LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

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Towards first principles in particle cosmology

Some of the important issues in cosmology (such as the existence of a matter-antimatter asymmetry) can be faithfully addressed in terms of interactions probed at terrestrial experiments, only if we know how to reliably compute with relativistic thermal quantum field theories. After outlining a few of the conceptual and technical challenges involved, I illustrate the status of the field with the example of the right-handed neutrino production rate in a very early universe.