Eta Space Introduces Cryo-Dock™

Cryogenic Propellant Depots Will Enable Sustainable Space Exploration

Cryo-Dock™ shown servicing reusable orbital transfer vehicles to enable rapid deployment of large mass payloads to multiple orbits

ROCKLEDGE, FLORIDA, UNITED STATES, July 13, 2022 /EINPresswire.com/ -- Three-year old start-up Eta Space plans to leverage critical technology learned during its LOXSAT mission to construct Cryo-Dock™, expected to be the world's first commercial cryogenic propellant depot in Earth orbit.

Cryo-Dock™ is designed to service spacecraft stages and orbital transfer vehicles with high-energy cryogenic propellants through a standardized, automatic umbilical. Building on the successful demonstration of cryogenic fluid management (CFM) technologies during the LOXSAT mission, Cryo-Dock™ is intended to feature full control of the cryogenic propellants in microgravity, including long-term zero boil-off storage and zero loss chill down and transfer. This capability is expected to enable a new era of sustainable space transportation in which spacecraft refueling and reuse dramatically lower the cost of transportation in the inner solar system. Future Cryo-Docks™ supplied with liquid oxygen and liquid hydrogen are being planned for operation in low Earth orbit and the lunar surface in support of Artemis program objectives.

In conjunction with Cryo-Dock™, work continues on LOXSAT, a 140 kg liquid oxygen demonstration satellite designed to test critical CFM technologies in low Earth orbit. Funded in partnership with NASA Space Technology Mission Directorate, the LOXSAT payload is planned to include 12 individual test objectives to be operated in a microgravity environment for the first time. The LOXSAT payload design is nearing completion, with a final design review scheduled in mid-August. LOXSAT is scheduled to fly on a Rocket Lab Electron rocket in March 2024 for a nine-month mission.

About Eta Space: Founded in 2019 by former NASA and contractor personnel with over 130 years of combined experience in aerospace cryogenics, Eta Space is a technology development company that specializes in applying advanced cryogenic systems to solve critical problems in the new space and the hydrogen energy economy. Eta Space is currently developing efficient

cryogenic storage and transfer systems on Earth, in orbit, and on the Moon.

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