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ExoGeoLab Pilot Project for Landers, Rovers and Instruments

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We have developed a pilot facility with a Robotic Test Bench (ExoGeoLab) and a Mobile Lab Habitat (ExoHab). They can be used to validate concepts and external instruments from partner institutes. The ExoGeoLab research incubator project, has started in the frame of a collaboration between ILEWG (International Lunar Exploration working Group http://sci.esa.int/ilewg), ESTEC, NASA and academic partners, supported by a design and control desk in the European Space Incubator (ESI), as well as infrastructure. ExoGeoLab includes a sequence of technology and research pilot project activities:
- Data analysis and interpretation of remote sensing and in-situ data, and merging of multi-scale data sets
- Procurement and integration of geophysical, geo-chemical and astrobiological breadboard instruments on a surface station and rovers
- Integration of cameras, environment and solar sensors, Visible and near IR spectrometer, Raman spectrometer, sample handling, cooperative rovers
- Delivery of a generic small planetary lander demonstrator (ExoGeoLab lander, Sept 2009) as a platform for multi-instruments tests
- Research operations and exploitation of ExoGeoLab test bench for various conceptual configurations, and support for definition and design of science surface packages (Moon, Mars, NEOs, outer moons)
- Field tests of lander, rovers and instruments in analogue sites (Utah MDRS 2009 & 2010, Eifel volcanic park in Sept 2009, and future campaigns).

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