



HEAVY ION COLLISIONS GROUP

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University of Silesia

- Established in 1968
- Location:
 - Upper Silesia region of Poland
 - Four University cities: Katowice, Sosnowiec, Cieszyn, Chorzów
- Total number of students: 22 972
- Academic Staff: 1957 (number of university teachers)
- Faculties: 9
 - Faculty of Science and Technology
 - Institute of Physics



UNIVERSITY OF SILESIA
IN KATOWICE



Institute of Physics

- One of the first Institutes at the University of Silesia
- One of the best Institutes at the University of Silesia
- ~100 members (faculty + technical staff)
- Main physics topics:
 - Experiential physics: solid state, molecular and atomic, nuclear, biophysics, application of physics in medical science
 - Theoretical physics: solid state, particle, quantum information and quantum computing
- ~40 grants per year from external founding agency
- ~300 publications per year



Heavy Ion Collisions Group - description

- A longstanding experience in heavy ion physics from low to relativistic energies and in the constructions of the detectors
- The group has been around for 10 years
- Collaboration (our experience):
 - Cyclotron Laboratory, Texas A&M University, College Station USA,
 - Chimera experiment at LNS INFN, Catania, Italy,
 - Spiral2 GANIL, Caen, France,
 - CBM, FAIR, Darmstadt, Germany,
 - NA61/SHINE, CERN, Switzerland



Heavy Ion Collisions Group - description

- The main physics interests
 - particle production, production of strange and multi-strange in the relativistic energy domain in heavy ion collision production
 - properties of the onset of deconfinement,
 - properties of the cosmic rays (measurement of the nuclear fragmentation cross sections),
 - Nuclear Equation of State (NEOS) - symmetry of nuclear matter, isospin effects.

Heavy Ion Collisions Group - description

- Other responsibilities and experience
 - beam detector system for NA61/SHINE
 - renew and upgrade
 - low voltage system for NA61/SHINE
 - participation in the detector development for other experiments: scintillating and gas detector
 - development of the software for nuclear experiments (C++, Python, Root)
 - data analysis
 - IT infrastructure
 - Coordination of the NA61/SHINE upgrade

Team members

- Faculty and Staff:
 - 3 PhD
 - 2 MSc
- PhD students: 3
- Undergraduate students: 1
- Grants:
 - Principal Investigator: 4
 - Scientific Supervisor: 4
 - Co-Investigator: 9

Cooperation with MPD collaboration

- Participation in the tasks devoted to polish groups
- Analysis on the particle production
- Participation in the development of the detectors
- Cooperation with MPD should help in acquiring new group members and students



Thank you

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