Contribution ID: **53** Type: **not specified**

Nonstandard tensor modes from a pseudoscalar inflaton

Monday, April 18, 2011 2:30 PM (20 minutes)

In many models of inflation, the inflaton is a pseudoscalar field that is a potential source of parity violation. I will discuss a natural mechanism allowing to transfer parity violation from the inflaton into the Cosmic Microwave Background (CMB). A pseudoscalar inflaton naturally interacts with gauge fields through an axion-like coupling. Through this coupling, the rolling inflaton induces the production of quanta of the gauge field, that in their turn source the tensor components of the metric perturbations. Due
to the parity-violating nature of the system, non-vanishing TB and EB correlation functions in the CMB are generated. I will also discuss how the
tensor modes generated this way might be directly detected by gravitational wave interferometers such as advanced LIGO.

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Session Classification: Contributed Talks