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## Erratum: Design of detectors at the electron ion collider with artificial intelligence

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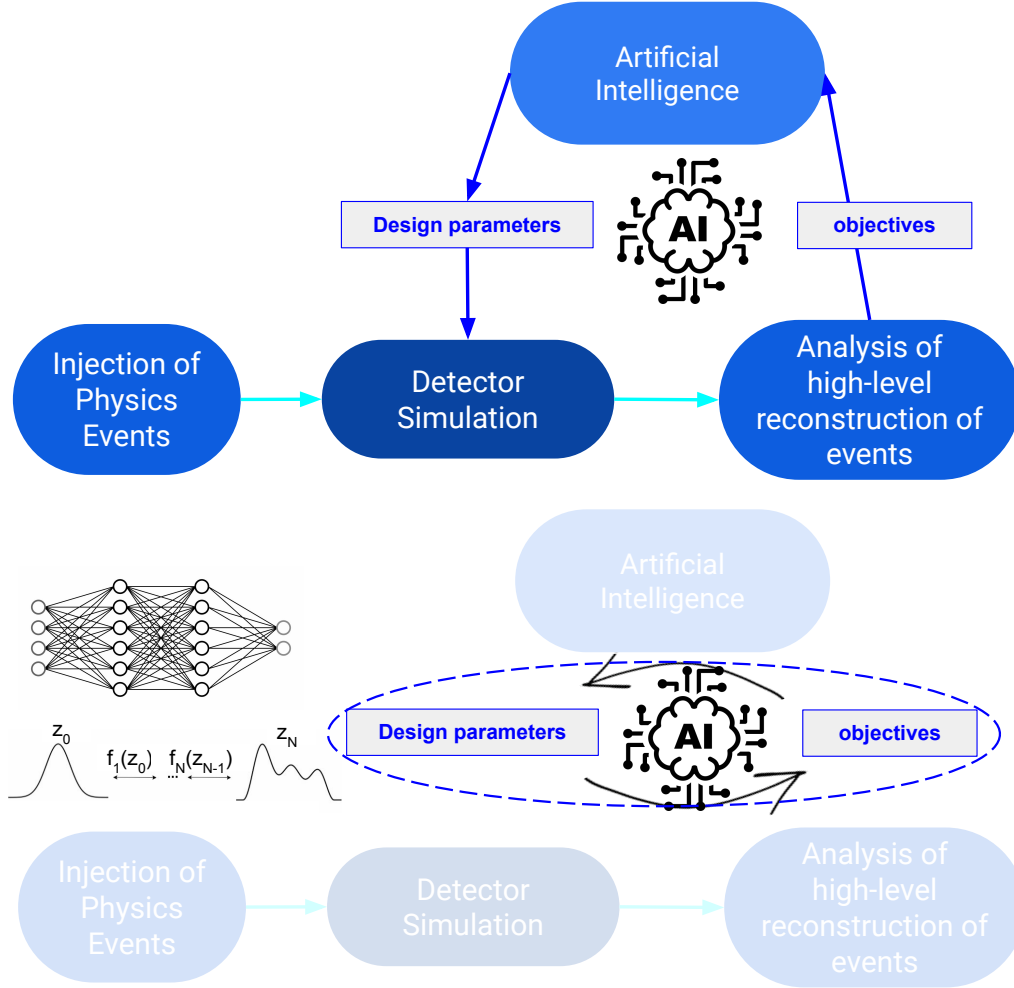
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ERRATUM TO: [2022 JINST 17 C04038](#)



In the published version of this article a number of errors are present. The corrections are the following.

- Figure 1 had a wrong label. The correct figure 1 is the following:



**Figure 1.** Workflow of detector design: (top) typical workflow of detector design assisted by AI: physics events are injected in a detector characterized by some given design parameters. Reconstructed events are analyzed and figures of merit are quantified and passed to some AI-based strategy, which in turn suggests the next design point to observe in this sequential approach; notice that AI can also intervene in the simulation and reconstruction steps. (Bottom) With large dataset one can use deep learning to learn the ‘mapping’ between the design and the objective space.

- The brackets appear to be unpaired in the last sentence of the caption of figure 3. The correct last sentence is: “The tracker support is characterised by 5 variables:  $\theta$  (the angle of projection of the support cone structure),  $r_{\text{vtx}}$  (radius of vertex support structure),  $r_{\mu\text{rwell-1}}$  ( $\mu\text{Rwell-1}$  radius), *plateau* (plateau length), and  $r_{\text{max}}$  (maximum allowed radius of inner tracker). More details can be found in [24].”

- The page range or article number in ref. [23] was missing. The correct and complete ref. [23] is:

## References

- [23] C. Fanelli et al., *AI-assisted Optimization of the ECCE Tracking System at the Electron Ion Collider, AI-optimised Design of the tracking system at the electron ion collider*, in *APS Division of Nuclear Physics Meeting Abstracts, APS Meeting Abstracts January 2021* (2021) KJ.004 [[arXiv:2205.09185](#)] [[INSPIRE](#)].