

What You Should Know from “Alpha video”!

- 1.) Einstein’s original theory predicted that the universe was expanding. He didn’t believe this. What did he do to counter it?
- 2.) Who supposedly discovered that the universe is, indeed, expanding, thereby negating the need for the move listed in Question #1?
- 3.) Why has the *cosmological constant* been revived?
- 4.) What is the consequence of a changing *fine structure constant*?
- 5.) When dealing with light:
 - a.) characterizing it as a particle means you have to stipulate what about the bundle?
 - b.) characterizing it as a wave means you have to stipulate what about the waveform?
 - c.) The two parameters listed in 5a and 5b are linearly related. What is the proportionality constant that links the two, and what is the defining relationship that comes when that constant is used?

6.) What is the deBroglie wavelength?

7.) What does the *fine structure constant* do?

8.) In terms of the charge “e” on an electron, what is *fine structure constant*?

9.) What has currently been observed about the *fine structure constant* that is controversial?