

Measurements of thermal properties of the whole of penetrator

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In situ heat-flow measurements will be carried out in Lunar-A mission. Detailed analysis of the temperature field within and around the penetrator, using it's thermophysical modeling, is required. We have measured thermal properties of the penetrator's mechanical components at the temperature of minus 20 centigrade within 10% errors. and constructed the thermophysical modeling of the penetrator. To confirm the validity of this modeling, we have measured thermal properties of the whole of penetrator, by detecting thermal response of the penetrator to the change of atmospheric temperature. The result did not conflict with the analytical prediction.