

Hunting spin 3/2 fields through gravitational waves

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I will first briefly remind why one tends to believe that a fundamental spin 3/2 particle might have only gravitational coupling, as the gravitino. I will then explain how stochastic gravitational waves, produced in the preheating phase of the universe by a gas in a non-adiabatic regime, have some peculiar features that allow to identify if the gas is made of spin-3/2 states.