



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

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Received 11 June 2016
 Accepted 15 June 2016

Edited by A. Momose, Tohoku University, Japan

Keywords: nonlinear diffraction; Bragg case; reflection region; third-order nonlinearity; two-wave diffraction

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

$$\text{rot rot } \tilde{\mathbf{E}} + \frac{1}{c^2} \frac{\partial^2 \tilde{\mathbf{E}}}{\partial t^2} = -\frac{1}{\epsilon_0 c^2} \frac{\partial^2 \tilde{\mathbf{P}}}{\partial t^2} \quad (2)$$

and

$$\text{rot rot } \tilde{\mathbf{E}}(\mathbf{r}, \omega_q) - \frac{\omega_q^2}{c^2} [1 + \chi^{(1)}(\mathbf{r}, \omega_q)] \tilde{\mathbf{E}}(\mathbf{r}, \omega_q) = \frac{\omega_q^2}{\epsilon_0 c^2} \tilde{\mathbf{P}}^{\text{NL}}(\mathbf{r}, \omega_q). \quad (4)$$

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

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

and

$$\begin{aligned} E_0(x, 0) &= E_0^{(i)} \exp(-ik \sin \theta \Delta \theta x), \\ E_h(x, T) &= 0. \end{aligned} \quad (19)$$

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.

