

JOINT TUFTS/MIT COSMOLOGY SEMINAR

Thermalization process and dark matter production in the reheating era

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I will talk about our work on the thermalization process of the Universe after inflation. The decay of inflaton produces high-energy particles that must be thermalized to complete the reheating of the Universe. The time scale of thermalization is found to be so long that it delays the evolution of the temperature, and the resulting maximal temperature of the Universe can be significantly lower than the one calculated by assuming the instantaneous thermalization. Before the thermalization completes, dark matters can be produced from collisions between the high-energy particles and/or the ambient thermal plasma. I will explain the resulting DM abundance and the condition that the non-thermal processes are important.

Tuesday, February 5, 2019, 2:30 pm
574 Boston Ave, Room 310
Tufts University

Refreshments at 2:00 outside room 304