

Kolloquium Physik / TransRegio211

Strong-Interaction Matter under Extreme Conditions

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Shine a light! When matter shatters

The microscopic properties of strong-interaction matter under extreme conditions of temperature and density is a topic of great interest.

Matter in equilibrium radiates photons with a thermal spectrum revealing its temperature in the slope of the energy distribution. This is generalized for virtual photons, which materialize after a short time by creation of a pair of charged leptons (dileptons), for which their invariant mass takes the role of the energy as observable. In contrast to the case of photons, their spectral distribution is not affected by a blue (or red) shift. Moreover, dileptons offer the unique opportunity also to directly monitor in-medium electromagnetic spectral functions. Hence, dilepton spectra from strong-interaction medium reflect not only its temperature but also are sensitive to possible effects of a restoration of the spontaneously broken chiral symmetry.

This talk will discuss important experimental results obtained so far at various facilities and the latest theoretical developments on emissivity of matter.

Monday, 08.06.2020, 4:15 p.m.

place: cyberspace

**zoom-link will be communicated
on the day of the colloquium**