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Status and new developments in Delphes 3

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A status of recent developments of the DELPHES C++ fast detector simulation framework will be given. New detector cards for the LHCb detector and prototypes for future e^+e^- (ILC, FCC-ee) and p-p colliders at 100 TeV (FCC-hh) have been designed. The particle-flow algorithm has been optimised for high multiplicity environments such as high luminosity and boosted regimes. In addition, several new features such as photon conversions/bremsstrahlung and vertex reconstruction including timing information have been included. State-of-the-art pile-up treatment and jet filtering/boosted techniques (such as PUPPI, SoftKiller, SoftDrop, Trimming, N-subjettiness, etc..) have been added. Finally, Delphes has been fully interfaced with the Pythia8 event generator allowing for a complete event generation/detector simulation sequence within the framework.

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