Errata

Erratum: Confinement: Understanding the relation between the Wilson loop and dual theories of long distance Yang-Mills theory [Phys. Rev. D 54, 2829 (1996)]

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[S0556-2821(97)02816-6]

PACS number(s): 12.38.Aw, 11.15.Kc, 12.38.Lg, 12.39.Pn, 99.10.+g

Inadvertently the following typographical errors have crept in on page 2842 of this paper (none of them were used in any calculation):

The second term on the right-hand side of Eqs. (7.16) and (7.23) should have a minus sign.

The right-hand side of Eqs. (7.18) and (7.24) should have a plus sign.

The first term on the right-hand side of Eq. (7.20) should have a plus sign.

Equation (7.30) should read

$$\nabla^2 V_a = -\nabla^2 V_0^{\rm NP}(R) + \tfrac{4}{3} e^2 \vec{\nabla} \cdot \vec{\nabla}{}' G^{\rm NP}(\vec{x},\vec{x}')\big|_{\vec{x}=\vec{x}'=\vec{z}_j}.$$

0556-2821/97/56(4)/2475(1)/$10.00

Erratum: Self-consistent determination of hard modes in hot QCD [Phys. Rev. D 55, 4997 (1997)]

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[S0556-2821(97)02916-0]

PACS number(s): 11.10.Wx, 12.38.Bx, 12.38.Mh, 99.10.+g

The first 14 lines of Sec. II should be replaced by the following.

''Throughout this paper, we employ the closed-time-path formalism of real time thermal field theory [10,11]. We start with defining the quasifree Lagrangian density for the ''good'' modes in a covariant gauge,

$$\mathcal{L}_0 = \mathcal{L}_0^{(q)} + \mathcal{L}_0^{(g)} + \mathcal{L}_0^{(\rm FP)}, \tag{2.1a}$$

$$\mathcal{L}_0^{(q)} = \sum_{j,j'=1}^{2} \overline{\psi_j}[i(-)^{j-1}\delta_{jj'}\partial\!\!\!/ - \Sigma_{jj'}(i\partial)]\psi_{j'}, \tag{2.1b}$$

$$\mathcal{L}_0^{(g)} = \sum_{j=1}^{2} (-)^{j-1}\left[-\frac{1}{4}(\partial_\mu A^a_{j\nu} - \partial_\nu A^a_{j\mu})(\partial^\mu A_j^{a\nu} - \partial^\nu A_j^{a\mu}) - \frac{1}{2\eta}(\partial^\mu A^a_{j\mu})(\partial^\nu A^a_{j\nu})\right] + \frac{1}{2}\sum_{j,j'=1}^{2} A^a_{j\mu}\Pi^{\mu\nu}_{jj'}(i\partial)A^a_{j'\nu}, \tag{2.1c}$$

$$\mathcal{L}_0^{(\rm FP)} = \sum_{j=1}^{2} (-)^{j-1}(\partial^\mu \overline{\eta^a_j})(\partial_\mu \eta^a_j - g f^{abc} A^b_{j\mu}\eta^c_j) - \sum_{j,j'=1}^{2} \overline{\eta^a_j}\Pi^g_{jj'}(i\partial)\eta^a_{j'}, \tag{2.1d}$$

where j, j' $(=1,2)$ are thermal indices and ''FP'' stands for Faddeev-Popov ghost field. Thermal self-energy parts, $\Sigma_{jj'}$, $\Pi^{\mu\nu}_{jj'}$, $\Pi^{g}_{jj'}$, are related to the corresponding diagonalized or Feynman self-energy parts, Σ_F, $\Pi^{\mu\nu}_F$, Π^{g}_F, through Bogoliubov transformation [10]. $\Sigma_F(i\partial)$ is a 4×4 matrix function of $i\partial$ and has the structure

$$\Sigma_F(Q)=f(Q)\not{Q}+g(Q)\gamma^0. \tag{2.2}$$

$f(Q)$ and $g(Q)$ meet $f(q_0,q)=f(-q_0,q)$ and $g(q_0,q)=-g(-q_0,q)$, respectively. Similarly $\Pi^{\mu\nu}_F$ has the tensor structure [10].''

On page 4998, first column, the second paragraph should be replaced by the following.

''Here it is worth making the following remark. As in [8], $\mathcal{L}_0$ in (2.1) is non-Hermitian, since $\Sigma_{jj'}$, $\Pi^{\mu\nu}_{jj'}$, and $\Pi^{g}_{jj'}$ are complex functions. We recall that, in constructing the Gell-Mann–Low formula of perturbative vacuum theory, the Hermiticity of the free Hamiltonian plays an essential role. In the operator formalism of thermal field theory, which is called thermo field dynamics [8], the so-called hat Hamiltonian $\hat{H}$ plays the role of Hamiltonian H in vacuum theory. The thermal Gell-Mann–Low formula may be derived [8] by suitably choosing a free hat Hamiltonian $\hat{H}_0$. It should be stressed that $\hat{H}_0$ is not necessarily Hermitian. In the course of derivation, the so-called tildicity of $\hat{H}_0$, i.e., the invariance of $-i\hat{H}_0$ under the tilde conjugation, plays the role of Hermiticity of H_0 in vacuum theory. It is well known that, as far as thermal-equilibrium cases are concerned, both the above operator formalism and the conventional real-time thermal field theory, as adopted here, lead to the same Feynman rules in perturbation theory. As a matter of fact, the hat Hamiltonian corresponds to the Hamiltonian which is obtained from (2.1) through standard Legendre transformation. One can easily show that this Hamiltonian meets the tildicity mentioned above.''

Other than the above two changes, all the contents of the paper remain unchanged.