

ASFAP Community Town Hall

Instrumentation & Detectors Group (12-15 July 2021)

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Guèye, Paul

Michigan State University/FRIB, USA

Stodart, Nieldane (start: 07/2021)

iThemba Labs, South Africa

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CNRS/IN2P3, Marseille, France

Outline

- ASFAP/IDG Overview
- Status (July 12, 2021)
- Projects and Capacity Building
- Contacts List (July 12, 2021)
- Physics Events in Africa
- Closing Remarks

ASFAP/IDG Overview

<https://twiki.cern.ch/twiki/bin/view/AfricanStrategy/AfInstrumentationDetectors>

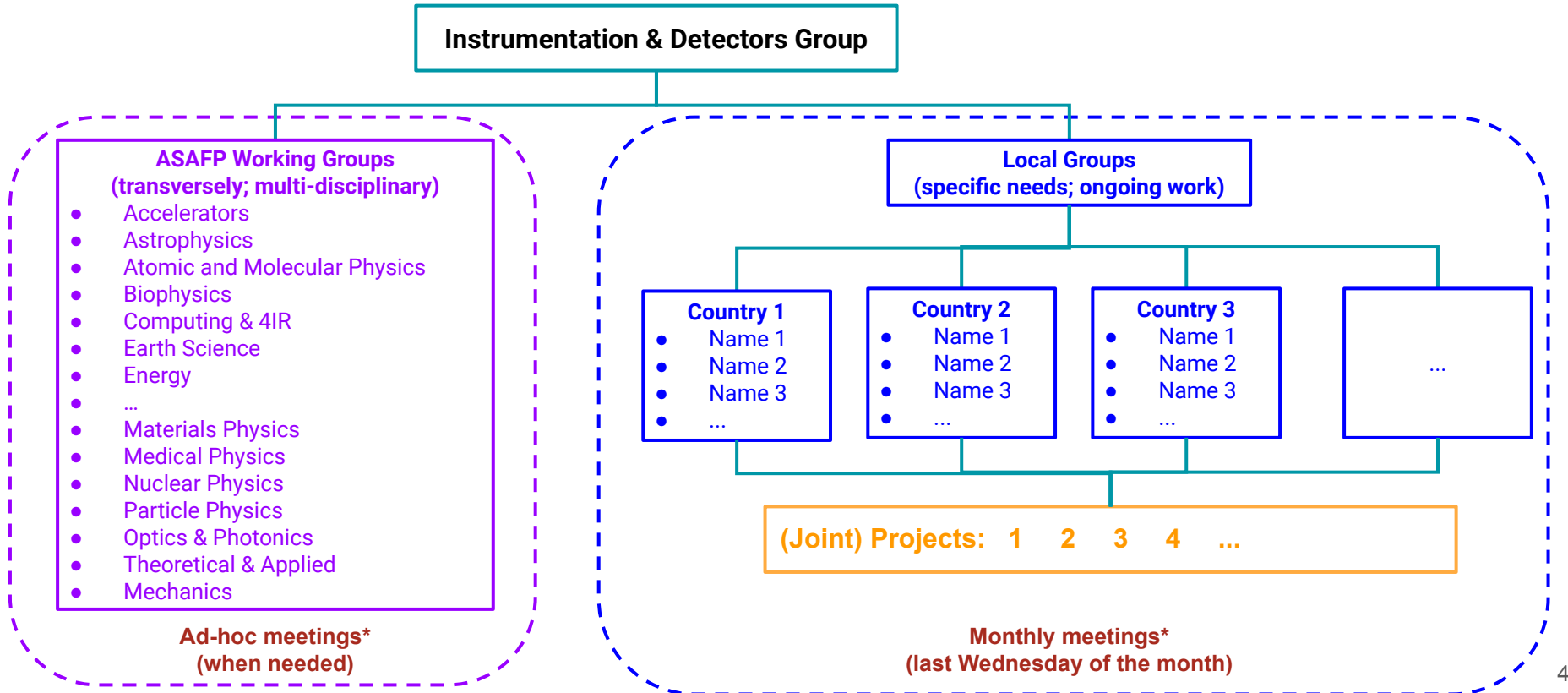
The Instrumentation and Detectors Physics Group aims at promoting physics, development, design, implementation and evolution for a broad range of instrumentation and detectors applications in Africa.

It is a transverse working group in contact with all the physics groups

Goals

- Provide a coherent/flexible framework for efforts in I&D across Africa
- Target groups: laboratories/centers, universities, pre-college
- Bottom-up approach: individual and/or group collaborations
- Prepare call for Letters of Intent by early communication
- Identify projects in instrumentation across countries, like shared facilities
- Useful and meaningful efforts with tangible results
- Cost effective implementation

Status (July 12, 2021)



Some Current Projects - Capacity Building 1

- **“Big Projects” (primary countries but contribution from others)**
 - Synchrotron Light Source
 - Square Kilometer Array
 - African Laser Light Source
 - ...
- **Existing laboratories (enabling remote experiments)**
 - iThemba Laboratory for Accelerator Based Sciences (iThemba LABS) in South Africa
 - Centre National de l'Énergie, des Sciences et des Techniques Nucléaires (CNESTEN) in Morocco
 - Center for Development of Advanced Technologies (CDAT) in Algeria
 - Radiocarbon laboratory of the Institut Fondamentale d'Afrique Noire (IFAN) in Senegal
 - ...

New Possible Projects - Capacity Building 2 & LOIs

- **New facilities (carried by more than 1 country)**
 - Detector labs: R&D, radiation detectors ...
 - FEM/TEM, laser systems ...
 - DAQ systems ...
 - (Reliable) Internet access ...
 - ...
- **Training laboratories for education**
 - Universities
 - Hospitals
 - Pre-college
 - ...

Status (July 12, 2021) - (Incomplete) Contacts List

- ***Particle Physics***
 - Algeria
 - Morocco
 - Egypt
 - South Africa
 - Democratic of Congo
 - Guinea
- ***Nuclear Physics***
 - Senegal
 - Rwanda
 - Namibia
- ***Astrophysics***
 - Namibia
 - Ethiopia
- ***Medical Physics***
 - Senegal
 - Mali
- ***Earth Science***
 - Ethiopia
- ***Materials Science***
 - Cameroon
- ***Others***
 - Nigeria, Sudan, Angola ...

(Incomplete) African Physics Conferences/Workshops (2021)

- African Network for Solar Energy (ANSOLE): 4-5 February 2021
 - <https://www.ansole.org>
- African Physical Society (AfPS): 22-26 March 2021
 - <https://www.africanphysicalsociety.org>
- Biophysics in and for Africa: 22-26 March 2021
 - <https://events.saip.org.za/event/213/>
- East Africa Astronomical Society: 20-22 May 2021
 - <https://earoad.essti.gov.et/>
- African School of Fundamental Physics & Applications: 19-30 Jul. 2021
 - <https://www.africanschoolofphysics.org/acp/>
- African Nuclear Physics Conference: 20-24 September 2021
 - <https://indico.tlabs.ac.za/event/101/>
- There are many more ... !!!!!!!

- **Impacts on conferences participation**
 - Networking with local research groups
 - Identify needs
- **Database of African Physics Events**
 - Suggestion: post/update list on ASFAP

Closing Remarks

- Encourage everyone to **register to ASFAP/IDG**
 - Indirect <https://africanphysicsstrategy.org> → Instrumentation & Detectors Physics Groups
 - Direct <https://twiki.cern.ch/twiki/bin/view/AfricanStrategy/AfInstrumentationDetectors>
 - Check IDG wiki site for updated information
- **Timeline**
 - Suggested
 - Monthly meetings: last Wednesday of each month; Time: 10:00-11:00 UTC
 - Ad-hoc meetings: TBD
 - Reminder
 - Letter of Intent (LOI)
 - Call : August-October 2021
 - Drafts : September-November 2021
 - Inputs from everyone is welcome