Quark Matter 2018



Contribution ID: 26

Type: Poster

## The STAR Forward-Rapidity Physics Program after the BES-II

Tuesday 15 May 2018 19:10 (30 minutes)

The physics program described in this poster complements the STAR mid-rapidity physics program after the BES-II. The program is based on the planned STAR forward rapidity ( $2.5 < \eta < 4.5$ ) detector upgrade, consisting of tracking detectors (Silicon mini-strip disks combined with small-strip Thin Gap Chambers) preceded by an electromagnetic and hadronic calorimeter. The uniqueness of the forward rapidity pA program is based on the flexibility of the RHIC accelerator to run collisions of different particle species at very different center-of-mass energies. This in combination with the existing and planned STAR detector capabilities allows to disentangle nuclear effects in the initial and final state as well as leading twist shadowing from saturation effects in a kinematic regime where all these effects are predicted to be large. It is specifically noted that the forward upgrade will provide new detector capabilities at RHIC and STAR to explore the longitudinal structure of the initial state and the temperature dependent transport properties of matter in relativistic heavy ion collisions.

## **Content type**

Experiment

## Collaboration

STAR

## Centralised submission by Collaboration

Presenter name already specified

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Session Classification: Poster Session

Track Classification: Future facilities, upgrades and instrumentation