TABLE CAPTIONS

Table 1: Obtained values for phenomenological quantities involved in our description. The bag constant B and the condensate value $\chi_0 = \langle 0|\chi|0\rangle$ are fixed inputs. The values of the length scales L_c, L_χ, the global conversion time scale $\tau_0 \propto L_0$, and the magnitude of the surface tension σ_c, are then extracted from the numerical simulation. Also listed is the associated critical temperature T_c, the mass scale of the lightest scalar glueball m_χ, and the estimate for the gluon condensate G_0.

Table 2: $e^+e^- \rightarrow$ *hadrons* at $Q = 34$ GeV: Average multiplicities of partons $\langle n_{qg}\rangle = \langle n_g\rangle + \sum_f \langle n_q + n_{\bar{q}}\rangle$, of clusters $\langle n_{cl}\rangle$, and of charged hadrons $\langle n_{ch}\rangle$, plus the contribution of pions, kaons and protons, in comparison with measured particle multiplicities [47].

FIGURE CAPTIONS

Figure 1: Schematic behaviour of $\kappa_L(\chi)$, eq. (16) and $\mu(\chi)$, eq. (17).

Figure 2: Form of the scale-dependent potential $\mathcal{V}(L)$, eq. (21), where L_χ characterizes the point of inflection at χ_χ, L_c marks the point when the two minima are degenerate at χ_c, and L_0 when the potential has a single absolute minimum at χ_0. The value at $\chi = 0$ is equal to the vacuum pressure (bag constant) B.

Figure 3: Diagrammatic representation of **a)** the two-point Green functions $S, D, \Delta, \tilde{\Delta}$; **b)** the self energies $\Sigma, \Pi, \Xi, \tilde{\Xi}$; **c)** the corresponding Dyson-Schwinger equations (30). *Notation*: Fat (thin) lines indicate fully-dressed (bare) propagators, shaded circles and boxes denote the full quark and gluon vertex functions, black circles and boxes with attached loops represent the local interactions with the collective fields χ and U via the potential $\mathcal{V}$, eq. (21).

Figure 4: Illustration of the simultanous evolution in space-time r and – 'orthogonal' to it – in energy-momentum p of the Wigner functions $F_\alpha(r,p)$, according to the transport and constraint equations (34) and (35). The self-consistent solution of these equations corresponds to summing over all possible quantum paths r, accounting for fluctuations in p, under the constraint of the uncertainty principle.