Low mass electron pair production in 40 GeV/nucleon Pb-Au collisions

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Abstract

In the 1999 Pb-beam run at the CERN SPS with a beam energy of 40 GeV/nucleon, the CERES/NA45 experiment took about 8 Million events with a trigger selection corresponding to approximately the most central 30% of the geometrical cross section. The electron pair data are in an advanced stage of the analysis. Depending on the single electron pt-cut and on the enhancement factor relative to hadronic decay sources, several hundred pairs with masses > 200 MeV/c2 can be expected. The lower multiplicities as compared to 158 GeV/nucleon and improvements in the analysis chain like use of the 2 RICH detectors as an integral unit without a magnetic field in between should lead at least to a similar statistical significance as obtained in the 1995 run at 158 GeV/nucleon.