



TUESDAY SEPTEMBER 5, 2023
SAFAR 20, 1445

GULF NEWS

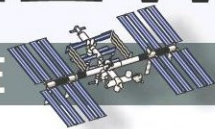
gulfnews.com



Scan for our social media



WELCOME BACK SULTAN OF SPACE



YOU MADE US PROUD



■ Sultan Al Neyadi is helped out of the SpaceX Dragon Endeavour spacecraft onboard the SpaceX recovery ship Megan off the coast of Jacksonville, Florida, yesterday.

AFP

DUBAI
BY SAJILA SASENDRAN
Senior Reporter

In a historic achievement that elevated the UAE's space ambitions to stellar heights, astronaut Sultan Al Neyadi yesterday splashed down off the coast of Jacksonville in Florida, US, after completing the longest Arab space mission and making the entire country proud of him. The culmination of his space voy-

age spanning six months aboard the International Space Station, not only cemented the UAE's place in an exclusive spacefaring club but also created a monumental chapter in the nation's space odyssey through the success of Zayed Ambition 2, the second part of the UAE Astronaut Programme.

Leaders all praise for Al Neyadi

President His Highness Shaikh Mohammed Bin Zayed Al Nahyan, His Highness Shaikh Mohammad Bin

Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai and Shaikh Hamdan Bin Mohammad Bin Rashid Al Maktoum, Crown Prince of Dubai, Chairman of The Executive Council of Dubai and President of the Mohammad Bin Rashid Space Centre, led the country in congratulating the Sultan of Space and welcoming him back to Earth.

The Najmonaut (Arab astronaut), who spent 186 days in space, orbiting Earth around 3,000 times, was the last

of the four Nasa SpaceX Crew-6 crew members to egress from the Dragon positioned on the recovery platform of SpaceX recovery vessel Megan.

As he briefly "set foot" on the vessel's deck exactly an hour after splashdown and got rolled out to the medical bay, Al Neyadi wore a big smile and showed the thumbs-up victory sign.

Prior to the splashdown at 8.17am UAE time, the Dragon spacecraft followed a series of critical phases, including phasing burns, trunk jettison,

deorbit burn, re-entry, parachute deployment, and finally, splashdown.

The re-entry phase involved a blackout period of seven minutes due to plasma formation outside the spacecraft during the descent. Communication signals were temporarily lost but were reestablished. Due to the heat shield's work during re-entry, the spacecraft slowed down from 17,000 to 350 miles per hour, and the thermal protection systems (TPS) shielded the Dragon from the extreme heat.

GULF NEWS

Al Neyadi's space mission is a triumph for the UAE

Astronaut's 6-month odyssey is a resounding testament to nation's visionary leadership

The UAE's skies have ignited with fervour as Sultan Al Neyadi returned triumphant to Earth, marking the culmination of his remarkable six-month odyssey aboard the International Space Station (ISS).

This monumental feat not only reaffirms the nation's unshakeable commitment to advancing its space programme but also stands as a blazing beacon of inspiration.

Al Neyadi's return is nothing short of spectacular. A colossal milestone for the UAE, it signifies the nation's second successful human space flight and the Arab world's first extended mission.

A historic moment in April saw Al Neyadi don his spacesuit and venture into the cosmic abyss, emerging as the pioneering Arab astronaut to perform a spacewalk — a historic feat indelibly etched in the annals of Arab space exploration.

Country's commitment to space sector

This mission resounds with the UAE's resolute commitment to catapult its space sector further. With a bold investment of approximately \$10 billion slated over the next decade, the UAE isn't merely reaching for the stars; it is steadfastly determined to grasp them. The return of Sultan Al Neyadi stands as a resounding testament to the visionary leadership of the UAE, determined to propel the nation's space programme to unparalleled heights.

This is a moment of unparalleled pride for all of us. As the UAE continues to advance in space science, technology, and innovation, we stand on the cusp of a future that promises to enrich humanity's comprehension of the cosmos.

SEE MORE



UAE leaders applaud success of space mission **P6**

How Arab star Sultan Al Neyadi splashed down to Earth **P2**

Father's pride flows out as poem in moving tribute to Al Neyadi **P4**

Six months in space: Al Neyadi's journey in pictures **P7**

ON GULFNEWS.COM

Meet 'Sultan of Space'

Al Neyadi's heartfelt farewell speech
An inspiration for young generation



Al Neyadi's journey home from the ISS

beurer
health and well-being

german engineering since 1960

Beurer - Specialist for health & well-being

Be inspired by our products and relish a pure joy for life with Beurer!

 BM 40 UPPER BP MONITOR	 BM 54 UPPER BP MONITOR	 FT 85 NON CONTACT THERMOMETER	 IH 18 NEBULIZER
 MG 99 MASSAGER	 FM 120 FOOT MASSAGER	 BF 400 DIAGNOSTIC SCALE	 HC 25 HAIR DRYER

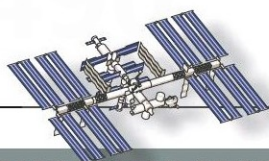
Available in all leading pharmacies, hypermarkets and **BEURER** Showrooms

City Centre Deira | 04 2626680 Dubai Mall | 04 2393040

wellbeing medical beauty active babycare



WELCOME BACK SULTAN OF SPACE



HOW ARAB STAR SULTAN AL NEYADI SPLASHED DOWN IN ATLANTIC AFTER HISTORIC MISSION

UAE astronaut, who spent 186 days in space, was the last of four Crew-6 members to exit spacecraft positioned on the platform of SpaceX recovery vessel Megan yesterday

DUBAI
BY SAJILA SASEENDRAN
Senior Reporter

An Arab star literally descended to Earth early yesterday when the Dragon spacecraft Endeavour carrying Nasa SpaceX Crew-6 splashed down in the Atlantic Ocean off the coast of Jacksonville in Florida, US.

UAE astronaut Sultan Al Neyadi made his triumphant return to Earth after the successful completion of the longest Arab space mission in history exactly one hour after the spacecraft splashed down at 8.17am in the UAE.

The Najmonaut (Arab astronaut), who spent 186 days in space, was the last of the four crew members to be rolled out of the spacecraft positioned on the recovery platform of SpaceX recovery vessel Megan.

The crew members safely egressed from the side hatch of the Dragon Endeavour with the help of the SpaceX recovery personnel.

After initial medical checks, the crew members were taken for a short helicopter ride to Florida from where a Nasa aircraft flew them to Houston where they were scheduled to be welcomed by family members. Al Neyadi's father, brothers, wife and MBRSC officials were among those waiting to give him a grand reception.

Gulf News tracked his historic journey back to Earth that began with undocking procedures on Sunday morning and continued the live coverage yesterday until the crew members safely egressed after their 17-hour journey.

Here is how events unfolded yesterday.

Safety preparations, site selection

Safety precautions were meticulously planned, with the United States Coast Guard establishing a safety zone to protect both the crew and the public during recovery operations.

The splashdown site off the coast of Jacksonville, Florida, was selected based on various factors, including weather conditions and the space station's orbital trajectory.

Re-entry phases

The Dragon spacecraft followed a series of critical phases, including phasing burns, trunk jettison, deorbit burn, re-entry, parachute deployment, and finally, splashdown.

The re-entry phase involved a blackout period of seven minutes due to plasma formation outside the spacecraft during the descent. This phase was challenging as the Dragon Endeavour experienced temperatures exceeding 3,000 degrees Fahrenheit. This blackout offered a fantastic view of the Dragon for those in Central Florida.

Recovery safety measures

Communication signals were temporarily lost but were successfully reestablished after this period. Due to the heat shield's work during re-entry, the spacecraft slowed down from 17,000 to 350 miles per hour, and the thermal protection systems (TPS) shielded the Dragon from the extreme heat.

TRIUMPHANT RETURN

UAE astronaut Sultan Al Neyadi and other members of Crew-6 splashed down off the coast of Florida at 8.17am UAE time yesterday. An hour later, the crew members safely egressed from the side hatch of the Dragon Endeavour with the help of the SpaceX recovery personnel.

Al Neyadi was the last to exit the spacecraft. He is back on Earth after spending 186 days in space. After medical checks, crew members were flown to Houston where they were set to be welcomed by family members. Al Neyadi's father, brothers, wife and MBRSC officials were among those waiting to give him a grand reception.

WHO IS A NAJMONAUT?

Najmonaut is a new word that is making its way into the global lexicon. It is a coinage of two words. The Arab word "najm" translates to star and the Greek word "naut" means sailor.

The new word that refers to an Arab astronaut, was reportedly coined by Dr Mejd Alsari, an Emirati scientist, and Lisa La Bonte, a space educator, to provide a unique identification for Arab space explorers.

Multiple safety measures were in place to ensure the safe recovery of the heat-scorched Dragon and the crew. The deployment of parachutes, including two drogue and two main parachutes, helped slow down the spacecraft's descent.

The spacecraft's nose cone was closed to prepare for atmospheric re-entry. The recovery operations team, including helicopters, boats, and ships, was on standby to assist with the recovery process. Two fast boats and the recovery personnel inside them secured the Dragon and helped move it onto the recovery platform of the recovery ship using rigging equipment and hydraulic lifts.

Word of gratitude

Crew-6 commander Nasa astronaut Stephen Bowen expressed his gratitude for the support received throughout the mission, emphasising the importance of teamwork and communication during the journey. Bowen was the first to be assisted to egress from the spacecraft, followed by Nasa astronaut and Crew-6 pilot Warren Woody Hoburg, Russian cosmonaut Andrey Fedyaev and finally Al Neyadi.

The crew members wore big smiles and showed thumbs-up signs as they briefly set foot on the recovery vessel, after six months of floating in microgravity.

They were then taken out in rolling chairs that looked like gurneys to the medical bay. They were carefully examined by medical personnel on board the recovery vessel Megan, ensuring they were in good health and ready for the transition from microgravity to Earth's gravity.

SEQUENCE OF EVENTS

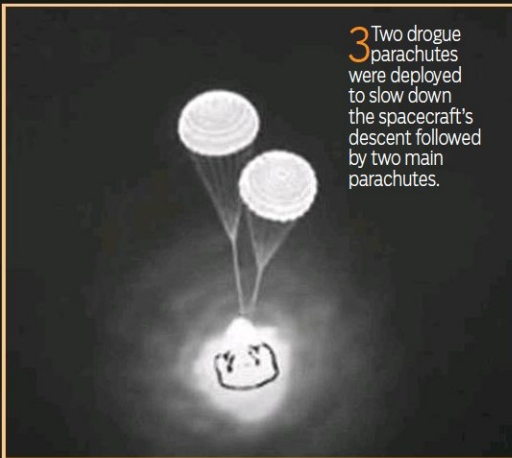
1 The Dragon Endeavour spacecraft followed a series of critical phases, including phasing burns, trunk jettison, deorbit burn, re-entry, parachute deployment, and finally, splashdown off the coast of Jacksonville, Florida. The site was selected based on various factors, including weather conditions and the space station's orbital trajectory.

Pictures: Nasa/X

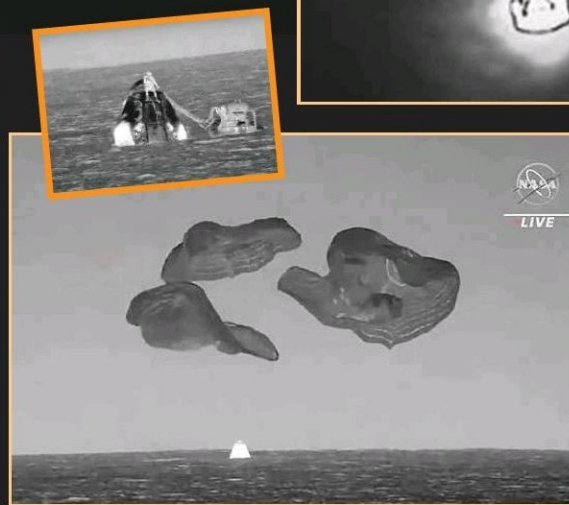


2 Sultan Al Neyadi, Stephen Bowen, Warren Hoburg and Andrey Fedyaev in the Dragon Endeavour spacecraft.

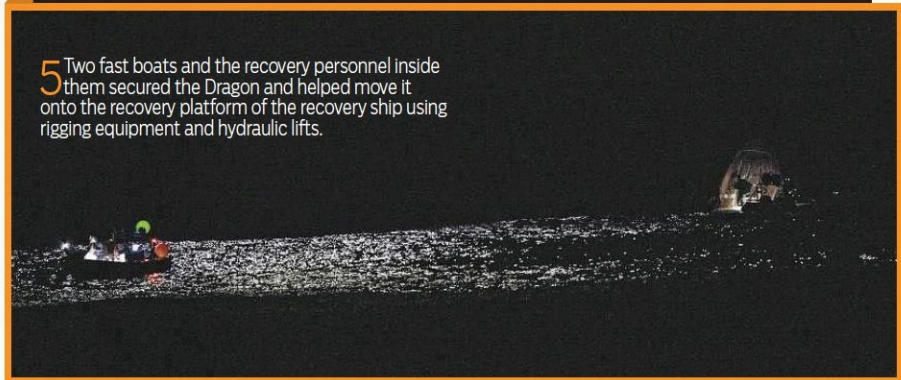
3 Two drogue parachutes were deployed to slow down the spacecraft's descent followed by two main parachutes.



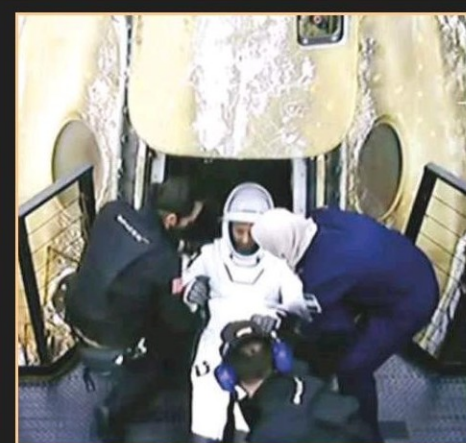
4 The spacecraft slowed down from 17,000 to 350 miles per hour, and the thermal protection systems shielded the Dragon from the extreme heat. It finally splashed down in the Atlantic Ocean and (inset) recovery team members got on to the capsule to extricate the crew.



5 Two fast boats and the recovery personnel inside them secured the Dragon and helped move it onto the recovery platform of the recovery ship using rigging equipment and hydraulic lifts.



6 The Dragon Endeavour being lifted onto the recovery vessel Megan after splashdown in the Atlantic.



7 Recovery personnel help Sultan Al Neyadi out of the Dragon Endeavour. The UAE astronaut was the last member of Crew-6 to exit the capsule.



CONGRATULATIONS AND WELCOME HOME!

OMEGA congratulates Emirati astronaut Sultan al-Neyadi of the Mohammad Bin Rashid Space Centre in Dubai on his successful 6-month mission and safe return. His adventure marks the longest manned space mission launched from the Arab states and the UAE National Space Program is only getting started. We're proud to say he measured every moment with OMEGA's Speedmaster Moonwatch. A chronograph with its own distinguished history of space travel.


 مركز محمد بن راشد
 للفضاء
 MOHAMMED BIN RASHID SPACE CENTRE


 Ω
 OMEGA



'OH LION' FATHER'S PRIDE FLOWS OUT AS POEM IN MOVING TRIBUTE TO AL NEYADI

POEM PAINTS A VIVID PICTURE OF SULTAN AS A BEACON OF COURAGE

HEARTFELT ODE

DUBAI
BY KHITAM ALAMIR
Chief News Editor

As the nation celebrates the successful space mission made by UAE Astronaut Sultan Al Neyadi, no one can be prouder of him than his parents. Marking his historic return from a six-month mission aboard the International Space Station, his father Saif Al Neyadi turned the surging national pride and his personal joy into verses that resonate deeply with every Emirati.

'Exemplary son'

In a poignant poetic tribute, Sultan's father illustrated his son's journey through the cosmos, a venture marked with relentless determination and a steadfast resolve. The poem paints a vivid picture of Sultan as a beacon of courage, echoing the sentiment that Sultan is not only his exemplary son but also a glowing emblem of national pride: "Sultan, what an exemplary son you've become! The nation beams with pride, its heart thrum... Oh lion, your achievements resound with might, in service to your country, you've lit the night."

The heartfelt ode applauds Sultan's relentless determination, painting him as a beacon of courage and an exemplary son of the nation.

Striking a chord

The poem resonates deeply with the sentiments echoing across every Emirati home, encapsulating the collective pride and joy at this monumental achievement: "Oh lion, your achievements resound with might, in service to your country, you've lit the night."



Sultan, what an exemplary son you've become! The nation beams with pride, its heart thrum... Oh lion, your achievements resound with might, in service to your country, you've lit the night."

Saif Al Neyadi | Father of Sultan Al Neyadi

Adding to the family's joyous sentiments, Mariam Al Neyadi, Sultan's sister, said that words fell short to describe the happiness and pride experienced during Sultan's successful mission. Sharing the nation's anticipation, she noted, "I'm sure that our feelings are the same as that of every Emirati home waiting for the return of Sultan."

Al Neyadi's mother expressed her gratitude, saying: "Sultan has brought immense pride to our family and our nation with his achievements. This would not have been possible had it not been for the guidance and support of our wise leaders who paved the way for success. May Allah bless them with health and a long life."

This historic mission, which concluded with a successful splashdown off the coast of Jacksonville, Florida, has indeed brought immense pride and joy to the UAE.

Sultan Al Neyadi has indeed become a beacon of national pride, a sentiment beautifully encapsulated in his father's poetic words, offering a heartfelt welcome from each home in the UAE: "Welcome back, bearing joy anew, A hearty welcome, from each home to you."

His uncle, Ali Al Neyadi, is equally filled with joy and pride. Reflecting his admiration for Sultan, he penned a poem celebrating the astronaut's feats and echoing the sentiments of an entire nation inspired by the space explorer's journey.



Sultan Al Neyadi, who returned from his historic space mission yesterday, has become a symbol of national pride in the United Arab Emirates.

Successful splashdown off the coast of Jacksonville, Florida, has indeed brought immense pride and joy to the UAE.

National success story

As the nation welcomes back its hero, this poetic tribute from a father to a son adds a personal, touching chapter to this national success story, showcasing a familial bond strengthened through stellar achievements.

Sultan Al Neyadi has indeed become a beacon of national pride, a sentiment beautifully encapsulated in his father's poetic words, offering a heartfelt welcome from each home in the UAE: "Welcome back, bearing joy anew, A hearty welcome, from each home to you."

His uncle, Ali Al Neyadi, is equally filled with joy and pride. Reflecting his admiration for Sultan, he penned a poem celebrating the astronaut's feats and echoing the sentiments of an entire nation inspired by the space explorer's journey.

Away from spotlight, Team MBRSC cheers

Officials welcome Sultan, thank team members for their efforts and support

DUBAI
BY SAJILA SASEENDRAN
Senior Reporter

UAE astronaut Sultan Al Neyadi's triumphant return to Earth yesterday has left the team at Mohammad Bin Rashid Space Centre (MBRSC) jubilant. Ever since Al Neyadi and Hazzaa Al Mansoori, UAE's first astronaut to go to the International Space Station (ISS), were selected from 4,000 applicants in 2018, the MBRSC team went all out to support them and helped them get training from international space agencies.

The agency behind the UAE Astronaut Programme, funded by the ICT Fund of the Telecommunications and Digital Government Regulatory Authority, said on X yesterday: "4 September 2023: a day that will remain etched in our memory... The longest Arab space mission in history has been accomplished."

While many senior MBRSC officials and astronauts were present in the US to welcome Al Neyadi back, another team continued to monitor his 17-hour journey back home from

The MBRSC team went all out to support Al Neyadi and Hazzaa Al Mansoori and helped them get training from international space agencies.

the MBRSC Mission Control Centre and kept in touch with those involved in rescue of the Crew-6 astronauts. The MBRSC medical team, led by Dr Hanan Al Suwaidi, flight surgeon, UAE Astronaut Programme, was also present to monitor Al Neyadi's health.

Team appreciated

Talal Humaid Belhoual Al Falasi, vice-president, MBRSC, said: "I would like to thank everyone who participated in the mission, no matter their role."

He was accompanied by Hamad Obaid Al Mansoori, chairman, and Yousuf Hamad Al Shaibani, vice-chairman, MBRSC. Al Mansoori said: "We thank God for the safe arrival of Sultan and the successful completion of this historic mission."

Meanwhile, Salem Humaid Al Marri, director general of MBRSC, who was stationed in Houston, wrote on X: "Our joy is indescribable..."



The MBRSC team, including Director General Salem Humaid Al Marri, at Nasa's Johnson Space Centre, moments after Sultan's successful landing.

From a stargazing Al Ain boy to the very first Arab spacewalker

Al Neyadi's feats as an astronaut are nothing short of extraordinary

DUBAI
BY FAISAL MASUDI
Assistant Editor

For the past six months, millions of UAE residents and space enthusiasts from around the world have been enjoying insights into life and work on-board the International Space Station (ISS), latest experiments in microgravity and stunning visuals of Earth captured from space.

It's all thanks to videos and pictures shared by Sultan Al Neyadi, the UAE astronaut who has completed the longest Arab space mission, during which he became the first Arab to perform a spacewalk.

Who is Al Neyadi?

The 42-year-old is one of the first two Emirati astronauts (the first one being Hazzaa Al Mansoori), who were named in 2018.

Al Neyadi, fondly known as the 'Sultan of Space', is from the Al Ain region in the UAE. He was born on May 23, 1981, in Umm Ghafa, 30km southeast of Al Ain. He completed his schooling in Al Ain.

Further studies

With a passion for communications engineering, he pursued higher education in the UK, earning a Bachelor of Science degree in Electronics and Communications Engineering from the University of Brighton.

Following in his father's footsteps, Saif Al Neyadi, Sultan joined the UAE Armed Forces upon returning from the UK. He travelled to Australia in 2008 to pursue a master's degree

in Information Technology from Griffith University. He subsequently became a Network Security Engineer for the UAE Armed Forces.

Astronomical ambition

Back in the UAE, Al Neyadi - who used to gaze upon the heavens from the desert as a child - turned his ambitions towards space. The UAE Astronaut Programme had just been launched, in 2017, and Al Neyadi - along with Hazzaa Al Mansoori - surpassed 4,000 candidates to prove his mettle for the UAE's first space mission.

Al Neyadi was the backup for Al Mansoori who became the first Emirati astronaut to go to space in September 2019.

Training for space

Al Neyadi completed his first year of training at NASA's Johnson Space Centre in 2021, becoming officially certified to work as an operator on-board the ISS.

This time, for UAE Mission 2, Al Mansoori was Al Neyadi's backup.

Al Neyadi underwent 20 months of training at Johnson Space Centre, including spacewalks, robotics and science experiments.

In March, Al Neyadi blasted off to space for his mission. Al Neyadi served as a mission specialist of the SpaceX Crew-6, the sixth crewed operational Nasa Commercial Crew flight of a Crew Dragon spacecraft, and the ninth overall crewed orbital flight.

Six months later, on September 4, Al Neyadi and Crew-6 returned to Earth after a successful mission.

Space hero Al Neyadi expected to be home in UAE in two weeks

He will spend a week in the country before flying back to Houston, MBRSC official says

DUBAI
BY SAJILA SASEENDRAN
Senior Reporter

When will the homecoming of the UAE astronaut Sultan Al Neyadi take place? The question was yesterday answered by a top official of the Mohammad Bin Rashid Space Centre (MBRSC), the agency behind the UAE Astronaut Programme.

Adnan Al Rais, mission manager of the UAE Astronaut Programme at MBRSC, revealed that Al Neyadi will be flying into the UAE after two weeks. Initial reports had said Al Neyadi was expected back home after a rehabilitation phase of at least three weeks.

Speaking during a Nasa SpaceX media teleconference post the Crew-6 members' successful return to Earth, Al Rais said: "He [Al Neyadi] will spend like 14 days here in Houston. And after that he will be back in the UAE for almost a week."

A grand reception is planned for the Sultan of Space who is



Al Neyadi sports a kandura during Eid onboard the ISS.

returning home after successfully completing the longest Arab space mission. After the celebrations to mark his historic achievements which include the first-ever spacewalk by an Arab and over 200 scientific experiments in space, Al Neyadi will return to the US, he confirmed.

Back in Houston

"Then again, he will be back here in Houston to continue to do science experiments."

The Dragon Endeavour that brought the Nasa SpaceX Crew-6 back to Earth also carried samples of science experiments

carried out by the Expedition 69 crew members.

At around 10.10am here, a Nasa official confirmed that the Crew-6 members had started boarding a helicopter from the SpaceX Recovery Vessel Megan.

"From the recovery ship, they will get on the helo [helicopter] and they'll fly to Jacksonville. And that's where they'll meet up with a Nasa aircraft and then they'll fly from there back to Houston," said Steve Stich, manager of Nasa's Commercial Crew Programme.

Around 3,000 orbits

Joel Montalbano, manager, International Space Station (ISS) Programme of Nasa, said the Crew-6 had an outstanding landing. "This crew spent 184 days onboard the ISS. So adding the day up and the day down, 186 days in space for our crew. They did just under 3,000 orbits of the Earth. And this crew saw seven visiting vehicles come and go to the ISS and performed just under 250 experiments, utilisation, research and technology demonstration," he added.

In 24 hours, the space station makes 16 orbits of Earth, travelling through 16 sunrises and sunsets. Thus, in 184 days, the Crew-6 orbited the Earth 2,944 times.



■ Astronaut Sultan Al Neyadi during his historic spacewalk. The 42-year-old Emirati became the first Arab to do so when he stepped out of the space station, into the open space, in April.

UAE LEADERS APPLAUD SPACE MISSION SUCCESS

President and Dubai Ruler congratulate Al Neyadi

HIGH PRAISE

DUBAI
KHITAM AL AMEER
Chief News Editor

As the UAE rejoices on the safe return of Sultan Al Neyadi, President His Highness Shaikh Mohammad Bin Zayed Al Nahyan lauded Al Neyadi for carrying the dreams and aspirations of the nation into uncharted territories. He emphasised that the people of the UAE deeply cherish his groundbreaking achievements.

Immensely proud

In a heartfelt Twitter message marking Al Neyadi's return to Earth, the UAE President said he carried the hopes of a nation to new frontiers. "[Sultan Al Neyadi], the people of the UAE are immensely proud of you and the entire team for achieving major advances in space exploration. You carried the dreams of a nation to new frontiers, and we rejoice in your pioneering journey and safe return," the President wrote on X, formerly Twitter.

In a similar vein, His Highness Shaikh Mohammad Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, highlighted that Sultan Al Neyadi has become

“[Sultan Al Neyadi], the people of the UAE are immensely proud of you and the entire team for achieving major advances in space exploration. You carried the dreams of a nation to new frontiers, and we rejoice in your pioneering journey and safe return.”

Shaikh Mohammad Bin Zayed Al Nahyan

an inspiration for millions of Arab youths, demonstrating the potential to greatly influence the progressive course of humanity in science and civilisation.

Great faith in youth

Shaikh Mohammad tweeted, “In just six years since the launch of the UAE's Space Pioneers programme, we have celebrated two groundbreaking Emirati space missions. These achievements reflect the UAE's commitment to shaping a brighter future for the world. “We have great faith in the potential of our youth and we are confident that our nation's deep wealth of talent will continue to drive its progress to greater heights.”

“In just six years since the launch of the UAE's Space Pioneers programme, we have celebrated two groundbreaking Emirati space missions. These achievements reflect the UAE's commitment to shaping a brighter future for the world.”

Shaikh Mohammad Bin Rashid Al Maktoum

Monumental milestone

Joining in the chorus of accolades, Shaikh Hamdan Bin Mohammad Bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Executive Council of Dubai, stated that September 4 marked a monumental milestone in the UAE's history.

Tweeting on the occasion of Sultan's return to Earth, Shaikh Hamdan said, “The conclusion of this mission marks yet another bright spot in our space journey. The mission's success reflects the commitment of the MBRSC team to bolster the UAE's status as a leader in space exploration. We are dedicated to making meaningful contributions to the progress and well-being of humanity.”

Thousands in the UAE and elsewhere interacted via video

DUBAI
BY FAISAL MASUDI
Assistant Editor

From health experiments in space to sleeping in microgravity, thousands of students have gained insights into the life and work onboard the International Space Station (ISS) during ‘A Call from Space’ live sessions with UAE astronaut Sultan Al Neyadi.

Al Neyadi fielded questions from youth during 12 live video calls organised in the UAE, USA

and Mauritius, as well as seven ham radio sessions.

The most recent call on August 26, was hosted by the UAE Embassy in Washington, DC, in collaboration with the Mohammad Bin Rashid Space Centre (MBRSC) and the National Aeronautics and Space Administration (Nasa).

Earlier in August, Al Neyadi received a surprise when the Umm Al Quwain edition saw his children and his father, Saif Al Neyadi, making a surprise appearance.

‘Beacon of inspiration’

A week before, Al Neyadi was praised during a call at Louvre Abu Dhabi by Shaikh Nahyan

Bin Mubarak Al Nahyan, Minister of Tolerance and Coexistence, who described him as “a beacon of inspiration for our younger generations”.

During his first month in space, in March, Al Neyadi thrilled some 2,000 young fans, showing them how he ate candies and drank water from a packet.

In July, the ‘Sultan of Space’ had the honour of speaking with Shaikh Mohammed Bin Hamad Bin Mohammad Al

Sharqi, Crown Prince of Fujairah, who said Al Neyadi was a model for children and youth intrigued with space.

The same month, Al Neyadi interacted with Shaikh Sultan Bin Ahmad Bin Sultan Al Qasbi, Deputy Ruler of Sharjah and President of the University of Sharjah.

In May, he said he longed for his mother's food during a special call to his hometown, Al Ain, on his birthday.

Sweet experience

During his first month in space, in March, Al Neyadi thrilled some 2,000 fans, showing them how he ate candies and drank water from a packet.

How Al Neyadi's experiments in space will benefit humanity

UAE astronaut spent 585 hours on studies ranging from heart health to agriculture

DUBAI

BY FAISAL MASUDI
Assistant Editor

Over the course of his six-month stay on the International Space Station (ISS), Sultan Al Neyadi conducted over 200 advanced research experiments and studies that took about 585 hours, in collaboration with 10 international space agencies and 25 leading UAE and global universities.

The experiments covered a range of topics including the cardiovascular system, back pain, protein crystallisation growth, epigenetics, immune system, fluid dynamics, plant biology, human life sciences, material science, sleep analysis and radiation, advanced exploration technologies.

Protein Crystal Growth

Al Neyadi engaged in an innovative Protein Crystal Growth Experiment (PCG) on board the Kibo module on the ISS. The experiment was launched on the Space X-28 cargo mission and was installed by Al Neyadi.

The experiment theme was proposed by a research team from the Mohammad Bin Rashid University of Medicine and Health Sciences (MBRU) in collaboration with the Harvard Medical School.

Research in microgravity

Al Neyadi, along with his Expedition 69 crew members, made significant strides in microgravity research, including on cardiovascular system, plant biology, material science, fluid science and sleep analysis, among others.

Sleep cycle

Al Neyadi wore a specially-designed headband to capture key data during the Dreams experiment, which employed the dry-EEG (electroencephalography) system to monitor sleep patterns of astronauts in the microgravity environment on the space station. “This research helps us learn more about sleep disorders in humans,” he said.

Heart health

Al Neyadi took part in the Cardinal Heart 2.0 study by Stanford University. “We are exploring the effects of clinical drugs on heart cells in microgravity using heart tissues,” he said. Al Neyadi also contributed to the Cardiobreat



Courtesy: @Astro_Alneyadi/X

■ Al Neyadi with protein samples shipped from the UAE for the Monoclonal Antibodies Protein Crystal Growth-2 experiment.

NOTABLE DUTIES AND STUDIES BY AL NEYADI

- Sending around 1,950kg of valuable scientific experiments and other cargo back to Earth on a Dragon cargo spacecraft, as part of the 27th contracted cargo resupply mission to the International Space Station (ISS). The spacecraft splashed down off the coast of Tampa, Florida in the US earlier this month.
- Setting up the hardware for the CapiSorb Visible Systems fluid physics study. This experiment investigates the potential of using a liquid-based carbon dioxide removal system to promote more efficient space-based solutions and advanced Earth-bound applications.
- Treating samples in the Kibo laboratory module for the Engineered Heart Tissues-2 experiment using Kibo's Life Sciences Glovebox. This research may help doctors treat, as well as prevent, space-caused heart conditions and Earth-bound cardiac disorders.
- Demonstrated the use of a 3D printer to manufacture tools, components, and experiments on the orbital outpost. Another entailed collecting and stowing samples in a science freezer for a study exploring the biomanufacturing of pharmaceuticals in space.
- Conducting space experiment to find a cure Alzheimer's disease. Al Neyadi installed a syringe filled with a protein solution inside the Microgravity Science Glovebox (MSG) for the Ring Sheared Drop (RSD) experiment that may provide potential treatments for neuro-degenerative diseases. He worked on the Destiny laboratory module's carbon dioxide removal assembly.

—F.M.

FIRST SPACEWALK BY AN ARAB

Sultan Al Neyadi became the first ever Emirati, first Arab and first Muslim astronaut to perform a spacewalk when he ventured out of the International Space Station (ISS) in April during Expedition 69.

The historic spacewalk lasted 7.01 hours in the vacuum of space on the starboard side of the ISS' truss structure, accomplishing two key objectives. One of the objectives of the Extravehicular Activity (EVA), undertaken by Al Neyadi along with NASA Flight Engineer Stephen Bowen, was to work on a series of preparatory tasks which involved routing power cables, which was successfully concluded.

These cable works were completed as a precursor to the installation of the ISS' fourth roll-out solar array, known as the International Space Station Roll-Out Solar Array (IROSA) for delivery on the SpaceX Dragon cargo mission. The next objective was to retrieve a crucial Radio Frequency Group (RFG) unit or communications antenna.

—F.M.

experiment, which is a critical analysis of the impact of microgravity on cardiovascular and respiratory functions.

Al Neyadi also participated in the host-pathogen experi-

ment to analyse the reaction between astronauts' immunity and the microbial pathogens on the ISS. The results of would be analysed through Al Neyadi's DNA samples.

Al Neyadi's calls from space have inspired young stargazers

Thousands in the UAE and elsewhere interacted via video

DUBAI
BY FAISAL MASUDI
Assistant Editor

From health experiments in space to sleeping in microgravity, thousands of students have gained insights into the life and work onboard the International Space Station (ISS) during ‘A Call from Space’ live sessions with UAE astronaut Sultan Al Neyadi.

Al Neyadi fielded questions from youth during 12 live video calls organised in the UAE, USA

and Mauritius, as well as seven ham radio sessions.

The most recent call on August 26, was hosted by the UAE Embassy in Washington, DC, in collaboration with the Mohammad Bin Rashid Space Centre (MBRSC) and the National Aeronautics and Space Administration (Nasa).

Earlier in August, Al Neyadi received a surprise when the Umm Al Quwain edition saw his children and his father, Saif Al Neyadi, making a surprise appearance.

‘Beacon of inspiration’

A week before, Al Neyadi was praised during a call at Louvre Abu Dhabi by Shaikh Nahyan

Bin Mubarak Al Nahyan, Minister of Tolerance and Coexistence, who described him as “a beacon of inspiration for our younger generations”.

During his first month in space, in March, Al Neyadi thrilled some 2,000 young fans, showing them how he ate candies and drank water from a packet.

In July, the ‘Sultan of Space’ had the honour of speaking with Shaikh Mohammed Bin Hamad Bin Mohammad Al

Sharqi, Crown Prince of Fujairah, who said Al Neyadi was a model for children and youth intrigued with space.

The same month, Al Neyadi interacted with Shaikh Sultan Bin Ahmad Bin Sultan Al Qasbi, Deputy Ruler of Sharjah and President of the University of Sharjah.

In May, he said he longed for his mother's food during a special call to his hometown, Al Ain, on his birthday.

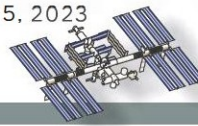
Sweet experience

During his first month in space, in March, Al Neyadi thrilled some 2,000 fans, showing them how he ate candies and drank water from a packet.



WAM

■ A child poses a question to Sultan Al Neyadi via a video link during the Umm Al Quwain edition of ‘A Call from Space’ event hosted by the Mohammad Bin Rashid Space Centre.



March 3, 2023



March 4, 2023



April 3, 2023

A LOOK AT AL NEYADI'S SIX-MONTH JOURNEY IN SPACE

UAE astronaut found the time to post spectacular videos and pictures despite his busy schedule on the ISS



February 26, 2023

■ **Above:** Sultan Al Neyadi completes one month in space. He took to social media to mark the milestone and announced that he and his crewmates have made significant progress in the experiments on their mission.

■ **Above centre:** Al Neyadi in the cupola of the ISS. He posted videos and images of the space station and talked about the work he was going to do aboard.

■ **Above left:** Al Neyadi introduced 'Little astronaut' Suhail as the fifth crew member of his mission.

■ **Below:** Al Neyadi shares first views of Earth from ISS Cupola. "The further we journey from Earth, the more we realise just how precious it truly is. Let us cherish and preserve this incredible planet we call home."

MBRSC



March 9, 2023



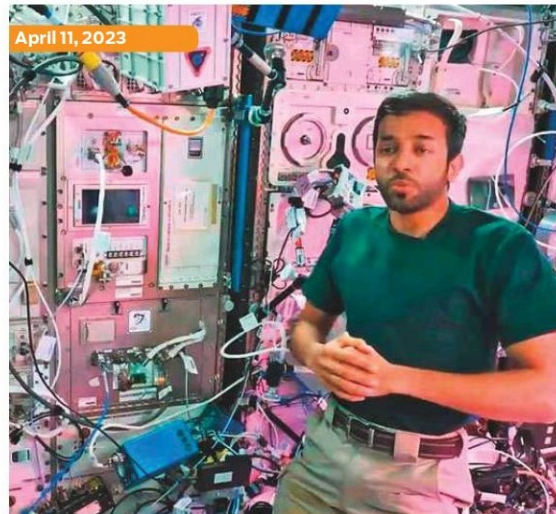
April 4, 2023

■ **Above:** Sultan Al Neyadi waves goodbye to his family as he departs for the launchpad for his expedition to the ISS at the Kennedy Space Centre in Cape Canaveral, Florida.

■ **Right:** Al Neyadi conducts breakthrough research on diabetic foot ulcers as part of the Maleth project that aims to advance medicine for treating type 2 diabetes in collaboration with international entities.

■ **Far right:** Dressed in a kandoura on the occasion of Eid with mascot Suhail for company, Al Neyadi sends Eid wishes to Earth and thanks UAE leaders.

MBRSC, Reuters



April 11, 2023



April 21, 2023



Scan for more pictures of Sultan Al Neyadi's Space Odyssey

■ **Above:** Al Neyadi receives NASA's gold pin. After being granted the silver pin last May after completing 20 months of training, the UAE astronaut received the prestigious gold pin by flying into space.

■ **Right:** Al Neyadi creates history by becoming the first Arab to perform a spacewalk when he stepped out of the Quest Airlock of the station at around 5.30pm UAE time

■ **Far right:** Al Neyadi has a gravity-defying birthday celebration on May 25, organised by his colleagues on the ISS, complete with a special cake and gifts.

MBRSC



April 29, 2023



May 25, 2023

NEW CHAPTER IN UAE'S SPACE REVOLUTION

Al Neyadi's achievements during his six-month historic ISS mission underline the country's unwavering commitment to the realm of space exploration and set the tone for bigger endeavours

BY SADIQ SHABAN | Opinion Editor

Sultan Al Neyadi, the pioneering Emirati astronaut, has triumphantly concluded his extraordinary six-month mission aboard the International Space Station (ISS). This mission marks a monumental chapter in the UAE's burgeoning foray into space exploration.

Setting sail on this journey on March 3, following in the footsteps of Hazza Al Mansouri, Al Neyadi etched his name in history as the first Arab to undertake an extended-duration space mission. Over the course of his tenure on the ISS, Al Neyadi conducted a staggering array of over 200 experiments, and in a milestone moment in April, he became the first Arab astronaut to perform a spacewalk. This momentous achievement underlines the UAE's unwavering commitment to the realm of space science and exploration.

Al Neyadi's mission represents a profound testament to the UAE's enduring dedication to advancing its space sector. Committing approximately \$10 billion to space endeavours as part of its 10-year plan, the UAE has steadfastly pursued its ambition of ascending to a prominent position as a global leader in space exploration.

The remarkable launch of the Hope spacecraft to Mars in 2020 offered a compelling demonstration of the nation's capabilities in planetary exploration. It was a moment of historic significance as the UAE achieved the distinction of becoming the first Arab country to successfully enter Martian orbit on its inaugural attempt when the Hope probe gracefully arrived at the red planet's doorstep in February 2021.

The UAE achieved this feat, becoming just the fifth country in the world, following the United States, Russia, China, and India, to reach Mars. Furthermore, the UAE space agency became only the second in history to achieve this feat on its very first attempt.

However, the UAE's aspirations transcend Martian exploration, with ambitious plans afoot to dispatch a spacecraft to investigate the asteroid belt within our solar system. Dubbed the Emirates Mission to the Asteroid Belt, this visionary project, set for lift-off in 2028, underscores the nation's unwavering commitment to pioneering scientific research and fostering innovation in the field of space science.

Inspiring aspiring astronauts

Al Neyadi's sojourn in space represents not just a scientific feat but also a source of inspiration for aspiring astronauts within the UAE and across the broader region. His mission is emblematic of the UAE's commitment to fostering a renaissance in the space sector, as it invests in nurturing a national cadre of astronauts poised to embark on future scientific and manned space exploration missions.



©Gulf News

The ISS, orbiting 400km above the Earth's surface, offers an unparalleled laboratory environment where the grasp of gravity is virtually non-existent. This unique setting presents invaluable opportunities for scientific research spanning a myriad of fields.

A moment of pride

As Al Neyadi adjusts to life on Earth, he shall reflect on the profound experience he has amassed during what he aptly describes as the "journey of a lifetime". He carries with him a profound sense of duty – the obligation to inspire countless others to reach for the stars. His journey home serves as a poignant conclusion to a mission that has not only propelled the UAE further into the celestial expanse, but has also ignited a new generation of space enthusiasts.

In an era where nations increasingly extend their reach into the cosmos, the UAE's unwavering focus on space exploration stands as a testament to its foresight and determination to shape the future of scientific discovery far beyond the terrestrial realm. Al Neyadi's return to Earth, therefore, resonates as a moment of great pride not merely for the UAE but for the entire region, underscoring the

nation's emerging role as a stellar presence in the realm of space exploration.

The UAE's ambitions in space extend far beyond individual missions. It has strategically positioned itself as a hub for space science, technology, and innovation. With a constellation of more than 20 orbital satellites and an impressive roster of over 80 international space companies and research institutions, the UAE is poised to make significant contributions to the global space community.

Its strategic initiatives, including the National Space Strategy 2030, are tailored to augment the space sector's contribution to the national economy while catalysing scientific and technological advancement.

As we celebrate Al Neyadi's triumphant return, we eagerly anticipate the UAE's ongoing voyage of exploration and discovery. It is merely a matter of time before we bear witness to new milestones, transformative breakthroughs, and profound contributions that will enrich humanity's understanding of the cosmos.

Al Neyadi's mission has inspired not only the UAE but the entire region to reach for the stars and embrace the limitless possibilities that await us in the universe.