THE BIENNIAL AFRICAN SCHOOL OF FUNDAMENTAL PHYSICS AND APPLICATIONS (ASP)

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http://www.africanschoolofphysics.org/
Objectives

- **Increase capacity in fundamental physics and related applications**
  - Organizing a biennial school rotating in different African Countries
  - Networking among African Students and with lecturers
  - Sharing of information on high education opportunities around the world
  - Promote collaboration between African countries in education and research
  - Promote collaboration between African institutes and abroad

- **First edition of the school, ASP2010**
  - August 1-21, 2010 (3 weeks) in Stellenbosch, South Africa. Attended by 65 students from 17 African countries. **125 applications received**

- **Second edition of the school, ASP2012**
  - At the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi Ghana. July 15 – August 8, 2012 (3.5 weeks). Attended by 50 students from 15 African countries. **138 applications**

- **Third edition, ASP2014**
  - At the Cheikh Anta Diop University in Dakar Senegal. 3-23 August 2014. Attended by 56 students from 17 countries. **330 applications received.**

  - **439 applications received.** 80 students selected: 2 non-Africans. Of the selected 80, 32 were females, hence female : male ratio of 32 : 48

- **School participation is free of charge to the selected students**
  - Full bursaries for selected students
  - The total cost per student for 3 weeks is €3200 (international student) and €2000 (local student).
Organization

- **International Organizing Committee (IOC)**
  - The IOC is the main organizer of ASP
  - The IOC Members:
    - B. Acharya (ICTP & King’s College London)
    - K. A. Assamagan (BNL)
    - A. Dabrowski (CERN)
    - C. Darve (ESS)
    - J. Ellis (CERN & King’s College London)
    - S. Muanza (CNRS-IN2P3)
    - R. Voss (CERN)

- **Local Organizing Committee (LOC)**
  - Local committee in the host country

- **International Advisory Committee (IAC)**
  - Advises on various aspects of the organization including fund raising

**How to contact the IOC:** ASP-IOC@CERN.CH
The school duration is 3 weeks

- In the first week, we concentrate on the theoretical foundation of nuclear and particle physics
- In the 2nd week, we concentrate on experimental physics and data analysis
- In the 3rd week, we concentrate on applications, high performance grid computing, and topics of interest to the LOC

- A 2-day workshop is organized to train high school physics teachers
- A 3-day outreach event is organized for high school students
ASP2016 - Rwanda

- August 1-19, 2016
  - At the University of Rwanda

- **Student attendance**
  - 74 from 29 African country, and 1 from the US
  - Ratio female : male students 29 : 46

- **Workshop for high school teacher**
  - 20 high school teachers from Rwanda

- **Outreach to secondary school**
  - 3 different high schools of 50 pupils each

- **Lecturers and support staff**
  - Of the order of 50
Sponsors

- Logos of institutes that support student participation
- BNL, JLab and JSA supported students but their logos not shown
- A 3rd of the total student budget is from African sources: South Africa and Rwanda
ASP2016 Student Applications and Selections

Total Applicants: 439, Non-Africans: 29, Females: 90
Total Selected: 80, Non-Africans: 2, Females: 32

Country of Citizenship
Selected Students by Country of Citizenship

- Algeria (1)
- Benin (2)
- Burundi (1)
- Cameroon (7)
- Central African Republic (1)
- Chad (1)
- People's Republic of Congo (1)
- Ivory Coast (1)
- Egypt (2)
- Gabon (1)
- Ghana (2)
- Kenya (3)
- Madagascar (3)
- Malawi (1)
- Morocco (4)
- Namibia (1)
- Nigeria (3)
- Rwanda (20)
- Senegal (2)
- South Africa (6)
- Soudan (2)
- Tanzania (1)
- Togo (1)
- Tunisia (2)
- Uganda (2)
- USA (1)
- Zambia (2)
ASP2016 Student Gender

Number of Students

Gender

Female

Male
ASP2016 Student Language Proficiency

- French: 31
- English: 49
- Arabic: 12
- African Languages: 66
- Others: 2
Overall Experience at ASP2016

1 not satisfied, 3 somewhat satisfied, 5 very satisfied
Participation in ASP2016: 1 has no impact, 3 has somewhat of an impact, 5 has much impact
**ASP2016 – Student Feedback**

**Lecturer ability: 1 is terrible, 3 is good, 5 is great**

- Explaining materials well to students
- Working with all students’ styles of learning
- Building trust and respect with students
- Subject matter expertise
- Working well with students from different backgrounds
- Spending more time with students after the lectures
ASP – Maintaining contact with students

- After the school. Networking with student continues through
  - Exchanges of information on high education opportunities
  - Placing students in Masters and Ph.D. programs
  - Student coaching and mentorship program
  - Survey of ASP alumni to gauge the impact of ASP
ASP2018 – 5th Edition

- **ASP2018**
  - In January 2016, Namibia was selected to host ASP2018
  - The dates of the school (in 2018) will be decided upon soon
    - It will be in July 2018: either first 3 weeks or the last 3 weeks
  - IOC to make a site visit to Namibia in 2017
We need to identify the host country for ASP2020 by December 2017.

Once the host is identified, it will be invited to join the organization of ASP2018.

So far, the following countries have expressed interest:
- Cameroon, Morocco, Sudan, Tunisia and Zambia

The requirement for the selection of the host are described here:
- [https://ketevi.web.cern.ch/ketevi/ASP/ASP-Venue-Selection.pdf](https://ketevi.web.cern.ch/ketevi/ASP/ASP-Venue-Selection.pdf)