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Long-haul travel may not get going for 2 years

Mutant strains, pace of vaccine roll-outs raising concerns



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All eyes on Hope Probe

It will capture complete image of Mars atmosphere, collect ITB data



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American democracy is still far from safe

9/11 brought citizens together, 1/6 appears to do the opposite

FIRST HOPE PROBE DATA BY SEPTEMBER

Spacecraft will capture complete image of Mars atmosphere, collect 1TB data

DUBAI

BY ANGEL TESORERO
Senior Reporter

All eyes are on the UAE Hope Probe's crucial Mars Orbit Insertion (MOI), which is scheduled to take place on Tuesday. If successful, the UAE will become only the fifth country or entity in the world to reach Mars and the third country to achieve the feat on its first attempt.

However, it will only be by September that the first set of data captured by Hope Probe of Martian atmosphere will be released to the science community and the public, Omran Ahmad Al Hammadi, Science Data Centre Lead – Hope Probe, told *Gulf News* during a press briefing at the Mohammad Bin Rashid Space Centre (MBRSC) over the weekend.

Capture orbit

Al Hammadi explained: “After Hope Probe's successful orbit entry, scientists and engineers will spend two months testing the spacecraft and its on-board scientific instruments before the orbiter will transition to its science orbit.” For two months, Hope Probe will be in capture orbit. During this stage, the ground control at MBRSC will conduct Three Transition to Science (TTS) manoeuvres to move the probe from its capture to science orbit. The final number of such manoeuvres will be defined by the accuracy/success of MOI. The transition to Hope's



■ Hessa Rashid Al Matroushi



■ Omran Ahmad Al Hammadi

science orbit will be completed by April 2021.

“Hope Probe has a planned 20,000km-43,000km elliptical science orbit, with an inclination to Mars of 25 degrees. In this orbit, the probe completes one orbit of the planet every 55 hours and will capture a full planetary sample every nine days,” Al Hammadi added.

30 minutes to process data

He continued: “The mission operation centres at different ground stations spread around the world will receive raw data from the Hope Probe, which will be submitted to the Science Data Centre at MBRSC, where data processing, management

Ten winners to join Arab Space Pioneers Programme

ABU DHABI
Staff Report

The UAE Space Agency has announced the names of ten winners who have been selected to join the Arab Space Pioneers Programme's inaugural edition, the first intensive scientific training programme of its kind in the Arab world.

His Highness Shaikh Mohammad Bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE and Ruler of Dubai, had launched the first-of-its-kind specialised training programme last July, in line with the launch of the UAE's Hope Probe to Mars – the Arab world's first interplanetary mission.

Within two weeks of its launch, the Arab Space Pioneers drew an overwhelming 37,000 applications from creative talents, researchers and inventors across the Arab world. The candidates chosen for the Talent Track are:

and indexing will be done to generate high level of scientific products before sharing with the world for free. It will take 30 minutes to process the data and the first set of data will be released by September and every three months thereafter.”

Hope Probe, with its three scientific instruments, will map a complete portrait of the Martian atmosphere and col-

lect more than one terabyte (1,000GB) of new data.

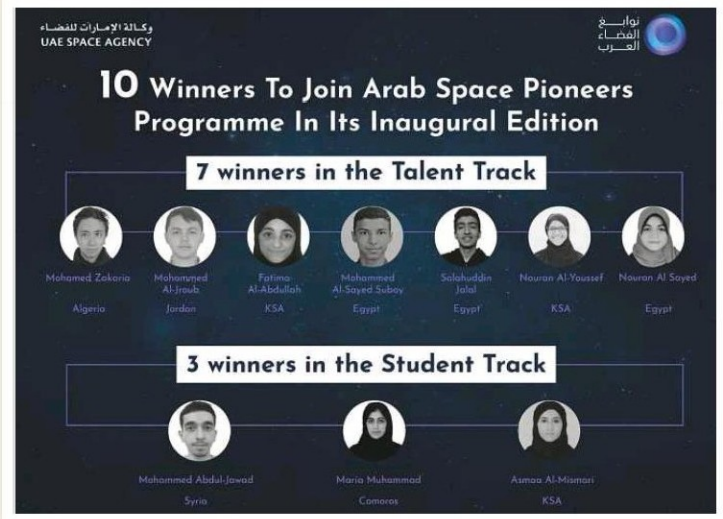
There are spacecrafts currently orbiting Mars, but they only follow paths around its equator and they can only see a particular area of the planet's surface at one time of the day. Hope Probe, on the other hand, will circle the equator, allowing it to get a complete picture of the planet every nine days –

including every spot on the surface at any time of day.

Complete view

The spacecraft carries three main scientific instruments that will allow it to observe Mars' atmosphere in wavelengths from infrared to ultraviolet. “This will provide a complete view of Mars atmosphere and this will allow scientists to study how the dif-

ferent layers of the atmosphere interact with one another and how those interactions change depending on the time of day, season and year. This will help us answer the long-standing question of how hydrogen and oxygen escape from the Martian atmosphere and float away into space,” noted Hessa Rashid Al Matroushi, Hope Probe Deputy Project Manager – Science.



Muhammad Al Sayed Subai (17 years), Salah El Din Jalal (17 years) and Nuran Al Sayed (16 years) from Egypt; Nuran Al Youssef (16 years) and Fatima Al Abdullah (16 years) from Saudi Arabia; Muhammad Zakaria (15 years) from Algeria;

and Muhammad Al Jroub (16 years) from Jordan. Finally, the candidates selected in the Student Track are Maria Muhammad from the Comoros, Muhammad Abdel Jawad from Syria, and Asmaa Al Mismari from Saudi Arabia.