to extract the characteristics of the space-time development from Bose-Einstein correlations of identical hadrons was suggested. Our main results are:

(i) The details of the parton-hadron conversion are controlled by the quantity L_c, the spatial separation of neighbouring color charges in their restframe, which defines the scale at which non-perturbative confinement forces become substantial. The value of L_c is determined by the choice of the bag constant B and the condensate value χ_0. All other macroscopic quantities which characterize the evolution, such as pressure, energy density, the time scale of the transition, etc., are then determined self-consistently. The found values are in agreement with common phenomenology.

(ii) The time scale obtained for the transition is a remarkable result: the local conversion of partons to clusters occurs very rapidly ($\approx 0.1 - 0.2\ fm$), but the global time scale for the transition of the system as a whole is long ($\approx 10 - 30\ fm$).

(iii) The QCD features of the perturbative parton evolution are projected unscathed onto cluster and hadron distributions, because the conversion is a local, universal mechanism. As a consequence the multiplicities of charged hadrons and their momentum spectra are predetermined by the preceding parton evolution, which we find in good agreement with experiments.

(iv) Our main result is the sensitivity of the Bose-Einstein correlations among identical pions due to Bose symmetry. It allows us to identify the parameter L_c with the hadron emission source radius measured in experiments, and to fix its value rather precisely to $L_c \simeq 0.8\ fm$. Moreover, the ratio of Bose enhancement of same-sign pions in different scenarios or physical situations can provide a very sensitive probe of the environment in which the parton system evolves. It can be exploited to study, e.g., modifications to parton evolution in finite-density media.

It is interesting to note that our model appears to be able to correlate sucessfully such diverse quantities as the macroscopic bag constant B, the microscopic length scale L_c for the parton-hadron transition, the associated critical temperature T_c, and the magnitude of measured Bose-Einstein correlations.

Finally we comment on future applications. These are manifold, as the advocated picture of parton-hadron conversion is universally applicable to any dynamical process