

8 Groups, working together to discuss the following questions

1. Where or how can [physics / and a physicist make the biggest positive impact in your countries / communities
2. What are the most important problems or questions that physicist can contribute to solving in your country/ region etc
3. What are the biggest challenges for you for a career in physics
4. How this particular African School of Physics benefit your studies and or career - what are your expectations from the school
5. How can the Africa School of Physics evolve / adapt to better serve the needs of your country / region or stage in your career

===== French =====

1. Où ou comment la physique et un physicien peuvent-ils avoir le plus grand impact positif dans vos pays ou communautés ?
2. Quels sont les problèmes ou questions les plus importants que les physiciens peuvent contribuer à résoudre dans votre pays/région, etc.
3. Quels sont les plus grands défis pour vous dans une carrière en physique ?
4. Comment cette école africaine de physique peut-elle bénéficier à vos études ou à votre carrière ? Quelles sont vos attentes vis-à-vis de l'école ?
5. Comment l'École africaine de physique peut-elle évoluer / s'adapter pour mieux répondre aux besoins de votre pays / région ou à l'étape de votre carrière ?

Feedback, main aspects from discussions

N'hésitez pas à répondre également en français

Group 1

Need for a connection of students to researchers for project

Understand what research projects are available

Covid-19 circumstances; challenge with moving to do research in another country

Challenges to complete a PhD

- Financial difficulties
- Internet connection
- Analysis takes a lot of time to complete

Colleagues working in larger collaborations, e.g. ATLAS have the support of the infrastructure of the collaboration, but more difficult for those on small experiments / research topics.

Group 2

High school outreach is important:

- physics should not be something 100% abstract
- Scientific publications should be made available to the media to popularize and to make accessible to people's lives.

Agriculture:

- support from physics instrumentation in terms of demarcation of land, and also satellite monitoring of land use.

Require physics to improve communication, satellite and internet

Collaboration and continuation of physics in African countries

Aspects of climate change;

- devices and instrumentation to monitor Co₂ related emissions to understand who are the dominant emitters. Important to understand the relative emissions from developing and developed countries to also hold those highest emitters accountable for climate change.

Group 3

Biggest impact of physics is that which is related to jobs, including job creation and entrepreneurial aspects. Physics that can be used to create opportunities.

Biggest challenges

- Lack of capacity building
- Not many very well qualified physics teachers that can teach the full scope of physics
- Technical challenges ⇒ facilities and laboratories in schools, universities and industry

Benefits from the school

- Opportunity to understand what is fundamental physics
- Introduced to many new topics that belong to physics through the lectures of this school

Group 4

Physics important to increase entrepreneurial opportunities in ones country, contributions to industry and jobs

Some main issues in Kenya: ⇒ can / how does physics contribute

- Water shortage
- Renewable energy

Awareness is important

- Understand how physics can contribute to society
- Need to reach out to more and more of the society

Scholarships are important

Launch this initiative potentially within the Africa Union, similarly to the Marie Curie scholarships

Allow for inter-country exchanges during both University stages of the career and also Post docs.

Group 5

Challenge with lack of post-doc opportunities in many countries, Morocco given as an example, and in general opportunities after the PhD.

Lack of equipment

Lack of jobs in industry that requires a physics background

Group 6

Feedback from NIYIKIZA Ange Benise:

We discussed many things including physics contributions to our countries. We started by introducing ourselves. Many of us are still at their bachelor level so we talked about the plans after bachelor degrees and all of us want to continue their studies in masters. We also talked about the challenges we face and we agreed that in Africa, there is no availability of equipment, laboratories for example in my country you can not find big instruments for spectroscopy like where I studied my bachelor degree. We had a UV spectrometer but it was not working. This is the reason why here in Africa many physicists join education. In addition, we shared our dreams and came to the conclusion that we wish to go outside of Africa to learn and work with a goal of coming back to contribute to our countries. Thanks

Group 7

Group 8

Mentioned the challenges of language in science, with most mother tongues not being first, or second language english.

Large part of Africa is francophone