

After Half a Century, Russia's Mission to the Moon Resumed



Recently, the Soyuz-2.1b carrier rocket carrying the unmanned lunar probe Luna-25 was launched from the Eastern Cosmodrome in the Russian Far East. This is the first time in 47 years that Russia has restarted a lunar exploration mission.

According to Nature, Luna-25 will take about five days to enter a near-moon orbit and is scheduled to make a soft landing on Aug. 21 near Boguslavsky crater, about 500 kilometers from the moon's south pole, with two orbital adjustments planned before landing. If successful, Luna-25 will be the first probe in human history to land at the moon's south pole. "At the south pole of the moon, we may see an increase in the concentration of water ice."

Orbital data since the 1990s suggests that the Moon's poles contain large amounts of water ice, which would be a valuable resource for humanity in the future, if accessible. Nico Dettman, head of the European Space Agency's Lunar Exploration Team, said the hydrogen and oxygen produced by the water ice could be used to produce drinking water, breathable air and even rocket fuel.

Developed over 20 years, Luna-25 is a fixed lander weighing about 1,750 kilograms, with a robotic arm as its main instrument, which will attempt to dig 50 centimeters into the bottom of Boguslavsky crater to look for signs of water ice. "By understanding how the moon collects water over time, we can begin to piece together the history of water in our solar system." Barber said.