

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Poster session (2D)

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LONG MARCH LAUNCH VEHICLES SUPPORT MOON EXPLORATION

Abstract

As Chinese Chang'e-3 lunar probe with the country's first moon rover named "Yutu (Jade Rabbit)" successfully sent by Long March 3B (LM-3B) launch vehicle, it set up a millstone for China's moon exploration, also proves that Long March Vehicles are the reliable access to the moon.

This article will present the capacity of Long March launch vehicles to support moon exploration activities. In the current stage, LM-3A series, including the LM-3A, LM-3B and LM-3C, are the flight proven launch vehicles which have already conducted China's three Chang'e moon exploration missions successfully, sending three rovers with different mass and dimensions to the moon by applying the different trajectory philosophies.

Meanwhile, Long March also provides the support to the international moon exploration activities. For example, to support the Google Lunar X PRIZE competition, China Great Wall Industry Corporation (CGWIC), the international cooperation platform for China's space industry, has reached the agreement with a European team for sending its self-developed lunar rover to the moon by using the LM-2C launch vehicle, which is different from the LM-3A series.

In the future, with the China's new generation of launch vehicles coming into services, China would expand its launch capacities significantly for the moon exploration.

In summary, China's current and future Long March launcher family are capable of sending various kind of payloads to the moon by using the proper launch solution and willing to support the international space exploration activities as well, including but not limited to the moon, either for the scientific purpose or the private commercial operations.