

## **LUNAR-A Mission: Science Objectives and its Instruments**

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The LUNAR-A mission, Japanese penetrator mission to the Moon, was rescheduled to be launched in Feb. 2003. The mission objectives are to study the lunar interior by using the seismometers and heat flow probes on board the penetrators which are deployed on the near-side and far-side of the moon. Seismic observation of deep moonquakes will reveal the core size of the moon and the heat flow experiment will provide us with information on the thermal state of moon as well as the bulk abundance of the refractory elements in the moon. The accelerometer data acquired during the penetrator impact will give the mechanical properties of the lunar regolith as a function of depth. We will also present the current status of the penetrator development including the causes of the malfunction of the penetrator discovered in the final qualification test and its countermeasure.