

To be an African, you don't need to be born in Africa, but Africa must be born in you



African Strategy for Fundamental and Applied Physics

Pan-African, gender balanced and inclusive

Web site: <https://africanphysicsstrategy.org/>, **Twitter:** <https://twitter.com/StrategyAsfap>

The Founders (Steering Committee: ASFAP-SteeringCommittee@cern.ch)

Dr. Kétévi Adiklè Assamagan (BNL, USA)

Prof. Simon Connell (University of Johannesburg, South Africa)

Prof. Farida Fassi (Mohammed V University, Rabat, Morocco)

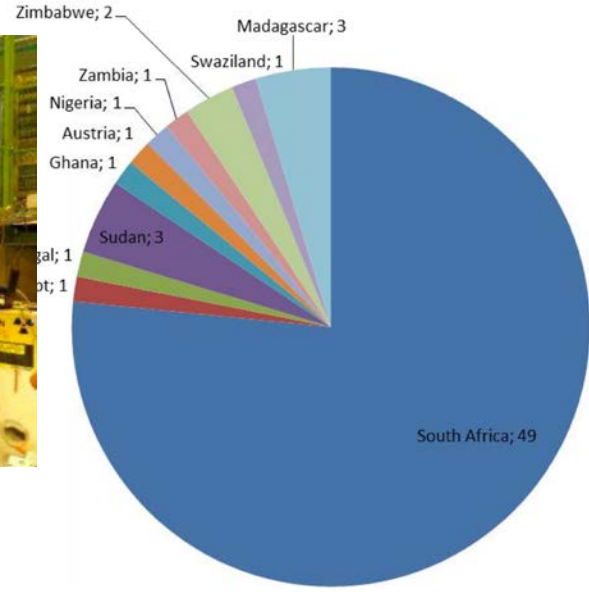
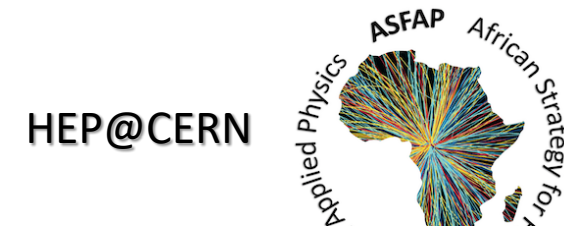
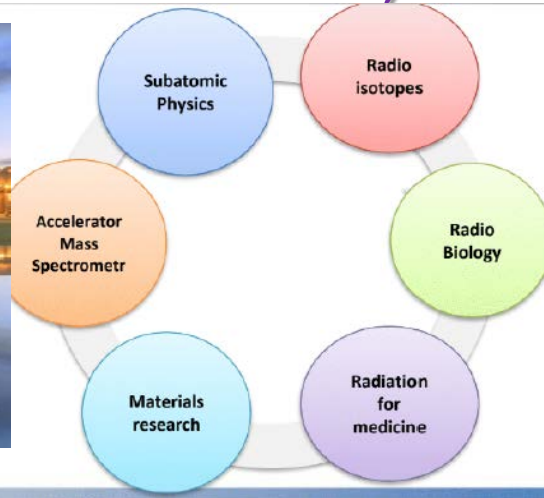
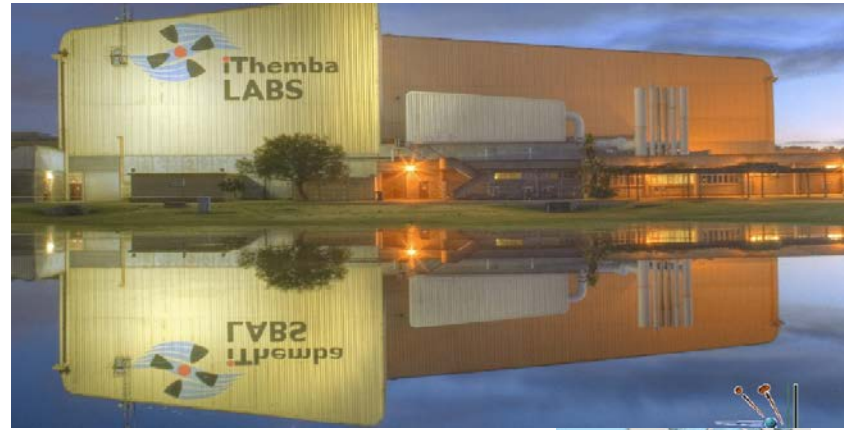
Prof. Shaaban Khalil (CFP, Zewail City, Egypt)

Dr. Fairouz Malek (CNRS and Grenoble Univ., France)

ECFA Meeting - 2020-11-20



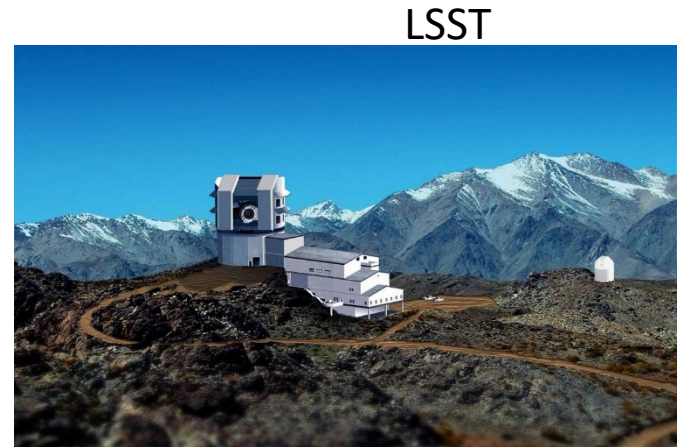
Africa in Science, to cite a few



SA and Southern



- SAAO
- SALT
- Boyden
- Hartebeesthoek
- Hermanus
- HESS



LSST



Egypt in CMS



Morocco in ATLAS

Africa Science, the long Journey



Africa is 54 countries and has 1.2 billion people
169 scientists per million people (UNESCO Science Report 2015)

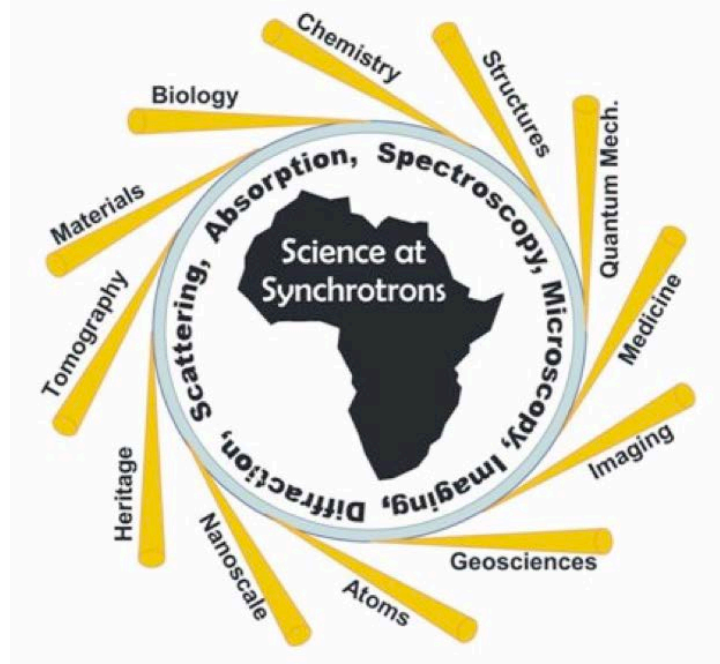
Africa needs at least **1 000 000 scientists** to get 1/6 of "1stworld"

- **African Science Renaissance**
- **Boost African Scientific Research**, Research Capacities, Capacity Building
- Build Research capacity in Industry, competitive industry
- Favor Mobility, Conferences, Schools, International Mentoring partnerships in student training, Regional Centers of Excellence, Local feeder instrumentation
- **Return of the African Science Diaspora** - new opportunities for young excellent scientists
- **For African countries to take control of their destinies and become major players in the international community**

Africa should take its equal place as a co-leader in the global scientific process, along with all the social-economic benefits thereto.

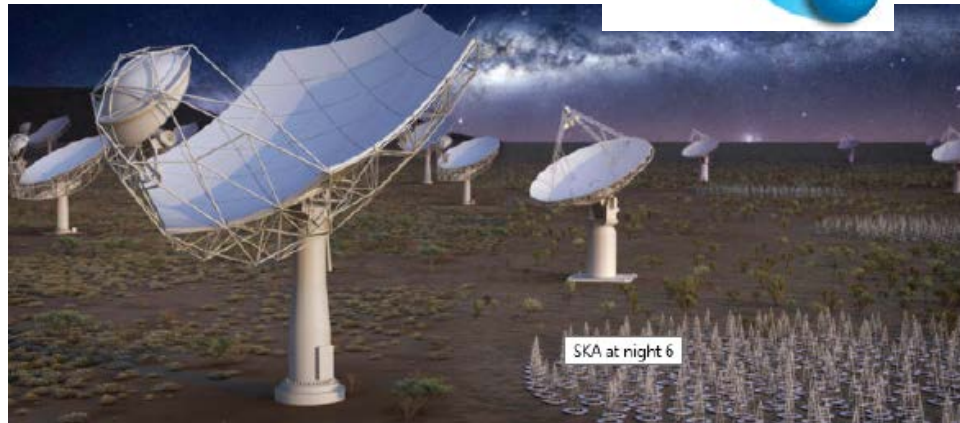


Future Infrastructures in Africa, to cite SO few



X-TechLab.

LA PREMIÈRE PLATEFORME DES TECHNIQUES DE RAYONS X AU BÉNIN AU SERVICE DE LA COMMUNAUTÉ.



ASFAP project



- **Will develop a Strategy to increase African education and research capabilities**, improve collaborations, and inform international partners, sponsors, policymakers on the strategic directions likely to impact African development;
- **Engage African scientists and the international community in the Strategy development;**
- African Strategy aims **to set the foundation and framework to draw the participation of African physicists** —with inputs from the international communities—in defining education and physics priorities most impactful for Africa;
- The process will take few years, to end with the release of the **strategy report** which will suggest the **direction, with actionable items for the next decade**. To be repeated periodically, every 7-10 years for the following decades with a review of the impact of previous Strategies;
- **Solicitation of inputs from the community in the form of Letters of Intent, and White Papers**



Endorsement and Support



Formal support and umbrella of the ASFAP

- **Endorsement** and support from AfPS (<https://www.africanphysicalsociety.org/>).

Official Launch ,November 18th, 2020

- Link of the ASFAP website for the African Physical Society (AfPS) website
- AfPS to open a forum of discussions for boosting ASFAP in the Continent
- Regular report of progress on ASFAP at AfPS meetings or workshops
- Endorsement of the final report on ASFAP by AfPS

• **Endorsement** from the International Union of Pure and Applied Physics (IUPAP) & AfPS

• **Support** message from CERN Director General

• **Support** from IAC members on their meeting of 2020-11-12

• **Close collaboration** with AFAS: <https://www.africanastronomicalsociety.org/>

• Seeking **support / engagement** from the African Academy of Sciences (AAS) – on going process

• Aim to **reach African Union** – on-going process



Structural Organization



Steering Committee

- Overall coordination
- Go-between IAC and Groups
- Preparation of final report

IAC

- Review of progress
- Advice on scope
- Engage of international communities and policymakers
- Review and endorsement of final report

Groups / Subgroup Conveners/Liaisons between groups

- Encouragement / Solicitations of community inputs
- Preparation of Group reports
- Liaison is to ensure that cross-cutting topics receive proper coverage and consideration in all the relevant groups

Timeline - Final report

- The start of group activities is expected at first semester **2021**
- **Final Report** to be delivered **Fall 2022**



Working Groups and Sub-Groups



Physics WGs:

- Accelerators
- Astrophysics & Cosmology
- Computing & the 4IR
- Energy Group
- Instrumentation & Detectors
- Light Sources
- Materials Physics
- Medical Physics
- Nuclear Physics
- Particle Physics

Additional Physics Groups to be built

Earth Science; Fluid & Plasma Physics; Atomic, Molecular & Optical Physics; Theoretical & Applied Mechanics; Photonics & Optics.

Community Engagement: Physics Education, Knowledge Transfer, Entrepreneurship, Communication and outreach, Stakeholders and Funding and government agencies, policy makers related affairs.

Groups, Sub-groups and the Liaison Conveners

- ✓ Each WG has **3 to 4** co-conveners
- ✓ **Gender balance is one rule among others of our code-of-conduct**
- ✓ Seeking co-conveners for the additional groups
- ✓ Working Sub-groups and the Liaison will be defined by the Group Conveners and the Steering Committee



How can you get involved?

key rules: [#AfricaMustBeBornInYou](#) [#GenderBlance](#) [#ubuntuMood](#)



- **Nominate subgroup conveners and liaisons**
- **Volunteer for (sub)conveners**
- **Submit LOIs / White papers**
- **Participate in White Paper study groups**
- **Offer your constructive opinions and expertise**
- **Encourage your research groups to get involved**
- **Encourage institutional credits for those working on this Strategy:** people in leadership roles as (sub)conveners and liaisons
- **White papers** will be of publishable quality and may be submitted to peer-reviewed journal: their findings are reviewed and referenced in the Strategy report

Your work on this Strategy will receive proper recognition at your institute and internationally, and should result in a paper, and serve the interest of the African Strategy



Back-up



The International Advisory Committee



- Prof. Ahmadou Wagué** (President of the African Physical Society, [AfPS](#))
Prof. Atish Dabholkar (Director of ICTP)
Prof. Azwinndini Muronga (Dean of Science, Nelson Mandela University, South Africa)
Prof. Emmanuel Tsemmelis (CERN International Relations)
Prof. Faïçal Azaiez (Director of iThemba LABS, South Africa)
Dr. Fadila Boughanemi (EU Deputy Head of International Cooperation, Research and Innovation Unit)
Prof. Fernando Quevedo (Former Director of ICTP)
Prof. James S. Gates (Brown University, President Elect of APS)
Dr. Latifa Elouadrhiri (Physicist Jefferson Lab & DOE, USA)
Prof. Michel Spiro (President of IUPAP)
Prof. Mohamed Hassan (President of TWAS)
Dr. Najat Mokhtar (IAEA Deputy Director General and head of the Department of Nuclear Sciences and Applications)
Dr. Melissa Denecke, Rep. of the IAEA Member)
Prof. Petra Rudolf (University of Groningen, The Netherlands, President of EPS)
Prof. Rob Adam (Director of SKA, South Africa)
Prof. Rohini Godbole (India Institute of Science)
Prof. Rolf Heuer (President of the SESAME Council)
Prof. Setsuko Tajima (President Elect of the Japan Physical Society, Osaka U., Japan)
Prof. Wang Yifang (Director at IHEP/CAS, China)
Prof. Winston Soboyejo (Former president of AUST, Nigeria, Provost Worcester Polytech. Inst., USA)
Dr. Shamila Nair-Bedouelle (UNESCO Assistant Director-General for Natural Sciences)
Dr. Takalani Nemaungani (Department of Science and Technology, Acting Chief Director of Astronomy, South Africa)
Prof. Zebon Vilakazi (Vice Chancellor, University of the Witwatersrand, South Africa).



Tentative Timeline



- **October - December 2020**

- Formation of IAC and WGs conveners
- First meeting with IAC and WGs conveners/invitation to stakeholders

- **January - March 2021**

- Definition of subgroups of each WGs
- Consultation with the IAC / stakeholders
- Call for nominations of subgroup conveners

- **April - June 2021**

- Selections of subgroup conveners
- Start of regular group meetings
- Africa-wide town hall

- **July - September 2021**

- Call for Letters of Intent
- From LOIs to White Paper study groups

- **October - December 2021**

- Community planning meeting
- White paper studies in progress
- Outline of the Strategy report

2020-2021

2021-2022

- **January - March 2022**

- Group contributions to the report
- Preliminary draft of report
- Consultation with IAC & Stakeholders / IAC & Stakeholders feedback

- **April - June 2022**

- White paper study groups finalized
- Report matured
- Community feedback

- **July - September 2022**

- ASFAP symposium
- Community feedback

- **October - December 2022**

- Final report endorsed by IAC.
- Report submitted to the African Academy of Sciences and other Stakeholders in Africa, and distributed widely

