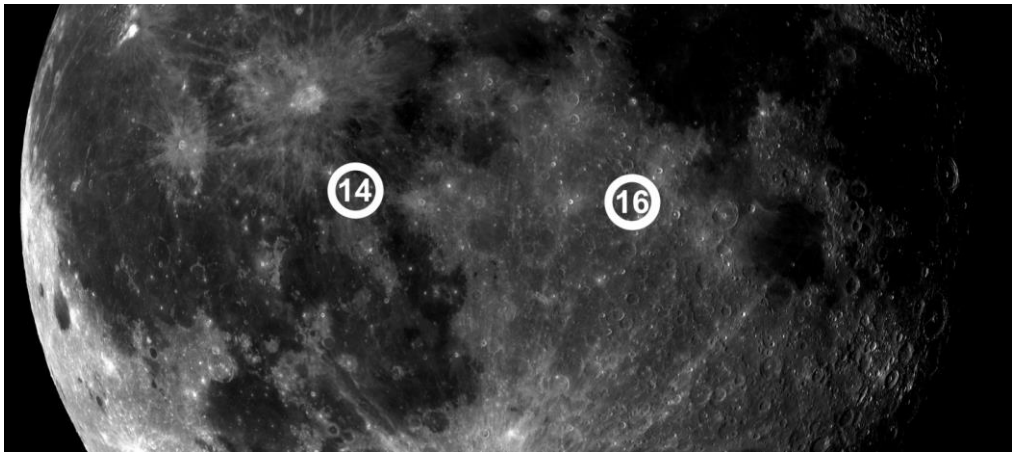
Joint Analysis of Rayleigh-Wave Dispersion and HVSR of Lunar Seismic Data from the Apollo 14 and 16 Sites

The understanding of the near-surface structure of the Moon is important both to describe the recent evolution of our satellite, both to plan possible future human activities that require the knowledge of the geotechnical parameters of the superficial lunar materials.

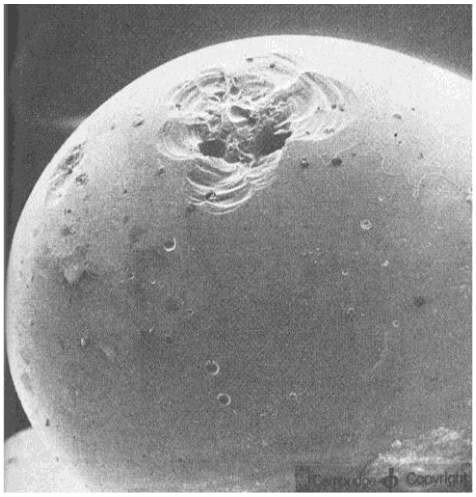
The re-processing of some of the active and passive seismic data collected during some Apollo missions was recently accomplished via up-to-date procedures and results published in ICARUS (the Elsevier journal of planetary sciences): *Joint Inversion of Rayleigh-Wave Dispersion and HVSR of Lunar Seismic Data from the Apollo 14 and 16 sites* (Dal Moro G.)

Analyses showed that the first meters of the lunar surface are composed of terribly-poor materials created by the very intense meteoric bombing (Moon lacks of an atmosphere capable of protecting its surface). Probably, if the gravity would have been similar to the one on the Earth (actually on the Moon the gravity is about 6 times smaller than on the Earth), NASA astronauts would have sunk like in a weird alien and completely waterless peat swamp...

[http://dx.doi.org/10.1016/j.icarus.2015.03.017]



Landing sites of the Apollo 14 and 16 missions



Micro-crater (0.3mm) on a glass particle from the Lunar surface

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