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South African contribution towards the ATLAS Tile Calorimeter PreProcessor

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Four major experiments for the High Luminosity Large Hadron Collider (HL-LHC) are upgraded to accommodate an increase in luminosity. ATLAS (A Toroidal LHC ApparatuS) is part of these four major experiments and it is upgraded to investigate a wide range of physics. The detector is divided into long barrel and two extended barrels. The Tile Calorimeter (TileCal) is part of the ATLAS detector and is the central hadronic calorimeter. The main aim of the TileCal Phase-II upgrade is to completely redesign the on- and off-detector electronics. The Tile PreProcessor (TilePPr) is part of the off-detector electronics and it is responsible for storing the detector data with a total data bandwidth of 40 Tbps. University of the Witwatersrand is contributing 24 % to the total design and production of boards toward the TilePPr. The TilePPr is made up of numerous components and University of the Witwatersrand is responsible for Tile GbE Switch and TileCoM components.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

PhD

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