

Exploration of volatile materials in the permanently shadowed areas around the lunar poles

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There are cold permanently shadowed areas (PSAs) around the lunar poles, which can keep volatile materials for billions of years. We will explore the PSAs using remote sensing instruments onboard Kaguya. The main targets are:

- (1) Infrared absorption of surface frost (SP)
- (2) Hydrogen emission line (GRS)
- (3) Topography and subsurface structures (LALT, LRS)

inside PSAs. All the instruments have completed the initial check-out phase by December, 2007. The preliminary results from the nominal operation period will be presented.