Conformal Description of Inflation and Primordial B-modes

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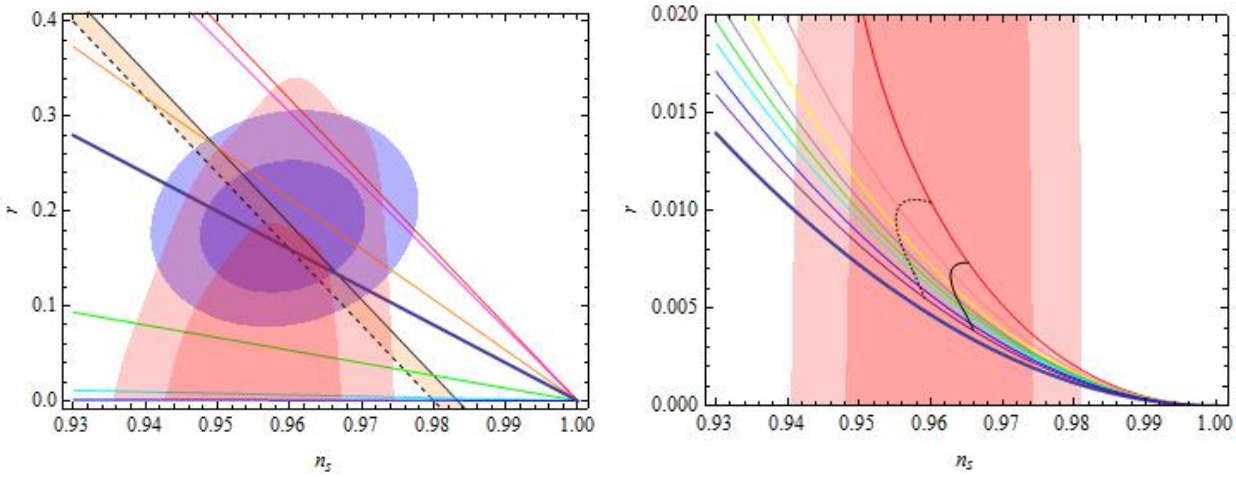
We describe an extended class of the conformally invariant theories which takes T-model as well as Starobinsky model as special cases. We derive a general relation between the two slow-roll parameters, and find that a large class of models can be embedded. Such models include more general Starobinsky-like inflation as well as the chaotic inflation with a large tensor-to-scalar ratio consistent with the BICEP2 result.

Figure 1. The r-n_s relation of (a) Left: Chaotic inflation; (b) Starobinsky-like inflation.



References:

[1] R.Kallosh and A.Linde, *New models of chaotic inflation in supergravity*, JCAP1011, 011 (2010).

[2] R.Kallosh and A.Linde, *Universality Class in Conformal Inflation*, JCAP1307, 002 (2013).

[3] P.A.R.Ade et al., *BICEP2 I: Detection Of B-mode Polarization at Degree Angular Scales*, arXiv: 1403.3985.