High power commissioning of BELLA iP2 up to 17 J (Erratum)

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A revised version of this manuscript was published on 3 October 2023. Details of the revision are provided in the text that accompanies this Erratum. The original paper has been updated.

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1) In the Abstract, the first sentence was split into two and the value for the laser intensity was updated.
   Before: *The new short focal length experimental beamline at the BELLA PW, called iP2, was commissioned up to 17 J laser pulse energy, corresponding to a peak intensity of 1.2x10^{21} W/cm^2 on target, based on a measured focal spot size with FWHM 2.7 µm and Gaussian equivalent pulse length of 40 fs.*
   After: *The new short focal length experimental beamline at the BELLA PW, called iP2, was commissioned up to 17 J laser pulse energy. At best compression, this corresponds to a peak intensity of 3x10^{21} W/cm^2 on target, based on a measured focal spot size with FWHM 2.7 µm and Gaussian equivalent pulse length of 40 fs.*
2) Updates consistent with those in 1) were made to the Laser Focus section and two sentences were added to provide detail on the laser intensity during ion acceleration experiments.
   Before:
   The energy fraction contained within w_0 was 71%. A laser pulse length of 40 fs (Gaussian equivalent) was measured independently via frequency-resolved optical gating (Grenouille). After removal of the attenuation, this results in a peak intensity of 1.2x10^{21} W/cm^2 at 17 J pulse energy.
   After:
   The energy fraction contained within w_0 was 60%. At best compression, the BELLA PW laser pulse length is 40 fs (Gaussian equivalent), with an energy-normalized peak power of 25 TW/J.[1] After removal of all attenuation, this results in a peak intensity on target of 3x10^{21} W/cm^2 at 17 J pulse energy. Ion acceleration results described in the following section were executed at a non-optimal laser pulse spectral phase, as measured with a Grenouille. As a result, a maximum normalized peak power of 18 TW/J was achieved, corresponding to a peak intensity of 2x10^{21} W/cm^2 on target. In the future, the spectral phase will be better compensated to achieve the maximum peak intensity in iP2 experiments.

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3) The laser intensity was also updated in the Conclusion section.
   Before:
   At this pulse energy, a peak intensity of 1.2x10^{21} W/cm^2 on target is estimated based on a measured focal spot size of 2.7 μm (FWHM) and the laser pulse length of 40 fs (Gaussian equivalent).
   After:
   At this pulse energy, a peak intensity of 3x10^{21} W/cm^2 on target is estimated based on a measured focal spot size of 2.7 μm (FWHM) and the laser pulse length of 40 fs (Gaussian equivalent) at best compression.
4) There was a typo in the 3rd sentence of the conclusion section, "*with few μ**m** thick foil targets*", which is now corrected.