

## Erratum to: Vortex and anti-vortex compositions of exact elegant Laguerre–Gaussian vector beams

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In the original publication of the article, signs are incorrect in Eqs. (10), (11) and (15), the symbols  $M'$  and  $N'$  in Eqs. (12) and (13) should be replaced by  $\mathbf{M}'$  and  $\mathbf{N}'$  respectively, the symbols  $\mathbf{M}'$  and  $\mathbf{N}'$  in Eqs. (14) and (15) should be replaced by  $M'$  and  $N'$  respectively, and a phase factor in Eq. (19) is absent.

The correct equations should read:

$$\tilde{G}_{p,\pm l} = \tilde{G}_{p\pm 1/2,\pm(l-1)} e^{\pm i\varphi} = \tilde{G}_{p\pm 1,\pm(l-2)} e^{\pm 2i\varphi}, \quad (10)$$

$$\tilde{G}_{p,\pm l} = \tilde{G}_{p\mp 1/2,\pm(l+1)} e^{\mp i\varphi} = \tilde{G}_{p\mp 1,\pm(l+2)} e^{\mp 2i\varphi}, \quad (11)$$

$$\mathbf{E}' = \mathbf{E}'^{(tm)} + \mathbf{E}'^{(te)} = \nabla \times \nabla \times \mathbf{M}' - \partial_\tau \nabla \times \mathbf{N}', \quad (12)$$

$$\mathbf{H}' = \mathbf{H}'^{(te)} + \mathbf{H}'^{(tm)} = \nabla \times \nabla \times \mathbf{N}' + \partial_\tau \nabla \times \mathbf{M}', \quad (13)$$

$$E'^{(tm)} = -2\hat{e}_z \partial_{\zeta_+} \partial_{\zeta_-} M' + (w_w/z_D) (\hat{e}_R \partial_{\zeta_+} + \hat{e}_L \partial_{\zeta_-}) \partial_z M', \quad (14)$$

$$E'^{(te)} = -i(w_w/z_D) (\hat{e}_R \partial_{\zeta_+} - \hat{e}_L \partial_{\zeta_-}) \partial_\tau N', \quad (15)$$

$$E'_{p,\pm l} = i\hat{e}_\phi (f^{-1} Q_{p,l+1} - f^{+1} Q_{p+1,l+1}) e^{\pm il\varphi}. \quad (19)$$

Above corrections do not affect other equations.

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