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ENGINEERING MODEL OF POLARIMETRIC CAMERA FOR KOREAN LUNAR ORBITER

Abstract

A polarimetric camera(PolCam) for the Korea Pathfinder Lunar Orbiter (KPLO) is under development. The KPLO polarimetric camera(PolCam) will observe the whole surface between -70° and $+70^\circ$ latitudes of the Moon. Selected wavelengths are 430nm and 750nm with polarized angles between 0, 60, 90 and 120 degrees. And also the PolCam will be observed 320nm to obtain the reflectance ratios at 320 nm and 430 nm with a spatial resolution of 80m. The swath width of PolCam is about 35 km at an altitude of 100 km with 45-degree oblique observation. The PolCam consist of an electronics box and optics box. Total mass of PolCam is less than 3kg and the maximum power consumption is 15W. This paper presents development status of the PolCam engineering model and the result of ground test. The lunar orbiter is planned to launch into 100 km circular lunar orbit at 2020.