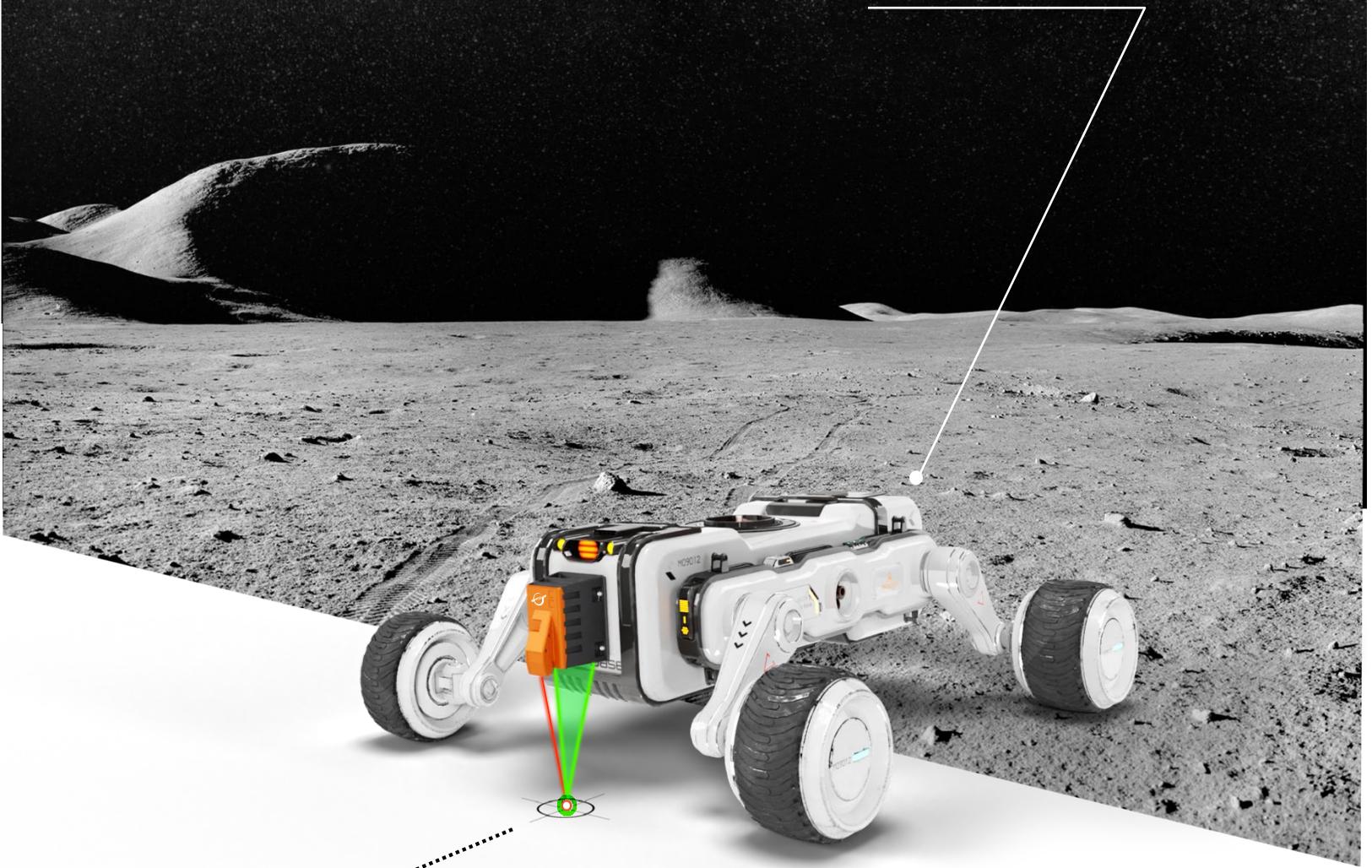


IN-SITU RESOURCE ANALYZER

ISRA / Laser spectroscopy payload for lunar exploration



Analyze to utilize

The In-Situ Resource Analyzer (ISRA) uses laser-induced breakdown spectroscopy (LIBS) technique for prospecting of lunar regolith.

Multi-elemental analyzer mounted on an **autonomous rover** enables an accelerated geological survey prior to mining and lunar settlement.

In-Situ Resource Utilization

- characterization of Lunar (Martian) regolith
- detection of water (H, and O)
- detection of other critical elements for ISRU
- chemical analysis necessary in various segments of ISRU (from prospecting to mining and utilization)

Laser-Induced Breakdown Spectroscopy (LIBS)

- stand-off elemental analysis
- laser ablation of material, plasma physics
- methodology for quantification and classification of minerals
- development of space-grade LIBS instrumentation

Laboratory of Laser Spectroscopy

Advanced Instrumentation and Methods
for Materials Characterization
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cooperation

