com

DARK is the first in-orbit demonstrator for Arkadia Space. It will demo two of Arkadia's 5 N Triton thrusters in orbital conditions. DARK is both a complete propulsion system and a miniature test center, capable of providing the propellant in adequate conditions, actuating and commanding the system's thrusters, and acquiring and measuring more than 60 telemetry channels while recording the data for on-ground analysis.

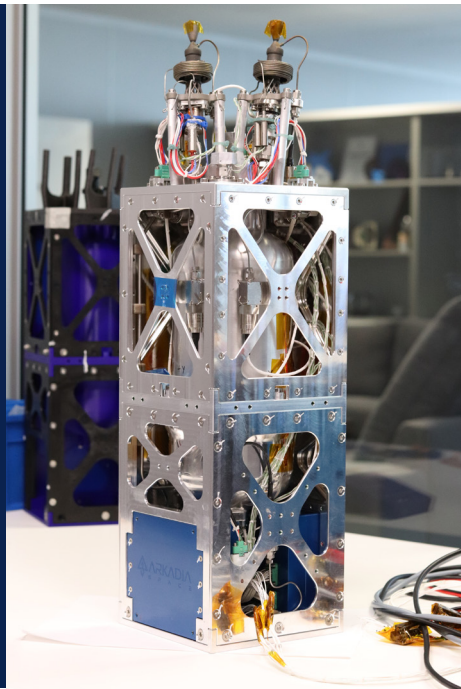
COMPANY PROFILE Website: www.arkadiaspace.com

Based in Castellón, Arkadia Space specializes in the development and commercialization of propulsion systems based on green propellants for satellites and platforms weighing over 50 kg, betting on the use of high-concentration hydrogen peroxide and their proprietary high-performance fuel. The company was founded in late 2020 by Francho García, Francisco Espinosa, Ismael Gutiérrez, and Sergio Soler, who previously worked together at PLD Space for 4 years, primarily leading the teams that developed company's propulsion systems and rocket engines. Arkadia's goal is to be the reliable, sustainable, and affordable alternative to toxic and costly propulsion systems using hydrazine and its derivatives, enabling the growth in the space logistics sector, where propulsion and mobility are essential in this new space economy.

Photo credit: Arkadia Space

We expect to gain a lot of trust from customers after this flight and convince them how fast we can develop and deliver reliable propulsion systems.

Francho García, Co-founder & CEO



Name of payload: GO-2 Propulsion System

Type of payload: Electric Propulsion System

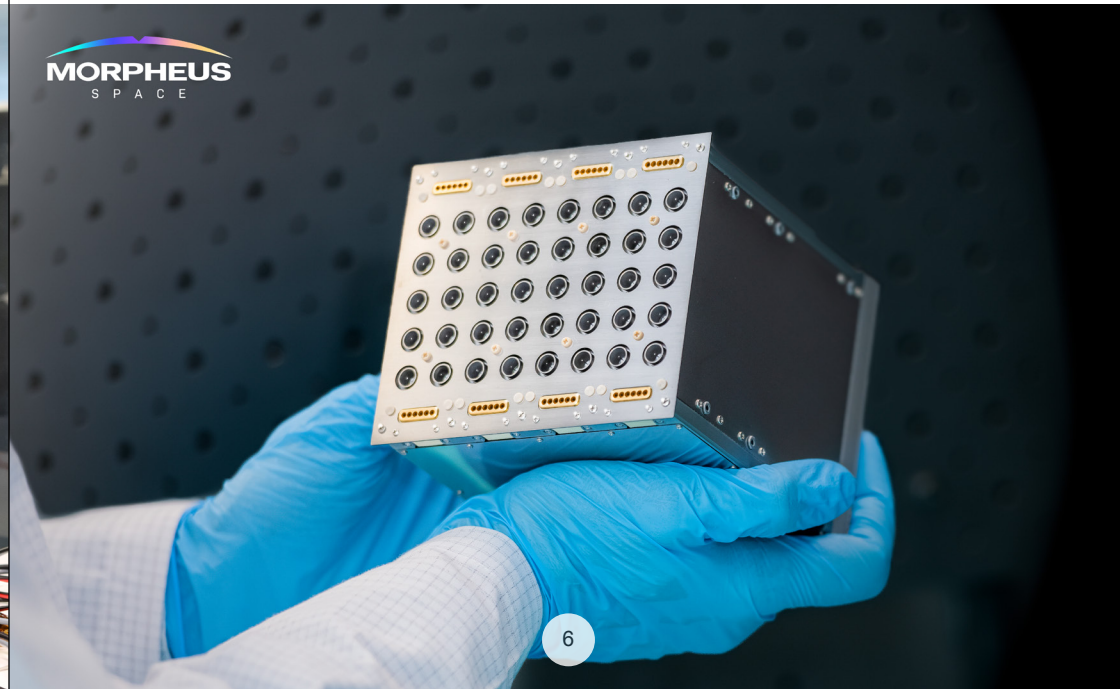
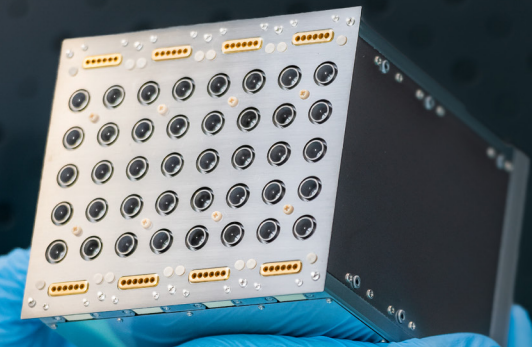
POC: Gabrielle Diemand
connect@morpheus-space.com

The GO-2 Electric Propulsion System is a high-performance solution designed to meet the rigorous demands of modern space missions. Leveraging FEEP technology the GO-2 system delivers exceptional precision, efficiency, and reliability for missions requiring high efficiency, low-thrust propulsion. Its scalable design makes it adaptable for a wide range of applications ranging from deorbit maneuvers, to thrust vectoring, to constellation management.

COMPANY PROFILE Website: www.morpheus.space

Morpheus Space emerged from cutting edge research at TU Dresden on Field Emission Electric Propulsion (FEEP) technology and the need to address the increasingly congested, contested and competitive nature of space. Traditional propulsion systems alone cannot solve the challenges satellite operators face once in orbit. The exponential increase in the number of satellites and space debris complicates constellation management. The growing threat from hostile nations demands that our space assets have the capability to evade danger and confront adversaries. Additionally, the business necessity of delivering value to investors, shareholders, and customers requires extending satellite lifetimes to ensure meaningful ROI. Our mission is to address these fundamental challenges, ensuring sustainable, safe, and profitable access to space.

Photo credit: Morpheus Space





Name of payload: Clustergate-1

Type of payload: Shared hosted payload stack

POC: Communication Office
contact@dphispace.com

Clustergate-1 is the maiden flight of Clustergate, a shared hosted payload platform enabling easier and more affordable access to orbit. It carries six payloads from various commercial and academic institutions, all connected to the Phoenix onboard computer, designed to provide plug-and-play integration and advanced edge processing in space. Additionally, Clustergate-1 hosts several software payloads, with the capability to onboard more during flight.

COMPANY PROFILE Website: www.dphispace.com

DPhi Space, based in Switzerland, is on a mission to reduce the cost and complexity of access to space by flying shared satellite platforms that aggregate multiple payloads on the same bus. With the introduction of its hosted payload platform, Clustergate, DPhi lowers the barrier to space for payloads by hosting them and connecting them to powerful computers, simplifying the integration process and enhancing their processing capabilities in orbit.

Photo credit: DPhi Space



Clustergate is a hosted payload container that aggregates smaller payloads and connects them to a powerful onboard computer. This approach lowers the barriers to space access and simplifies operations for our customers.

DPhi Space



Name of payload: Shooting Star Memorial

Type of payload: Commemorative payload

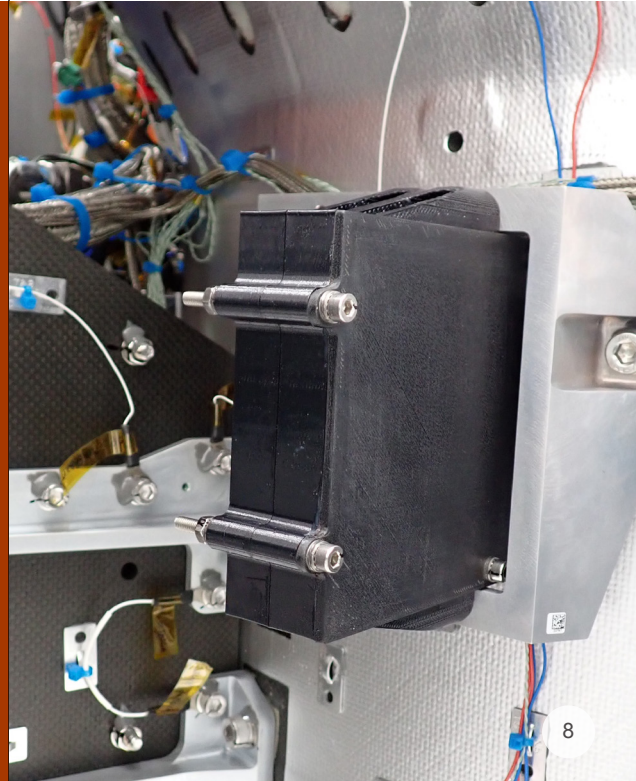
POC: Dan Peabody
dan@beyondburials.com

The Beyond Burials Shooting Star Memorial is a breathtaking tribute that takes human remains from loved ones across the world on a final, awe-inspiring journey through space. Secured within a specialized payload, each symbolic portion of cremated remains embarks on a voyage beyond Earth's atmosphere, where it will orbit before becoming a shooting star upon re-entry—a final, spectacular farewell written in the sky. This extraordinary memorial offers a once-in-a-lifetime way to honor a loved one, transforming their passing into a moment of wonder and inspiration. As their spirit becomes part of the cosmos, their legacy lives on among the stars.

COMPANY PROFILE Website: www.beyondburials.com

Beyond Burials offers affordable space memorial experiences that help family members celebrate their loved ones in a unique, meaningful, and inspiring way.

Photo credit: Beyond Burials



I wanted to create an affordable space memorial that helps family members celebrate their loved ones in a unique, meaningful, and inspiring way.

Dan Peabody,
Founder & CEO



Name of payload: AlbaPod - PocketQube satellite deployer

Type of payload: Deployer and PocketQubes

POC: Tom Walkinshaw
tom@pocketqubeshop.com

Albapods are satellite deployers specifically designed by Alba Orbital for PocketQube satellites, supporting various formats from 1p to 3p. Onboard this mission, the two AlbaPods are hosting the following PocketQube satellites:

HADES-ICM - HYDRA SPACE / IC MERCURY / SMART IR:

The 1.5p PocketQube, carries an open voice transponder for the radio amateur community. It will be operated by the non-profit organization AMSAT-EA. It also includes UK based Smart IR second, graphene based technology, experiment in orbit and icMercury, Interstellar Communication Holdings Inc inspiring space sustainability text messages, that will be broadcasted periodically by HADES-ICM

HYDRA-W - HYDRA SPACE:

Hydra Space are developing an IOT network utilising their 1.5p PocketQube platform. Hydra-W will add to this growing constellation. It includes an in-orbit experiment from UC3M - Universidad Carlos III (Spain) implemented by Terahertz Research group and IoT connectivity experiment by Hydra Space.

UNICORN-20, 2P & 2Q - ALBA ORBITAL:

UNICORN-20, 2P & 2Q are three 3p PocketQubes imaging satellites for Alba night time Earth observation constellation to image Earth in daytime and night time. These are the 15th, 16th and 17th Unicorn-2 satellites to launch into orbit.

Photo credit: Alba Orbital



COMPANY PROFILE Website: www.albaorbital.com

Alba Orbital (UK, USA, Germany) is the world's leading PocketQube company that has delivered 41 pico-satellites on-orbit to date. Alba is a vertically integrated NewSpace company 'democratising access to space', providing turnkey solutions from advanced pico-satellite platforms, low-cost launch opportunities, and ground station services. Alba has worked with over 30 customers across three continents, including prestigious clients such as Stanford University, Carnegie Mellon University and TU Delft.

Photo credit: HYDRA Space, icMercury, Smart IR

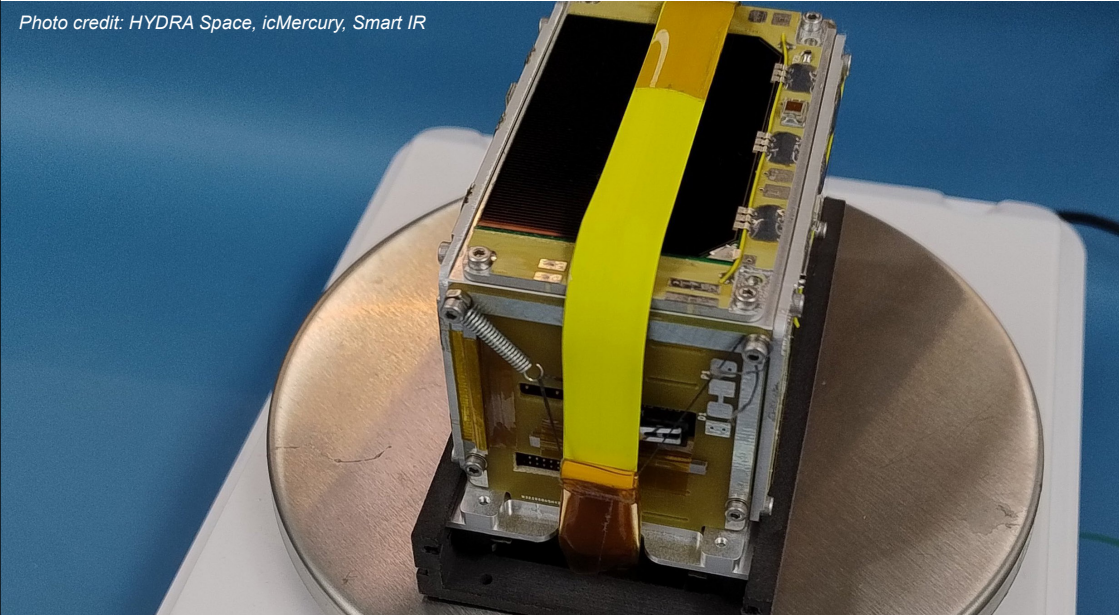


Photo credit: Hydra Space

