Erratum: Dynamics of quantum systems [Phys. Rev. E 64, 036213 (2001)]

I. Rotter

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The relation

$$\tilde{\Gamma}_R = 2\pi \sum_{c=1}^{K} (\tilde{W}_R^c)^2, \tag{1}$$

appearing in Eqs. (23) and (32), Ref. [1], holds only for isolated resonances. For overlapping resonances, the relation between the $\tilde{\Gamma}_R$ and $\tilde{W}_R^c$ is, generally, more complicated: the energy dependence of both functions is different and $\Im\{(\tilde{W}_R^c)^2\} \neq 0$ due to the unitarity of the *S*-matrix. It holds that

$$\tilde{\Gamma}_R = \frac{2\pi}{A_R} \sum_c |\tilde{W}_R^c|^2 \leqslant 2\pi \sum_c |\tilde{W}_R^c|^2, \tag{2}$$

as stated in the paragraph under Eq. (23).

The conclusions of the paper [1] do not depend on Eq. (1). The relation between total and partial widths is nowhere used in the paper since, in contrast to the *R*-matrix theory, the two functions $\tilde{\Gamma}_R$ and $(\tilde{W}_R^c)^2$ are calculated separately in compliance with the unitarity of the *S* matrix. In any case, the partial widths $(\tilde{\gamma}_R^c)^2 \equiv 2\pi(\tilde{W}_R^c)^2$ lose their physical meaning in the overlapping regime, as can be seen from Eq. (2).

[1] I. Rotter, Phys. Rev. E **64**, 036213 (2001).

