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Simulation of hadronic cocktail decay contributions to the dielectron spectrum within the PHENIX acceptance

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Dielectron spectra in Au+Au collisions carry important information on the properties of the hot dense matter created in the early stage of the collisions. The earlier PHENIX measurement, using data taken in 2004 shows significant deviations from hadronic decay expectations. The most recent data set from 2010, taken with the Hadron Blind Detector (HBD) upgrade designed to reduce the combinatorial background, promises to be a more significant result. This new data set requires an update to the simulations of hadronic cocktail contributions. The cocktail provides the benchmark for studying medium effects, such as the previously reported low mass excess. The new simulation takes into account improved PHENIX measurements of the cross sections for some of the hadrons (η , ϕ , ω), as well as an improved line shape of the ρ meson. In addition, it also includes the modified PHENIX acceptance and additional detector material. Results on the new cocktail and comparison with dielectron spectra will be shown.

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