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Spatio-spectral metrology at focus of ultrashort lasers: a phase-retrieval approach: erratum

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Abstract: This is an erratum on the manuscript entitled ‘Spatio-spectral metrology at focus of ultrashort lasers: a phase-retrieval approach’, by A. Borot and F. Quéré [*Opt. Express* **26**, 26444 (2018)].

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We would like to point out an error in our manuscript “Spatio-spectral metrology at focus of ultrashort lasers: a phase-retrieval approach” [1], related to the definition and units of frequency. Throughout the paper, we have used the term ‘frequency’, expressed in hertz (Hz). Although this terminology is correct, the numbers that are provided for our measurements (in Figs. 2 to 5, Fig. 11, text of section 3.2 and section 6) actually correspond to angular frequencies, $\omega=2\pi/T_L$ (T_L optical period), and not to frequencies $\nu=1/T_L$ as indicated. The proper units of angular frequencies are rad/s, rather than Hz as we have used in the paper.

We wish to thank Dr. Nemes (ELI-NP, Romania, and ASTiGMATTM, Citrus Hts., CA, USA) for pointing out this ambiguity in the terminology and inconsistency in the units. We take this opportunity to provide this useful reminder written by Dr. Nemes:

“The SI unit of frequency is hertz, the SI unit of angular frequency is radian per second. Although it is formally correct to write these two units as the reciprocal second, the use of the different names emphasizes the different nature of the quantities concerned. It is especially important to carefully distinguish frequencies from angular frequencies, because by definition their numerical values differ by a factor of 2π . Note also that it is common, although not recommended, to use the term frequency for quantities expressed in rad/s. It is recommended that quantities called “frequency”, “angular frequency”, and “angular velocity” always be given explicit units of Hz or rad/s, respectively, and not s^{-1} .”

Disclosures

The authors declare no conflicts of interest.

References

1. A. Borot and F. Quéré, “Spatio-spectral metrology at focus of ultrashort lasers: a phase-retrieval approach,” *Opt. Express* **26**, 26444 (2018).