Non-Gaussianity of Racetrack Inflation Models

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Abstract: In this paper, we use the result in [C.Y. Sun and D.H. Zhang, arXiv:astro-ph/0510709] to calculate the non-Gaussianity of the racetrack models in [J.J. Blanco-Pillado, et al., JHEP 0411 (2004) 063; arXiv:hep-th/0406230] and [J.J. Blanco-Pillado, et al., arXiv:hep-th/0603129]. The two models give different non-Gaussianities. Both of them are reasonable. However, we find that, for multi-field inflationary models with the non-trivial metric of the field space, the condition of the slow-roll cannot guarantee small non-Gaussianities.

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