measured total charged multiplicity at $Q = 91$ GeV for $L_c = 0.8\ fm$. The required value is $k_0 = 0.5$ GeV which implies $\alpha_s(0) \approx 0.8$. With this adjustment we then obtain in Fig. 13b the momentum spectra of charged hadrons with respect to the variable $\ln(1/x)$, where $x = 2E/Q$ is the particle energy normalized to the total energy Q. The spectra clearly exhibit the well known 'hump-back plateau' [32]. The good agreement of the simulation with experimental spectra is another indicator of the aforementioned local parton-hadron duality. The result is not surprising, since the simulation incorporates the *coherent* parton shower evolution [38] based on the soft-gluon interference properties of the MLLA, which cause this hump-back plateau with its depletion at small x. Because in our approach cluster formation and subsequent cluster decay involve no momentum dependence, but are solely described by the space-time separation of partons, the parton momentum spectra in x are mapped almost unaltered onto the hadron distributions. We also conclude, that the comparisons in Fig. 13 do not indicate any clear preference for one value of B or L_c over the other. However, as we will discuss in Sec. 5.3, an indication may be drawn from Bose-Einstein correlations among produced hadrons.

An example of the composition of the final hadron yield in terms of different particle species is given in Table 2, where we compare the result of our simulation of e^+e^- annihilation events at $Q = 34$ GeV with measured particle multiplicities [47]. The remarkable agreement is in accord with the presumption that the different particle yields are essentially determined by the available phase space and the density of hadron states, and not by more complex mechanisms. Further experimental constraints by more sensitive measures of event shapes such as thrust, sphericity, etc., may be investigated, but it is evident from the results shown that our approach yields an overall satisfactory description that withstands confrontation with experiment, and encourages us to study more complex reactions in the near future.

5.3 The Bose-Einstein effect

From Figs. 10 and 11 we can conclude that the distribution of formed clusters clearly resembles the picture of *preconfinement* [27], which is the tendency of partons produced during the cascade evolution to arrange themselves in color-singlet clusters with limited extension in both position and momentum space. Since the clusters are the basic units within which the final-state hadrons arise, the ensemble of clusters in phase space, as it