NA34/3 - Dimuon production at low mass

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Physics Goals:	Dimuon production per charged particle
Beams:	p, S at 200 GeV/A
Targets:	W

Physics Summary

The HELIOS/3 experiment was designed to study virtual photons, detected as muon pairs, at low transverse mass. In this way the dimuon production was studied from threshold up to the J/psi mass at all pt. Data from interactions of p and ^{32}S at 200 GeV/c per nucleon on a tungsten target were collected in 1990 at the CERN SPS. A comparison of the dimuon mass spectra between p-W and ^{32}S-W is therefore possible. The HELIOS/3 set-up consists of a muon spectrometer based on a large superconducting dipole magnet, scintillator hodoscopes and MWPC's, a hadron absorber made of Al_2O_3 followed by iron. Between the target and the absorber, two silicon ring detectors of suitable granularity measured the event multiplicity in the dimuon acceptance.

Selected Publications

"Dimuon and vector-meson production in p-W and S-W interactions at 200 GeV/c/nucleon", M.A.Mazzoni, Proc. of QM 93 Conf., Nucl. Phys. **A566**, 95c.

"Dimuon continuum production in p-W and S-W interaction at 200 GeV/c/A (pagina 531)", J. Bystricky, Proceedings of the International Europhysics Conference on High Energy Physics (HEP 93), 531, J. Carr, M.Perrottet Editors, Editions Frontieres.

"Vector meson production in p-W and S-W interactions at 200 GeV/c/A", M.Masera, Proceedings of the International Europhysics Conference on High Energy Physics (HEP 93),529, J. Carr, M.Perrottet Editors, Editions Frontieres.

"Dimuon production below mass 2.5 GeV/c2 in p-W and S-W interactions at 200 GeV/c/A", M.Masera, 27th International Conference on High Energy Physics (ICHEP 94) Glasgow, UK 20-27 July 1994

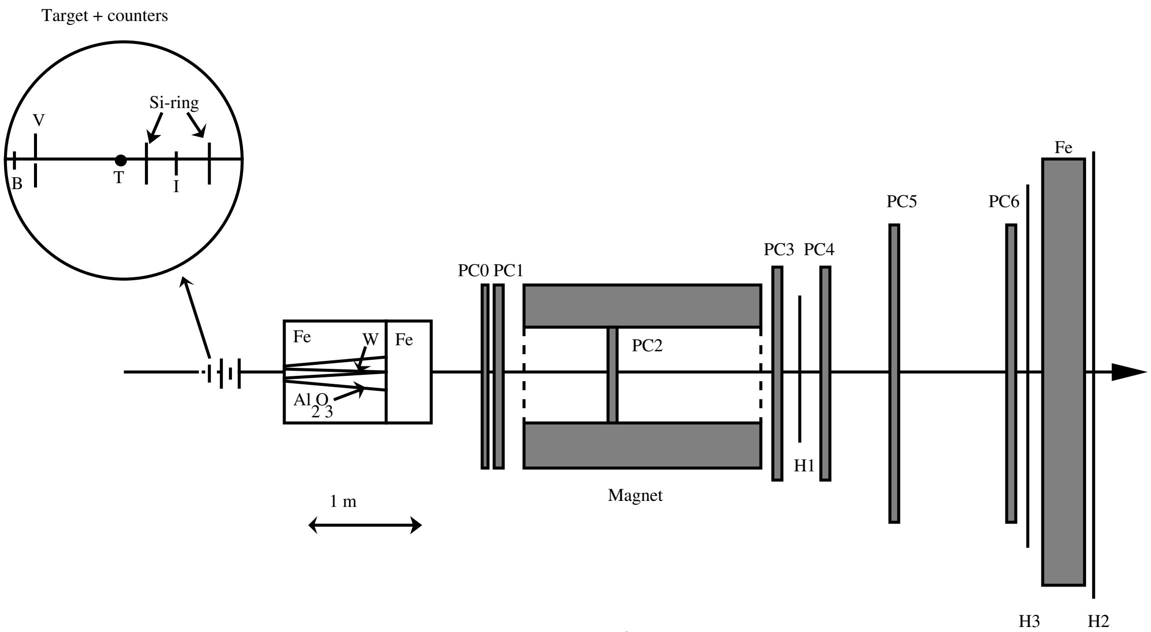

Figure 1: The NA34/3 Spectrometer

Figure Details

B, V, I	Beam and Interaction Counters
Si-ring	Silicon Multiplicity Counters
PC0-PC6	Proportional Chambers
H1-H3	Trigger Hodoscopes

Related Experiments

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