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The Canadian contribution to the upgrades to the ATLAS experiment

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The discovery of the Higgs boson has provided the missing link in understanding one of the most profound mysteries of particle physics, namely how particles acquire mass. To deepen our understanding of this newly discovered particle and to extend our searches for new physics, analysis of very large data samples will be required. To enable this program, the instantaneous luminosity of the Large Hadron Collider will be increased over the next decade, reaching up to 5 to 7 times higher than the original design luminosity. To extract the maximum benefit from data collected at these high rates, the experiments at the LHC will require significant upgrades. This talk will focus on the contributions of the Canadian groups to the ATLAS upgrade program, in particular the hardware that will be required to maintain the trigger capability of ATLAS for muons and electrons at the upgraded LHC.

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