

LUNAR TERRAIN VEHICLE (LTV)

Safely Traversing the Lunar Surface

The future of lunar exploration begins with getting there—to the Moon and across the surface. Creating a long-term human presence in deep space requires vehicles that are capable of safely traversing the harsh environments of planets and their moons.

The proposed LTV will be a highly reliable, modular vehicle capable of

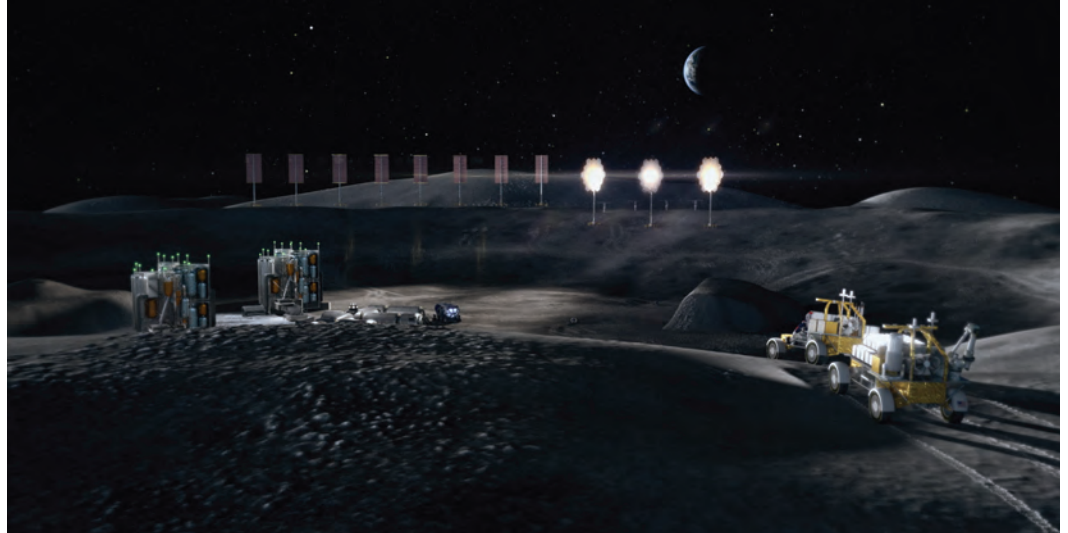
long-term exploration of the lunar surface. Northrop Grumman plans to incorporate a planetary mobility system, that includes autonomous, remote and manual driving, an airless tire solution, and robotic capabilities such as construction and excavation. The vehicle's rugged design will be optimized to withstand the Moon's harsh environment, and consideration from the first-hand experiences of Apollo astronauts has been taken to ensure that the LTV meets the needs of Artemis astronauts.

Northrop Grumman is leading systems integration and spacecraft design with a team of best-in-class automotive and

space industry partners to deliver a design for a lunar terrain vehicle that supports human and robotic exploration of the Moon and beyond.

- **AVL:** expertise in the advancement of battery electric vehicles, autonomous driving, and propulsion solutions
- **Intuitive Machines:** expertise to meet NASA and commercial demand for larger lunar surface payload delivery
- **Lunar Outpost:** a leader in lunar mobility platforms
- **Michelin:** expertise in high-tech materials and airless tire solutions

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The Lunar Terrain Vehicle's modular design will allow for easy adaptation to meet the needs of a variety of scientific experiments.

FEATURES

- Autonomous, remote and manual driving modes
- Modular design
- Planetary mobility platform
- Airless tire solution
- Extended capabilities including construction and excavation

BENEFITS

- Highly reliable
- Functions seamlessly in harsh environments
- Provides the best value possible to our customer

EXPERIENCED CONSULTANTS

- Design considers expertise from Apollo astronauts Dr. Harrison (Jack) Schmitt and Charles Duke
- Their hands-on experience in exploring the lunar surface allows for a vehicle that is optimized for astronauts' needs and comfort



Northrop Grumman's LTV will support autonomous, remote and manual driving.

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