Triggering Discoveries in High Energy Physics III, High Tatras



Contribution ID: 43 Type: not specified

Update on high pt neutral meson production in heavy ion collisions at PHENIX

The PHENIX experiment at RHIC already published results on π^0 and η production in $\sqrt{s_{NN}}=200$ \,GeV Au+Au collisions based on data taken 2004, 2007 and 2010. In the 2014 and 2016 data taking periods large amount of new data were collected, about ten times the previous statistics. This allows both to extend the p_T -range of the measurements and improve on systematic uncertainties. In this talk we report on the ongoing analysis of π^0 , η and ω invariant yields using 2016 data, with an emphasis on quality assurance (improving timing resolution and techniques to exclude malfunctioning parts of the detector). The results will eventually be combined with a parallel analysis of the 2014 data providing the final results from RHIC on light neutral meson production.

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