

COSY-11: an experimental facility for studying meson production in free and quasi-free nucleon-nucleon collisions.

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The COSY-11 experimental setup [1,2] is an internal facility installed at the COoler SYNchrotron COSY in Jülich. It allows to investigate meson production in free and quasi-free nucleon-nucleon collisions, eg. $pp \rightarrow ppMeson$ and $pd \rightarrow p_{sp}npMeson$ reactions. Drift chambers and scintillators permit to measure outgoing protons, separated in magnetic field of COSY-11 dipole. Neutrons are registered in the neutron modular detector installed downstream the beam. Recently, the experimental setup has been extended with spectator detector and polarization monitoring system, and since then meson production can be investigated also as a function of spin and isospin of colliding nucleons.

The COSY-11 facility, as well as experimental methods developed to identify events corresponding to the meson production in free and quasi-free nucleon-nucleon collisions will be presented.

References:

- [1] S. Brauksiepe et al., Nucl. Instr. and Meth. **A 376** (1996) 397.
- [2] P. Moskal et al., Nucl. Instr. and Meth. **A 466** (2001) 448.

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