

Hadroproduction at SPS Energies

At the Super Proton Synchrotron, measurements of final state hadron production in p-p, n-p, pion-p, p-nucleus and pion-nucleus reactions have been performed at a c.m. energy of $\sqrt{s}=17.3$ GeV. The experimental data are characterized by an unprecedented coverage of available phase space. This includes the area $0 < x_F < 0.85$ and $0 < p_T < 2$ GeV/c, covered in a dense two-dimensional grid of double differential cross sections for inclusive, identified particle production.

What results is the possibility of an unprecedently detailed analysis of the soft hadroproduction process in the non-perturbative area of Quantum Chromodynamics (QCD). Several aspects of this analysis will be reviewed in this talk, including in particular (1) the dependence of particle production on the valence structure of the incoming projectile hadron, (2) the transport of baryon number from the initial incoming proton down into the final state baryon at low x_F , and (3) the influence of the nuclear medium induced by the non-elementary target.

As an addition to the above, the possibility of obtaining novel information on the hadron formation time on the basis of new electromagnetic probes will be discussed.

Primary author: Dr RYBICKI, Andrzej (H.Niewodniczanski Institute of Nuclear Physics, Polish Academy of Sciences)

Presenter: Dr RYBICKI, Andrzej (H.Niewodniczanski Institute of Nuclear Physics, Polish Academy of Sciences)

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