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In-medium Modifications of Hadrons and the NA60 dimuon measurements HENDRIK VAN HEES, RALF RAPP, Texas A&M University — The theoretical understanding of dimuon spectra as measured in 158 A GeV In-In collisions by the NA60 collaboration at the CERN SPS is summarized. The low-mass region, $M \leq 0.9$ GeV, is well described by in-medium modifications of the ρ-meson spectral function within a hadronic many-body approach. To account for the yield in the intermediate-mass region, 0.9 GeV $\leq$ M $\leq$ 1.5 GeV, four-pion contributions in the electromagnetic emission function have to be taken into account. The data are consistent with the assumption of chiral mixing of isovector-vector and -axialvector currents, which could be indicative for the onset of chiral-symmetry restoration in heavy-ion collisions. Our calculation also includes the contribution from the quark-gluon plasma phase which turns out to be small compared to that of the hadronic source. Predictions for the modifications of ω- and ϕ-meson spectral shape may be experimentally checked in future experiments.

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