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Erratum

Characterization of focal field formed by a large numerical aperture paraboloidal mirror and generation of ultra-high intensity (10^{22} W/cm^2)

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Lines 19–24 of the right-hand column of p. 827 in the printed article contain an erroneous statement. The corrected sentence is printed here: We applied the criteria to the diffraction integrals in this article and to the theory of Richards and Wolf [10] and one can show algebraically that both theories satisfy the first criterion. Regarding the second criterion, the Richards-Wolf formulae can also numerically be shown to satisfy energy conservation, which must be so because their apodization factor was derived from energy conservation. On the other hand, the momentum conservation was not yet checked for the Ref. [10]. The Richards-Wolf theory is suitable for compound lens focusing because of their use of reference sphere geometry, whereas the present formalism is more suitable for off-axis paraboloid focusing. It was shown before that Richards-Wolf formula could be derived from the Stratton-Chu integral (C. J. R. Sheppard, A. Choudhury and J. Gannaway, "Electromagnetic field near the focus of wide-angular lens and mirror systems," IEE Journal on Microwaves, Optics and Acoustics, Vol. 1, No. 4, p. 129 (1977)). Therefore the essential difference between the present formulae and the Richards-Wolf's is whether to map the incident field on the reference sphere or to use it directly.

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