Erratum: Observation of Spatial Quantum Correlations Induced by Multiple Scattering of Nonclassical Light [Phys. Rev. Lett. 102, 193901 (2009)]

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The Letter was published with an error in Fig. 3 as a result of an incorrect account for the resolution bandwidth of the measurement in the applied theory. As a consequence, the magnitude of the spatial quantum correlation function was incorrectly estimated. Figure 1 is the corrected figure. The measured spatial correlation function $C_{abab'}(\omega, \delta\omega)$ depicts the Fourier transformation of Eq. (1) in the original manuscript calculated within the frequency interval $\omega_{\pm} = \omega_s \pm \delta\omega/2$. Here ω_s is the detection frequency and $\delta\omega$ the resolution bandwidth. The detailed theory of the experiment has recently been published in Ref. [1]. We emphasize that the mistake does not influence any conclusion or discussions of the Letter.

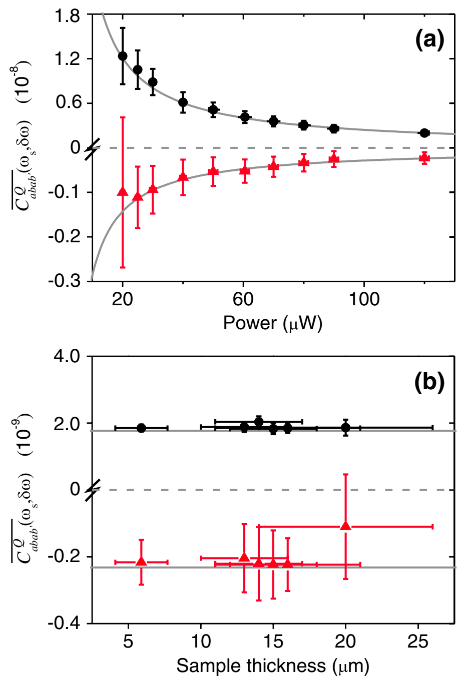

FIG. 1 (color online). (a) Measured spatial quantum correlation function $\overline{C^{Q}_{abab'}}(\omega_s, \delta\omega)$ versus power of the incident light beam where $\omega_s/2\pi = 3.93$ MHz is the detection frequency and $\delta\omega/2\pi = 300$ kHz is the resolution bandwidth. For classical [$F_a(\omega_s, \delta\omega) = 4.6$, black points] and nonclassical [$F_a(\omega_s, \delta\omega) = 0.52$, red triangles] photon fluctuations, positive and negative spatial correlations are observed, respectively. Every data point represents an average over three different positions on the sample of thickness $L = 6$ m. The curves are the theoretical predictions and the dashed line represents the uncorrelated case. (b) Spatial quantum correlation function versus sample thickness taken at an input power of $P = 120$ μW. The spatial quantum correlation function is found to be independent of the sample thickness in agreement with theory (horizontal lines).

[1] S. Smolka, J. R. Ott, A. Huck, U. L. Andersen, and P. Lodahl, Phys. Rev. A **86**, 033814 (2012).

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