

CHINA

Laureate honored

Barry J. Marshall (second from right), Nobel Prize laureate in physiology or medicine, visits the Guangdong Chinese Medicine Museum at Guangzhou University of Chinese Medicine in Guangdong province on Tuesday. Professor Marshall led a delegation to visit the university for an exchange visit. He has been actively fostering biomedical cooperation between China and Australia. During his visit, the Guangzhou university presented him with an honorary professorship certificate. CHEN CHUOHONG / CHINA NEWS SERVICE



Negative ions found on moon solve old mystery

By XUNUO
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In a first for space exploration, a Chinese-led research team has detected negative hydrogen ions on the moon's surface, solving a long-standing mystery on how the solar wind interacts with airless celestial bodies.

The discovery was made by a specialized instrument aboard China's Chang'e 6 lander. It reveals that these rare particles are created when the solar wind — a constant stream of charged particles from the sun — slams into the lunar soil.

Negative ions are atoms or molecules that have "stolen" an extra electron. While they are a vital component of the plasma that fills the universe, they are notoriously difficult to study. Because they are fragile, sunlight quickly strips away that extra electron, making them nearly impossible to detect from a distance or by orbiting spacecraft.

The researchers used the Negative Ions at the Lunar Surface, or NILS, detector, a first-of-its-kind instrument developed by the Swedish Institute of Space Physics and the Chinese Academy of Sciences. During its mission, the device recorded six energy signatures of these hydrogen ions over two days. This marks the first time such particles have been measured directly on the surface of another world.

To confirm where these ions came from, the team compared their findings with data from the European Space Agency's Artemis satellites, which monitor the sun's activity. They found a direct link: as the solar wind intensified, so did the production of negative

ions. The process works through "scattering", where solar wind particles hit the lunar surface and bounce back, picking up electrons from the soil in the process.

The team's simulations showed two very different environments on the moon. On the day side, sunlight destroys the ions almost instantly, keeping them trapped in a very thin layer just above the ground. However, on the night side, in the absence of sunlight, the ions can survive much longer. They are swept up by electromagnetic fields, forming a massive tail that stretches thousands of kilometers behind the moon.

Understanding these ions helps scientists explain "space weathering", the process by which the harsh environment of space physically and chemically changes the lunar surface over millions of years. Plasma is often called the fourth state of matter, and it is essentially a gas-like soup of electrically charged particles. In this case, the negative ions can trigger plasma waves — ripples of energy — that disturb the environment around the moon.

The researchers believe these ions may play a role in how water forms on the moon and how the moon's incredibly thin atmosphere, known as an exosphere, is maintained. During periods of intense solar activity, the density of these ions can jump by more than 1,000 percent, creating measurable disturbances in the lunar environment.

The findings provide a new blueprint for studying other airless bodies in our solar system, such as asteroids or the moons of other planets.

DeepZang, first AI model in Tibetan language, unveiled

Pioneering platform seen as a useful tool in education and public services

By GUO YANQI
and PALDEN NYIMA in Lhasa

China has unveiled DeepZang, the world's first large language model for the Tibetan language, in a move that could broaden the use of Tibetan in digital communications and public services.

The model was launched in Lhasa, capital of the Xizang autonomous region, by local developer Choknor. It supports interactions in Tibetan, as well as standard Chinese and English, and integrates functions including AI dialogue, real-time translation and speech-to-text transcription.

At the launch ceremony, the World Record Certification Agency awarded DeepZang the certification of "The World's First Tibetan Large Language Model", recognizing its global pioneering status.

According to the company's founder, Tenzin Norbu, the model is the result of more than four years of development. So far, it has accumu-

lated nearly 70 million entries of standardized parallel corpora and more than 30,500 hours of voice data covering Tibetan's three major dialects — Utsang, Kham and Amdo — forming what the company said is China's most extensive and accurately annotated Tibetan speech database to date.

Beyond its technical milestone, the platform is already moving toward practical deployment. Several institutions, including the Xizang branch of China Mobile and PICC Property and Casualty Co, have signed cooperation agreements to explore applications in sectors such as government services, education, healthcare and finance.

Li Yalong, deputy general manager of PICC Property and Casualty's Xizang branch, said the model could help overcome long-standing language barriers in serving farmers and herders.

"It will support the development of Tibetan language intelligent customer service and policy interpretation

tools," he said, particularly in agriculture-related insurance services.

Academic users have also highlighted its potential. Sonam Yontan, a doctoral student at Xizang University, said the model has already improved efficiency in research.

"The system's translation and search functions are useful and convenient," he said. "It allows us to process materials and find sources much faster." He added that the model represents an unprecedented step forward for Tibetan in the field of artificial intelligence.

However, early user feedback suggests the technology remains a work in progress.

"DeepZang's Tibetan capabilities were clearly strong," said Nie Chang, a 26-year-old Tibetan-language teacher for non-native speakers. "But its response speed felt slower than some mainstream products such as ChatGPT or Doubao."

He said some users encounter paywalls after limited queries, which may affect accessibility.

In educational settings, Nie added, the model has yet to function effectively as a teaching aid for non-native students.

"It feels more like a search engine at this stage," he said, adding that explanations of grammar are not always clear or tailored to these learners' needs.

Online reactions have been mixed, with some users praising the platform for promoting Tibetan language and culture, while others pointed to issues such as translation accuracy, limited capability in handling complex queries and pricing barriers. Some also expressed hope that similar models could be developed for other languages, including Mongolian and Uyghur.

The company acknowledged that the model is still evolving and said it will continue improving performance as more data and user feedback are incorporated. It also noted that the current mobile app is just one application built on the underlying model, which could be extended to devices such as smart glasses and earphones, as well as sector-specific solutions in healthcare and education.

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Amendments to HK's natl security law lauded

By GANG WEN in Hong Kong
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Amendments to the Implementation Rules for Article 43 of the Hong Kong Special Administrative Region National Security Law reflect the core spirit and principles of the common law system, which emphasizes human rights and procedural safeguards, Deputy Secretary for Justice Horace Cheung Kwok-kwan said on Tuesday.

Cheung said the amendments draw on relevant laws from other common law jurisdictions, aiming to better safeguard national security amid escalating global geopolitical conflicts.

He made the remarks during a joint panel meeting with the city's lawmakers, a day after the amendments to the Implementation Rules for Article 43 of the Law of the People's Republic of China on Safeguarding National Security in the HKSAR were gazetted and came into effect.

The amendments enhance the powers of the SAR's law enforcement authorities and the various measures available to them when handling national security cases. They also establish strict requirements by specifying the precise circumstances under which such powers may be exercised.

Cheung emphasized that the amendments draw on existing local laws and relevant legislation from other common law jurisdictions, adding that many provisions are "by no means unique to Hong Kong."

He noted that amid frequent geopolitical conflicts, national security risks persist in ever-changing forms with high complexity and concealment, adding that Hong Kong's fight against these risks has never ceased.

He said the SAR must earnestly fulfill its constitutional responsibility to protect national security, rigorously enforce the HKSAR National Security Law and the Safeguarding National Security Ordinance, while also formulating, amending and improving relevant legislation as needed to provide a more specific and comprehensive institutional safeguard.

Cheung added that the chief executive, together with the Committee for Safeguarding National Security of HKSAR, is empowered to amend the implementation

rules, refining the measures and mechanisms available to law enforcement agencies for handling national security cases.

Tam Yiu-chung, vice-chairman of the Chinese Association of Hong Kong and Macao Studies, said amendments are a natural progression.

"After the rules have been in place for some time, it is natural to refine them in accordance with actual needs," Tam said.

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Under Article 43, Tam noted, the SAR's law enforcement authorities may take the measures set out in the article as well as various measures stipulated under existing laws during the investigation, with the Committee for Safeguarding National Security of HKSAR exercising supervisory responsibilities. Article 43 also authorizes the chief executive and the committee to formulate relevant implementation rules.

Barrister Ronny Tong Ka-wah, also an Executive Council member, said the amendments are "normal updates resulting from experiences gained in operation". He noted that the amendments streamline procedures for handling legally privileged material by specifying how disputes on the issue can be dealt with by the court.

Both Tam and Tong stressed that the amendments will not affect the daily lives of the general public, nor will they impact the rights and freedoms of Hong Kong residents.

"It reflects the principle of respecting and safeguarding human rights," Tam said.

The Implementation Rules for Article 43 came into effect on July 7, 2020, following the enactment of the city's National Security Law on June 30 that year.

US investor finds home in Lhasa's coffee scene

By PALDEN NYIMA
and DAQIONG in Lhasa

In the heart of Lhasa, near Barkhor Street, the Summit Fine Art Cafe — affectionately known as Yangtse Coffee — has become a familiar presence where tradition meets modern urban life. As the morning sun warms the streets, local businesspeople and young professionals gather over freshly brewed Italian-style coffee.

At the center is Douglas Wolford, an American businessman who first came to Xizang autonomous region in 1997. During that visit, he noticed what he saw as a gap in the market.

"There were thousands of foreign tourists coming to the region, yet there wasn't a single authentic coffeehouse at that time," he said. "I felt there was an opportunity."

In 2005, he opened what he described as Lhasa's first Western-style cafe. For many locals at the time, stepping inside felt different from visiting a traditional Tibetan teahouse, he said.

Over the past two decades, however, coffee has shifted from novelty to routine in Lhasa. According to the city's market supervision authority, Lhasa had 128 registered coffee businesses as of August 2024, up from 56 in 2023 — more than doubling within a year, China News Service reported.

Industry observers said the actual number may be higher, as some restaurants and teahouses also serve coffee without registering specifically as cafes.



Consumers enjoy coffee at the Summit Fine Art Cafe in Lhasa, Xizang autonomous region, in December. PALDEN NYIMA / CHINA DAILY

Today, coffee shops can be found not only along Barkhor Street but also in shopping malls and near major landmarks. Rooftop cafes offer views of the Potala Palace, while riverside coffee carts serve customers strolling along the Lhasa River.

Yangtse Coffee itself has adapted with the times. The cafe serves a mix of traditional Tibetan dishes and global desserts. One signature drink — a churro latte infused with Tibetan cheese *chura* — reflects an effort to blend local ingredients with Italian coffee traditions.

"There are many cafes in Lhasa now, but the coffee here has a very pure taste," said Tenzin Nyima, a customer who has visited the cafe for more than a decade.

Other operators are also experimenting with local flavors. Tsomo, founder of the local chain Lhasa Nindo Coffee, said her brand has created drinks such as Lhasa latte, highland

barley cold brew and butter-infused coffee. Founded in 2018, the chain now operates five outlets in the city, the report said.

"I think the popularity of coffee in Lhasa reflects the city's openness to outside beverages," she said. She added that Tibetan consumers have long been familiar with coffee in different forms, recalling that instant coffee from Southeast Asia was available in Barkhor Street shops years ago.

During the Spring Festival and Tibetan New Year holidays, several cafes introduced special seasonal drinks using yak butter and turnip, attracting young customers who now see meeting for coffee as part of their holiday routine.

Along Barkhor Street, Mecha Cafe combines traditional Tibetan-style stone walls and murals with modern, camping-inspired decor, becoming a popular gathering spot for photos and social events. Mean-

while, a mobile coffee cart parks by the Lhasa River, serving drinks while introducing visitors to migratory birds wintering nearby.

Against this backdrop of growing competition and diversification, Wolford said consistency has been key to his business. From the beginning, he said, he adhered to Italian coffee-making standards.

He also credited improvements in infrastructure and the broader business environment for supporting long-term operations.

"Operating as a foreign investor here has been a positive experience," he said.

Lhakdrön, the cafe's general manager for 12 years, said Wolford has fostered a supportive workplace. Employees are entitled to maternity leave, and flexible arrangements are available for staff with children.

For Wolford, Lhasa has become more than a place of business. Wearing a Tibetan *dzi* bead around his neck, he speaks warmly of local hospitality.

"When you visit a Tibetan home, they keep refilling your teacup after every sip," he said. "That generosity stays with you."

"Now I have a home in California and in Xizang," he added. "But my heart is here."

Zheng Jinran contributed to this story.

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