

Thanks for your comments, my answers are in blue.

Review of “Calculations for the optical system for the first ITER plasma”

B.Plaum et al.

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To the authors

The paper is generally well written and report high quality work relevant for the EC community. In the following a few minor modifications are suggested to improve the readability of the paper.

Fig. 1 may be updated with a more schematic version with the location of the mirrors for the two rows of EC beams. A similar comment applies to the figures reporting the results of the calculations, which mention the mirrors within the Upper Launcher system. A reference to a paper describing the design of the UL would be useful for better understanding of its lay-out and of the modifications needed for the first plasma, (e.g. D.Strauss et al., Fusion Engineering and Design 146 (2019) 23–26).

Thanks for the notice. I added a more schematic Figure (hope it's ok) and added the reference.

In the statement:

“This condition can, however, be fulfilled only approximately, because the field vector is always perpendicular to the k-vector (in an isotropic medium) and the latter is slightly tilted with respect to the global xy-plane.”

Is the xy plane parallel to the equatorial plane of the vessel? If this is the case, mention it may help to understand the geometry.

Yes, it's parallel to the equatorial plane. I modified the text to clarify this.

In the statement:

“The best physically possible E-direction was obtained by defining an auxiliary vector \mathbf{a} , which is perpendicular to the k-vector and lies in the x-y plane of the torus:”

“and” is likely a mistype

Corrected

Fig.10

Please clarify the meaning of the z[m] axis in Fig.10. (Propagation coordinative of the beam or vertical position, normal to xy plane?)

The z-axes of Figures 10 and 11 are in the direction of the beam axis. I added a note to the text.