

SETI Resources / Links

Post by “Joshua” of July 29, 2019 at 3:41 AM

Here's a scattershot summary of the state of play. I'm mostly just going off what I've learned in reading.

1. H₂O is more common than people think. Hydrogen is most common element; helium second, oxygen third. Most common molecule is H₂. Helium is inert, doesn't bond. O₂ is quite common as well; H₂O very likely to be widespread.
2. Exoplanets being discovered all the time, including at the nearest star system to Sol (Proxima Centauri). This process is mostly done by computers now.
3. Earth-life more resilient than once thought. Thriving microorganisms happily bubbling away at deep-water vents, where the water is hot enough to boil, but can't because the pressure is too high. These extremophiles suggest the goldilocks zone wider than we thought.
4. Space is BIG. Proxima Centauri is the closest system, and it's still 4 light-years away. It would take our fastest probes 50,000 years to get there. Humans discovered agriculture at the end of the last ice-age, about 12,000 years ago. Written history is at most 5,000 years old. We're simply not equipped to conceive of these distances/timescales.
5. Space is OLD. Hold your arm out to the side, parallel to the ground. If you measure the history of Earth from the center of your sternum to the edge of your fingertip, all of human history would vanish in one pass of a nail file at the end of your fingernail. What if there WAS a space-faring civilization "nearby", but we missed it by half a billion years?
6. The Dark Forest Theory; this is an attempt to answer the Fermi paradox (where's all the life?) based on game theory. Basically, any civilization would have to assume that a contact event would have a high probability of being catastrophic for that civilization. So if there are other civilizations out there, we should assume they are trying not to be found. (In Earth's history, our most influential contact-event was the European discovery of the Americas. It was disastrous for the Native Americans.)