

Production of the  $\phi$  mesons at intermediate rapidity in Au+Au collisions at  
 $\sqrt{s_{NN}} = 200$  GeV  
(BRAHMS Collaboration)

Study of the  $\phi$  mesons produced in relativistic heavy-ion collisions can unfold properties of the hot and dense quark gluon matter produced in these reactions. The measurement of the  $\phi$ -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  $\phi$  mesons in  $K^+K^-$  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.