

Life on Mars?

If it turns out that evidence for life in ALH84001 is disproven, what does this mean?

- Life on Mars never existed
- Life is rare in the solar system
- Nothing
- Water existed on Mars' surface
- Life on Earth probably started on Mars

How Rampant Are We?

Poll: There are 100 billion stars in our galaxy.

How many besides our Sun have planets with intelligent life?

 0

 A few

 Thousands

 Millions+

Search For Past Life on Mars (1996 paper)

”Conclusion: In examining the martian meteorite ALH84001 we have found that the following evidence is compatible with the existence of past life on Mars:

- (i) [The rock was immersed in liquid at some point]
- (ii) [Parts of the rock are newer than other parts]
- (iii) [Parts of the rock look like tiny ‘bugs’ or bacteria on earth]
- (iv) [There’s magnetite in the rock, which some life on Earth uses]
- (v) [There are chemicals called PAH’s that life on Earth also uses]

None of these observations is in itself conclusive for the existence of past life.

Although there are alternative explanations for each of these phenomena taken individually, when they are considered collectively, particularly in view of their spatial association, we conclude that they are evidence for primitive life on early Mars.”

But, Extraordinary claims require extraordinary evidence – C. Sagan

Is there Life out there?

The search for ET can (and does) take several paths:

- **Q: How does life work on earth**

A: It starts fast and easily, everywhere we look

- **Q: Can we find life elsewhere in SS?**

A: We're trying, suggestive evidence, but no proof yet.

- **Can we find other planets like Earth elsewhere?**

A: Almost – come back in 10 years

- **Q: Can we detect evidence for life anywhere in galaxy?**

A: Long shot, but we're trying (listening for radio transmissions)