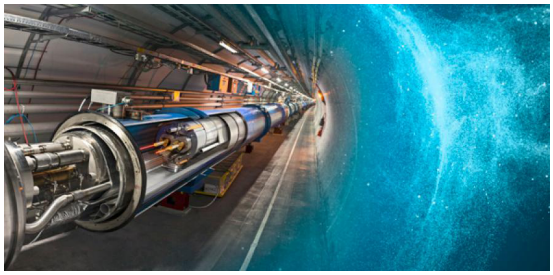

Contribution ID: **47** Type: **not specified**

Minimum bias simulation of parasitic collisions

Wednesday, 23 March 2022 15:30 (15 minutes)

Parasitic collisions are proton-proton collisions that happen offset from the nominal ATLAS interaction point. With a 25 ns bunch spacing, the bunches can have parasitic encounters at z = n × 3.75 m, with n < 7. Using MC simulations, it would be possible to observe the distributions of key variables (from tracks and energy deposits) for such events at various distances. The task consisted of the generation of minimum bias MC samples, applying a Z offset to reproduce the effect and simulate the ATLAS detector response in release 21, and reconstructing the observables, based on muon segments, jets topology, Pixels clusters.

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