

## Analytic representation of finite quantum systems

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## Corrigendum

### Analytic representation of finite quantum systems

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Some of the formulas quoted for the case that  $d$  is an odd number should be corrected, as follows.

Equation (34) should be replaced with

$$\begin{aligned} \mathcal{N}_C(A) = \pi^{-1/2} \lambda^{-2} \cdot \left\{ \Theta_3 \left[ \frac{A_R}{\lambda} (2\pi d)^{1/2}; \frac{2id}{\lambda^2} \right] \Theta_3 \left[ A_I i \lambda^{-1} \left( \frac{2\pi}{d} \right)^{1/2}; \frac{2i}{d\lambda^2} \right] \right. \\ \left. + \Theta_2 \left[ \frac{A_R}{\lambda} (2\pi d)^{1/2}; \frac{2id}{\lambda^2} \right] \Theta_2 \left[ A_I i \lambda^{-1} \left( \frac{2\pi}{d} \right)^{1/2}; \frac{2i}{d\lambda^2} \right] \right\} \end{aligned} \quad (34)$$

where

$$\Theta_2(u; \tau) = \sum_{n=-\infty}^{\infty} \exp [i\pi \tau (n + 1/2)^2 + i2 (n + 1/2) u].$$

Equation (43) is valid for even  $d$  only. For odd  $d$  it is

$$\begin{aligned} \langle \langle A_1 | A_2 \rangle \rangle = \pi^{-1/2} \lambda^{-2} \mathcal{N}_C(A_1)^{-1/2} \mathcal{N}_C(A_2)^{-1/2} \exp \left( -\frac{i}{2} A_{1I} A_1^* + \frac{i}{2} A_{2I} A_2 \right) \\ \times \left\{ \Theta_3 \left[ \frac{A_1^* + A_2}{\lambda} \left( \frac{\pi d}{2} \right)^{1/2}; \frac{2id}{\lambda^2} \right] \Theta_3 \left[ \frac{A_1^* - A_2}{\lambda} \left( \frac{\pi}{2d} \right)^{1/2}; \frac{2i}{d\lambda^2} \right] \right. \\ \left. + \Theta_2 \left[ \frac{A_1^* + A_2}{\lambda} \left( \frac{\pi d}{2} \right)^{1/2}; \frac{2id}{\lambda^2} \right] \Theta_2 \left[ \frac{A_1^* - A_2}{\lambda} \left( \frac{\pi}{2d} \right)^{1/2}; \frac{2i}{d\lambda^2} \right] \right\}. \end{aligned} \quad (43)$$

Equations (44) and (45) give the zeros and they are valid for even  $d$  only.

Equation (56) is valid for even  $d$ . For odd  $d$  it is

$$\begin{aligned} f(z, A) = \pi^{-1/2} \lambda^{-1} d^{1/2} \mathcal{N}_C(A)^{-1/2} \exp \left( \frac{i}{2} A_I A \right) \\ \times \left\{ \Theta_3 \left[ \frac{z + A}{\lambda} \left( \frac{\pi d}{2} \right)^{1/2}; \frac{2id}{\lambda^2} \right] \Theta_3 \left[ \frac{z - A}{\lambda} \left( \frac{\pi}{2d} \right)^{1/2}; \frac{2i}{d\lambda^2} \right] \right. \\ \left. + \Theta_2 \left[ \frac{z + A}{\lambda} \left( \frac{\pi d}{2} \right)^{1/2}; \frac{2id}{\lambda^2} \right] \Theta_2 \left[ \frac{z - A}{\lambda} \left( \frac{\pi}{2d} \right)^{1/2}; \frac{2i}{d\lambda^2} \right] \right\}. \end{aligned} \quad (56)$$

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