LISA simulators of Mars environment

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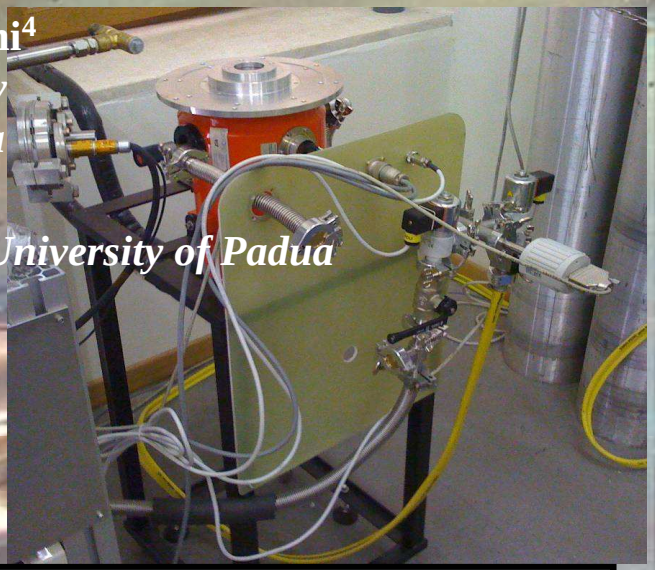
LISA



mini-LISA

Here we present some results obtained from experiments performed with the Martian environment simulators LISA (Laboratorio Italiano Simulazione Ambienti, Galletta et al., 2006, 2007) and mini-LISA, operating at the Astronomical Observatory of Padua, Italy. They have been designed to simulate the conditions on the surface of planet Mars (atmospheric pressure,6-9 mb; temperature from 133 to 293 K, Martian-like atmospheric composition and UV radiation).

LISA simulators are offered as experiment facilities to research groups willing to study soil samples, small instruments or lifeforms under Martian conditions.

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LISAs performances

Temperature: $-120 \leq T \leq 50$ °C (Mars $-136 \leq T \leq +27$ °C)
Pressure: $10^{-4} \leq P \leq 2$ bar (Mars ~7 mbar)
Atmosphere: any (Mars 95% CO_2, 3% N_2, etc.)
UVC flux ~3-6 W/m^2 (Mars ~3 W/m^2)
Length of experiment: ≤ 25 hours LISA, no limit mini-LISA