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THE LUNAR RADAR SOUNDER ON-BOARD SELENE SPACECRAFT

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The Lunar Radar Sounder (LRS) on-board the SELENE will provide subsurface stratification and tectonic features in the shallow part (several km depth) of the lunar crust, by using an FM/CW radar technique in HF (~5MHz) frequency range. Knowledge of the subsurface structure is crucial to better understanding not only of the geologic history of the moon, but also of the regional and global thermal history of the Moon, and also of the origin of the Earth-Moon system. In addition to the subsurface radar experiment, LRS will provide the spectrum of plasma waves, and solar and planetary radio waves in wide frequency range covering from 10 Hz to 30 MHz. The SELENE spacecraft will be launched in 2007.