

Emirates Mars Mission Countdown Starts

Mars Hope Probe to Launch in 10 Days

Abu Dhabi, United Arab Emirates, 6 July 2020 - The Emirates Mars Mission, the first interplanetary exploration undertaken by an Arab nation, today confirmed the launch of its Mars Hope Probe in 10 days – on the 15 July 2020 at 5.51am (JST) / 14 July 2020 at 4:51am (EST) from Tanegashima Space Center in Kagoshima Prefecture, southwestern Japan, on a Mitsubishi MH-IIA rocket. The launch will be livestreamed at <http://www.emm.ae/live>.

The Emirates Mars Mission (EMM) will send the Mars Hope probe on a 495,000,000km journey to reach and orbit the Red Planet in February 2021. Hope aims to build the first full picture of Mars' climate throughout the Martian year.

“The launch of Mars Hope comes at the end of a six-year journey of development by the team at the Mohammed bin Rashid Space Centre, an accelerated time frame by interplanetary mission standards. The team has overcome remarkable challenges, not least those presented by the Covid-19 pandemic, but we're all good to go now,” said Omran Sharaf, EMM Mission Lead.

EMM and the Hope probe are the culmination of a knowledge transfer and development effort started in 2006, which has seen Emirati engineers working with partners around the world to develop the UAE's spacecraft design, engineering and manufacturing capabilities. It is part of a long-term integrated effort to create economic opportunity around leadership in space sciences, research and exploration. The mission's probe was named Mars Hope as a symbol of hope for all young Arabs.

The launch will see the two-stage, 53-metre Mitsubishi rocket reach a velocity of 38,000 km/h to place the probe into earth orbit, from there it will start its 7-month cruise at a speed of some 121,000 km/h to reach Mars Orbital Insertion (MOI) in February 2021.

Mars Hope is a fully autonomous spacecraft, carrying three instruments to measure Mars' atmosphere. Weighing some 1,350 kg, and approximately the size of a small SUV, the spacecraft was designed and developed by MBRSC engineers working with academic

partners, including LASP at the University of Colorado, Boulder; Arizona State University and the University of California, Berkeley.

EMM will study the Martian atmosphere, the relationship between the upper layer and lower layer, and for the first time, scientists based in over 200 universities and institutes globally will have access to a holistic view of the Martian atmosphere at different times of the day, through different seasons.

“Something like 50% of all missions to Mars to date have failed – it’s a huge challenge for a young nation to undertake a mission like this. But we have already – before we even launch the mission – learned so much and accomplished so much in taking on that challenge. It has truly transformed The Emirates’ capability in space systems engineering, science and research and had enormous positive impacts on our science community in general,” Sharaf said.

The Emirates Mars Mission was developed by the Mohammed bin Rashid Space Centre (MBRSC) working in conjunction with its knowledge transfer partners and funded by the UAE Space Agency.

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About the Emirates Mars Mission

Announced in July 2014 by Sheikh Khalifa Bin Zayed Al Nahyan, President of the United Arab Emirates and Ruler of Abu Dhabi and Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, the Emirates Mars Mission was developed by the Mohammed bin Rashid Space Centre (MBRSC) working in conjunction with its knowledge transfer partners and funded by the UAE Space Agency.

EMM was conceived to disrupt and accelerate the development of the UAE’s space sector, education and science community and will send the Mars Hope probe to orbit Mars in February 2021. Hope aims to build the first full picture of Mars’ climate throughout the Martian year.

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The Mars Hope Probe will reach Mars orbit in 2021, the 50th anniversary of The Emirates, which became an independent nation on 2 December 1971.

Media Contact

FleishmanHillard

Caitlin Teahan

Caitlin.Teahan@fleishman.com

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