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Publisher Correction: Ultrafast beam pattern modulation by superposition of chirped optical vortex pulses

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The original version of this Article contained errors in Equations 22, 29, and 30 where extra brackets were incorrectly added to Equations 22 and 29, and the brackets in Equation 30 were captured in the wrong font size. Additionally, value "**r**" in Equations 22, 29 and 30 was wrongly presented as "*r*".

Equation 22

$$S_\rho(r,t) = -\mathrm{i}\frac{\omega_0}{8}\Big\{|G(t)|^2\Big[U_1^*(r)\partial_\rho U_1(r) - U_1(r)\partial_\rho U_1^*(r)\Big] + \Big|G(t-\tau_{\mathrm{CP}})\Big|^2\Big[U_2^*(r)\partial_\rho U_2(r)] - U_2(r)\partial_\rho U_2^*(r)\Big]$$
$$+ G(t)G^*(t-\tau_{\mathrm{CP}})[U_2^*(r)\partial_\rho U_1(r) - U_1(r)\partial_\rho U_2^*(r)] + G^*(t)G(t-\tau_{\mathrm{CP}})[U_1^*(r)\partial_\rho U_2(r) - U_2(r)\partial_\rho U_1^*(r)]\Big\}$$
$$+ \mathrm{c.c.},$$

now reads:

$$S_\rho(\mathbf{r},t) = -\mathrm{i}\frac{\omega_0}{8}\Big\{|G(t)|^2\Big[U_1^*(\mathbf{r})\partial_\rho U_1(\mathbf{r}) - U_1(\mathbf{r})\partial_\rho U_1^*(\mathbf{r})\Big] + \Big|G(t-\tau_{\mathrm{CP}})\Big|^2\Big[U_2^*(\mathbf{r})\partial_\rho U_2(\mathbf{r}) - U_2(\mathbf{r})\partial_\rho U_2^*(\mathbf{r})\Big]$$
$$+ G(t)G^*(t-\tau_{\mathrm{CP}})[U_2^*(\mathbf{r})\partial_\rho U_1(\mathbf{r}) - U_1(\mathbf{r})\partial_\rho U_2^*(\mathbf{r})] + G^*(t)G(t-\tau_{\mathrm{CP}})[U_1^*(\mathbf{r})\partial_\rho U_2(\mathbf{r}) - U_2(\mathbf{r})\partial_\rho U_1^*(\mathbf{r})]\Big\}$$
$$+ \mathrm{c.c.},$$

Equation 29

$$S_\rho(r,t) = -\mathrm{i}\frac{\omega_0}{8}\Big\{g(t)^2\Big[u_1^*(r)\partial_\rho u_1(r) - u_1(r)\partial_\rho u_1^*(r)\Big] + g(t-\tau_{\mathrm{CP}})^2\Big[u_2^*(r)\partial_\rho u_2(r)] - u_2(r)\partial_\rho u_2^*(r)\Big]$$
$$+ \exp\Big\{\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_2^*(r)\partial_\rho u_1(r) - u_1(r)\partial_\rho u_2^*(r)\Big]$$
$$+ \exp\Big\{-\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_1^*(r)\partial_\rho u_2(r) - u_2(r)\partial_\rho u_1^*(r)\Big]\Big\}$$
$$+ \mathrm{c.c.},$$

now reads:

$$S_\rho(\mathbf{r},t) = -\mathrm{i}\frac{\omega_0}{8}\Big\{g(t)^2\Big[u_1^*(\mathbf{r})\partial_\rho u_1(\mathbf{r}) - u_1(\mathbf{r})\partial_\rho u_1^*(\mathbf{r})\Big] + g(t-\tau_{\mathrm{CP}})^2\Big[u_2^*(\mathbf{r})\partial_\rho u_2(\mathbf{r}) - u_2(\mathbf{r})\partial_\rho u_2^*(\mathbf{r})\Big]$$
$$+ \exp\Big\{\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_2^*(\mathbf{r})\partial_\rho u_1(\mathbf{r}) - u_1(\mathbf{r})\partial_\rho u_2^*(\mathbf{r})\Big]$$
$$+ \exp\Big\{-\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_1^*(\mathbf{r})\partial_\rho u_2(\mathbf{r}) - u_2(\mathbf{r})\partial_\rho u_1^*(\mathbf{r})\Big]\Big\}$$
$$+ \mathrm{c.c.},$$

Equation 30

$$S_\phi(r,t) = -\frac{\sigma\omega_0}{4}\Big\{g(t)\partial_\rho|u_1(r)|^2 + g(t-\tau_{\mathrm{CP}})^2\partial_\rho|u_2(r)|^2$$
$$+ \exp\Big\{\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_1(r)\partial_\rho u_2^*(r) + u_2^*(r)\partial_\rho u_1(r)\Big]$$
$$+ \exp\Big\{-\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\}g(t)g(t-\tau_{\mathrm{CP}})[u_2(r)\partial_\rho u_1^*(r) + u_1^*(r)\partial_\rho u_2(r)]\Big\}$$
$$+ \frac{\omega_0}{4\rho}\Big\{2\ell_1 g(t)^2|u_1(r)|^2 + 2\ell_2 g(t-\tau_{\mathrm{CP}})^2|u_2(r)|^2$$
$$+ \exp\Big\{\mathrm{i}\Big[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2\Big]\Big\}(\ell_1+\ell_2)g(t)g(t-\tau_{\mathrm{CP}})u_1(r)u_2^*(r)$$
$$+ \exp\Big\{-\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}(\ell_1+\ell_2)g(t)g(t-\tau_{\mathrm{CP}})u_1^*(r)u_2(r)\Big\},$$

now reads:

$$S_\phi(\mathbf{r},t) = -\frac{\sigma\omega_0}{4}\Big\{g(t)\partial_\rho|u_1(\mathbf{r})|^2 + g(t-\tau_{\mathrm{CP}})^2\partial_\rho|u_2(\mathbf{r})|^2$$
$$+ \exp\Big\{\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_1(\mathbf{r})\partial_\rho u_2^*(\mathbf{r}) + u_2^*(\mathbf{r})\partial_\rho u_1(\mathbf{r})\Big]$$
$$+ \exp\Big\{-\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}g(t)g(t-\tau_{\mathrm{CP}})\Big[u_2(\mathbf{r})\partial_\rho u_1^*(\mathbf{r}) + u_1^*(\mathbf{r})\partial_\rho u_2(\mathbf{r})\Big]\Big\}$$
$$+ \frac{\omega_0}{4\rho}\Big\{2\ell_1 g(t)^2|u_1(\mathbf{r})|^2 + 2\ell_2 g(t-\tau_{\mathrm{CP}})^2|u_2(\mathbf{r})|^2$$
$$+ \exp\Big\{\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}(\ell_1+\ell_2)g(t)g(t-\tau_{\mathrm{CP}})u_1(\mathbf{r})u_2^*(\mathbf{r})$$
$$+ \exp\Big\{-\mathrm{i}[(\ell_1-\ell_2)\phi - C\tau_{\mathrm{CP}}t - \omega_0\tau_{\mathrm{CP}} + C\tau_{\mathrm{CP}}^2/2]\Big\}(\ell_1+\ell_2)g(t)g(t-\tau_{\mathrm{CP}})u_1^*(\mathbf{r})u_2(\mathbf{r})\Big\},$$

The original Article has been corrected.