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Performance of the ATLAS Hadronic calorimeter and the phase II upgrade program[1] SERGEI CHEKANOV, Argonne Natl Lab, ATLAS COLLABORATION — The Tile Calorimeter (TileCal) of the ATLAS experiment at the LHC is the hadronic calorimeter designed for energy reconstruction of hadrons, jets, tau-particles and missing transverse energy. Results on calibration, monitoring, signal reconstruction and performance of the TileCal detector using ppcollision from the LHC run I are presented. In particular, the studies of the TileCal response to single isolated charged particles and high-pT jets, as well as the noise description with increasing pile-up are presented. Upgrade plans for TileCal electronics for the High Luminosity LHC programme in 2024 are discussed, together with R&D activities at different laboratories that target different parts of the TileCal electronics.

[1]On behalf of the ATLAS Collaboration.

Sergei Chekanov
Argonne Natl Lab

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