

Abstract Submitted
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Production of the ϕ mesons at intermediate rapidity in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV¹ DIPALI PAL, University of Kansas, BRAHMS COLLABORATION — Study of the ϕ mesons produced in relativistic heavy-ion collisions can unfold properties of the hot and dense quark gluon matter produced in these reactions. Since the ϕ is a bound state of s and \bar{s} quarks it is not subject to the canonical suppression of strangeness in p+p interactions and thus serves as a clean probe of strangeness enhancement in Au+Au collisions. The measurement of the ϕ -meson spectra, yield, and temperature parameter gives information on strangeness enhancement and the bulk properties of the partonic matter. The BRAHMS experiment at RHIC has measured particles produced in high luminosity Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV over a broad range of rapidity and p_T . Using the efficient tracking system and high resolution time of flight wall of the mid-rapidity spectrometer (MRS), we have measured the ϕ mesons in the K^+K^- decay channel at $y \sim 1$. The first results of the $\phi \rightarrow K^+K^-$ measurements with focus on spectra and yield analysis will be presented.

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