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Erratum

The paper by Henk van Beijeren on "Mode coupling theory for purely diffusive systems," which appeared in *J. Stat. Phys.* **35**: 399 (1984) contains a number of errors, which are listed below. Corrected copies of the manuscript can be obtained from the author at the following address:

Institut für Theoretische Physik A
RWTH
Templergraben 55
5100 Aachen—West Germany

The quantities $C_{\alpha\gamma}$, as defined in Eq. (4) are no direct correlation functions according to standard definitions. Denoting the latter as $\tilde{C}_{\alpha\gamma}$ one obtains the following relation between the two quantities:

$$C_{\alpha\gamma} = c_\alpha^{-1}\delta_{\alpha\gamma} - \tilde{C}_{\alpha\gamma}$$

Equation (5) should read

$$\frac{\partial}{\partial t}\mathbf{c}(\vec{r}, t) = \nabla \cdot \int d\vec{\rho} \int_0^t d\tau \bar{\bar{d}}(\rho, \tau) \circ \nabla \mathbf{c}(\vec{r} - \vec{\rho}, t - \tau)$$

Equation (6) should read

$$[z + k^2 \bar{\bar{D}}(k, z)] \circ \hat{\mathbf{c}}(\vec{k}, z) = \hat{\mathbf{c}}(\vec{k})$$

The left-hand sides of Eqs. (9) and (17) should be multiplied by a factor $1/V$.

The second term on the right-hand side of Eq. (10c) must be multiplied by V. The first term on the right-hand side of Eq. (13) obtains a $-$ sign.

Equation (14) should read

$$\bar{\bar{L}}(k, z) = \left\{1 - \frac{k^2}{zV}\langle [\vec{k} \cdot \hat{\mathbf{j}}(-\vec{k})][\hat{\vec{k}} \cdot \hat{\mathbf{j}}(\vec{k}, z)]\rangle \circ \bar{\bar{C}}\right\}^{-1} \circ \frac{1}{V}\langle [\hat{\vec{k}} \cdot \hat{\mathbf{j}}(-\vec{k})][\hat{\vec{k}} \cdot \hat{\mathbf{j}}(\vec{k} z)]\rangle$$

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The quantities $\bar{\bar{\phi}}^{(2)}(t)$ and $\bar{\bar{\phi}}^{(4)}(t)$ appearing in (18) and (19), respectively, are tensors. Also in (19), the upper bound on the integral over τ must be t'.

The sentence below (24) should read "Inserting (22) into..." Equation (26) should read

$$\frac{1}{V^2}\langle \hat{c}_\alpha(\vec{q})\,\hat{c}_\beta(\vec{k}-\vec{q})\,\hat{c}_\gamma(\vec{l})\,\hat{c}_\delta(-\vec{k}-\vec{l})\rangle = \frac{1}{V^2}[\delta_{\vec{q},-\vec{l}}$$
$$\times \langle \hat{c}_\alpha(\vec{q})\,\hat{c}_\gamma(-\vec{q})\rangle\langle \hat{c}_\beta(\vec{k}-\vec{q})\,\hat{c}_\delta(\vec{q}-\vec{k})\rangle + \delta_{\vec{q}-\vec{k},\vec{l}}\langle \hat{c}_\alpha(\vec{q})\,\hat{c}_\delta(-\vec{q})\rangle$$
$$\times \langle \hat{c}_\beta(\vec{k}-\vec{q})\,\hat{c}_\gamma(\vec{q}-\vec{k})\rangle + \delta_{\vec{k},\vec{0}}\langle \hat{c}_\alpha(\vec{q})\,\hat{c}_\beta(-\vec{q})\rangle\langle \hat{c}_\gamma(\vec{l})\,\hat{c}_\delta(-\vec{l})\rangle]$$
$$+\,O\left(\frac{1}{V}\right)$$

In (27) the expression $\{\bar{\bar{\bar{A}}}(-\vec{q},\,-\vec{k})+\hat{\bar{\bar{\bar{A}}}}(\vec{q}-\vec{k},\,-\vec{k})\}$ should be replaced by $\{\hat{\bar{\bar{\bar{A}}}}(-\vec{q},\,-\vec{k})+\bar{\bar{\bar{A}}}(\vec{q}-\vec{k},\,-\vec{k})\}$ and the combination $(z-k^2\bar{\bar{D}}^+)^{-1}$ appearing at the end of this equation must be replaced by $(z+k^2\bar{\bar{D}}^+)^{-1}$.

Equation (28) should read

$$\Delta\bar{\bar{L}}(k,z)=\frac{-1}{2V^3k^2}\sum_{\vec{q}}\{\hat{\bar{\bar{\bar{A}}}}(-\vec{q},-\vec{k})+\bar{\bar{\bar{A}}}(\vec{q}-\vec{k},\,-\vec{k})\}$$
$$\mathbin{\substack{\circ\\\circ}}\,(z+q^2D^{(1)}+|\vec{k}-\vec{q}|^2\,D^{(2)})^{-1}$$
$$\mathbin{\substack{\circ\\\circ}}\,\langle \hat{\mathbf{c}}^{(1)}(-\vec{q})\,\hat{\mathbf{c}}^{(2)}(\vec{q}-\vec{k})\,\hat{\mathbf{c}}(\vec{q})\,\hat{\mathbf{c}}(\vec{k}-\vec{q})\rangle$$
$$\mathbin{\substack{\circ\\\circ}}\,\{\bar{\bar{\bar{A}}}^+(\vec{q},\vec{k})+\hat{\bar{\bar{\bar{A}}}}^+(\vec{k}-\vec{q},\vec{k})\}$$

Equation (29) should read

$$\phi^4(t)=\frac{\{(\partial D/\partial c)\lim_{k\to 0}(1/V)\langle \hat{c}(-\vec{k})\,\hat{c}(\vec{k})\rangle\}^2}{2(2\pi)^d}\int d\vec{q}e^{-2Dq^2t} \qquad \text{etc.}$$

The relations for $D_s(k,z)$ and $\phi_s(k,t)$ given below (41) should read

$$D_s(k,z)=\frac{L_{\mathrm{II\,II}}(k,z)}{[c_t(1-c_t/c)]}$$

and

$$\phi_s(k,t)=\frac{\phi_{\mathrm{II\,II}}(k,t)}{[c_t(1-c_t/c)]}$$

respectively.