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# Probing higher spin fields from galaxy alignment

Non-linear effects during inflation can generate primordial non-Gaussianities(PNG). Arkani-Hamed & Maldacena showed that an interaction between the inflaton and higher spin ($s \geq 2$) fields, which may be predicted in string theory, can generate angular dependent PNG. Specifically, the search of the imprint of spin ($s \geq 4$) fields can give us the evidences of string theory. As was argued by Schmidt et al., the anisotropy generated from spin-2 PNG can be explored by galaxy alignments. By extending this method, we examine the detectability of the imprint of spin-4 fields by galaxy alignments. I will state the relation between the higher moments with galaxy alignments and the PNG with higher spins.

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