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C4Or1B-06: [Invited] NASA's Human Landing Systems Program (HLS) Cryogenic Propulsion Systems Status and Overview

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As part of the Artemis Program, NASA's Human Landing Systems (HLS) Program is responsible for the development of spacecraft that will land the next American astronauts on the Moon and return them safely to a staging vehicle in lunar orbit. NASA has partnered with SpaceX and Blue Origin to lead the design and development of these human landing systems, and NASA is providing critical insight and expertise, particularly in the area of cryogenic fluid management and cryogenic propulsion systems. Both landing system architectures require advancement of cryogenic propulsion technologies such as on-orbit transfer, long-duration storage, and passive and active fluid management to achieve the lunar landing mission. This portion of the NASA cryogenic propellant / fuel panel will provide a summary of the HLS architectures, concept of operations, development status, and future test and flight plans.

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