Space Studies of the Earth-Moon System, Planets, and Small Bodies of the Solar System (B)
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A YEAR OF POLCAM OPERATIONS ON DANURI

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The Wide-Angle Polarimetric Camera (PolCam) onboard the Danuri orbiter aims to measure the Moon's surface polarization data and titanium content. Launched in August 2022 and starting its scientific mission in January 2023, PolCam collects reflectance ratios and polarization data at observation wavelengths of 320nm, 430nm, and 750nm. Particularly, it performs polarization observations at 430nm and 750nm and photometric observations at 320nm to gather detailed information about the lunar surface. With a normal mission resolution of 41m/pixel, it enables the determination of physical properties such as particle size, maturity, and porosity of the lunar surface. Additionally, the reflectance ratio between 320nm and 430nm serves as a crucial indicator for estimating the distribution of TiO2 on the Moon's surface. We will introduce operational changes, including resolution improvements and mission extension, and the data and preliminary results from the first year of operation.