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## Water moves moon closer as home away from home

Chinese scientists' discovery of a hydrated mineral containing approximately 41 percent water in terms of weight in lunar soil samples returned by Chang'e 5 mission marks a giant step in mankind's understanding of the moon while signifying a bright future for mankind's march toward the Earth's only natural satellite.

While it has long been believed that there was no water on the moon's surface, because it easily evaporates and escapes from the moon's surface given the moon's lack of an atmosphere and lower gravitational pull, whether water

exists in nonliquid form is of key academic interest. Scientists had found no water in the lunar soil samples collected by the United States' Apollo series of spaceships from 1969 to 1972, but in 2009, remote sensing from an impactor aboard the Indian mission Chandrayaan 1 that deliberately crashed on the moon's polar region found evidence raising the possibility of the existence of ice there.

In 2020, NASA announced that it had detected water molecules in the Clavius crater on the sunlit surface of the moon, but now Chang'e 5 has seen them in lunar soil samples. If more evidence of

water in lunar soil is found in the future, scientists will gain a deeper understanding of how the moon once had an atmosphere and how it lost it, an essential chapter in the moon's history.

It will also raise the possibility of mankind residing on the moon in the future, because the existence of water resources makes it possible for humans to set up base there in due course, without the need to carry this essential resource all the way, about 380,000 kilometers. However, all that hinges on more research being carried out in the future.

— ZHANG ZHOULIANG, CHINA DAILY