

## ■ WIRES#15 – JAXA殿共同研究 (1/3)

| Major Specifications |       |      |
|----------------------|-------|------|
| Initial Mass         | 1,000 | [kg] |
| Max. Thrust          | 17.8  | [kN] |
| Combustion Time      | 30    | [s]  |
| Max. Altitude        | 5     | [km] |

### Experimental Objectives

#### Propulsion System

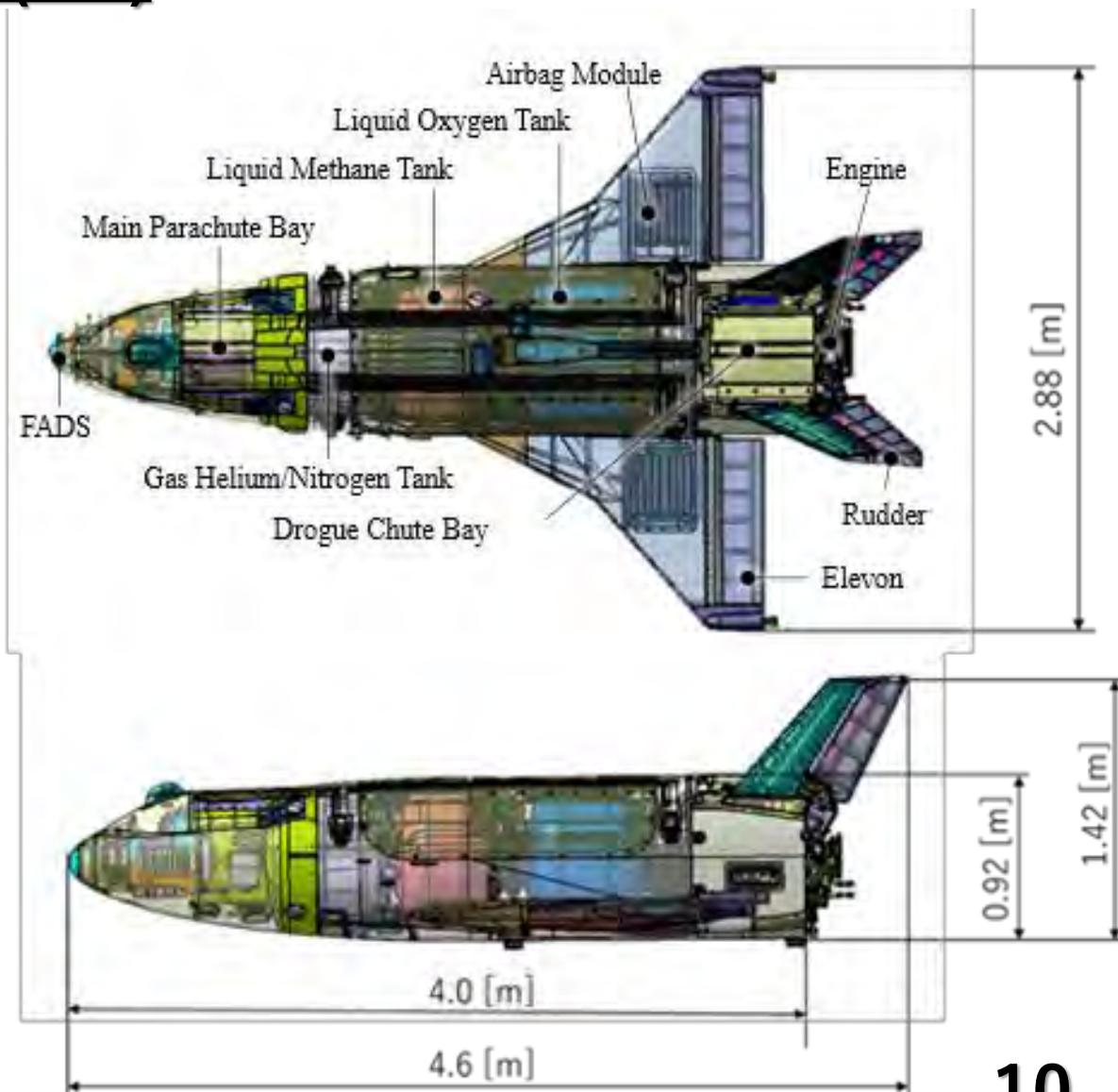
- Full Expander Cycle LOX/LNG Engine
- TVC (Thrust Vector Control)

#### NGC (Navigation, Guidance and Control) System

- Fault-tolerant FADS (Flush-type Air Data Sensing) System
- Real-time Trajectory Generation and Guidance
- Attitude Control using DI (Dynamic Inversion) Theory
- RCS (Reaction Control System) at the Apogee of Trajectory

#### Composite Tank

- LOX/LNG Tanks made of pCFRTP-PC (pitch Carbon Fibre Reinforced Poly-Carbonate)
- High Pressure He and N<sub>2</sub> Gas Tanks of Type 4





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## ✓ Pre-flight Experiment





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Demonstration Flight will be conducted at German Military Area at Meppen WTD 91 (Wehrtechnische Dienststelle) in collaboration with DRL (German Aerospace Center) from 2025 to 2026.

