

Epicurus On The Issue of The Universe Being Infinite In Space

Post by “Adrian” of February 20, 2023 at 3:58 PM

Quote

both the universe and the space in which it exists are in accelerated expansion

This is interesting. The universe has been defined as all existing matter and space considered as a whole, so is there anything outside the universe for it to expand into? If there is something outside the universe what is it?

There is a great deal of discussion on what does the universe expand into? This is discussed by the physicist Sabine Hossenfelder in her interesting YouTube video “What does the universe expand into? Do we expand with it?”, and also in her 2022 book “Existential Physics: A Scientist’s Guide to Life’s Biggest Questions.”

Are you possibly referring to the no-boundary proposal which avoids the Big Bang singularity by replacing time with space outside the early universe? Hossenfelder says outside because it makes little sense to use before if there was no time. In the no-boundary proposal, the universe is embedded into space. I find the concept of a space outside the universe for the universe to expand into difficult to conceive since all space is surely within the universe? Cosmology is very interesting.