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*The educational satellite mission concluded with the deployment of a drag sail that will reduce satellite re-entry time by 80 percent*

**Fino Mornasco, Italy, March 30, 2023:** [D-Orbit](#), a market leader in space logistics and transportation services, is proud to announce the success of the SBUDNIC space mission, which ended with the deployment of a drag sail that will reduce satellite re-entry time by 80 percent. The mission, carried out by [Brown University School of Engineering](#) and the [National Research Council's Institute of Atmospheric Pollution Research \(CNR-IIA\)](#), in collaboration with D-Orbit, innovatively and cost-effectively demonstrated the possibility of reducing space debris in orbit, helping to ensure the sustainability and safety of the space sector. The mission was supported by D-Orbit, which transported the satellite into orbit inside its ION Satellite Carrier orbital transfer vehicle in May 2022, and released it into its operational orbital position.

The SBUDNIC satellite, designed and built by a team of Brown University students, professors and researchers in collaboration with CNR-IIA with low-cost materials readily available on the market, **has deployed an innovative 3D-printed Kapton polyamide drag sail designed to increase the satellite's aerodynamic drag and accelerate its orbital decay** from the nominal 25-27 years to just 5 years.

The use of the drag sail will demonstrate the effectiveness of this technology in reducing **the space debris problem, paving the way for future applications and developments in the sustainability and security of the space sector**. D-Orbit and CNR look ahead to further collaborations to develop new technologies and innovative solutions for the space sector, as well as promoting education and interest in space through image sharing and public outreach campaigns.

*"D-Orbit is proud to have partnered with CNR to support Brown University students in this innovative mission aimed at reducing space debris in orbit," **said Matteo Lorenzoni, Head of Sales at D-Orbit**. "We strongly believe that solutions like the one implemented by SBUDNIC can help ensure a safe and sustainable future in space."*

*"SBUDNIC has achieved its main goal, which is to demonstrate that synergies with industrial entities such as D-Orbit actually make New Space more accessible for academia and research, benefiting scientific and technological progress in space exploration and the sustainable development of new Earth observation capabilities," **said Lorenzo Bigagli, project coordinator for CNR** and a researcher at IIA's Florence office.*

The mission confirms D-Orbit's commitment to supporting the development of space debris mitigation solutions. Over its 12 years of operation, the company has successfully demonstrated in-orbit active and passive decommissioning devices to facilitate rapid removal of its satellites at mission end.

The SBUDNIC mission was also made possible thanks to the support of NASA, through the Rhode Island Space Grant, AMSAT-Italy and the University of Rome "La Sapienza."



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## About D-Orbit

D-Orbit is a market leader in the space logistics and transportation services industry with a track record of space-proven services, technologies, and successful missions.

Founded in 2011, D-Orbit is the first company addressing the logistics needs of the space market. ION Satellite Carrier, for example, is a space vehicle that can transport satellites in orbit and release them individually into distinct orbital slots, reducing the time from launch to operations by up to 85% and the launch costs of an entire satellite constellation by up to 40%. ION can also accommodate multiple third-party payloads like innovative technologies developed by startups, experiments from research entities, and instruments from traditional space companies requiring a test in orbit. The whole, fully redundant ION can be rented for edge computing applications and space cloud services to provide satellite operators with storage capacity and advanced computing capabilities in orbit.

D-Orbit's roadmap includes becoming a relevant player in the in-orbit servicing market, which is forecasted to become one of the largest, growing markets within the space sector.

D-Orbit has offices in Italy, Portugal, the UK, and the US; its commitment to pursuing business models that are profitable, friendly for the environment, and socially beneficial, led D-Orbit S.p.A. to become the first certified B-Corp space company in the world.

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## About CNR – IIA

The National Research Council is the largest public research organization in Italy. Articulated in 102 institutes, its mission includes carrying out multidisciplinary research activities, promoting the internationalization of the national research system, promoting industrial innovation and competitiveness, and transferring technologies and solutions to emerging public and private needs.

The National Research Council's Institute on Air Pollution focuses on knowledge and understanding of air quality to act toward decarbonization and sustainable development to protect future generations.