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ERRATUM: BOSE–EINSTEIN CONDENSATION BEYOND MEAN FIELD: MANY-BODY BOUND STATE OF PERIODIC MICROSTRUCTURE*

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Abstract. This is a correction to the author's article [*Multiscale Model. Simul.*, 10 (2012), pp. 383–417].

Key words. Bose–Einstein condensation, homogenization, many-body perturbation theory, two-scale expansion, singular perturbation, mean field limit, bound state

AMS subject classifications. 81V45, 81Q15, 81V70, 82C10, 76M50, 35Q55, 45K05

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Remark 6.2 in the original publication [1] contains an error in regard to a metric for the coefficients $K_n(\tilde{x}, \tilde{y}, x, y)$ which enters two-scale expansion (6.1). The corrected Remark 6.2 should read as follows.

Remark 6.2. We consider 1-periodic $\Phi_n(\cdot, x)$ and $K_n(\cdot, x, y)$ and assume that $K_n(\tilde{x}, \tilde{y}, \cdot) \in W^{1,1}(\mathbb{R}^d \times \mathbb{R}^d)$ (see section 7). Further, impose $\|\Phi_n(\tilde{x}, \cdot)\|_{H^1(\mathbb{R}^d)} < \infty$ and $\|K_0(\tilde{x}, \tilde{y}, \cdot)\|_{L^2} < \infty$. For later convenience, take $\Phi_n(\tilde{x}, x)$ to be bounded, sufficiently differentiable, and decaying rapidly for large x, as anticipated from properties of $V_e(x)$ and $A(x)$.

In the original article [1], the condition on the L^2-norm of $K_n(\tilde{x}, \tilde{y}, \cdot)$ is stated for arbitrary n. In the corrected version, this condition is stated only for $n = 0$.

REFERENCE

[1] D. MARGETIS, *Bose–Einstein condensation beyond mean field: Many-body bound state of periodic microstructure*, Multiscale Model. Simul., 10 (2012), pp. 383–417.

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