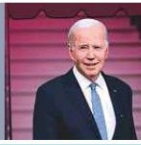


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UAE ASTRONAUT MISSION: ALL YOU NEED TO KNOW

A dream and astronomical work fuel fascinating story of the first Arab set to spend 6 months on ISS

DUBAI
BY SAJILA SASEENDRAN
Senior Reporter

Five years of literally astronomical work has gone into efforts to realise the space mission poised to enable the first Arab to spend six months in space.

However, when the UAE's second astronaut Sultan Al Neyadi lifts off to the International Space Station (ISS) from NASA's Kennedy Space Centre in Florida tomorrow, he will be fulfilling a decades-old dream – that of a region, a nation and himself.

As we approach the new target date of SpaceX Crew-6 Dragon Endeavour's lift-off on a Falcon 9 rocket on February 27, here is everything that residents in the UAE need to know about the history in the making in the country that you call home.

Why the mission's name?

This space mission is named UAE Mission 2. It is named so because this is the second time the country is sending an astronaut to space. In 2019, the first Emirati astronaut Hazzaa Al Mansoori spent eight days in the ISS in the first mission.

The UAE has always taken pride in the fact that its founding father, the late Shaikh Zayed Bin Sultan Al Nahyan, had a thirst for scientific knowledge and a vision and dream to elevate his country among space-faring nations. Keeping that legacy in mind, the country's first astronaut mission carried the slogan 'Zayed's Ambition.'

The second mission has a logo that depicts an astronaut wearing the space suit and looking at a portrait of Shaikh Zayed.

A first for the region

Upon the completion of this mission, the UAE will rank 11th globally among countries that have successfully achieved a long-duration mission at the ISS. It will also become the first Arab country to hit this milestone. The UAE is also the first non-ISS partner country to participate in a long-haul ISS mission.

Al Neyadi, 41, whose full name is Sultan Saif Hamad Al Neyadi, is an IT engineer hailing from Al Ain. He used to work as a Network Security Engineer for the UAE Armed Forces.

What is Crew-6 mission?

It is a four-person astronaut mission to the ISS on a Crew Dragon spacecraft from Elon Musk's spacecraft manufacturer Space Exploration Technologies Corp (SpaceX). The spacecraft or the capsule is named Endeavour. It will lift off to space on board a SpaceX Falcon 9 rocket. Crew-6 is a joint mission of NASA and SpaceX. The flight is NASA's sixth crew rotation mission with SpaceX to the space station, and the seventh flight of Dragon with people as part of NASA's Commercial Crew Programme. It is the ninth overall crewed orbital flight.

Crew-6 will spend up to six months at the space station before returning to Earth. The Crew-6 launch will carry two NASA astronauts from the US, Mission Commander Stephen Bowen and Pilot Warren 'Woody'

Hoburg, along with UAE astronaut Sultan Al Neyadi, and Roscosmos cosmonaut Andrey Fedyayev of Russia, who will serve as mission specialists for Expedition 69, the 69th long-haul expedition in ISS. Since 2000, the space station has never been without astronauts on board. The members of Crew-6 will join the seven astronauts currently in the ISS for Expedition 68. Some of them will return to Earth after the arrival of Crew-6.

What's special about the Crew-6 logo?

The names of all four crew members have been written in their mother tongues in the design chosen for the Crew-6 logo. Al Neyadi's name in Arabic is what makes the logo extra special for the Arab region. NASA explains the design of the logo as below.

"Sailing across the Crew-6 patch, the ship represents both our destination, the International Space Station, and the vessels that countless explorers have steered into the unknown. The station anchors us on the dawn of missions to the Moon and Mars.

The ship's sail, a symbol of the 2012 cosmonaut class, has relative radii matching those of the Earth, the Moon, and Mars. The Draco constellation represents NASA's Commercial Crew Programme and shares a name with the thrusters that manoeuvre our Dragon spacecraft. The ship's Dragon figurehead looks to the future as we also look back at Earth, grateful for the tireless hours of all who support our mission."

What is Al Neyadi's role in Crew-6?

Al Neyadi is a mission specialist and primary crew of the SpaceX Crew-6. Once aboard the ISS, he will be the flight engineer. He will spend six months in the orbiting laboratory during which he will carry out almost 20 experiments.

The scientific projects that the team would carry out span a wide range of disciplines – from life and physical sciences to advanced materials, technology development, in-space production applications, and even student-led research.

"Results from these studies will bring value to humanity, further our ability to explore, and enable a robust market in low Earth orbit," stated ISS National Laboratory which will sponsor dozens of these investigations.

Adnan Al Rais, mission manager, UAE Astronaut Mission 2, said the scientific community in the UAE, including researchers and students, will take part in the mission through an educational and outreach programme. MBRSC and the Emirates Literature Foundation also has a joint venture through which Al Neyadi will interact with students from space. It will be through live or recorded sessions that will be streamed on a website, according to Salem Humaid Al Marri, director general of MBRSC.

In the event of any delay in the planned launch window, back-up launch dates as of now are February 28, March 2, 3 and 4.

From becoming the first Arab nation and fifth country ever to reach Mars and the first Arab country to build and launch a Moon rover, the UAE continues to make incredible strides in space.



UAE astronaut Sultan Al Neyadi (2nd right) with his fellow crew members. **Left:** The Falcon 9 rocket is rigged to the launchpad with the Endeavour capsule perched atop it.



Results from these studies [experiments to be conducted during the Crew-6 mission] will bring value to humanity, further our ability to explore, and enable a robust market in low Earth orbit."

ISS National Laboratory



Sultan Al Neyadi was with the UAE Armed Forces working as a Network Security Engineer prior to being chosen for the space mission.

Right: The Falcon 9 rocket and SpaceX Crew-6 Dragon Endeavour space capsule mark the end of their journey by land at the launch site at NASA's Kennedy Space Centre in Florida.



ON GULFNEWS.COM

Rocket flying UAE astronaut Al Neyadi to space rolled out to NASA launchpad, what happens next?



Watch videos on astronaut Sultan Al Neyadi and his mission preparations

Why the name 'Najmonaut' for Al Neyadi?

DUBAI
BY SAJILA SASEENDRAN, Senior Reporter

Najmonaut is a word coined to refer to an Arab astronaut. *Najm* in Arabic means star and the UAE's star astronaut is now referred to as a najmonaut and is also popularly known as the 'Sultan of Space.'

Since 2018, he has undergone various training programmes at astronaut and cosmonaut training facilities under NASA and other entities in various countries. In 2021, he became officially certified to work as an operator on-board the International Space Station.

Al Neyadi completed his training for the long-haul mission at NASA's Neutral Buoyancy Laboratory (NBL). His space dream came to have wings when the Mohammad Bin Rashid Space Centre (MBRSC) in Dubai invited applications from Emiratis for the UAE Astronaut Programme in 2018. He was selected along with Hazzaa Al Mansoori to form the first batch of Emirati astronauts.

Al Neyadi was later chosen as the back-up for Al Mansoori in the first mission. Al Mansoori is his back-

up this time around. Al Neyadi could also be possibly the first 'najmonaut' to perform the first spacewalk. His training included spacewalks, robotics and science experiments.

The father of five is currently in preflight quarantine at the Kennedy Space Centre while his family members are also in Florida to watch him make the epic flight.

Al Neyadi is a PhD holder in Information Technology (Data Leakage Prevention) and an author of six research papers.

Though Al Neyadi found himself drawn to engineering, and spent 20 years serving in the military, he never let go of his childhood dream.

It was always his dream to become a pilot and an astronaut, though in his youth he had never imagined his dream would ever come true.

In July 2022, President His Highness Shaikh Mohammed Bin Zayed Al Nahyan and His Highness Shaikh Mohammad Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, announced the selection of Al Neyadi to participate in the first long-duration Arab astronaut mission.