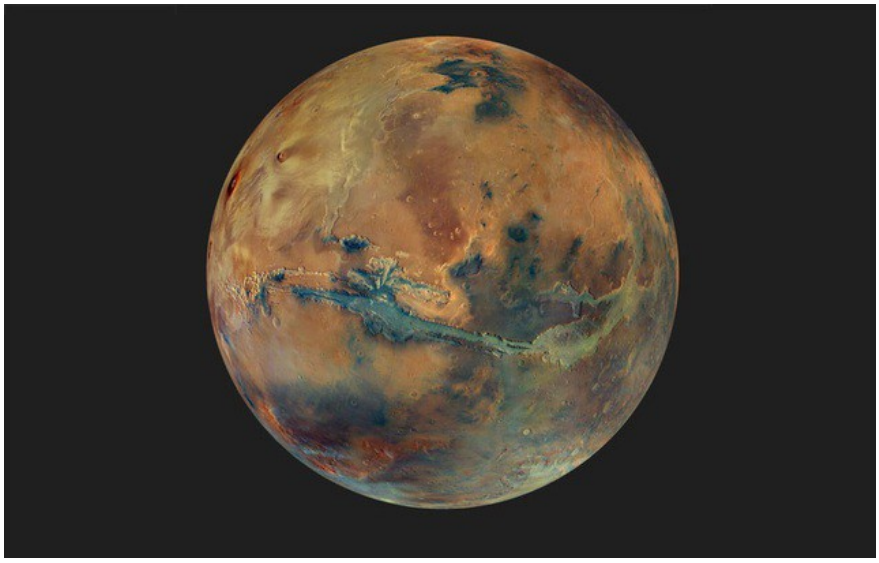
# Humanity Misunderstands the Code of Life on Mars?

Mars' ghostly red color may be evidence that it's not quite a dead planet.

Mars is easily recognizable in the sky. It is close enough to Earth to shine like a star and has a distinctive red color. That red color also reflects a world that may have once had water and life.

According to Sci-News, scientists have long pointed out that this red color is caused by rusted iron minerals in the dust, related to a wet period that completely ended billions of years ago.

But a study recently published in the scientific journal Nature Communications shows that Mars is still full of water, just in a different state.



Mars in the wet period, which may have also been a time when life prevailed - Graphic image: NASA

To get this huge red dust, iron bound in rocks on Mars at some point reacted with liquid water or water and oxygen in the air, similar to how rust forms on Earth.

Over billions of years, this rusty material - iron oxide - broke down into dust and was carried around the planet by the wind, a process that continues to this day.

But iron oxides come in many varieties, and the exact chemistry of rust on Mars remains controversial, with many studies based on observations from spacecraft finding no evidence of water in them.

Most scientists believe that the main type of iron oxide on Mars is hematite, which formed under dry surface conditions through reaction with the Martian atmosphere billions of years ago, when the wet period ended.

However, a new analysis using spacecraft observations combined with laboratory techniques suggests that Mars' red color is more consistent with a hydrated iron oxide called ferrihydrite.

It is a hydrated iron oxyhydroxide mineral common on Earth's surface. If it is present on Mars, it must have formed when Mars still had water on its surface.

This means Mars started rusting earlier than we thought, back when it still had oceans on its surface.

And that rust has retained its hydrated nature to this day, miraculously.

"We found that ferrihydrite mixed with basalt, a volcanic rock, best matched the minerals seen by the spacecraft on Mars," the authors said.

They also believe that more water-bearing deposits may exist on the red planet than we previously expected.

It's too early to draw any concrete conclusions, but scientists hope they'll have a clearer answer when future spacecraft bring back samples from Mars.

That would allow for precise measurements of ferrihydrite in the dust and reveal more clearly the history of water on Mars, and possibly the history of life there.