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Hadronic screening masses in thermal QCD up to the electroweak scale

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Novel theoretical and computational strategies have opened the possibility of exploring QCD thermodynamics at the non-perturbative level at unprecedented temperatures, reaching from the GeV scale up to the electroweak scale.

A number of observable quantities are now being investigated in this regime.

Key ones are the hadronic screening masses, which encode the correlation length of the medium and thus the extent to which strong interactions are screened in a thermal environment.

In this talk I present recent lattice results for hadronic screening masses, including baryonic modes and (preliminary) non-static mesonic modes.

These results can be compared with predictions from the perturbative expansion in the three-dimensional effective theory valid at asymptotically large temperatures.

The comparison reveals persistent non-perturbative effects well into the electroweak scale, shedding new light on the microscopic structure of QCD at extreme temperatures.

Parallel Session (for talks only)

QCD at nonzero temperature and density

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