

Thermal test of a full-integrated LUNAR-A penetrator and determination of its thermal model

Shinsuke Yoshida[1], Satoshi Tanaka[1], Yasuyuki Yamashita[2], Hagermann Axel[1], Masahiko Hayakawa[1], Akio Fujimura[1], Hitoshi Mizutani[1], ki'ichi hourai[1], Ken'ichi Hirai[3]

[1] ISAS, [2] CAST, ISAS, [3] IA

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 its thermal model, is required. To determine the thermal model of the penetrator, we will make a thermal test for a full-integrated penetrator in April, 2001, by detecting the thermal response of the penetrator to the change of the atmospheric temperature. In order to determine the thermal conductivity of the penetrator's components more precisely, the configuration of the experiment is improved from the thermal test made in 1998 in order to determine the thermal conductivity of the penetrator's components more precisely.