

Development of the lunar heat flow measurement system by the Lunar-A Penetrators

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In situ heat-flow measurements will be carried out in LUNAR-A mission. The penetrators contain of 18 temperature sensors, which are calibrated within 0.01 % error. 5 of the 11 thermo-couple sensors serve as thermal conductivity sensors, which are calibrated to be able to determine the thermal conductivity within 10 % error. The determination of the thermal model of the penetrator is also important, and to confirm the validity of the model, determined by the components-level experiments, we make a thermal test for a full integrated penetrator, by detecting the thermal response of the penetrator to the change of the atmospheric temperature in this April.