

matter in the energy density regime $\varepsilon \approx 1000 \text{ GeV/fm}^3$. In addition, the aim is to gain insight into the physics of parton densities close to phase – space saturation, and their collective dynamical evolution toward hadronisation (confinement) in a dense nuclear environment. In this way, one also expects to gain further insight into the

structure of the QCD-phase diagram and the properties of the QGP phase [1].

- [1] P.Cortese et al., ALICE Physics Performance Report, Journal of Physics G 30(2004)1517

6.7 Interferometry of Direct Photons in Central $^{208}\text{Pb} + ^{208}\text{Pb}$ Collisions at 158 A GeV

by K.Karpio and T.Siemiarczuk for WA98 Collaboration

Two-particle correlations of direct photons were measured in central $^{208}\text{Pb} + ^{208}\text{Pb}$ collisions at 158 AGeV. The invariant interferometric radii were extracted for $100 < K_T < 300 \text{ MeV/c}$ and compared to radii extracted from charged pion correlations. The yield of soft direct photons, $K_T < 300 \text{ MeV/c}$, was

extracted from the correlation strength and compared to theoretical calculations [1, 2].

- [1] M.M.Aggarwal et al., Phys. Rev. Lett. 93 (2004)022301
[2] M.M.Aggarwal et al., J. Phys.G 30(2004)1065

6.8 Centrality and Transverse Momentum Dependence of Collective Flow in 158 A GeV Pb + Pb Collisions Measured by Inclusive Photons

by K.Karpio and T.Siemiarczuk for WA98 Collaboration

Directed and elliptic flow of inclusive photons near mid-rapidity in 158A GeV Pb+Pb collisions has been studied. The data have been obtained with the photon spectrometer LEDA of the WA98 experiment at the CERN SPS [1]. The flow strength has been measured for various centralities as a function of p_T and rapidity over $0.18 < p_T < 1.5 \text{ MeV/c}$ and $2.3 < y < 2.9$. The angular anisotropy has been studied relative to an event plane obtained in the target fragmentation region that shows the elliptic flow to be in-plane. The elliptic

flow has also been studied using two-particle correlations and shown to give similar results. A small directed flow component is observed. Both the directed and elliptic flow strengths increase with p_T . The photon flow results are used to estimate the corresponding neutral pion flow.

- [1] M.M.Aggarwal et al., nucl-ex/0410045, 2004; submitted to Nucl. Phys. A

6.9 Azimuthal Anisotropy of Photon and Charged Particle Emission in $^{208}\text{Pb} + ^{208}\text{Pb}$ Collisions at 158 A GeV

by K.Karpio and T.Siemiarczuk for WA98 Collaboration

The azimuthal distributions of photons and charged particles with respect to the event plane are investigated as a function of centrality in $^{208}\text{Pb} + ^{208}\text{Pb}$ collisions at 158 AGeV/c in the WA98 experiment at the CERN SPS [1]. The anisotropy of the azimuthal distributions is characterized using a Fourier analysis. For both the photon and charged particle distributions the first two Fourier coefficients are observed to

decrease with increasing centrality. The observed anisotropies of the photon distributions compare well with the expectations from the charged particle measurements for all centralities.

- [1] M.M.Aggarwal et al., nucl-ex/0410045, 2004; submitted to EPJ

6.10 Three-pair Final-state Interaction in the $pp \rightarrow pp\eta$ Reaction Close to Threshold

by A.Deloff

We present a three-body formalism describing the final-state interaction effects in the $pp \rightarrow pp\eta$ reaction close to threshold. We derive a three-body enhan-

cement factor devised in such a way that all three pairwise interactions are regarded on equal footing. The enhancement factor is obtained by expanding the



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