

1 Production of K^{*0} in Au+Au collisions at
2 $\sqrt{s_{NN}} = 14.6$ and 19.6 GeV in BES-II from STAR

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4 The production of short lived resonances like K^{*0} provides a unique oppor-
5 tunity to probe the hadronic phase formed in heavy-ion collisions. Due to its
6 short lifetime the decay daughters may interact with the medium which may
7 lead to a change in the properties of the resonances. The decay particles may
8 undergo rescattering and re-generation effects. Hence K^{*0}/K provides a unique
9 tool to investigate the interplay of re-scattering and regeneration effects in the
10 hadronic phase of heavy-ion collisions. Recently STAR has completed the BES-
11 II run resulting in high statistics Au+Au data with improved detectors and
12 wider pseudorapidity coverage. This will help us to extend the measurement in
13 both lower and higher p_T range with less statistical uncertainty than that in
14 BES-I.

15 We will report mass, width, and invariant yields of K^{*0} using the 14.6 and
16 19.6 GeV BES-II data. The average transverse momentum of K^{*0} will be shown
17 and compared with other hadrons. The nuclear modification factor of K^{*0} will
18 be shown. The resonance to non-resonance ratio will be shown as a function
19 of centrality to study the rescattering/regeneration effects. Measurement of the
20 hadronic phase lifetime will be shown as a function of centrality and will be
21 compared with other RHIC and LHC energies.