

Paper Submission Form - SAIP2025 Proceedings

Sections A, C, D, and E must be completed by all authors (including students) who submit papers. Section B is compulsory for students who submit manuscript(s).

Section A: Paper Submission Information

Paper/Abstract ID	253
Paper title	The South African contribution based on TileCoM and Tile GbE Switch to the Tile Pre-Processor Modules for the ATLAS Tile Calorimeter: Progress and Current Status.
Corresponding Author Name & Surname:	Mpho Gift Doctor Gololo
Corresponding Author Email Address:	mphog@uj.ac.za

Section B: For Students & Supervisors

Supervisor Name & Surname:	Mpho Gift Doctor Gololo
Supervisor Email Address:	mphog@uj.ac.za

For this paper, the supervisor must agree/disagree with the following statements.

	Yes	No
1. I am aware that the above-mentioned paper is being submitted for possible publication in the Proceedings of the SAIP Conference. I am satisfied that the presented work is that of the listed authors. I hereby give consent to the submission	X	
2. I have proof-read the manuscript	X	
3. I am satisfied that the manuscript is written in appropriate English and is sufficiently free of grammatical and spelling errors	x	
4. I am familiar with the required manuscript format ("House Style"), and I am satisfied that this manuscript meets the criteria. I am aware that manuscripts not conforming with House Style may be desk rejected	X	
5. I am satisfied that the scientific content of this manuscript is of sufficient standard for it to be considered for publication in the Proceedings of the South African Institute of Physics Conference Proceedings	X	

Student Name & Surname: N/A Signature: N/A Date: N/A

Supervisor Name & Surname: Mpho Gololo Signature:  Date: 31/07/2025

Section C: Suggested Reviewers

Obtaining the two referee reports necessary for DHET subsidy is an onerous task.

Please provide the names and contact details of three qualified South African and/or international referees. Referees should have a PhD and expertise in the relevant area of Physics. Do not recommend referees who have co-authored a work with any of the authors on the manuscript within the past five (5) years. Manuscripts without three recommended referees may be subject to desk rejection.

Suggested Reviewers in your Research Field (Both local & international)		
	Reviewer Names & Surname	Reviewer's Email Address(es)
Suggested reviewer #1		
Suggested reviewer #2		
Suggested reviewer #3		

Section D: Declaration of Novelty and Use of AI

How is this submitted manuscript scientifically novel?

By describing South Africa's development of crucial back-end electronics components, such as the TileCoM and Tile GbE Switch, this manuscript offers a distinctive contribution to the ATLAS Tile Calorimeter Phase-II. Upgrade. The incorporation of artificial intelligence methods, particularly machine learning models for predictive anomaly detection, within the TilePPR's real-time control and monitoring architecture is a novel feature of this work. This method is a proactive approach to autonomous fault management and intelligent detector operation in investigation of large-scale high-energy physics

Please see the Author Guidelines for the AI use policy.

How was AI used in the generation of this manuscript?

AI was mainly used to assist the author in restructuring the content of the manuscript together with putting together the references needed for the content of the manuscript.

Section E: Plagiarism

	Yes
I am aware that plagiarism detection software may be used on my manuscript.	YES