

**T043-P013**

Time: May 29 17:00-18:30

## Introduction of An 100-Orders and Degrees Spherical Harmonic Model for Lunar Topography

Jinsong Ping[1], # Koji Matsumoto[2], Yoshiaki Tamura[3], Kosuke Heki[4], Hiroshi Araki[3]

[1] NAOJ, [2] Div. Earth Rotation, Natl. Astronomical Obs., [3] NAO, Mizusawa, [4] Div. Earth Rotation, National Astron. Obs.

Based on the lunar topographic 0.25x0.25 (deg x deg) grid database, which have been obtained by filtering the altimetry data of the Clementine mission, a new 100-orders and degrees spherical harmonic model is obtained. It is compared with the GLTM-2 model and the original grid data. Also, the offset between the center of figure (COF) and the center of mass (COM) of the Moon has been estimated. It is similar to the results obtained by other researchers, i.e., D. Smith et al (1997). Possibility for retrieving more information from the grid data so as to obtain the higher order and degree spherical harmonic model is also discussed. The data analysis method developed and used in this research will benefit the research of the future SELENE mission.