

Radiation torque on nonspherical particles in the transition matrix formalism: erratum

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Abstract: An erratum is presented to correct the errors in two equations in Sect. 3 of [Opt. Express **14**, 9508–9521 (2006)].

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OCIS codes: (290.0290) Scattering; (260.2110) Electromagnetic theory; (260.2160) Energy transfer.

References and links

1. F. Borghese, P. Denti, R. Saija, and M. A. Iatì, “Radiation torque on nonspherical particles in the transition matrix formalism,” Opt. Express **14**, 9508–9521 (2006).
2. F. Borghese, P. Denti and R. Saija, *Scattering from model nonspherical particles*, 2nd edition (Springer, Berlin, 2007)

The last two unnumbered equations of Sect. 3 of Ref. [1] are written with wrong indices, and in the second equation a minus sign is missing. The correct equations read

$$\begin{aligned} \langle \Gamma_{\mu; \bar{\eta} \eta}^{(\text{ext})} \rangle &= c_{\Gamma} \sum_{plm} s_{\mu; lm} \sum_{\bar{p}\bar{l}} W_{l\eta l, m-\mu}^{(p)} \bar{\mathcal{F}}_{l\bar{m}\bar{l}m}^{(p\bar{p})*} W_{l\bar{\eta}\bar{l}m}^{(\bar{p})*}, \\ \langle \Gamma_{\mu; \bar{\eta} \eta}^{(\text{sca})} \rangle &= -c_{\Gamma} \sum_{plm} s_{\mu; lm} \sum_{\bar{p}\bar{p}'} \sum_{\bar{l}\bar{l}'} \sum_{m'} \bar{\mathcal{F}}_{l, m-\mu, \bar{l}, m'-\mu}^{(p\bar{p})} W_{l\eta \bar{l}, m'-\mu}^{(\bar{p})} \bar{\mathcal{F}}_{l\bar{m}'\bar{l}'m'}^{(p\bar{p}')*} W_{l\bar{\eta}\bar{l}'m'}^{(\bar{p}')*}. \end{aligned}$$

An identical error affects the analogous equations on p. 105 of Ref. [2]. Nevertheless, we stress that the calculations reported both in Refs. [1] and [2] were performed using the correct formulas.