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Usage of EDM4hep datamodel in RDataFrame

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The Future Circular Collider analysis framework, FCCAnalyses, heavily relies on the Key4hep provided data-model: EDM4hep. The datamodel itself is described by a simple YAML file, and all required I/O classes are generated with the help of Podio, datamodel generator and I/O layer. One of the limitations of the Podio-based datamodel is that its internal structure, while providing convenient containerization of physics objects and resolution of relationships between them, has performance implications when running in the columnar parallelized environment of RDataFrame. The presentation will discuss the approaches undertaken when interfacing ROOT's RDataFrame with the EDM4hep datamodel.

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