UC Berkeley

UC Berkeley Previously Published Works

Title

Erratum: An accurate and efficient laser-envelope solver for the modeling of laser-plasma accelerators (Plasma Physics and Controlled Fusion (60) (014002) DOI: 10.1088/1361-6587/aa8977)

Permalink

<https://escholarship.org/uc/item/5hm0x691>

Journal

Plasma Physics and Controlled Fusion, 62(8)

ISSN

0741-3335

Authors

Benedetti, C
Schroeder, CB
Geddes, CGR
et al.

Publication Date

2020-08-01

DOI

10.1088/1361-6587/ab9a63

Peer reviewed

Corrigendum: An accurate and efficient laser-envelope solver for the modeling of laser-plasma accelerators [Plasma Phys. Control. Fusion 60 (2018) 014002]

C Benedetti

Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

C B Schroeder

Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

C G R Geddes

Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

E Esarey

Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

W P Leemans ‡

Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

We would like to correct a misprint§ present in equation (7) of our paper [1]. The correct equation reads

$$\begin{aligned} \frac{\mathcal{L}_k^-}{2} \hat{a}_{j,k-1}^{n+1} + \left[C_k^{0,+} - \frac{\chi_{j,k}^n}{2} + \frac{i}{\Delta_\tau} D_{j,k}^n \right] \hat{a}_{j,k}^{n+1} + \frac{\mathcal{L}_k^+}{2} \hat{a}_{j,k+1}^{n+1} = \quad (7) \\ - \frac{2}{\Delta_\tau^2} \hat{a}_{j,k}^n \\ - \frac{\mathcal{L}_k^-}{2} \hat{a}_{j,k-1}^{n-1} - \left[C_k^{0,-} - \frac{\chi_{j,k}^n}{2} - \frac{i}{\Delta_\tau} D_{j,k}^n \right] \hat{a}_{j,k}^{n-1} - \frac{\mathcal{L}_k^+}{2} \hat{a}_{j,k+1}^{n-1} \\ - \frac{2e^{i(\theta_{j,k}^n - \theta_{j+1,k}^n)}}{\Delta_\tau \Delta_\zeta} [\hat{a}_{j+1,k}^{n+1} - \hat{a}_{j+1,k}^{n-1}] \\ + \frac{e^{i(\theta_{j,k}^n - \theta_{j+2,k}^n)}}{2\Delta_\tau \Delta_\zeta} [\hat{a}_{j+2,k}^{n+1} - \hat{a}_{j+2,k}^{n-1}]. \end{aligned}$$

[1] Benedetti C *et al* 2018 *Plasma Phys. Control. Fusion* **60** 014002

‡ Now at: Deutsches Elektronen-Synchrotron, Hamburg, Germany.

§ The authors would like to thank A. R. Rossi and L. Martelli for pointing out this issue.