National Aeronautics and Space Administration

NASA**facts**

The Lunar Environment Monitoring Station for Artemis III

What is LEMS-A3

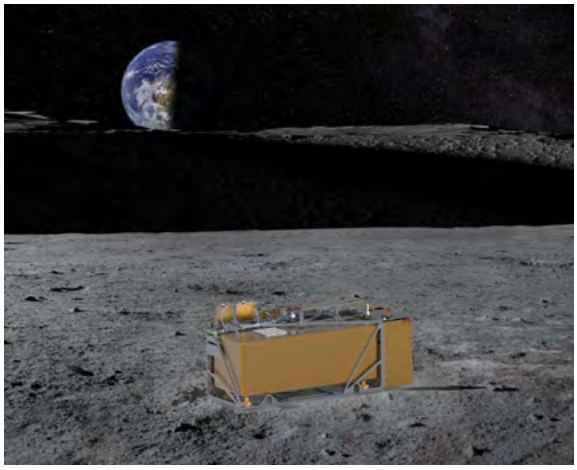
The Lunar Environment Monitoring Station for Artemis III (LEMS-A3) is a compact, autonomous, and self-sustaining geophysical instrument package that enables multi-year, in-situ, monitoring of the Moon's seismic environment.

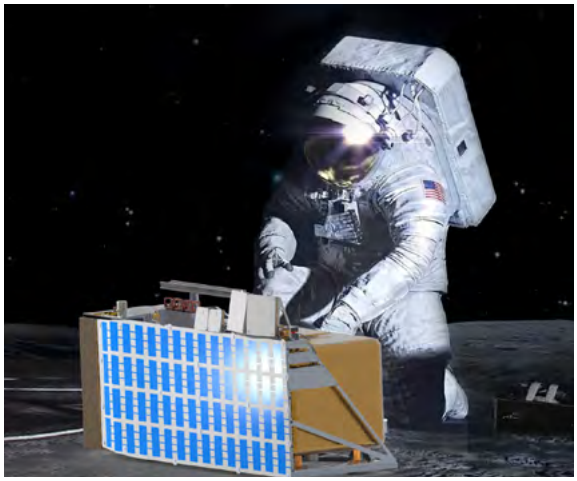
– It is a self-powered, self-managed, and self-communicating flight system.

– It conducts science observations on the lunar surface continuously (day and night).

– It is fully autonomous, requires no assistance from Artemis crew beyond deployment.

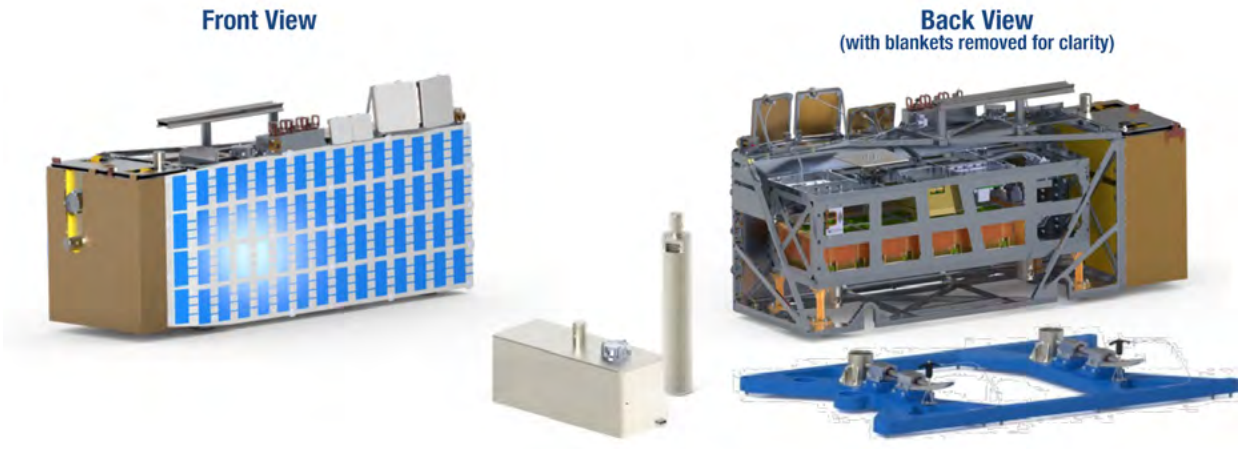
– It utilizes Short Period (SP) and Broad-band (BB) seismometers to characterize the Moon's seismicity and its internal structure.





Why LEMS for Artemis III ?

- **Provides Longevity beyond the capability of Artemis:** Seismology requires sensors to operate for long durations (months to years), which goes beyond the current duration of Artemis crew surface exploration.
- **Ideal package for delivery by crewed missions:** LEMS provides a standalone, all-in-one science package that minimizes crew workload during deployment.



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