

# Vikram lander hops on the Moon, goes to sleep

Payloads and ramp of lander were folded back before performing the hop test

PRESS TRUST OF INDIA  
Bengaluru, 4 September

After a successful hop test where the Vikram lander was elevated and soft landed again on the moon, Indian Space Research Organisation (Isro) on Monday said it has exceeded its objectives and now its payloads have been switched off.

The hop test will help scientists in future moon missions where samples could be brought back to earth and more importantly help the human missions being planned, Isro added.

The space agency said Vikram Lander has been set into sleep mode around 8 am Monday. Payloads have been switched off while lander receivers are kept on.

Before going into sleep mode, in-situ experiments by ChaSTE, RAMBHA-LP and ILSA payloads on lander were performed at the new location. The data collected was received at the Earth.

Sources in Isro said that the payloads and ramp of the lander were folded back before performing the hop test.

Further, it was elevated by firing its engines and making it hop once on the lunar surface.

"Vikram soft-landed on the moon, again! Vikram Lander exceeded its mission objectives," Isro added.

"On command it (Vikram lander) fired the engines, elevated itself by about 40 cm as expected and landed safely at a distance of 30 to 40 cm away," Isro said in an update on X.

After the successful hop test, Vikram and Pragyan payloads are now in a power-off mode until the south pole of the lunar surface is back in the range of the Sun again.

Isro said that Vikram will fall asleep next to Pragyan once the solar power is depleted and the battery is drained. The space agency said it was "hoping for their (Vikram and Pragyan's) awakening, around

September 22, 2023." Scientists at Isro said that after the Chandrayaan 3 mission landed on the lunar surface on August 23, Vikram and Pragyan performed all their planned experiments within one lunar day or approximately 14 earth days and finally after a hop test, have been put on sleep mode.

The temperatures could go up to -200 degree Celsius on the lunar surface soon. The payloads may not be able to withstand extreme temperatures while they are still powered on.

Therefore, the payloads have been switched off and will be powered on only after conditions are conducive for them to work again, an Isro source said.

Elaborating on the experiment, Isro's update said the importance of the experiment is to help in future missions where samples from the Moon's surface can be brought back to earth for further analysis.

The hop test can also help in the human missions as it confirmed Isro's ability to 'kick-start' the lander once again days after touching down on the lunar surface.

Isro scientists said that after the Vikram lander carrying the Pragyan rover landed on the Moon, various experiments were conducted and the hop test was the latest.

It was not announced earlier but it is one of the tests that helped the Chandrayaan mission exceed its objectives, Isro said.

The agency also released images of the lunar surface taken before and after the hop test.

When the payloads are switched on after 18 days, Isro will be undertaking the same experiments it had conducted in the past few days on the lunar surface. This cycle will be repeated every 10 to 14 days until the payloads are able to function on the Moon, an Isro source added.

According to a senior Isro scientist, the hop test showed that even after 14 days, its engines can be fired again.



BEFORE

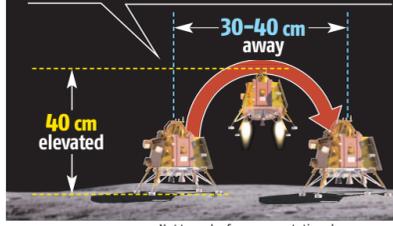


AFTER

Images showing the lunar surface before and after the lander hop experiment PHOTOS: PTI/ISRO

## SIGNIFICANCE OF 'HOPPING'

The hop experiment means that the lander has made a second consecutive landing on the surface of the moon. It is crucial for future missions where samples could be brought back to earth and it gauges the lander's capacity to function in lunar conditions. The ability of the lander to hop on the surface opens up the scope to traverse the remote and unexplored areas of the lunar surface. The success also tests the possibility and scope of human missions



Not to scale, for representational purpose only

# AYUSH Jharkhand allegedly hacked, 320K records leaked

SOURABH LELE  
New Delhi, 4 September

Cyber threat analysis company CloudSEK on Monday reported that personally identifiable information (PII) and medical diagnoses of over 320,000 patients, along with sensitive data about doctors, were found to have been leaked on the dark web from the Ministry of AYUSH website for Jharkhand.

The breach was initiated by a threat actor who goes by the name "Tanaka", and the compromised data included sensitive information about doctors, such as their PII, login credentials, usernames, passwords, and phone numbers. Information about 500 login credentials, some in clear-text (unencrypted form), was exposed on the dark web.

The website for Jharkhand is designed and developed by Bitsphere Infosystem, an information technology services firm based in Ranchi. The threat actor shared a post titled "bitsphere.in" on an English-speaking hacking forum, CloudSEK said in a report.

Email queries sent to officials of the AYUSH ministry, the office of the director at AYUSH Jharkhand, and Bitsphere Infosystem remained unanswered at the time of going to press.

The Ministry of AYUSH website for Jharkhand serves as a critical resource providing information about ayurveda, yoga, naturopathy, unani, siddha, and homeopathy treatments. It connects patients to doctors working in these medical disciplines and is also used for education and research in these fields.

Although the database is relatively small, at around 7.3 megabytes in size, it contains over 320,000 patient records, including their PII information and medical diagnoses. It also contains contact information for 737 people who used the "contact us" form on the website, as well as 472 records containing PII information of doctors. The database also contains PII information for 91 doctors, along with information about where they are posted.

The link between the compromised data and AYUSH Jharkhand's website was established by cross-referencing chatbot and blogpost data shared by the threat actor with publicly accessible data on the website. CloudSEK's contextual artificial



## DARK SIDE OF THE WEB

- Around 500 login credentials, some unencrypted, allegedly exposed
- Breach also includes 472 records containing personal information of doctors
- Contact information of 737 people who used 'Contact Us' form may have leaked
- The leaked info may increase account takeovers and phishing attacks, among other threats

intelligence digital risk platform, XVigil, was used to identify the source of the leaked data.

"CloudSEK researchers found a deeply concerning data breach that has far-reaching implications for patient and doctor confidentiality. The breach raises serious concerns about the digital security of health care data," the analytic platform said.

In its report, CloudSEK also warned that the leaked data could enable account takeovers, as commonly used or weak passwords could lead to 'brute force' attacks. It would equip malicious actors with the details required to launch sophisticated phishing attacks.

'Brute force' refers to attacks that use trial and error to guess login credentials or encryption keys.

Breach of health care databases may have severe implications as it includes sensitive data such as reproductive, sexual, and mental health data.

# ASI launches 'Adopt a Heritage 2.0' programme

The Archeological Survey of India (ASI) on Monday launched the 'Adopt a Heritage 2.0' programme seeking collaboration with corporate stakeholders in preservation of monuments.

Besides, a user-friendly mobile app, named 'Indian Heritage', which will showcase the heritage monuments of India, was also unveiled.

The ASI has 3,697 monuments under its ambit.

These monuments not only exhibit the rich cultural heritage of India but also play a significant role in fostering economic growth, the culture ministry said.

Union Minister of Tourism G Kishan Reddy, who attended the launch programme virtually, urged all entities to come forward and help in better upkeep and rejuvenation of India's rich cultural heritage.

The programme seeks to foster collaboration with corporate stakeholders through which they can contribute to preservation of these monuments for the next generations, he said. PTI

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