

TIPP2023

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WITS
UNIVERSITY



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

IUPAP-C11 meeting – 21/07/24



TIPP2023

TECHNOLOGY IN INSTRUMENTATION & PARTICLE PHYSICS CONFERENCE

4 - 8 SEPTEMBER 2023



Cape Town International Convention Centre (CTICC)



science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



NRF
National Research Foundation
iThemba LABS
Laboratory for Accelerator Based Sciences



IUPAP
International Union of Pure and Applied Physics

Conference dedicated to the late **Dr. Daniel Adams** to whom we owe the establishment of particle Physics in South Africa.



With Madeleine Adams during the TIP2023 dinner. ³

About 250 registered participants from all over the world



Want to thank the Minister for making the effort to open TIPP2023



Minister's speech

Report on TIP2023 by the largest national TV broadcaster during prime time. Coverage by several newspapers as well.

[Link to TV coverage](#)



A screenshot of a YouTube video player. The main video frame shows three men sitting in red theater seats, looking towards the left. The man on the left is wearing a dark suit, the man in the middle is wearing a striped shirt, and the man on the right is wearing a plaid shirt and glasses. A large red play button is centered over the video. In the top left corner of the video frame, there is a small SABC NEWS logo. In the top right corner, there is a 'Share' button with a white arrow icon. At the bottom of the video frame, there is a black banner with the text 'Scientists discuss particle physics' in white. Below the banner, there are social media icons for YouTube, Facebook, and Twitter, along with the text '@SABCNews'. In the bottom right corner of the video frame, there is a small inset video showing a woman in a blue top and dark jacket speaking against a green background. The SABC NEWS logo is also visible in the bottom left corner of the video frame.



South African Government

<https://www.gov.za/speeches/minister-blade...> ▼

Minister Blade Nzimande opens international conference on ...

Web 28 Aug 2023. Minister of Higher Education, Science, and Innovation of the Republic of South Africa, Hon. Dr Blade Nzimande, will be opening the 2023 conference on Technology...



african-trade.com

<https://african-trade.com/news/tipp-conference-in...> ▼

TIPP conference in Cape Town focusses on technological ...

Web The post TIPP conference in Cape Town focusses on technological advancements appeared first on SABC News . Over 250 leading scientists from across the globe have...



engineeringnews.co.za

<https://www.engineeringnews.co.za/print-version/...> ▼

Engineering News - World's top physics instrumentation ...

Web The sixth iteration of the Technology and Instrumentation in Particle Physics (TIPP) conference was opened at the Cape Town International Convention Centre on Monday. This ...



cern.ch

<https://ideasquare.web.cern.ch/node/310> ▼

The ATTRACT project was presented at the TIPP 2023 | IdeaSquare

Web The TIPP conference was held on September 4-8th, 2023, in Cape Town, South Africa, and its goal is to provide a stimulating atmosphere for scientists and engineers from around...



Astrocent

<https://astrocent.camk.edu.pl> › event=tipp-2023-confe... ⋮

TIPP 2023 conference in Cape Town, South Africa

13 Sept 2023 — **TIPP 2023** conference in Cape Town, **South Africa**. From September 2nd to September 10th, Dr Azam Zabihi embarked on an extensive journey to South ...



ScienceDZ.net

<https://www.sciencedz.net> › conference › 96525-tipp2... ⋮

TIPP2023 — 6th International Conference on Technology ...

TIPP2023 — 6th International Conference on Technology and Instrumentation in Particle Physics. Cape Town, Western Cape, **South Africa**.



capetown.today

<https://capetown.today> › Events ⋮

Minister Blade Nzimande Inaugurates TIPP 2023 ...

28 Aug 2023 — **South Africa's** Minister of Higher Education, Science, and Innovation, Hon. Dr. Blade Nzimande, is set to inaugurate the prestigious 2023 ...



NRF

<https://www.nrf.ac.za> › minister-of-science-and-innov... ⋮

Minister of Science and Innovation to open international ...

28 Aug 2023 — Blade Nzimande, will be opening the 2023 conference on Technology and Instrumentation in Particle Physics (TIPP) at the **Cape Town** International ...

Piece appeared in the October newsletter of CERN's AIDA highlighting the Technology Transfer session at TIPP2023



A glance at the innovation ecosystem of particle physics

In September, the project's technology transfer policy was presented at the TIPP conference.

By Antoine Le Gall (CERN)

AIDAInnova had the honour to be present at a historical session of the [Technology in Instrumentation in Particle Physics](#) (TIPP) conference. Held for the first time in Africa, this conference was organised by the iThemba LABS, the largest accelerator facility complex of the Southern Hemisphere, at the International Convention Centre in Cape Town, South Africa.

One key point of the conference was its “[technology and knowledge transfer](#)” session, co-organised by AIDAInnova, which included presentations from representatives from CERN, DESY, INFN and the Max Planck institute on their respective technology transfer policy. This insightful session allowed one to have a vision at-a-glance of the innovation ecosystem surrounding particle physics.

One of the highlights of this session was the presentation by AIDAInnova's scientific coordinator, Paolo Giacomelli. In a skilful play, he offered a captivating talk about the innovation policy of none less than five particle-physics projects funded by the European Commission: AIDAInnova, EURO-LABS, I.FAST, LEAPS-INNOV and EASI-STRESS.

“ For future particle-physics experiments to take shape, cooperation with industry is essential from the early stages of R&D. EU-funded projects are very useful to develop and strengthen this cooperation. We appreciate the EU efforts to continue with these types of calls and wish it to eventually increase the funding devoted to these calls.

- Paolo Giacomelli, AIDAInnova scientific coordinator. ”

All presentations can be read at the following link: <https://indico.tlabs.ac.za/event/112/sessions/525/#20230906>

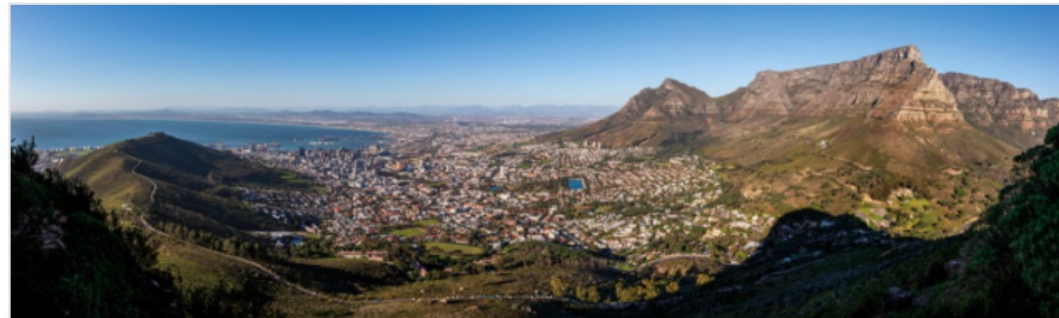


DETECTORS | MEETING REPORT

First TIPP in Africa a roaring success

17 January 2024

6th Conference of Technology and Instrumentation in Particle Physics.



Knowledge-transfer opportunities Cape Town's "City Bowl" as viewed from Lion's Head. Credit: D Delso/Wikimedia Commons

The Conference of Technology and Instrumentation in Particle Physics (TIPP) is the largest conference of its kind. The sixth edition, which took place in Cape Town from 4 to 8 September 2023 and attracted 250 participants, was the first in Africa. More than 200 presentations covered state-of-the-art developments in detector development and instrumentation in particle physics, astroparticle physics and closely related fields.

“As South Africa, we regard this opportunity as a great privilege for us to host this year’s edition of the TIPP conference,” said minister of higher education, science and innovation Blade Nzimande during an opening address. He was followed by speeches from Angus Paterson, deputy CEO of the National Research Foundation, and Makondelele Victor Tshivhase, director of the national research facility iThemba LABS.

Instrumentation School

- ❑ **Instrumentation school at iThemba LABS, August 24th - September 1st with the support from CERN, DESY and IJCLAB.**
 - ❑ <https://indico.tlabs.ac.za/event/121/>
- ❑ **Very large number of student applications**
 - ❑ **Admitted 40 students**
 - ❑ **Students mostly based in SA**
 - ❑ **CERN supported students from outside SA**
 - **1 Egypt, 1 Morocco, 4 Botswana**
- ❑ **Impressive presentations by student teams, available in the agenda**

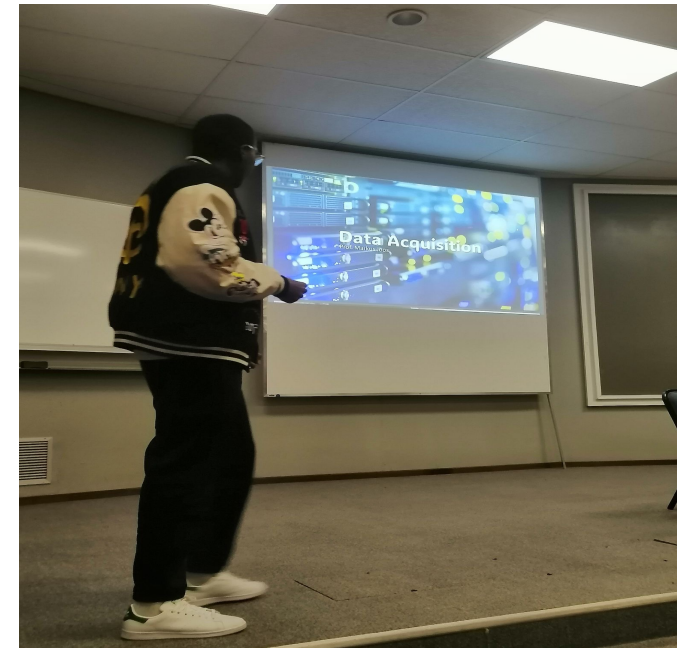
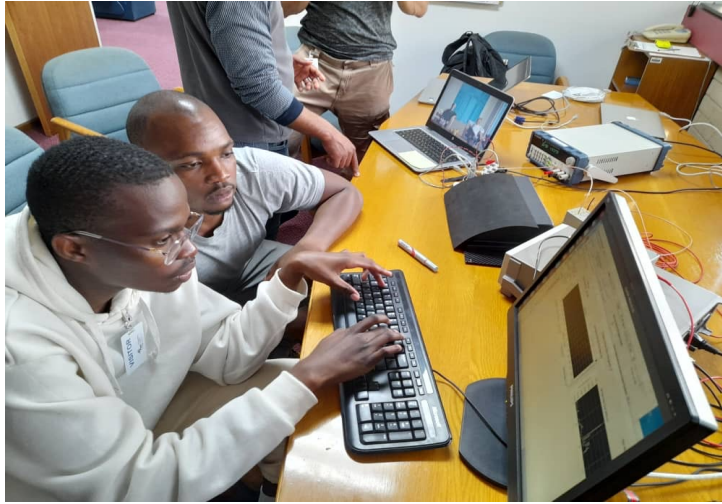


Lectures by distinguished lecturers from CERN, DESY, IJCLAB and IEEE



Hands On Exercises

1. Resolution of a silicon pixel detector - Computer Room J15 ground floor
2. Data Acquisition - J Block room 16 (J16) ground floor
3. Micro pattern gas detector - Computer Room J15 ground floor
4. Cloud chamber - J Block (Office 23) 1st floor
5. Calorimetry Silicon Tungsten exercise - J Block Library board room 2nd floor



Piece appeared in the October newsletter of CERN's AIDA



Training the next generation of African detector students

At the end of August, AIDAinnova detector scientists travelled to South Africa to organise an Instrumentation School.

By Antoine Le Gall (CERN)

The next generation of African detector scientists is eager to learn. Last August, just before the [TIPP conference](#), the [Instrumentation School in Particle, Nuclear and Medical Physics](#) took place at iThemba LABS in the Western Cape, in South Africa.

Over the course of one week, 25 MSc and PhD students coming from many different African countries – South Africa, Cameroon, Botswana, Egypt, etc. – took part in a series of lectures about particle detectors. Some of the students had already worked on detector experiments, at ATLAS and ALICE for instance, and were happy to learn about other types of detectors.

The school was punctuated by five sessions with hands-on experiments led by international instructors. “The students had the opportunity to cut their teeth on different detectors - silicon pixel ones, micro-pattern gas ones, cloud chambers, calorimeters, etc. –, operate their many parameters – calibration, signal – while using the same software and tools that we are using for real research”, explain Roman Poeschl from IJCLab. “This hands-on experience will be scaled up with real experiments”.

The school is sponsored by CERN, Germany’s DESY, France’s IJCLab and South Africa’s NRF. The first three labs all play a major role in AIDAinnova. “I am happy that we could use for the school hardware developed in the frame of AIDAinnova’s predecessor AIDA2020.”, adds Roman.

The positive feedback is testimonial to the importance to tie links with African institutes, some of which are already or are to become members of several experiments.

Link

Current Issue

On

Newsletter Issue

[October 2023](#)

<https://aidainnova.web.cern.ch/training-next-generation-african-detector-students>