

Iran eyes for 10m Qur'an memorizers Int'l Qur'an exhibition underway in Tehran

Iran's President Ebrahim Raeisi called the sense of responsibility in forbidding wrong and enjoining right in the society as one of the priorities and virtues of the holy month of Ramadan and stated, "Our people stand by their covenant for the realization of all revolutionary and Islamic values until the last moment".

Speaking in the opening ceremony of the 30th International Exhibition of the Holy Qur'an, coinciding with the Islamic Republic Day, Raeisi said, "On this day, which is the day of the Islamic Republic and religious democracy, the people of Iran decided that religion should rule over their destiny and that all their communications should be influenced by religion and Our'anic teachings", president.ir wrote.

Referring to the statements of the Minister of Culture and Islamic Guidance Mohammad-Mehdi Esmaeili that there are 300 memorizers of the Holy Qur'an in only one village of the country, Raeisi called the realization of the goal of 10 million memorizers in the country achievable and stated, "Qur'anic events such as holding such exhibitions are among very good measures".

The president also expressed his condolences on the demise anniversary

of Hazrat Khadijah (PBUH) and added, "I am very happy that in the month of the Qur'an and the month of Lailat-ul-Qadr, I am in the company of memorizers, translators and those who made their lives in harmony with the Qur'an".

Raeisi further considered the Qur'an as a manifestation of God's mercy and stated, "Humanity is formed in the light of connection with the Qur'an and revelation, and the value of speech and pen in the world is also to act in the path of human excellence and perfection". In another part of his speech, the president considered April 1 and the Islamic Republic Day as one of the important days in the history of the Islamic Revolution and a clear manifestation of Imam Khomeini's faith in the people and added, "The Imam's view of the people's vote was never ceremonial and he referred to the people's vote for choosing the type of government as well as approving the constitution based on divine and Islamic rules".

Raeisi further attributed the development of Qur'anic culture in the country to the persuasions, encouragements and follow-ups of the Leader of the Islamic Revolution and stated, "I personally value all Qur'anic figures, but the truth is that what has happened in the field of the Qur'an in the country is the result of attention and special view of the Leader of the Revolution".

Raeisi also referred to chastity and hijab as one of the legitimate demands and concerns of religious people in the society and added, "Hijab is a religious necessity and a common divine command among all monotheistic religions and Islam's branches, which protects the individual and society from any harm". The president stated, "There may be those who do not believe in these concepts, and here we emphasize the use of the capacity of scientific centers, discussions and persuasive conversations. At the same time, there is a legal requirement in this regard, and all sections of the society with any attitude and tendency are required to comply with this law". Pageig stated that thank

Raeisi stated that, thank God, our women and girls have proven their adherence to the law so far and will continue to do so in the future, adding, "The common point of all the wills of the martyrs is to preserve religious and revolutionary principles and values, and today, as the followers of the path of the martyrs, we must stick to their commandments".

Raeisi called the sensitivity towards other wrong issues, including the issue of economic corruption, as one of the other rightful demands of pub-

lic opinion, along with the issue of hijab, and said, "The duty of the authorities is to keep the Islamic society clean from the corruption and pay attention to all the good". Raeisi also emphasized to the Qur'anic society of the country "Today you also

the Qur'anic society of the country, "Today, you also have the duty to pay attention to the Qur'anic concepts and giving hope in the society at the top of your actions and activities". The 30th International Exhibition of the Holy Qur'an

is underway at Tehran's

Imam Khomeini Grand Prayers Ground (Mosalla). The kids' section and the "garden of verses" are among the main parts of this year's fair and have been expanded threefold compared to previous editions. Various programs have also been planned for the women and girls sec-

The exhibition will run by April 15 with the motto "I Read You" which highlights the importance of continually reading the Holy Qur'an.

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Planets without stars might have moons suitable for life



Rogue planets (one illustrated) wander the galaxy alone rather than orbit a star. Such a planet's gravitational action could create conditions for life to emerge on a tagalong moon, new research suggests/ INTERPOTT

Life might arise in the darkest of places: the moon of a planet wandering the galaxy without a star.

The gravitational tugof-war between a moon and its planet can keep certain satellites toasty enough for liquid water to exist there — a condition widely considered crucial for life. Now computer simulations suggest that, given the right orbit and atmosphere, some moons orbiting rogue planets can stay warm for over a billion years, astrophysicist Giulia Roccetti reported March 23 at the PLAN-ET-ESLAB 2023 Symposium. She and her colleagues also report their findings March 20 in the International Journal of

Astrobiology.

"There might be many places in the universe where habitable conditions can be present," says Roccetti, of the European Southern Observatory in Garching, Germany. But life presumably also needs long-term stability. "What we are looking for is places where these habitable conditions can be sustained for hundreds of millions, or billions, of years." Habitability and stability don't necessarily need to come from a nearby sun. Astronomers have spotted about 100 starless planets, some possibly formed from gas and dust clouds the way stars form, others probably ejected from their home solar systems (SN: 7/24/17). Computer simulations suggest that there may be as many of these free-floating planets as there are stars in the galaxy.

Such orphaned planets might also have moons — and in 2021, researchers calculated that these moons need not be cold and barren places. Unless a moon's orbit is a perfect circle, the gravitational pull of its planet continually deforms it. Resulting friction inside the moon generates heat. In our own solar system, this process plays out on moons such as Saturn's Enceladus and Jupiter's Europa (SN: 11/6/17; SN: 8/6/20). A sufficiently thick, heat-trapping atmosphere, likely one dominated by carbon dioxide, might then keep the surface warm enough for water to remain liquid. That water could come from chemical reactions with the carbon dioxide and hydrogen in the atmosphere, initiated by the impact of high-speed charged particles from space.

But such a moon won't stay warm forever. The same gravitational forces that heat it up also mold its orbit into a circle. Gradually, the ebb and flow of gravity felt by the moon deforms it less and less, and the supply of frictional heat dwindles. In the new study Boc-

In the new study, Roccetti and her colleagues ran 8,000 computer simulations of a sunlike star

with three Jupiter-sized planets. These simulations showed that planets that are ejected from their solar system will often sail off into space with their moons in tow. The team then ran simulations of those moons, assumed to be the size of Earth, whizzing around their planets along the orbit they ended up with during the ejection. The goal was to see if gravitational heating occurred and if it lasted long enough for life to potentially originate there. Earth may have become habitable within a few hundred million years, although the earliest evidence of living organisms here date to about 1 billion years after the planet formed.