LUNAR SAMPLE REFERENCE SUITE: “GROUND TRUTH” FOR INSTRUMENT DEVELOPMENT AND TESTING

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Support to Instrument Testing:
A reference suite of 18 lunar rocks and 4 soils, spanning the compositional and petrographic range found in the Apollo collection, has been selected and approved specifically to support instrument development and testing. A glovebox and laboratory space for testing such instruments are available in the JSC Lunar Experiment Laboratory. Thin sections of the reference suite samples are available at JSC for direct comparison. The Laboratory, sample suite, and Compendium are available to the lunar research and exploration community.

First Tests:
In the 1st test of possible instruments, we imaged all 18 reference suite rocks and 4 soils using the Multispectral Microscopic Imager developed by Arizona State and JPL.

In the 2nd test we measured the permeability and permittivity of the 4 reference suite soils using a microwave frequency waveguide developed by JPL.

Ground Rules:
- Tests must be non-destructive
- Tests may be conducted in the glovebox or on the bench top in the JSC Lunar Experiment Laboratory.
- The instrument must be transported to JSC for the tests.
- The investigator must submit a short proposal to the JSC Lunar Sample Curator, describing the proposed tests and previous results on relevant terrestrial samples.
- For accepted tests JSC will provide samples, testing area, and curator/technician support at no cost. All other costs must be supported by the proposer.