UAE Space Exploration Efforts

27/08/2021
Emirates Mars Mission
EMIRATES MARS MISSION JOURNEY

Launch Date: July 2020
Launch Speed: 34,082 km/h
Cruising distance from Earth to Mars: 493.5 Million Km
Orbit period: 55 hours
Radio signal delay: 13 - 26 minutes
Cruising time: approximately 7 months
Science Orbit Dimension: 20,000 x 43,000 Km
Spacecraft enters its orbit around Mars in February 2021
Hope Probe uses star trackers to navigate
Unfolding panels to recharge
Earth at launch
Mars at launch
Earth at arrival
Mars at arrival
HOPE PROBE INSTRUMENTS

**EMIRATES MARS INFRARED SPECTROMETER (EMIRS)**
- Infrared

**EMIRATES EXPLORATION IMAGER (EXI)**
- High resolution photos

**EMIRATES MARS ULTRAVIOLET SPECTROMETER (EMUS)**
- Ultra Violet
Emirates Lunar Mission
The instruments on the first Arab lunar rover

- Two high-resolution cameras to capture images of the lunar surface
- Microscopic Camera
- Thermal Imager
- Langmuir Probe to determine the electron temperature, electron density, and electric potential of a plasma
- Inertial Measurement Unit (IMU) to track the motion of the Rover
- 3D Camera Time of Flight

The scientific objectives of the Emirates Lunar Mission

- Study the **lunar surface soil**
- Study the thermal properties of **lunar surface structures**
- Study the **lunar photoelectron sheath**
- Test different materials for their **susceptibility to adhesion of lunar particles**
- Study mobility on the **lunar surface**
Astronaut Program
NORA ALMATROOShi
Second Batch of the UAE Astronaut Programme

YEAR OF BIRTH: 1993
EDUCATION:
• Bachelor’s degree in mechanical engineering from the United Arab Emirates University (2015)
• Training at the Vaasa University of Applied Sciences in Finland

MOHAMMAD ALMULLA
Second Batch of the UAE Astronaut Programme

YEAR OF BIRTH: 1988
EDUCATION:
• Holder of commercial pilot’s license
• Holder of flight instructor license from the Australian Civil Aviation Authority
• Bachelor’s degree in law and economics
• Executive Master of Public Administration - Mohammed Bin Rashid School of Government