



The STAR experiment

at the Relativistic Heavy Ion Collider, Brookhaven National Laboratory

STAR members in Warsaw

Femtoscropy:

Krzysztof Brzeziński

Jakub Ferenc

Martin Girard

Adam Kisiel

Filip Oleszczuk

Diana Pawłowska

Jan Pluta

Katarzyna Poniatowska

Sebastian Siejka

Maria Stefaniak

Paweł Szymański

Hanna Zbroszczyk

Heavy Flavor:

Zhanna Khabanowa

Daniel Kikoła

Leszek Kosarzewski

Andrzej Lipiec

Janusz Oleniacz

Robert Sobolewski

Mateusz Wnuk

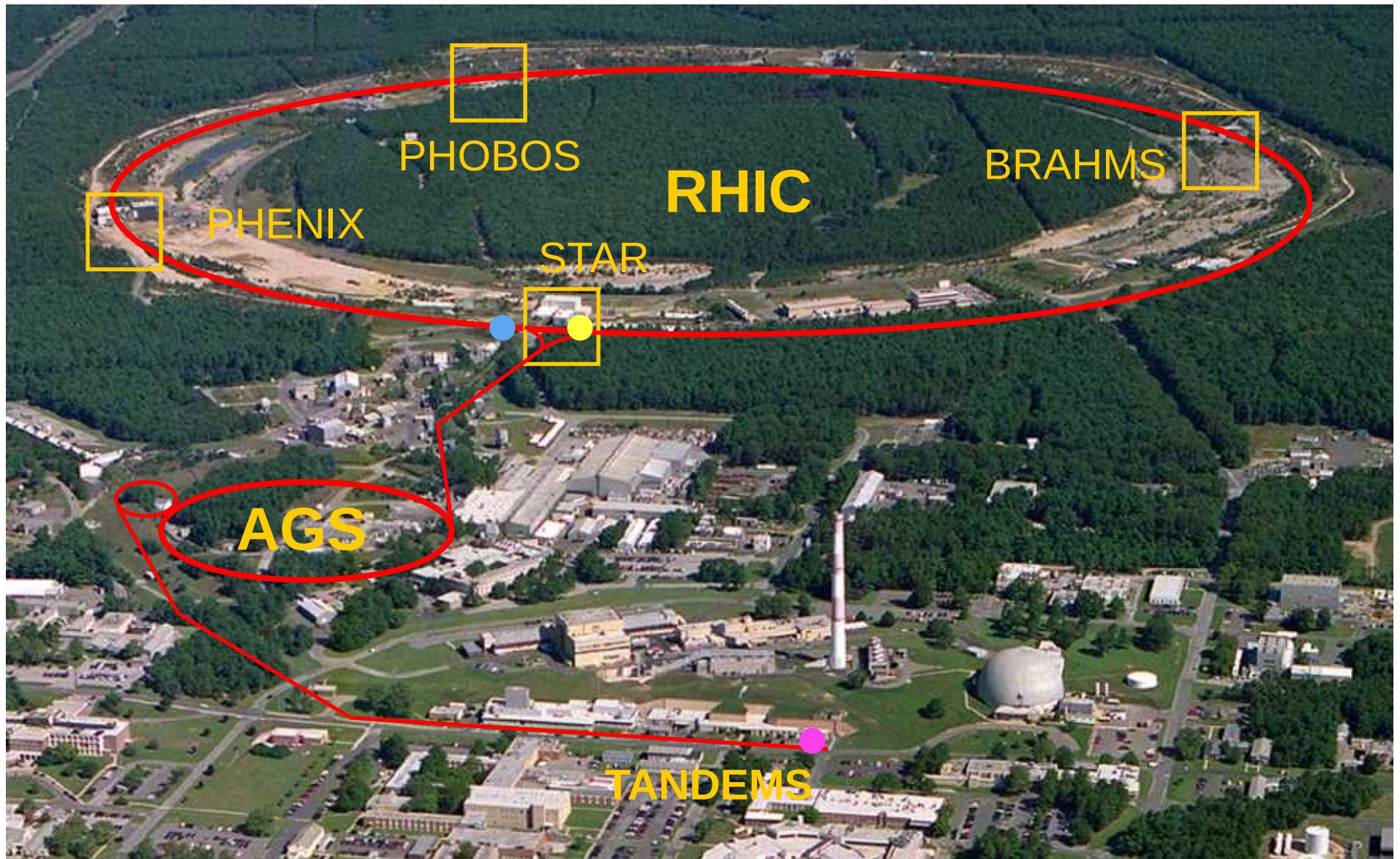
Staff members (5)

Student (11)

Ph.D. Student (3)

Relativistic Heavy Ion Collider (RHIC)

Brookhaven National Laboratory (BNL), New York



- 2 concentric rings of 1740 superconducting magnets
- 3.8 km circumference

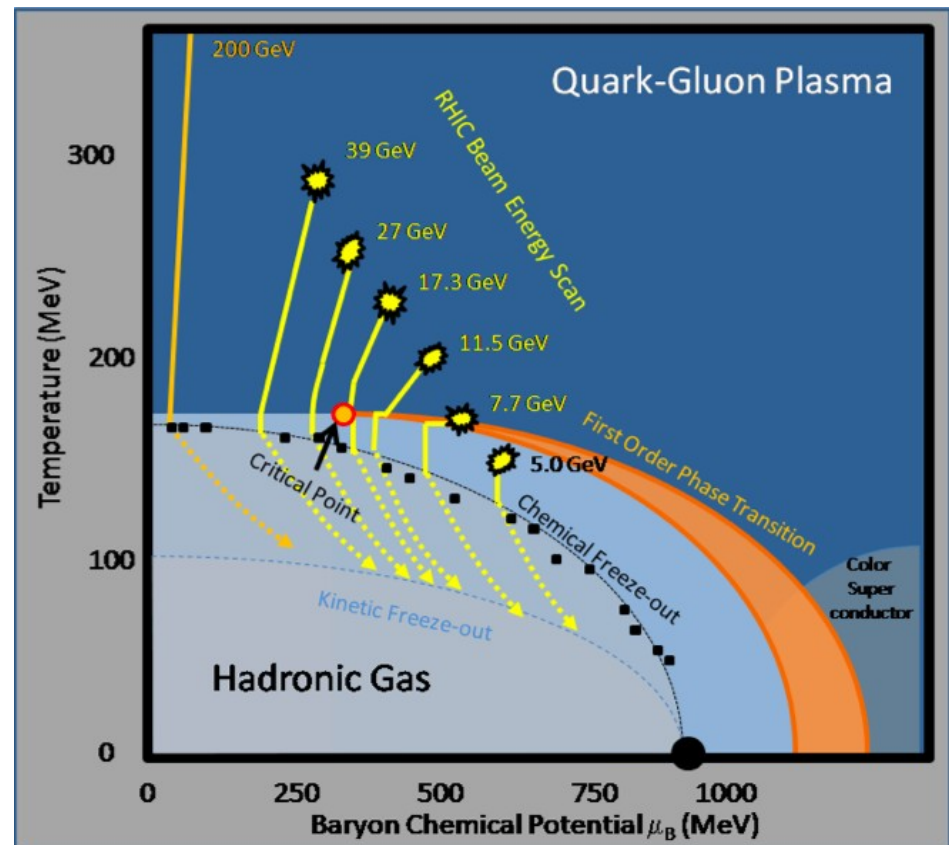
Relativistic Heavy Ion Collider (RHIC)

Brookhaven National Laboratory (BNL), New York

14 years of operation

Heavy-Ion Collisions: Au+Au, Cu+Cu, Ur+Ur (also p+p, d+Au)

Collision energies: $\sqrt{s_{NN}} = 200$ GeV (also Beam Energy Scan Program)



Computing cluster

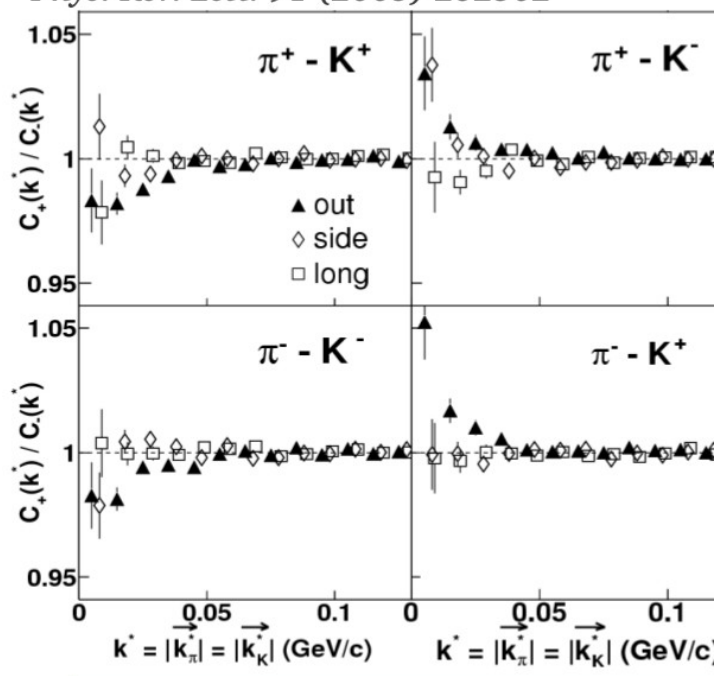
- 1) 12 compute servers with modern Intel Xeon processors
giving a total physical processors $48 + 60 = 108$,
and logic ones 216
RAM 4GB/core; drives 2TB
 - 2) RAID5 disk matrixes: 35TB and 13TB of memory
 - 3) Interactive nodes: 8x 4-core Intel Q6600; 16GB of RAM
 - 4) 5 UPS (3000VA)
- Root4star already installed

Femtoscscopy

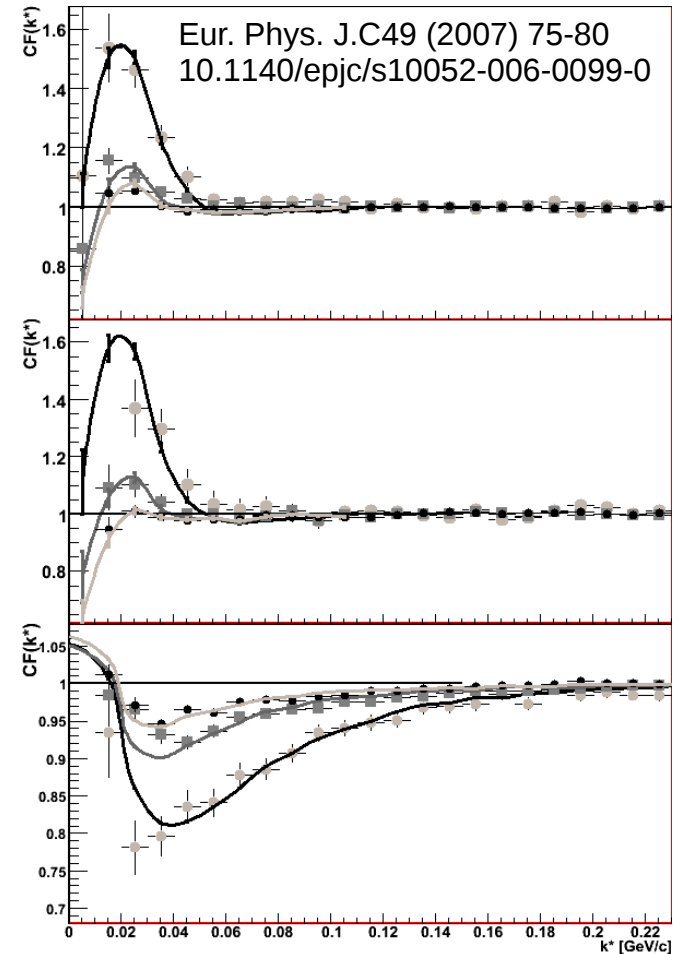
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Non-identical particle correlations

Phys. Rev. Lett. 91 (2003) 262302



Baryon correlations



Identical particle correlations (kaons)

Femtoscscopy

Physics:

- nonidentical particle correlations
- identical particle correlations

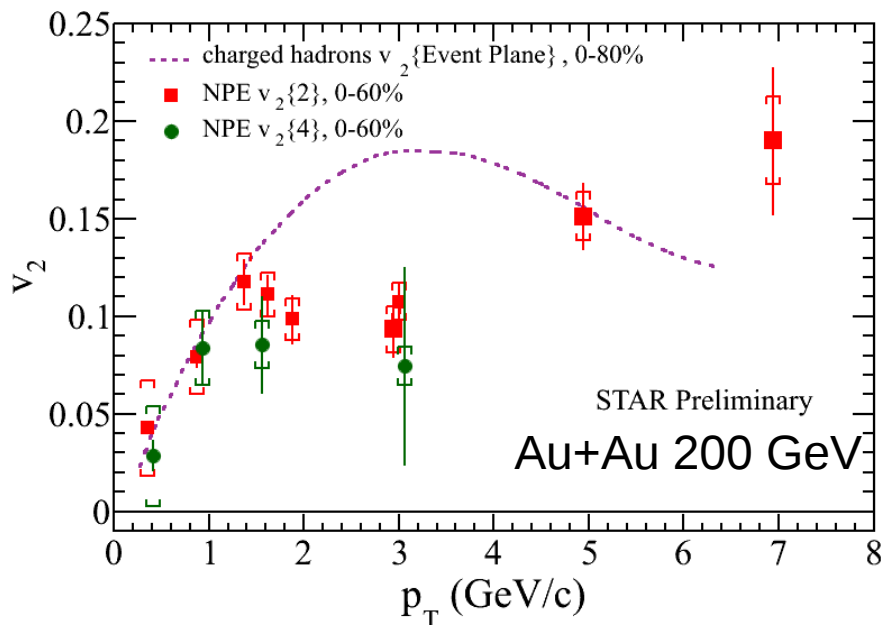
- baryon correlations
- meson correlations

- Beam Energy Scan program
- AuAu@200 GeV

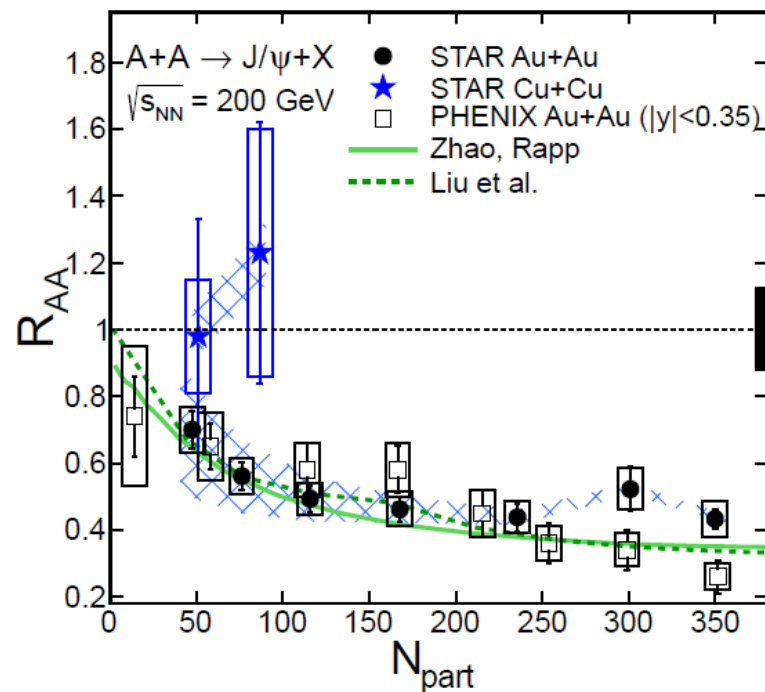
Heavy Flavor

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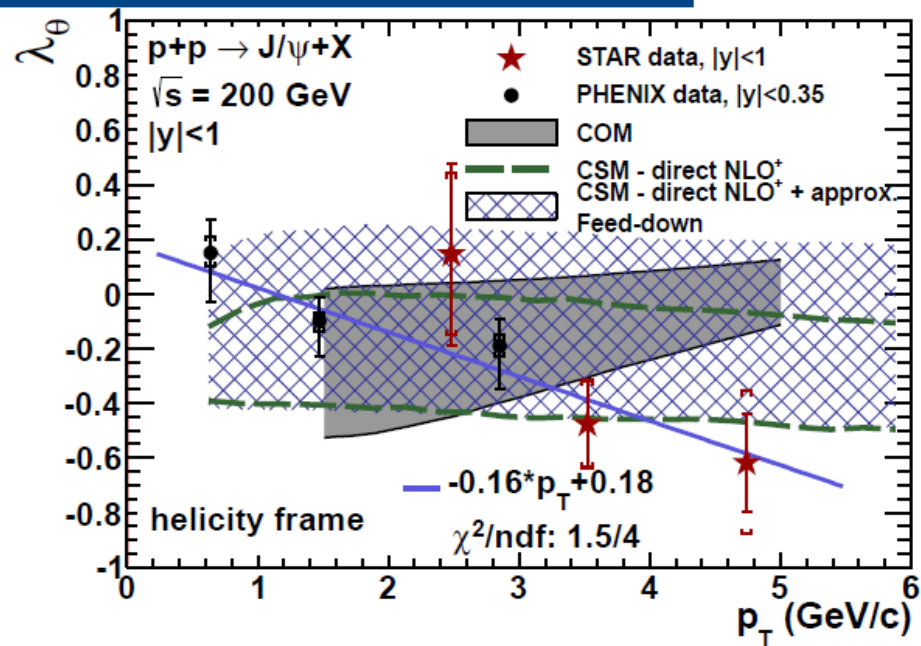
Open heavy flavor elliptic flow



J/ψ production in A+A



J/ψ polarization in p+p



Heavy Flavor Tracker

Physics: **Bottom** production and elliptic flow

- $B \rightarrow J/\psi$, $B \rightarrow e$

Software: Data Quality Assurance, simulations

