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Rashid Rover to shoot off for moon in 2022

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WORLD'S FIRST GREEN MOSQUE

DUBAI

BY ANGEL TESORERO
Senior Reporter

The UAE is set for yet another date with history as the Arab world's first lunar mission, Rashid Rover, is set to be deployed to the moon between August and November next year, Dr Hamad Al Marzouqi, the project manager of Emirates Lunar Mission (ELM) at the Mohammad Bin Rashid Space Centre (MBRSC), has confirmed to *Gulf News*.

"The launch window has been planned between August 2022 and November 2022," said, Dr Al Marzouqi said. "The landing site is an area called Lacus Somniorum, which translates into 'Lake of Dreams' [in English]. This is the primary landing site, while three others have been selected as backup," he added.

Prototype testing

Al Marzouqi also said: "Rashid Rover is currently being tested at MBRSC – for the most part – and there are different kinds of tests being conducted at various locations in the UAE, France, Japan and other areas."

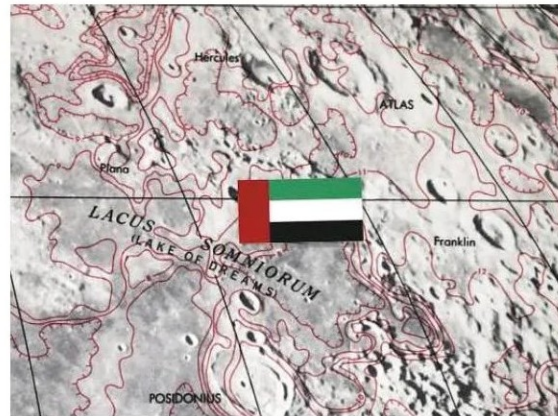
MBRSC announced early last month that the first prototype of Rashid Rover has concluded a successful functional testing, which is an assessment used to test the features/functionality of the system or software. The next step is robustness testing, which is done to verify the robustness or correctness of a test process and to verify whether or not a software system will perform well under stress.

Importance of launch window

In the context of spaceflight, launch window is a term used to describe a time or period in which a particular mission

Emirates Lunar Mission set for August–November 2022 launch

MBRSC REVEALS RASHID ROVER'S LANDING SITE ON MOON'S SURFACE



■ Rashid Rover's landing site on the moon is an area called Lacus Somniorum, which translates into 'Lake of Dreams'.

ROVER'S MISSION

Rashid Rover's mission is to better understand how lunar dust and rocks vary across the moon. It will capture multiple images and send those back to the control room in Dubai. The ELM team will then test new technologies in material science, robotics, mobility, navigation and communications, which are designed to survive and function in the harsh lunar environment. The rover is touted as the smallest and lightest rover to be deployed on the surface of the moon. **Its height is 70cm, length is 50cm and width is 50cm. Its weight is approximately 10kg with payload.**

must be launched. Launch window or launch period is dependent on the rocket's capability and the orbit to which it is going. It is also determined to set optimise fuel and resource-efficient course for the vehicle to reach its destination. Timing

is the key here. If the rocket is launched without considering the correct launch window, there is a strong chance that it could enter the wrong orbit and fail in its intended mission.

UAE-made Rashid Rover will be delivered to the lunar



Gulf News Archives

■ The Rashid Rover prototype at the Emirates Lunar Mission office at the Mohammad Bin Rashid Space Centre.



Lunar mission: First prototype of UAE's Rashid Rover passes functional testing

surface next year by Japanese lander Hakuto-R (Hakuto-Reboot) aboard a SpaceX Falcon 9 rocket that will lift off from Kennedy Space Centre in Florida, United States.

A first for Arab world

The Emirates Lunar Mission will be the first moon landing for the Arab world and for Japan. If successful, the UAE and Japan will together become the fourth entity to land on the lunar surface, after the United

States, former Soviet Union and China.

Rashid Rover will be deployed two years ahead of the original schedule. Japan's Hakuto-R is set to land on the near side of the moon, which offers a smoother surface with less craters.

Al Marzouqi has confirmed that the primary landing area is the moon's Lacus Somniorum, a basaltic plain located in the northeastern part of the moon's near side. Lacus Somniorum, the name given by 16th century Italian astronomer and Catholic priest Giovanni Riccioli, has a diameter of 424.76km and it "has an irregular feature with complex, somewhat ill-defined borders". Its surface was formed by flows of basaltic lava.