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## LICIACUBE IS READY FOR THE FIRST PLANETARY DEFENCE MISSION

High-resolution photos for the Italian MicroSat, built by Argotec and ASI, that will be on NASA's asteroid mission

Turin/Rome, 12 July 2021 - LICIACube, a microsatellite built entirely in the Argotec laboratories in Turin for, and in collaboration with, the Italian Space Agency (ASI) is ready for shipping. It will be delivered to its integration site in the United States in the coming weeks in preparation for the year-end launch of the first planetary defence mission against potential future asteroid threats.

The Italian microsatellite will participate in NASA's DART mission, which aims to determine whether it is technically possible to change the orbit of the **smallest asteroid in the Didymos binary asteroid system. DART will impact the asteroid at a speed of about 21,000 km/h, 11 million kilometres from Earth.** LICIACube, after an 11-month voyage on board DART, will be deployed from the NASA spacecraft a few days before DART's impact and will acquire high-resolution images of the crater and debris generated by the collision. All the data produced during this stage of the mission will be crucial in verifying the effectiveness of the shifting an asteroid's orbit using this technique. In addition, the Italian and American science teams will use the data acquired by DART and LICIACube to study both the nature and composition of the asteroid.

The small Italian satellite platform, measuring just 30x20x10cm, with powerful optics and artificial intelligence-based software, will be able to recognise celestial objects in the camera's range, autonomously perform orbital manoeuvres and **capture images and scientific data. The data will be indispensable for validating this technique to defend the Earth from potential threats such as asteroids.** The LICIACube mission will be one of the most challenging ever carried out by a microsatellite in the harsh conditions of deep space, due in part to the high speed at which the satellite will travel past the DART impact site. This project will set a new technological benchmark for the future of small satellite missions that can support space exploration.

*Using Argotec's Hawk platform, an all-Italian microsatellite, will monitor the kinetic impact of a probe against an asteroid. - said David Avino, Argotec's CEO. - LICIACube will*

*also be the first Italian device to reach such a remote object in deep space. This success is both a great responsibility for the Argotec team and a source of pride for Italy.*

*ASI has always paid great attention to the challenges offered by exploration. - said **Giorgio Saccoccia, president of the Italian Space Agency (ASI)**. - LICIACube is a typical example of the Agency's efforts to explore space beyond the Earth's orbit and the roadmaps currently being drawn up to aim at more ambitious goals. Italy has both the skills and the industrial and scientific capabilities to interact with the most prestigious space organisations, and the fact that NASA has selected Italy is no coincidence but the consequence of a history of long-standing collaborations.*

At the moment, there is no threat of an immediate asteroid impact with the Earth, but the risk of an asteroid collision should not be neglected. This mission represents the first step towards a new planetary defence system, so it is of vital importance that Italy plays a decisive role together with its LICIACube.

#### ARGOTEC

*Argotec is an Italian aerospace engineering company founded in Turin in 2008. Innovation and research have always been the main factors in the two core business areas: the development of innovative systems for the comfort of astronauts and future space explorers, and the production of small satellites for outer space. All its activities are primarily aimed at developing space systems with potential spin-offs for terrestrial applications. Since it was founded, the company has always collaborated with the main space agencies, by performing experiments and providing products of high technological and scientific value. Recently, Argotec's Hawk satellite platform was selected by NASA to go on board two important US missions: Artemis 1 and DART. In 2021 Argotec will be the only company in the world to have two small satellites operating in outer space.*

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