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ERRATUM

Erratum to: Mobile source of high-energy single-cycle terahertz pulses

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In 2010, we reported [1] on a demonstration of a mobile source of high-energy near-single-cycle THz pulses based on a tilted pulse front optical rectification set-up, pumped by a mobile terawatt laser (*Teramobile*). The absolute value of the THz pulse energy was measured with a pyroelectric detector (Coherent Molectron J4-05). The company does not provide a spectral sensitivity dependence for this detector below 3.3 THz. In the reported experiments, generated THz pulses had broad spectra centred at 0.2 THz [1]. Previously, this detector was used for measuring the energy of near-single-cycle THz pulses with an average frequency of 0.9 THz generated by an accelerator-based source [2]. Afterwards, it was reported that the sensitivity of the Coherent pyroelectric detector at 1 THz was approximately 1.8 times less than the specified sensitivity at 1.06 μm [3], and this difference has been take into account in a following publication [7].

Recently, we compared the sensitivity of the Coherent Molectron J4-05 detector with that of another widely used pyroelectric THz detector (Microtech Instruments) [3–6]. The latter detector is provided with a calibration curve of the spectral dependence of the sensitivity in the frequency range of 0.12–3 THz. As a result, we found that at frequencies of 0.2–0.5 THz, the Coherent Molectron J4-05 detector underestimates the THz pulse energy by a factor of about 3.5 with regard to the Microtech Instruments detector. This finding evidences an additional drop of the Coherent Molectron J4-05 detector sensitivity for THz wave frequencies below 1 THz. By this comparison, we conclude that the THz pulse energy in Ref. [1] should significantly be re-estimated, up to 175 μJ (instead of the initially published value of 50 μJ), which is to the best of our knowledge the highest energy of near-single-cycle THz pulses generated by tabletop sources.

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