

SEARCH FOR DISORIENTED CHIRAL CONDENSATES IN 158 A·GeV Pb+Pb COLLISIONS

WA98 Collaboration

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The restoration of chiral symmetry and its subsequent breaking through a phase transition has been predicted to create regions of Disoriented Chiral Condensates (DCC). This phenomenon has been predicted to cause anomalous fluctuations in the relative production of charged and neutral pions in high-energy hadronic and nuclear collisions. The WA98 experiment has been used to measure charged and photon multiplicities in the central region of 158 A·GeV Pb+Pb collisions at the CERN SPS. In a sample of 212646 events, no clear DCC signal can be distinguished. Using a simple DCC model, we have set a 90% C.L. upper limit on the maximum DCC production allowed by the data.

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