

Expansion of Universe

Our Universe is not only expanding, rather it is accelerating too. Dark energy is the name given to whatever is causing the acceleration of the Universe or expansion to speed up. Ongoing far enough out, there is a distance at which galaxies are speeding away from us faster than the speed of light. As a result, it's suspected that receding galaxies will cross a type of cosmological event horizon, where any evidence of their existence will not be captured even by light, no matter how far into the future you go. Because of great speeds, these galaxies will likely not be visible to us forever, some of them are right now emitting their last bit of light that will ever be able to make it across space and reach us, billions of years from now. After that, we will observe them freeze and fade, never to be seen again. The Hubble constant tells us that if for every megaparsec of distance between two galaxies, the apparent speed at which the galaxies move apart from each other is greater than 71 km/sec and since we know that the speed of light is around 300,000 km/sec, it's easy to calculate how far away two galaxies must be to be moving away from each other faster than the speed of light. The answer we get is that the two galaxies must be separated by around 4,200 megaparsecs. Current cosmological theories state that the universe is big enough to accommodate a bunch of galaxies that are more than 4,200 megaparsecs away from each other and in fact, there is an infinite number of them. Using the best observationally determined values for the universe's rate of expansion, acceleration, and other parameters, it was found that if one uses a value of around 1.4 for the redshift then one gets the required distance of 4,200 megaparsecs. Therefore, any galaxy with a redshift greater than 1.4 is currently moving away from us faster than the speed of light. A redshift of 1.4 is not that much. Many quasars with redshifts around 5 have been detected. We can even see light back to a redshift of 1000 or so, which is known as the Cosmic Microwave Background and was emitted around 380,000 years after the Big Bang, right after the Universe had cooled down enough for light to get through all the intervening matter. Physics supports the fact that there are galaxies, which may have passed beyond a certain event horizon and have faded away, never to be seen or heard again. The soul energy that crosses the event horizon is like lost stars who are never meant to return. From the perspective of Physics, dark energy or dark matter is a constituent of this eternal Void which makes up the ingredients of soul energy. Dark matter of the Universe is not influenced by gravitation and remains undetected. For this reason, dark matter is called the missing mass. This dark matter makes up 26.5 percent of the matter-energy composition of the universe. There are

two distinct categories of dark matter - Baryonic and Non-baryonic. The Baryonic dark matter is made up of the familiar baryons i.e. protons, neutrons, etc. They constitute 4.5 percent of the dark matter. The remaining 22 percent of the dark matter is a Non-baryonic substance. It is intrusive from early universe density fluctuations that non-baryonic dark matter is non-relativistic and electromagnetically neutral. Therefore, it remains undetected by any physical force and unguided by the laws of relativity or particle physics. It pervades the entire known universe but remains undiscovered, undetected like soul energy. One who is aware of the laws governing dark matter may also be able to crack the puzzle of soul energy by looking at it from the perspective of mathematical formulas of manipulation of mere matter and not from the concept of the sinful or holy act. If an entity overcomes the gravitational pull of Earth through its escape velocity then the molecular structure or any other characteristics is not considered, but it only depends on the one who imparts that velocity. The same law acts in the liberation of the soul.