Twitter Thread by ■■■■■■™

■■■■■■™
@yajnshri

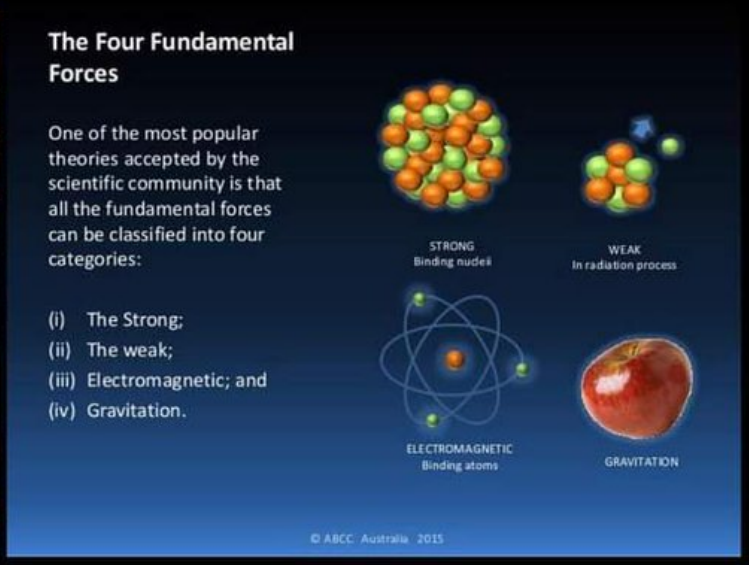
WHEN DID STARS FIRST APPEAR?

Puranas About Beginning of Universe ?

Science behind the universe?

Did You Know?

The first mind-born creations and sons of the Bhagwan Brahma, The Kumaras are four sages (rishis) who roam the universe as children from the Puranic texts of Hinduism,generally named Sanaka, Sanandana,Sanatana and Sanat. They are said to wander throughout the materialistic and spiritualistic universe without any desire, All four brothers always travelled together.



The four fundamental forces of nature, and they govern everything that happens in the universe.

1.Sanaka= Gravity
2.Sanandana= Electromagnetism
3.Sanatana=Strong Nuclear Force
4.Sanat = Weak Nuclear Force

Puranas About Beginning of Universe

According to the Purāṇas, the Universe began at the start of the Pratisamdhi at the end of the last Day of Brahmā. As discussed in Section 6.2, this occurred 13.819 billion years ago. Since a Pratisamdhi is 616 million years long, a significant event in the history of the Universe is expected at 616 million years after the origin of the Universe. According to the latest analysis of the Planck data, the end of the Pratisamdhi at 616 million years ago lies within the Planck estimate for the first appearance of stars. In other words, it seems that the end of the Pratisamdhi corresponds to the Epoch of Reionization (the end of the Dark Age). It is interesting to note that an earlier analysis of CMBR data put the Epoch at 450 million years ago (Hinshaw et al, 2013), and Planck's analysis shifted it 100 million years younger (Planck Collaboration, 2016). It will be interesting to see if future analyses of the CMBR bring the Epoch even closer to the Puranic value.

WHEN DID STARS FIRST APPEAR?

According to cosmologists, our Universe began as a hot, dense, primordial soup of particles, mostly electrons, protons, neutrinos, and photons. Since the Universe was dense, the photons couldn't travel far without colliding with electrons. At this stage the Universe was "opaque." As the Universe cooled down, electrons and protons combined together to form hydrogen atoms, which is known as recombination. Recombination occurred 380,000 years after the Big Bang (or Big Bounce) and produced the Cosmic Microwave Background Radiation. Due to the recombination phase, the Universe became unobservable, because all of the emitted short-wavelength spectrum was quickly absorbed by the atomic gas. This was the start of the period known as the Dark Age.

During the next few hundred million years, some regions of the Universe became dense – it is these regions that gave birth to the Universe's first stars.

The Epoch of Reionization

These stars ended the Dark Age. As these stars came to life, their ultraviolet radiation ionized the hydrogen atoms in their surroundings, causing them to split into electrons and protons. Thus, the atoms were reionized – scientists refer to this moment as the "Epoch of Reionization." In a relatively short amount of time, the whole Universe was mostly ionized and lit up due to these stars.

The Epoch of Reionization is a point of contention between astrophysicists and cosmologists. While astrophysicists argue for the first stars as early as 250 million years ago (Hashimoto, 2018), cosmologists argue for the first stars at 492–648 million years ago (z = 8.8 ± 0.9, H, 67.27, 0.316; Planck = = Collaboration, 2016; Tristram, 2016). In other words, astrophysicists argue for an older age for the first stars and cosmologists, based on observing the fluctuations in the CMBR, propose a younger age for the first stars.

The Hubble Constant

The Hubble constant, which plays a role in the estimation of the age of the Universe, is a measure of the rate at which the universe is expanding from the primordial "Big Bang." In recent years, the Hubble constant has been a topic of debate between cosmologists and astrophysicists. Cosmologists use methods based on analysis of the Cosmic Microwave Background Radiation and Baryon Acoustic Oscillations, both of which yield the same value of 67.4 km s^{1} Mpc for the Hubble constant (Sokol, 2019). The current cosmological estimate of the age of the Universe at 13.8 billion years is based on these analyses.

However, astrophysicists use different methods to measure the Hubble constant. They look at distant galaxies, stars, and supernovae and measure the speed at which they are traveling away from each other. They have proposed a range of values for the Hubble constant from 69 to 82 km s^{1} Mpc^{1} (Sokol, 2019).

Science is based on veda also proven by big bang theory

The Purāṇic chronology is Remarkably close to that of modern science. Therefore, we propose that Planck's estimate for the age of the Universe is accurate and will stand the test of time against doubts raised by astrophysicists regarding the Hubble constant. This is an example of how Puranic statements serve as an independent source of validation for scientific data.