WHAT? WATER RESERVOIR ON THE MOON?

I continue with my interest in science and enjoy reading about recent discoveries.

This article caught my eyes today in Google:

"…….Hong KongCNN —

As Chinesescientists analyzed the soil samples that their lunar probe brought back from the moon, they realized something groundbreaking: There was water found along with minerals in the soil.

Finding water on the moon is, on its own, nothing new. NASA and Indian spacecraft have spotted what they believe to be water on the moon's surface, and Chinese scientists last year found water trapped in glass beads strewn across the moon.

But this latest discovery, scientists say, is the first time water in its molecular form, H2O, has been found in physical samples – and, importantly, it was retrieved from a part of the moon where they'd previously thought water in that form couldn't exist.

Researchers closely inspected samples collected by China's Chang'e-5 probe, which landed on the lunar surface in 2020, and found a "prismatic, plate-like transparent crystal" – roughly the width of a human hair – that was in fact an "unknown lunar mineral" dubbed ULM-1, according to the study, which published July 16 in the journal Nature Astronomy.

The ULM-1 crystal (with the chemical formula (NH4)MgCl3·6H2O) are made up of roughly 41% water, with bits of ammonia that keep that H2O molecules stable despite wild temperature swings on the moon, according to the study.

This type of water could be a potential "resource for lunar habitation," the scientists wrote in their study.

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The discovery is the latest finding in China's larger push to become a dominant space power – with sweeping ambitions such as building a research base on the moon. The study was hailed by excited Chinese social media users, who pointed to the space program as a source of national pride.

"The discovery of a hydrated mineral at the Chang'e-5 landing site is fascinating and will further enhance our understanding of rock-vapor reactions in the lunar crust and on the lunar surface," said David A. Kring, principal scientist at the Lunar and Planetary Institute in Texas, who was not involved in the study.

Recovery crew members inspect the Chang'e 5 probe after its successful return landing in northern China in December……."

Very interesting!

Posted by Elmer Verigin February 27, 2025