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REST-for-Physics framework for Geant4 simulations and data analysis

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The REST-for-Physics (Rare Event Searches Toolkit for Physics) framework is a ROOT based open-source software to process the data from detector physics experiments. Its main features include the traceability of code and data to ensure reproducible results, potential scalability and reusability. The framework provides common event data structures for experimental and MonteCarlo simulated events, where common event processes may operate on both. The Geant4 simulated events can be launched directly through the builtin restG4 package that interfaces with the REST-for-Physics Geant4 library. REST-for-Physics is actively maintained and it is already consolidated in Rare Event Searches experiments using gaseous Time Projection Chambers such as PandaX-III, TREX-DM and BabyIAXO.

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