

ASTIISH HW

When will Earth disappear or end? It will likely survive the red giant stage, but eventually protons will decay.

Do Aliens exist? We will cover the odds in our last lecture.

What is the meaning of life? Great question! I could only give my philosophical answer. So I won't.

Why did the Big Bang occur? Another great question. At this point, there's no answer.

Are there other universes? Not currently known, but most Big Bang pre-theories include them.

Is there life out in the Universe? See Above. If not, why are we alone? It took a lot of special circumstances to get us here. That could be the answer.

What Started the Universe? See above.

Where did life come from? Specifically, the organism that started everything. We see complex molecules in many objects in space (particularly on comets), which look similar to pre-proteins/amino acids. So perhaps the ingredients are often there, just the right set of energy/conditions is needed.

Why do I dream of things that happen in the future? You're clairvoyant?

Are there other human-like creatures on other planets? We will see in the coming decades.

What is the maximum size of the Universe? Evidence currently suggests it will expand forever.

How vast is our universe? Is it infinite? Current evidence suggests no, but we can't find the edge as mass defines space, so our mass alone would drag our universe wherever we went. So we can't think of a way to get outside of it to see.

Why do we see different constellations depending on the time of the year? They are all always there, it's just a question of which ones are not drowned out by daylight.

Is there a way to know when, or if, the earth will be inhabitable for humans? I did an Astro Brief on this, look here:

<https://www.ksmu.org/show/astro-brief/2024-10-17/astro-brief-future-earth>

How does our universe mean to us?/Why should we know this? I'm not sure. We should try to learn about everything we can, that's how progress is made.

Can flares from neutron stars kill us? Or be extremely dangerous. Could, but it would have to be pretty close. More dangerous are supernovas, but even though would have to be fairly close, likely within 100 light years.

How old is the universe? Covered in class.

What is dark matter? Covered in class, at least so far as we currently know.

If the universe is always expanding, what is it expanding into? Great question. Currently unknown.

How does dark matter function within our universe? So far as we can tell, dark matter only makes gravity. It doesn't interact in any other way. But we'll know more in the near future (<decade most likely)

If life on another planet could eventually be achieved, you think we may move planets in the future? I hope so. We are a fragile species, and so having all our eggs in one basket (the Earth) means it is too easy to be destroyed.

Where do we really come from? (Big bang vs. religion) Unknown at this time, but a great question.

How did the stars evolve? If you mean to begin with, from over-dense regions in the early universe. If you stellar evolution, that was covered in class.

How do we come up with the names of all the stars in the universe? The bright ones were named by ancient peoples, most from the Middle East during Europe's dark ages. Now, they are named by the survey that found them and their coordinates.

Why is it important to understand the universe we live in? We are curious. But also our curiosity discovers new useful things.

Is there a god? Good question that I do not know the answer to.

What is the furthest point in the universe that we can reach? **Wherever you go, since you take the universe with you (see above).**

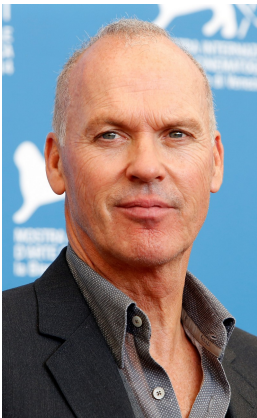
What is the single largest observable object in the universe? And how big is it in size and mass? **Superclusters, but they're really individual galaxies, which themselves are individual stars (or remnants). The biggest individual things we see are supermassive black holes at the centers of galaxies. They can get to several billion times the mass of our Sun.**

Is mayonnaise an instrument? **People are either pro or con on mayonnaise. (I'm pro.)**

Is anything related to math? **Math is a great tool. If you can master math, you're nearly a magician.**

If time travel is theoretically possible, is it also theoretically doable? Are those things mutually exclusive? **Yes, yes, and no. Covered in class.**

Am I the only one who thinks Professor Reed looks a bit like actor Michael Keaton?



I'm not seeing it, but I appreciate the sentiment. (Can I get some of his royalties?)

What happens after you die? **Unfortunately you have to die to find out and the dead don't talk.**

What is the scariest aspect of space? **For me, the lack of breathable air. For someone else? I don't know.**