

Inflation Paradigm

Elli Pomoni*

State University of New York, Stony Brook

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Abstract

I will start my talk with a small introduction to Big Bang Cosmology (just to introduce the main concepts that we will use later). Then, in order to give motivation for the introduction of inflation paradigm, I will discuss some of the problems that Big Bang Cosmology can not explain (i.e. the flatness problem, the horizon problem and the unwanted relics). This will lead me to the introduction the inflationary universe scenario and I will explain how that solves all the problems above. Furthermore, I will explain how we can construct inflationary models by using "slow-rolling" scalar fields and what we can learn from them. Finally, I will discuss the current observational situation and how it supports the idea of inflation.

*Electronic address: epomoni@grad.physics.sunysb.edu

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