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## **Current state of ATLAS's New Small Wheel simulation software and construction effort of the small strip thin gap chambers (student talk)**

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The ATLAS experiment is being improved in order to benefit from the increased performance provided by the next phase of CERN's large hadron collider upgrade plan. The Small Wheel will be replaced by the New Small Wheel, constructed from Micromega detectors and Small-strip Thin Gap Chambers (sTGC). The current state of the sTGC simulation software responsible for replicating hardware response and track reconstruction will be presented. The assembly and testing of sTGCs at Carleton University will also be introduced. The issues which arise when we attempt to consolidate both the hardware construction and the software efforts will be discussed in order to showcase some difficulties of building complex detectors.

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