

## Solvable model for pair excitation in trapped Boson gas at zero temperature

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## Corrigendum

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There is a minor error in equations (23) and (24) on page 6, which does not affect the analysis, results and conclusions presented in the rest of the paper. Equation (16) on page 6 is valid for  $\mathbf{R} \in \mathcal{R}_{\text{in}}$ , as stated correctly by Wu [11]. For  $\mathbf{r} \in \mathcal{R}_{\text{out}}$ , the evolution equation for  $\mathcal{K}^0$  reads

$$i \partial_t \mathcal{K}^0(\mathbf{r}, \mathbf{R}, t) = -2 \Delta_{\mathbf{r}} \mathcal{K}^0 + 2[-Z + V_e(\mathbf{R})] \mathcal{K}^0.$$

Solving this equation via the Fourier transform in  $\mathbf{r}$  yields the correct form of (23):

$$\widehat{\mathcal{K}}^0(\mathbf{k}, \mathbf{R}, t) = \widehat{f}(\mathbf{k}, \mathbf{R}) e^{-2i[k^2 - Z + V_e(\mathbf{R})]t}, \quad \mathbf{R} \in \mathcal{R}_{\text{out}}. \quad (23)$$

Accordingly, the correct form of (24) is

$$\begin{aligned} \mathcal{K}^0 &= \int d\mathbf{r}' f(\mathbf{r}', \mathbf{R}) \frac{e^{i|\mathbf{r}' - \mathbf{r}|^2/(8t)} e^{-2i[-Z + V_e(\mathbf{R})]t}}{(8i\pi t)^{3/2}} \\ &\sim \frac{e^{i\mathbf{r}^2/(8t)} e^{-2i[-Z + V_e(\mathbf{R})]t} e^{-i3\pi/4}}{(8\pi t)^{3/2}} \int d\mathbf{r}' f(\mathbf{r}', \mathbf{R}). \end{aligned} \quad (24)$$

These corrections do not affect any other result of the paper.