addenda and errata



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X-ray third-order nonlinear plane-wave Bragg-case dynamical diffraction effects in a perfect crystal. Erratum

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Formulae in the paper by Balyan (2015) [J. Synchrotron Rad. 22, 1410–1418] are corrected.

The formulae (2) and (4) in the paper Balyan (2015) have the same essential typographical error. The correct forms of these equations are

rot rot
$$\tilde{\tilde{\mathbf{E}}} + \frac{1}{c^2} \frac{\partial^2 \tilde{\tilde{\mathbf{E}}}}{\partial t^2} = -\frac{1}{\varepsilon_0 c^2} \frac{\partial^2 \tilde{\tilde{\mathbf{P}}}}{\partial t^2}$$
 (2)

and

rot rot
$$\tilde{\mathbf{E}}(\mathbf{r},\omega_q) - \frac{\omega_q^2}{c^2} \left[1 + \chi^{(1)}(\mathbf{r},\omega_q)\right] \tilde{\mathbf{E}}(\mathbf{r},\omega_q) = \frac{\omega_q^2}{\varepsilon_0 c^2} \tilde{\mathbf{P}}^{\mathrm{NL}}(\mathbf{r},\omega_q).$$
 (4)

In the same paper, the formulae (17) and (19) are also incorrect. The correct forms of these equations are

$$E^{(i)}(x,0) = E_0^{(i)} \exp(ik\cos\theta^{(i)}x)$$
(17)

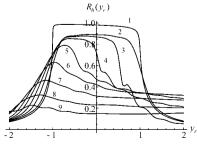
and

$$E_0(x, 0) = E_0^{(i)} \exp(-ik\sin\theta\,\Delta\theta x),$$

$$E_h(x, T) = 0.$$
(19)

These equations are used for derivation of the third-order nonlinear Takagi's equations.

References Balyan, M. K. (2015). J. Synchrotron Rad. **22**, 1410–1418.



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