

ATLAS HL-LHC Upgrade

Tuesday 24 November 2020 16:30 (15 minutes)

The ATLAS experiment, located at the Large Hadron Collider (LHC) at CERN, uses a detector design optimized for the collection of data for a wide range of physics studies.

The experiment will benefit greatly from the upcoming High Luminosity LHC (HL-LHC) upgrade, which will provide higher luminosities, making new discoveries and higher-precision measurements possible.

Higher luminosity operation will result in a harsher detector environment.

To cope with the more demanding conditions and ensure capability to take full advantage of the higher luminosities, the detector needs to be upgraded.

Swedish institutes are heavily involved in many important parts of the upgrade, namely in the upgrades of the detector's inner tracker (ITk) and tile calorimeter and the additions of a hardware track trigger system (HTT) and a new high-granularity timing detector (HGTD).

The talk will introduce these projects and give an overview of the contributions from Swedish institutes.

Abstract Track

LHC

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