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Progress on the IDEA vertex detector implementation in key4hep full simulation

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A plethora of measurements at the FCC-ee crucially depend on efficient flavour tagging and precise flight distance measurements. To achieve this, the innermost piece of the FCC-ee detectors, the vertex detector, has to precisely locate the collision vertices, while adding only a minimal amount of material to the detector to limit multiple scattering deteriorating the detector performance.

This contribution presents the progress of the implementation of the IDEA vertex detector in full simulation using the key4hep and DD4hep frameworks.

Next steps in the full simulation work considering alternative vertex detector designs and the related sensor R&D will be briefly discussed as well.

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