Energy for the first collisions in MPD at NICA

Grigory Nigmatkulov
National Research Nuclear University MEPhI

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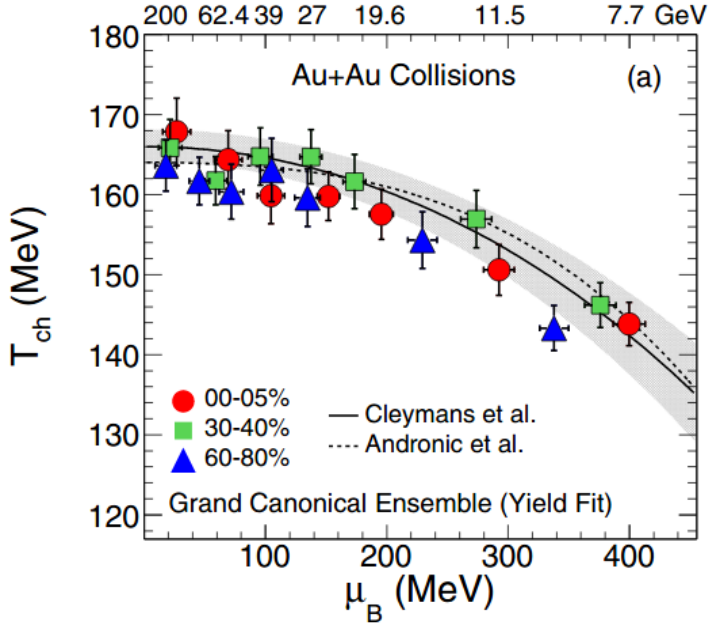
Which energy?

- At $\sqrt{s_{NN}}$<19.6 GeV system properties start changing fast
- There are few measurements at $\sqrt{s_{NN}}$>9 GeV, which is required by NICA collider accelerator department
- Only $\sqrt{s_{NN}}$=9.2 GeV has already been measured at RHIC in the COLLIDER mode in the year 2008 (low statistics)
- Theoretically motivated (peak in trace anomaly) K.A. Bugaev et al. PEPAN 15, 210 (2018)
- STAR took data at $\sqrt{s_{NN}}$=9.2 GeV in the year 2020 (~160M events)
- In case first heavy-ion collisions at NICA will be at $\sqrt{s_{NN}}$=9.2 GeV it will:
  - Allow to test the collider capabilities
  - Be a compelling and timely measurement

PHYSICAL REVIEW C **96**, 044904 (2017)



PHYSICAL REVIEW C **81**, 024911 (2010)

Identified particle production, azimuthal anisotropy, and interferometry measurements in Au + Au collisions at $\sqrt{s_{NN}}$ = 9.2 GeV