Water Vapor Reported Found on Moon

By JOHN NOBLE WILFORD
New York Times, Saturday, October 16, 1971

Dr. John W. Freeman, Jr. and Dr. H. Kent Hills, two Rice University physicists, said mid yesterday that geysers of water vapor have been detected erupting through cracks in the surface of the moon, providing the first evidence that pools of water may lie beneath the otherwise barren lunar landscape.

They said that instruments that had been left on the moon by Apollo astronauts detected the geyser last March 7 on the eastern rim of the moon's Ocean of Storms.

The eruptions lasted 14 hours the scientists said, and coincided with a series of small moonquakes. They said that the clouds of water vapor spread to cover an area of about 100 square miles. Other, lesser geysers have apparently been identified, but the data on them are not yet conclusive.

The report raises a number of interesting questions. Does it mean that there is submerged liquid water on the moon? If so, how deep and extensive is it and could it be tapped as a resource for future lunar explorers? Could the discovery hasten the time when permanent laboratories could be erected on the moon?

"This indicates," Dr. Freeman said at a news conference in Houston, "there is possibly liquid water in the subsurface of the moon.

"In my opinion this represents a potential benefit and we could tap this source of heat, energy and water if the day comes when the Congress and NASA (National Aeronautics and Space Administration) see fit to establish a permanent lunar base," Dr. Freeman added.

They made their discovery through an analysis of data radioed to earth from two instruments, called "suprathermal ion detectors," which were left on the moon by the Apollo 12 and 14 astronauts.

The instruments, which weigh only 19.6 pounds each, were designed to measure the flux, composition, energy and velocity of ions, or charged particles, in the vicinity of the lunar surface. Their main purpose was to hunt for charged particles reaching the moon from outer space, for traces of a lunar atmosphere and for any sign of volcanic processes on the moon.

In an interview by telephone from the Rice Campus, Dr. Freeman said that he was "quite certain" that the data were reliable. The "signatures" of the event on the moon "matched," he said, laboratory signatures of water vapor.

Each chemical compound depending on its atomic weight and charge, produces a characteristic signal as it passes through the suprathermal ion detector. These signals, which were telemetered to earth, are as unique as a human fingerprint.

Dr. Freeman said that he and Dr. Hills delayed reporting their findings more than six months to recheck and verify the data through computers. This led him to conclude, he said, that "water vapor is the best fit"-or best match.

"Certainly water vapor is the dominant component" in the event, Dr. Freeman stated.

The scientists said they were unable to pinpoint the exact location of the eruptions because they had only two points of reference-the landing sites of Apollos 12 and 14. Three points are needed to pinpoint a site, which should be possible for any future geysers because of the subsequent deployment of a similar detector during the Apollo 15 mission last summer.
The scientists said that they were sure the detected vapor was not related to the Apollo 14 lunar module as it took off from the moon. The cloud was detected 29 days after the departure of Apollo 14.
In the vacuum of space, gases that would reach the lunar surface would dissipate in a matter of hours.
Moreover, the Rice University physicists doubted that the cloud was associated with a volcano. If it had been, they said, they would have identified volcanic gases such as sulfur dioxide.
Other scientists, commenting on the findings, said that they lent new weight to the growing body of evidence that the moon is not a completely dead and inactive place.
Apollo seismometers have picked up numerous signals of moonquakes, especially along the rims of the great lunar plains, or seas.
Ground-based telescopes have observed a number of "transients," which are thought to be flares of gases escaping from the lunar interior.

Courtesy of Arizona MUFON
Vol. 7/Issue 1

Editor's Commentary

What is significant about this article? After all, it was written almost 27 years ago.
That's the point. Recently we have been told by NASA officials that one of the primary missions of Prospecter is to determine if there is water on the moon. Since we knew over a quarter of a century ago that there was abundant water there, what is the real purpose of Prospecter? Could it be to answer the question posed by Captain Edgar D. Mitchell, Apollo 14 Astronaut, "We all know the UFOs are real. All we need to ask is where do they come from?"

LOSING A FRIEND
VINNIE'S UNTIMELY DEATH
VINNIE'S INTERROGATIONS

SATELLITE INFORMATION
ALIEN INVASION
BATTLELAB
CANCER DETECTION
COSMIC CONSPIRACY
EOS: NEXT GENERATION
GPS FROM THE USAF
PACHYDERM PATROL

[RAPID TARGETING CAPABILITY]
[SATELLITE OR UFO?]
[SPACE WARS]

UFO RELATED
[AREA 51]
[FOO FIGHTER]
[WHAT'S A UER?]
[UFO SHOT DOWN]
[USAF UFO RELEASE]

[UFOs & ASTRONAUTS-1] [ASTRONAUTS-2]
[GORDON COOPER-1] [COOPER-2]

THE MOON
[MOON FACTS]

GENERAL
[HYPERSONIC MISSILE] NEW
[MICROCHIP IMPLANTS]
[RUSSIAN BOMBS]
[TITAN ROCKET EXPLODES]

ROSWELL
[J.BOND JOHNSON]
[SYMBOLS?]
1947 PHOTOS
[Scan 2] [Scan 3] [Scan 4]
[Scan 5] [Scan 6] [Scan 7]
[MORE SCANS] UPDATE!

RONALD REGEHR
[BIO]

[LINKS] [EMAIL RON REGEHR]

[ALIEN CHASER INDEX]