



# Absolute gas density profiling in high-order harmonic generation: erratum

A. COMBY,<sup>1,\*</sup>  S. BEAULIEU,<sup>1,2</sup> E. CONSTANT,<sup>3</sup>  D. DESCAMPS,<sup>1</sup>  S. PETIT,<sup>1</sup> AND Y. MAIRESSE<sup>1</sup>

<sup>1</sup>Université de Bordeaux - CNRS - CEA, CELIA, UMR5107, F33405 Talence, France

<sup>2</sup>Institut National de la Recherche Scientifique, Varennes, Quebec, Canada

<sup>3</sup>Institut Lumière Matière, Université Lyon 1, CNRS, UMR 5306, 10 rue Ada Byron, 69622 Villeurbanne Cedex, France

\*[antoine.comby@u-bordeaux.fr](mailto:antoine.comby@u-bordeaux.fr)

**Abstract:** In this erratum, we correct two numerical errors due to conversion mistakes from our previous published manuscript [Opt. Express 26, 6001 (2018)]. In the original manuscript, the two errors compensated each other such that the conclusions remain perfectly unchanged.

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In our previously published manuscript [1], we derived the length-density product from two independent measurements of the length and the density of a gas jet. As the density of the jet is around  $3.5 \times 10^{18}$  at.cm<sup>-3</sup> and the length of the jet is around  $350 \mu\text{m} = 3.5 \times 10^{-2}$  cm, the unit of the length-density product should be  $10^{17}$  cm<sup>2</sup>, and not  $10^{15}$  cm<sup>2</sup> as mentioned in the original manuscript. This changes the value of the length-density product maximizing the signal from  $1.2 \times 10^{15}$  cm<sup>2</sup> to  $1.2 \times 10^{17}$  cm<sup>2</sup> in the following sentence: "The results show that all the curves reach their maxima at the same length-density product of  $1.2 \times 10^{17}$  cm<sup>2</sup>." It also changes the x-axis unit of Fig. 3(b) from  $10^{15}$  cm<sup>2</sup> to  $10^{17}$  cm<sup>2</sup>.

In addition, the absorption cross section of argon at 57 nm is  $3.6 \times 10^{-17}$  cm<sup>2</sup> and not  $3.6 \times 10^{-15}$  cm<sup>2</sup> as stated in the original manuscript.

The scientific discussion and conclusions on our work are based on the value of the product of the cross section and length-density product. This product is unchanged by the corrections, and therefore the conclusions remain unaffected by these mistakes.

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## Disclosures

The authors declare no conflicts of interest.

## References

1. A. Comby, S. Beaulieu, E. Constant, D. Descamps, S. Petit, and Y. Mairesse, "Absolute gas density profiling in high-order harmonic generation," *Opt. Express* **26**(5), 6001–6009 (2018).