Production of Luna topographic map using KAGUYA LALT data

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   LALT (Laser ALTimeter) is a sensor on **KAGUYA (SELENE)**, which is a lunar explorer launched on September 14, 2007. LALT have been sent the height observation data of Luna surface since the end of the December, 2007. We are discussing the method of geographic expression on Luna and producing a **topographic map** of Luna. Our purpose is production of interesting and impressive map rather than scientific output of the project.

   We are discussing the map projection; combination of the Mercator projection and the polar stereo projection may be appropriate. We are discussing the method of geographic expression; combination of contour lines, color gradation by height, and hill shading may be appropriate.

   Heights on Luna are measured from the 1737.4 km-radius sphere centered at the mass center of Luna. The Lunar shape is like a spheroid, difference between the maximum radius and the minimum radius is 1.7 km. The center of the shape is about 2 km apart from the center of mass; the difference corresponds 4 km of height difference. Therefore if we draw the color gradation by the height from the reference share, these effects are emphasized and the land forms such as maria and terrae are not visualized enough. Therefore we are selecting the reference surface which is differ from the height-reference share for color gradation, and the gradation will be done by height measured from the surface.

   We will display the topographic map and the discussion of the specifications.