

IAF SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 1 (2A)

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STATUS UPDATE OF TAIWAN'S LUNAR EXPLORATION MISSION

Abstract

Taiwan's space agency, the National Space Organization (NSPO), has been planning a mission for outer space exploration in the Phase III space program from 2019 to 2028, and is working to include lunar exploration as a goal. In 2019, the program team has planned the development of a lunar orbiter mission. Mission objectives, key mission parameters, the strategy of arriving at the Moon, ground station requirements, and operational requirements have been derived and specified. In 2020, the academic and research communities in Taiwan have joined the lunar mission and proposed several instruments (payloads, P/Ls) with advanced scientific ideas and plans for the lunar orbiter exploration. Totally nine potential P/L developing teams have passed the screening and completed the feasibility studies in early 2021. These instruments cover four categories: lunar surface exploration, lunar environmental observation, lunar surface photography, and scientific investigations using lunar orbit. In mid-2021, NSPO has reassessed its internal resources and is considering instrument development as a first step and is seeking international cooperation or commercial services to deliver these P/Ls to the Moon. The instruments to be selected will not be installed on orbiters, but on lunar landers and lunar rovers, respectively, for lunar exploration scientific research. These instruments are expected to be completed by the end of 2024. This paper will provide an update on the status of Taiwan's lunar exploration mission. Requirements and development milestones of new payload instruments will also be briefly described.