

CORRIGENDUM

Optimization and control of synchrotron emission in ultraintense laser-solid interactions using machine learning – CORRIGENDUM

J. Goodman, M. King, E. J. Dolier, R. Wilson, R. J. Gray, and P. McKenna

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Due to an isolated error in the 3D simulation parameters, the laser energy and intensity (calculated using the energy) values were incorrectly stated as 10.9 J and $3 \times 10^{22} \text{ W cm}^{-2}$, respectively, in Sections 3.3, 7 and 8. The correct values are 39.8 J and $1.1 \times 10^{23} \text{ W cm}^{-2}$. Similarly, the values stated for the higher energy case, 109 J and $3 \times 10^{23} \text{ W cm}^{-2}$ in Section 7, should be 398 J and $1.1 \times 10^{24} \text{ W cm}^{-2}$, respectively.

The conversion efficiencies (which are calculated using the laser energy) shown in Figures 9(d)–9(f) are corrected by multiplying by a constant factor of 0.273. With corrected energies, the synchrotron conversion efficiencies in Section 3.3 now become 4.32%, 4.50% and 1.67% for $x_f = 0$, z_R and $-z_R$, respectively, corresponding to changes of +4% and -61% for the positive and negative defocus, respectively.

This error does not affect the conclusions of the article.

Reference

J. Goodman, M. King, E. J. Dolier, R. Wilson, R. J. Gray, and P. McKenna. Optimization and control of synchrotron emission in ultraintense laser–solid interactions using machine learning. High Power Laser Science and Engineering 11, e34 (2023). Cambridge University Press.