



LLR data analysis and impact on lunar dynamics from recent developments at OCA LLR Station

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Since late 2014, OCA LLR station has been able to range with infrared wavelength (1064nm). IR ranging provides both temporal and spatial improvement in the LLR observations. IR detection also permits in densification of normal points, including the L1 and L2 retroreflectors due to better signal to noise ratio. This contributes to a better modelisation of the lunar libration. The hypothesis of lunar dust and environmental effects due to the chromatic behavior noticed on returns from L2 retroreflector is discussed. In addition, data analysis shows that the effect of retroreflector tilt and the use of calibration profile for the normal point deduction algorithm, contributes to improving the precision of normal points, thereby impacting lunar dynamical models and inner physics.