

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	436
Paper title	Investigating the latitudinal-dependent solar differential rotation rate using SDO/HMI Dopplergrams
Corresponding Author Name & Surname:	Thembaletu Zulu
Corresponding Author Email Address:	zuluthembaletu318@gmail.com

Section B: For Students & Supervisors

Supervisor Name & Surname:	Dr Ruhann Steyn
Supervisor Email Address:	ruhann.steyn@nwu.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: Thembaletu Zulu

Signature: 

Date: 31 July 2025

Supervisor Name & Surname: ...Ruhann Steyn

Signature: 

Date: 31 July 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	Eugene Engelbrecht	n.eugene.engelbrecht@gmail.com
Suggested reviewer #2	Stefan Ferreira	Stefan.Ferreira@nwu.ac.za
Suggested reviewer #3	Zama Katamzi-Joseph	zkatamzi@sansa.org.za

Section D: Declaration of Novelty and Use of AI

How is this submitted manuscript scientifically novel?

Determining the differential rotation rate of the sun takes a long time, depending on the technique used.

This study confirmed the differential rotation rate by using 1.5 hours of Dopplergrams from the SDO spacecraft. This study shows that using 10 years worth of Dopplergrams will only slightly increase the accuracy of the results. Therefore, Dopplergrams is an easy, accessible way to quickly determine the differential rotation rate of the sun.

Please see the Author Guidelines for the AI use policy.

How was AI used in the generation of this manuscript?

Grammarly was helpful in checking the grammar for this manuscript.

Section E: Plagiarism

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