Erratum: GV/m Single-Cycle Terahertz Fields from a Laser-Driven Large-Size Partitioned Organic Crystal [Phys. Rev. Lett. **112**, 213901 (2014)]

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For the electric field strength E_p calculation, a prefactor was omitted. For the estimation of the peak THz field generated in the PCS crystal, the experimental pulse energy, the focus size, and the pulse envelope duration τ_{FWHM} is taken into account. The electric field can be expressed as

$$E_p = \sqrt{\frac{\Sigma_{\text{pulse}}}{c\epsilon_0 A \tau_{\text{FWHM}}}}, \quad (\text{E1})$$

with Σ_{pulse} the pulse energy measured with a calibrated Golay cell detector taking into account the losses. THz pulse energies up to 12 μJ were measured by illuminating the PCS crystal with a 3 mm pump diameter beam. A is the effective area for a two-dimensional Gaussian distribution with a FWHM measured in the experiment of 270 μm : $A \approx \text{FWHM}^2 \pi / [4 \ln(2)]$. c and ϵ_0 are the speed of light and the vacuum permittivity, respectively. The half-maximum THz pulse duration τ_{FWHM} is derived from the Gaussian fit of the envelope of $|E(t)|^2$ of the electro-optical sampling shape reported in Fig. 2(a) and is equal to 364 fs. According to Fig. 1, the THz peak field is about 0.38 GV/m (3.8 MV/cm), and the corresponding magnetic field about 1.3 T. The corrected electro-optical field evolution is reported in Fig. 1.

The effective electric and magnetic peak field by pumping the entire PCS crystal surface would result in about 2.6 GV/m and 8.6 T, respectively (instead of 3.6 GV/m and 12 T).

Furthermore, there is a typo in the reported frequency range (p. 3). It correctly reads, “The experimental focus was reproduced in ZEMAX simulation modeling the THz radiation as discrete frequencies between 0.5 and 6 THz [inset of Figs. 3(a) and 3(b)].” We would like to thank J. Faist and H. Schiff for having pointed out the mistake in the field calculation.

FIG. 1. THz field measured with electro-optical sampling and rescaled using Eq. (E1).