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## Recent Progress in the South African contribution to the ATLAS Tile Calorimeter Phase-II Upgrade at CERN

*Thursday, 6 July 2023 15:00 (20 minutes)*

The Large Hadron Collider (LHC) at CERN is a cornerstone of modern particle physics research, and the ATLAS experiment is one of the largest and most complex detectors at the LHC. The upcoming Phase-II Upgrade of the ATLAS detector presents a major opportunity for advancing our understanding of the fundamental properties of matter and the universe. South African institutions are playing a key role in the Phase-II Upgrade of the ATLAS Tile Calorimeter, with contributions to both on-detector and off-detector electronics. South African institutions are contributing significantly to the Phase-II Upgrade of the Tile Calorimeter at the LHC, with 50% of the production of the Low Voltage Power Supply Bricks (LVPS) and 24% of the production of the Tile Preprocessor (PPr) being fully manufactured and tested in South Africa. This talk will provide an overview of the South African contribution to the Phase-II Upgrade of the ATLAS Tile Calorimeter, including the design, manufacturing, and testing of the LVPS bricks and PPr boards, as well as the benefits to South African students and researchers involved in the project.

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

No

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

N/A

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