

# Chapter IV Reality in Modern Physics

Abstract

In this chapter, we briefly discuss the crucial concepts of space, time, matter, energy, causality, and entropy that have evolved during the last four hundred years after the advent of modern physics. The required theoretical formulations and their experimental discoveries and recognition that the universe has three identical, the micro, macro, and the middle and these concepts have to fit into the explanation of happenings in all the three domains. The Big Bang Theory of Creation triggered by the discovery of the expanding accelerating universe and their needs for creation of particles and anti-particles observed in high energy physics experiments and the newly discovered Dark Energy and Dark Matter overwhelming the constituents of the universe in comparison to baryonic matter that had been discovered earlier explained. How all these leads to the strange but tentative conclusion that the ultimate reality is more likely the "quanta vacuum" which is a combination of various energy fields endowed with specific properties.





The ~~various~~ sources of knowledge on the basis of  
which the different philosophies are ~~formulated~~ <sup>formulated</sup> are detailed.

The accepted sources of knowledge in Indian philosophy are  
~~Pratyaksha~~ Pratyaksha (Perception), Anumana (Inference),  
Apta Vagya (Testimony), Upamana (Comparison)

Arthapatti (Postulation) Anupalabdhi (Non-Cognition)

The different philosophies accept different combination of  
the above sources listed above.

The conclusions regarding the ultimate reality reached by  
the different philosophies is also presented

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The history of the concepts of physics - Space, Time  
Matter, energy, causality, origin of the universe  
is presented