

Coherent Dilepton Pair Production in Heavy Ion Collisions at RHIC and SPS Energies

An excess of dilepton pairs has been measured in high-energy heavy-ion collisions at very low transverse momentum. These dileptons cannot be explained with modern models of the thermal radiation from the Quark-Gluon Plasma and hadronic matter. This excess is a strong indication of photon-photon interactions prior to the collision. Current models of photon interactions deviate from experimental data at lower dilepton masses. To investigate the discrepancy, we will present new calculations describing the production of coherent dileptons from photon interactions in peripheral Indium-Indium collisions at SPS energies. These calculations will explore in this reaction the excess of dileptons in the lower mass region.