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Author: Dr. Muhammad Rizwan Mughal
Institute of Space Technology (IST), Pakistan, rizwan920@gmail.com

Dr. Rehan Mahmood
Institute of Space Technology (IST), Pakistan, rehan@mail.ist.edu.pk
Dr. Khurram Khurshid
Institute of Space Technology (IST), Pakistan, khurram133@yahoo.com
Dr. Hayat Muhammad Khan
Institute of Space Technology (IST), Pakistan, hayat.khan@ist.edu.pk
Prof.Dr. Qamarul Islam
Pakistan, qamarul_islam@hotmail.com

PRELIMINARY MISSION OVERVIEW AND DESIGN TECHNIQUE OF LUNAR CUBESAT
ONBOARD CHNGE'E6

Abstract

The Chang'e 6 probe, consisting of an orbiter, lander, lunar ascent vehicle and reentry capsule, will target the South Pole-Aitken (SPA) basin. The SPA basin is a colossal, ancient impact crater roughly 1,550 miles (2,500 kilometers) in diameter that covers almost a quarter of the moon's far side. The impact basin, considered to be the oldest on the moon, holds vital clues about the history of the moon and the solar system, according to a new report.

The Chang'e 6 mission will also carry a number of payloads from international partners. The Asia Pacific Space Cooperation Organization (APSCO) in collaboration with China National Space Administration (CNSA) has provided its member states (MS) the opportunity to launch a payload onboard orbiter and also the possibility of deployment of CubeSat in the lunar orbit.

As part of APSCO mission, we are currently working on a 3U CubeSat to be deployed into lunar orbit. The CubeSat shall consist of a visible/ spectral imager for further understanding of the lunar surface. Moreover, the CubeSat shall carry science and technology demonstration payloads to further understand and characterize the lunar surface. The paper shall focus on the detailed mission overview and design technique of the lunar CubeSat onboard Chang'e6 mission.