**OHB Czechspace: Date with a comet**

**22 May 2024, Brno: The European Space Agency's (ESA) new Comet Interceptor mission will explore a previously undiscovered comet, with the aim of uncovering fundamental insights into the origins of our Solar System. The Brno-based company OHB Czechspace is playing a crucial engineering role in the probe, which will fly into space in 2029.**

So far, only short-period comets have been studied, i.e. comets that have an orbital period of less than 200 years and thus repeatedly return to the inner areas of our Solar System. However, each flyby around the Sun has a major impact on the comet's appearance. That is why ESA chose the Comet Interceptor mission to explore a comet the world has never seen before. This type of comet, unaffected by the Sun, could ultimately provide a number of valuable insights into the origins of our Solar System, dating back 4.6 billion years.

Yet, astronomers will only find out about such a comet months in advance - by the time it is too late to build and launch a satellite. Therefore, the spacecraft will be "parked" at Lagrange point 2, distant 1.5 million kilometres from Earth, waiting for a suitable comet. When it arrives, the spacecraft will take images of the entire comet to create its 3D profile.

The satellite that will explore the comet consists of three parts - the main spacecraft and two smaller ones that will carry additional scientific instruments. All three parts will then make various measurements of the comet's core and its gas, dust and plasma environment to provide observations from different perspectives.

The OHB Czechspace team will work on the project for approximately 2 years. Specifically, it will contribute with engineering activities to the spacecraft structure, including the assembly, integration and testing (AIT) of the dust shield, which is necessary to protect the satellite from the comet dust.

The €150 million contract is being developed by ESA in collaboration with the Japan Space Agency (JAXA), which is responsible for one of the two smaller probes mentioned above. The mission is part of ESA's “Cosmic Vision” programme and is a “F-class” fast-track mission, which is expected to take just eight years to implement. *"The project's classification as 'F-class' in ESA's mission categorisation means that we have much less time than usual for engineering activities. Together with the assembly of the comet dust shield, this is a significant technical challenge that the OHB Czechspace engineering team is eager to take on,"* said Daniel Rohel, Head of Engineering at OHB Czechspace.

The satellite will be carried on a rocket together with the ARIEL space telescope in 2029.

**OHB Czechspace**

OHB Czechspace, based in Brno, is a member of the OHB SE technology group. It focuses on the supply of spacecraft and launcher structures, as well as its mechanical ground support equipment. The company has been awarded various contracts under ESA programmes, in addition to the Hera planetary defence mission, it is also working on the Nuclear Electric Propulsion (NEP) programme RocketRoll, the Plato space exploration mission and the CO2M mission to measure carbon dioxide in the atmosphere. Last year, the company’s SOVA mission was selected as a backup mission of the Ministry of Transportation Ambitious project.

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