

Inflation after Planck & BICEP2

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The inflationary scenario is currently considered to be the most promising paradigm to describe the origin of the perturbations in the early universe. It corresponds to a period of accelerated expansion before the hot Big Bang phase. Inflation is typically achieved using scalar fields, and it is the quantum fluctuations associated with the scalar fields that are responsible for the creation of the primordial perturbations. The perturbations generated during inflation leave their signatures as anisotropies in the Cosmic Microwave Background (CMB). With the CMB anisotropies being measured to greater and greater precision, we are presently in an unprecedented situation of being able to arrive at strong constraints on the physics of the early universe. In this talk, after a brief introduction to inflation, I describe the implications of the recently released Planck & BICEP2 data for inflation and discuss what are the “best” inflationary scenarios.

References

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