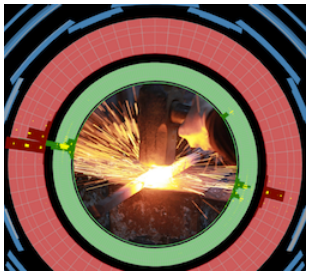

Contribution ID: **3** Type: **parallel talk**

Initial condition of inflationary fluctuations

Monday 9 May 2016 14:30 (15 minutes)

It is usually assumed that the inflationary fluctuations start from the Bunch-Davies (BD) vacuum and the $i\varepsilon$ prescription is used when interactions are calculated. We show that those assumptions can be verified explicitly by calculating the loop corrections to the inflationary two-point and three-point correlation functions. Those loop corrections can be resumed to exponential factors, which suppress non-BD coefficients and behave as the $i\varepsilon$ factor for the case of the BD initial condition. A new technique of loop chain diagram resummation is developed for this purpose. For the non-BD initial conditions which is setup at finite time and has not fully decayed, explicit correction to the two-point and three- point correlation functions are calculated. Especially, non-Gaussianity in the folded limit is regularized due to the interactions.

Summary

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