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His original fans are adults now but they still re-read the series year after year

UAE analogue astronaut leaves isolation facility after 8 months

SIRIUS-21 CREW WAS STUDYING EFFECTS OF SPACE FLIGHT ON HUMAN PHYSIOLOGY

DUBAI

BY ANGEL TESORERO
Senior Reporter

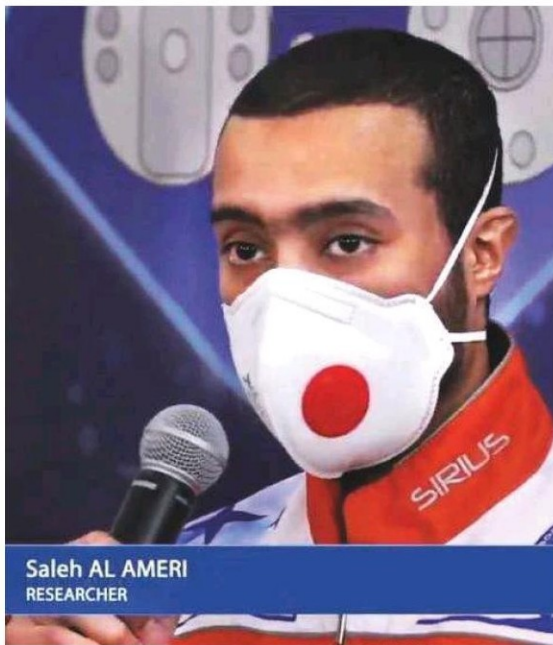
UAE analogue astronaut Saleh Al Ameri – along with three Russian and two American crew members of SIRIUS-21 (Scientific International Research in the Unique Terrestrial Station) – has left the isolation facility at Moscow's Institute of Biomedical Problems, completing an eight-month mission studying the effects of space flight on human physiology and psychology.

SIRIUS-21 crew left the isolation facility this afternoon.

After conducting around 70 scientific experiments over the last eight months, the SIRIUS-21 crew have made new discoveries that will significantly impact the advancement of space exploration for the benefit of humanity. They have gathered new data on how astronauts can cope physically and mentally with long-term isolation, which are required for long-duration space journey.

Collaboration

Al Ameri collaborated with three Russian and two American crew members – Oleg Blinov, Ekaterina Karyakina and Victoria Kirichenko from Russia's Institute of Biomedical Problems of the Russian Academy of Sciences (IBMP), and Ashley Kowalski and William Brown from United States space agency, Nasa.



Saleh AL AMERI
RESEARCHER

Courtesy: SIRIUS-21 live-stream screengrab

■ Al Ameri collaborated with three Russian and two American crew members.



Watch: Saleh Al Ameri leaves isolation facility after 8 months

Five members of the SIRIUS-21 crew yesterday left the terrestrial experimental centre of the Russian Institute of Medical and Biological Problems

after 240 days in isolation. The SIRIUS-21 study is the third milestone of the SIRIUS (Scientific International Research in Unique terrestrial Station) international project.

The project provides for a series of isolation studies. The next experiment to simulate the long-range space flight will last for a year and will begin in July 2023.

HAMDAN HAILS SUCCESS OF SIRIUS-21 MISSION

Shaikh Hamdan Bin Mohammad bin Rashid Al Maktoum, Crown Prince and Chairman of the Executive Council, congratulated the UAE leadership and people on the success of SIRIUS-21, the first UAE analogue astronaut mission at the NEK ground-based analogue facility in Moscow, Russia.

The 240-day isolation experiment kicked off on November 4, 2021, with the participation of UAE astronaut Saleh Al Ameri along with Russian and American astronauts.

"The success of the SIRIUS-21 mission is a new achievement added to the UAE and the team of the Mohammed bin Rashid Space Centre," Shaikh Hamdan said on his twitter account.

— *Khltam Al Amr,*
Chief News Editor

70

scientific experiments SIRIUS-21 conducted over the last eight months

HUMAN RIGHTS ON MARS

Feasible constitutions for the Red Planet will probably offend the educated classes

BY TYLER COWEN

Kim Stanley Robinson writes best-selling novels about a colony on Mars. Elon Musk talks of actually colonising Mars. There is even a 30-page constitution, courtesy of a Yale political science class, for a Mars settlement. The actual prospects remain uncertain, but the question of how it should be organised could stand some further scrutiny.

The Yale proposal is about how to make a Mars settlement democratic, as is an earlier proposal published in *Space Legal Issues*. But I fear a harsher question needs to be addressed first: Should a Mars settlement allow for contractual servitude?

When the New World was settled, it was common practice for workers to sign multi-year contracts, receiving passage across the ocean but giving up a share of their earnings and some of their freedom.

Uncomfortable position

Contractual servitude is distinct from slavery in the sense that it is chosen voluntarily. But once the contract is signed, the worker is in an uncomfortable

position, in both an economic and democratic sense. And once these individuals land in the New World — or, as the case may be, on Mars — their protection by mainstream legal institutions cannot be assumed.

It is easy to inveigh against contractual servitude, but it has one valuable function: It creates incentives for someone to finance the voyage in the first place. If I had to finance my own passage to Mars, and then sustain myself when I got there, and pay off the travel costs, I would never go. But if a company can send a few thousand people, keep half the profits, and remain in charge, the voyage might stand a chance, at least when the technology is further along.

I am fine with banning contractual servitude on Mars, if that is what a democratic society decides. My point is that this is a more pressing question than what kind of new participatory rights the new Martians will have. Keep in mind the economic point: If poorer people are not allowed to sign up for these funded voyages, then maybe only billionaires will visit Mars.

The tension is that most people have well-developed moralities for wealthy, democratic societies in which most citizens can earn their keep or be provided for by a well-funded social welfare state. Neither of those assumptions holds for Mars. The upshot is that feasible Mars constitutions will probably offend the educated classes dearly.

Government funding

Another option is to have the US government fund the voyage and apply some version of military law to the venture, as one might find on an aircraft carrier. But also note that governmental space exploration has slowed dramatically since its peak in the 1960s and 1970s. It is the private sector that has revived interest in a Mars settlement.

Ideally I might like Mars to be settled by a religious group rather than by a government or a corporation. After all, various Puritan groups helped to settle North America, and they had the unity and sense of mission to pull off a very difficult and dangerous endeavour. Similarly, Mormons helped settle the American West.

Not surprisingly, many of

these early governments had strong theocratic elements. If the key question is motivating the settlers, then the religion option ought to be taken seriously. Like contractual servitude, it could serve a practical purpose.

I suspect that no feasible constitution for a Mars settlement would be very popular. Perhaps the best that can be hoped for is a very democratic philosophy for life on Earth, with the understanding that Mars will be very different.

Can we accept such a contradictory set of perspectives? Can the proper answer to such a fundamental question as how society should be organised so firmly depend on which planet we are talking about? Might some sceptics suggest that, with illiberal values ascendant on Earth, it would be better for Mars to offer an alternative?

These are all valid questions. The debate over a Martian constitution is interesting, but it may also be premature.

— Bloomberg

■ Tyler Cowen is a professor of economics at George Mason University.