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A MULTICOMPONENT APPROACH TO THE DESCRIPTION OF MULTI-PARTICLE PRODUCTION

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Charge distributions and charge-neutral correlations are described on the basis of the multicomponent model^[1] in which clusters are produced statistically independently in the central region in the presence of certain dissociation channels of leading particles.

It is shown that at energies $E_L > 100$ GeV the main contribution to the distribution over the number of charged particles comes from the heavy clusters ($CL \rightarrow 4\pi$); the mass of such a cluster is estimated. The down knee of the functions $f(n_{ch}) = \langle n_{\pi^0} \rangle$ (n_{π^0} the number of π^0 mesons, n_{ch} that of charged particles) is found to be due to the kinematical constraints.

Based on simple assumptions on the distribution of decay products of cluster in the rapidity space the data on correlations of the type "forward-backward" are interpreted.

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