

Erratum: “Analytical solution of the almost-perfect-lens problem” [Appl. Phys. Lett. 84, 1290 (2004)]

R. Merlin

FOCUS Center and Department of Physics, The University of Michigan Ann Arbor, MI 48109-1120

(Received 10 November 2003; accepted 7 January 2004)

[DOI: 10.1063/1.1789572]

There is a typographical error in Eq. (4). Also, the results in the electrostatic limit are only applicable to $\mu=1$. More generally, λ should be replaced by $\lambda\sqrt{2/(\mu+1)}$ in the abscissa of the graph and the caption of Fig. 2 as well as in the last part of the paragraph of p. 1292, before the acknowledgments. The correct expression of Eq. (4) is:

$$H_y^{\text{NF}} = \int_{|q| > \omega/c} \mathcal{H}(q) e^{iqx - \sqrt{q^2 - \omega^2/c^2}|z+\ell|} dq.$$

For arbitrary $\mu > -1$, the paragraph should read: “...provided we make the substitution $2\pi(d/\lambda)\sqrt{(1+\mu)/2} = \sqrt{|\sigma|} \ln(2/|\sigma|)$. Using this expression and Eq. (10) we can easily calculate the lens’ resolution. The dependence of L_R/d on $(\lambda/d)\sqrt{2/(\mu+1)}$ is shown in Fig. 2. Explicitly, $4(\lambda/d)^2/(\mu+1) = e^{2\pi d/L_R}(L_R/d)^2$.”