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Missing transverse momentum algorithm improvements for the ATLAS Run 3 High Level Trigger BENJAMIN CARLSON, TAE MIN HONG, University of Pittsburgh, ATLAS COLLABORATION — The ATLAS missing transverse momentum trigger is susceptible to the impact of multiple proton-proton interactions (pileup) in the same event. To mitigate the impact of pileup, sophisticated subtraction schemes are utilized. During the Run 2 data-taking (2015-2018), these methods focused only on information from the calorimeter due to limited time available for the algorithms to utilize tracks in the HLT. HLT is the High Level Trigger software-based second-level trigger subsystem. In this talk, I will present updates on the missing transverse momentum trigger algorithms utilizing tracking information for Run 3 (2022-2025).

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