

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	81
Paper title	Rate equations for the control of Yb-171 ions
Corresponding Author Name & Surname:	Abigail Eden Iyer
Corresponding Author Email Address:	23171480@sun.ac.za

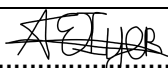
Section B: For Students & Supervisors

Supervisor Name & Surname:	Dr Christine Margarete Steenkamp
Supervisor Email Address:	cmsteen@sun.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: Abigail Eden Iyer

Signature: 

Date: 1 August 2025

Supervisor Name & Surname: CM Steenkamp

Signature: 

Date: 2025-08-01

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	Prof Tjaart Kruger	tjaart.kruger@up.ac.za
Suggested reviewer #2	Dr Angela Dudley	angela.dudley@wits.ac.za
Suggested reviewer #3	Dr Gurthin Bosman	gwb@sun.ac.za

Section D: Declaration of Novelty and Use of AI

How is this submitted manuscript scientifically novel?

The use of a rate equation model to simulate the dynamics of ytterbium ions has been done before.

However, type of questions that we are investigating we have not seen answered in literature.

We want to investigate whether the model can simulate the experimental processes that are commonly used but never studied in detail. It will also be useful to know if the simulation differs from the experimental results for commonly used processes as that may point out that the model fails to account for all influences.

This is still work in progress as we cannot yet compare to the experiment, but we are showing how the model can be useful.

Please see the [Author Guidelines for the AI use policy](#).

How was AI used in the generation of this manuscript?

I made use of AI as a thesaurus to improve the language using out-of-context prompt but not to edit or correct my own content. I also use it to find functions in matlab using generic prompts out of the context to the submitted content.

Section E: Plagiarism

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