

Notes: Ways we search for E.T.

SETI – *Search for Extraterrestrial Intelligence.*

Search has focused on Aliens **TRYING** to get in touch with us

We look for signals coming to us from a star.

Using Radio or Laser technology known to us (compared against background noise/static)

Growing over the years, becoming more powerful technology (telescopes)

New search: look for aliens **NOT** trying to get ahold of us.

BASE ON 2 IDEAS:

That aliens will harness vast amounts of energy

That they obey the laws of physics

Once they have used energy from their planet they will go out into space and start using other planets/moons to build larger civilization (we look for this)

Dyson sphere- array built around a star to capture partial, most or all of the energy from the star.

Infrared light wouldn't match visible light from star

Structure that blocks as it rotates around star.

Large solar array: blocks sunlight-makes a unique dip in sunlight

Listening to their conversation –

Modulated laser beams – sharp spike in frequency, not naturally occurring, and could outshine a star natural frequency by 1000x

Look at galaxies full of Dyson spheres – galaxies that are full of “red” light

Nothing has turned up in the search so far: (Possibilities)

- 1- we are alone
- 2- life on other planets haven't developed the technology
- 3- don't use most of their sun's energy
- 4- can't detect because they use physics we are not aware of yet

Movie Notes: The Search for ET (The Universe)

Part 4: SETI and Searching for life

1. What is happening to our TV/Radio waves when they leave Earth?
All our TV and radio waves are going out and will go out for infinity
2. Why is contact through a signal more possibly/easier than traveling with a rocket ship?
Light travels faster than rockets. Gets there soon.
3. How sensitive are our radio telescopes?
So sensitive they can detect a flea hoping.
4. What is SETI looking for a signal to have (natural vs. intelligence)?
Using radio waves to study the universe.
SETI in California, looking for signals being made by ET.
Looking for a narrow band signal-not natural. 100 million channels at a time.
5. What stars are SETI looking at and why?
SETI goes through list of stars that are nearby. Don't know that planets there.
If they get an interesting signal, get another radio telescope to confirm.
6. Why would life that comes to visit us be a machine rather than biological? List the reason why.
ET could be non-human. Maybe a thinking machine. Every two years processing doubles. By 2030 get the processing power by \$1, 1000 buck in 2020.
Capture a human thoughts/personality into a computer. Possibly live forever. Smart enough machine, that could replicate like a virus. Machines could withstand radiation and live "forever" and would most likely get here first. Its what we would probably do first.
7. What would it mean to humans if there was or wasn't life in the Universe?
 - a. Is life?
Could have a positive effect on humans. We are one species among many. Might not cause panic.
 - b. No Life?
Or we could never meet anyone. Means that intelligence life is precious and should be treasured.