

MUSTANG I

RUNWAY LAUNCHED | ROCKET POWERED | REUSABLE

RESPONSIVE ACCESS TO THE SUBORBITAL FRONTIER

Mustang I is Orion Space Systems' uncrewed, reusable aerospace vehicle concept designed to bring research payloads into high-altitude environments without the infrastructure and operating model of conventional vertical launch systems. Runway departure, a rocket-powered ascent, and unpowered glide recovery form the foundation of a repeatable, customer-focused flight service.

200,000 FT	120 LB	3 BAYS	<24 HOURS
NOMINAL ALTITUDE	TOTAL PAYLOAD	40 LB EACH	TURNAROUND TARGET

AIRCRAFT & FLIGHT CONCEPT

- Twin pressure-fed LOX/ethanol rocket engines
- Uncrewed aircraft with autonomous flight controls
- Runway takeoff and horizontal glide landing
- Three standardized payload compartments
- Rapid recovery, servicing and reuse by design

MISSION OPPORTUNITIES

- High-altitude scientific and atmospheric research
- Payload and sensor testing / qualification
- Advanced materials and technology demonstration
- Government and university experimentation
- Specialized defense research and evaluation

WHY MUSTANG MATTERS

Conventional research flights can be expensive, infrequent and difficult to schedule. Mustang I is being developed around a different model: flexible payload integration, reusable hardware and rapid mission turnaround. The objective is to make access to the near-space environment more practical for customers.

DEVELOPMENT PATH

Phased engineering, independent technical review, flight validation and FAA engagement. Orion Space Systems was selected for the NewSpace Ignitor program in October 2026.

ENGINEERED FOR RESPONSIVE, REPEATABLE MISSIONS

ORION SPACE SYSTEMS

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