



The African Light Source Foundation

Towards a Lightsource for the African Continent




AfLS Website <https://www.africanlightsource.org>


JSR Journal of Synchrotron Radiation
The African Light Source: history, context and future
 JSR, 31(2024) 1-9
<https://doi.org/10.1107/S1600577523009682>

World Scientific Modern Physics Letters A
 www.worldscientific.com Vol. 33, No. 9 (2018) 1830003 (19 pages)
Synchrotron light sources in developing countries
 Sekazi K. Mtingwa Herman Winick*

Institute of Physics **IOP** Recent progress towards an African light source
 Learned society Institute of Physics *Debating the Societal Impact of Big Science in the 21st Century*
<https://iopscience.iop.org/book/edit/978-0-7503-3631-4/chapter/bk978-0-7503-3631-4ch54>

<https://www.worldscientific.com/doi/abs/10.1142/S0217732318300033>
SCIENCE AND PUBLIC POLICY
 2023-06-14 Science and Public Policy 00 (2023) 1-12
 “[Science diplomacy from the Global South: the case of intergovernmental science organizations](#)”

*** Research Professional News**
African Light Source aims for science with ubuntu
 By Katharina Cramer et al

<https://www.researchprofessionalnews.com/rr-news-europe-views-of-europe-2022-5-african-light-source-aims-for-science-with-ubuntu/>

 **The African Review of Physics**
 formerly published as The African Physical Review
 The African Review of Physics (2018) 13: 0019
Proceedings of the first African Conference on Fundamental Physics and Applications 2018, Namibia.
Guest Editors: K. A. Assamagan, M. Backes, D. Charlton, S. Muanza, D. Sahu, and D. Singh
<http://lamp.ictp.it/index.php/aphysrev/article/view/1610/586> **The African Light Source Project**

nature reviews physics
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<https://i0.wp.com/www.africanlightsource.org/wp-content/uploads/2022/12/Nature-Review-Physics.png?ssl=1>
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Building a brighter future for Africa with the African Light Source

BIOPHYSICAL REVIEWS
 pp 1-9 | Cite as
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<https://link.springer.com/article/10.1007/s12551-019-00578-3>
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Why the AfLS ?

1. African Challenges → Identify Science → Identify RI → AfLS

- a) Examples in these slides
- b) Health (African vaccine IP), Big Data Analytics, Others → All RIs

2. Insist on evolution towards **major African** funding

3. RI for Science Diplomacy → Developing Pan Africanism

- a) SESAME
- b) CERN

4. AfLS profile for **African Government Science Policy**, Regional Science Policy → **Leave no country behind**

5. **Governance** → African participation on RI Councils

6. **African User Base development** (Training, Youth)

- a) Schools, Workshops,
- b) Medium term visits,
- c) Sandwich programmes

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1. Community Building:

1. Training (LAAAMP, START, ESRF programme, IAEA INT0104, ICTP School)
2. Conferences
3. Audit of Users (DeCoREA, now UNESCO),
4. Membership system (Coming Soon)
5. AAS Partnerships in Training and other community building activities
6. AfLS - AAS Awards Programme

2. CDR : Critical Design Report

3. Science Diplomacy, Strategic Government level

1. AAS Partnerships

1. LOIs, MOUs (SESAME, LAAAMP)
2. MOU: AAS
3. AfLS Executive Office

2. Strategic Task Forces

1. The African Beamline at an international AdLS
2. The Collective African membership of an international AdLS
3. African Regional Infrastructure

3. Global Partnerships

1. UNESCO Resolution
2. Commonwealth profile
3. European Commission
4. Sunstone
5. Nephews - Bursaries to HERCULES, Workshops.



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Conferences

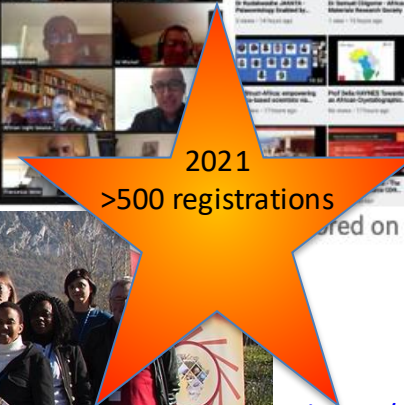
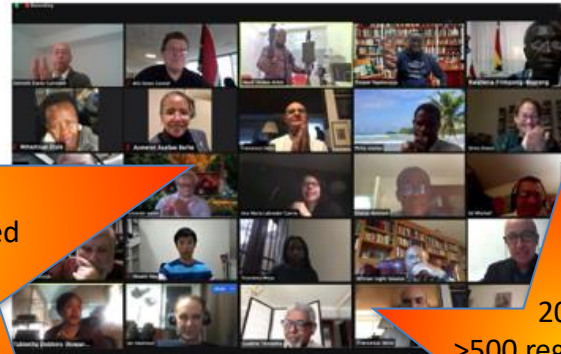
2015, 2019, 2020,

2021, 2022,

2023, 2024



2021
Now 5 African
Governments involved
Many co-conveners
Prof bodies
Academies



2021
>500 registrations



2022
~1000 registrations



- AFLS1 2015
<https://events.saip.org.za/event/61/>
- AFLS2 2019
<https://events.saip.org.za/event/145/>
- AFLS3 2020
<https://events.saip.org.za/event/211/>
- AFLS4 2021
<https://events.saip.org.za/e/AFLS3>
- AFLS5 2022
<https://events.saip.org.za/e/AFLS2022>
- AFLS6 2023
<https://events.saip.org.za/event/243/>
- AFLS7 2024
<https://events.saip.org.za/event/249/>



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3 Strategic Task Forces to report by Dec 2023

The African Beamline at an international AdLS

This is an African designed and operated beamline at an International AdLS that can address selected African Research Imperatives. It leads additionally to the training of engineers and technologists and will result in Technology Transfer.

The Collective African membership of an international AdLS

Here several African countries jointly acquire formal membership of an international AdLS. They leverage a threshold of participation that allows African Government involvement in the Council of the Facility, so that there is increased African Access of Researchers, technologists, Industries and also Governments.

African Regional Infrastructure

This is research infrastructure that is both highly competitive in its own right but which is also seen as important training and feeder infrastructure to an AdLS.

“Leave no country behind.”

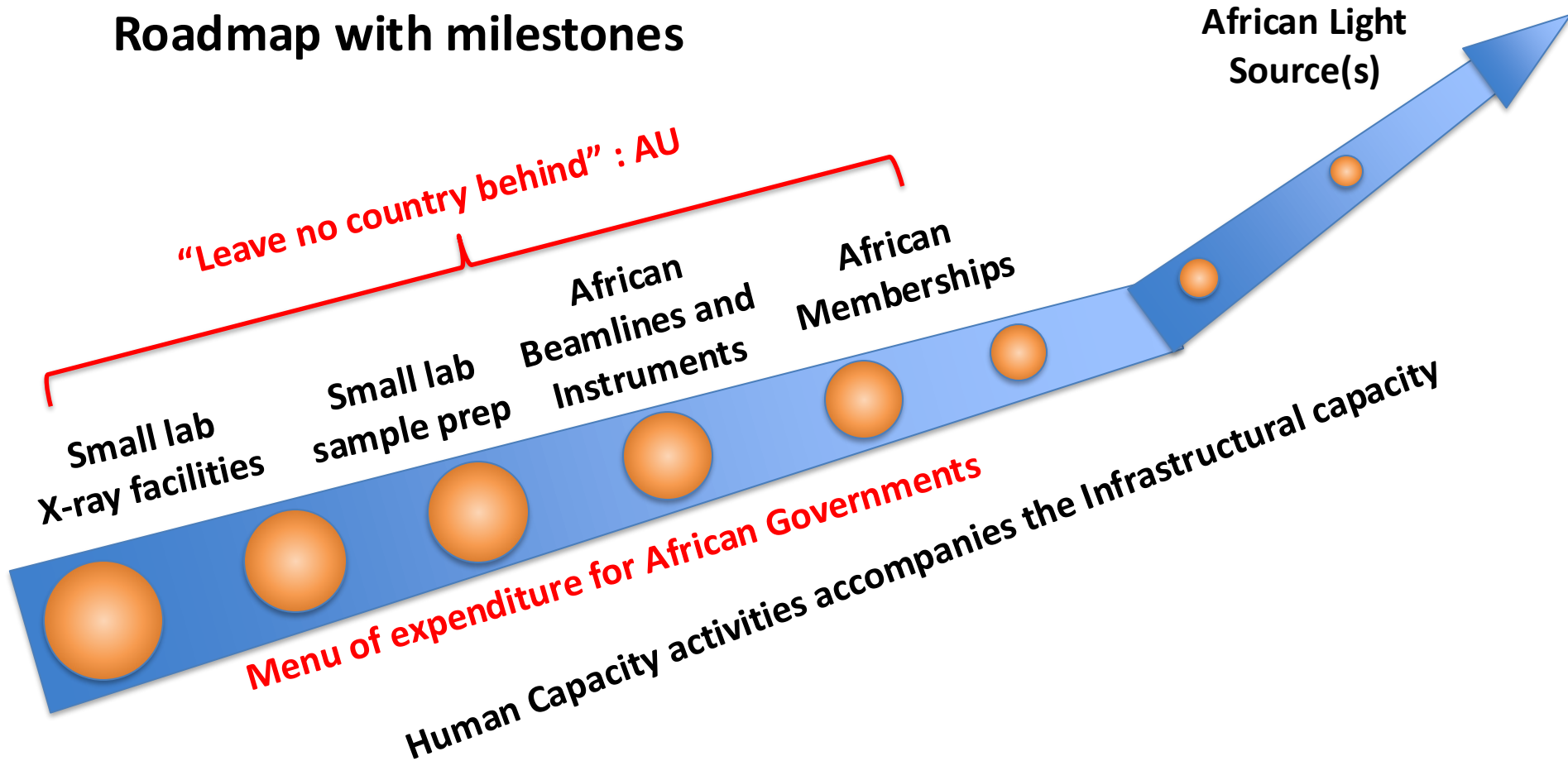


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AfLS Infrastructure Roadmap with milestones





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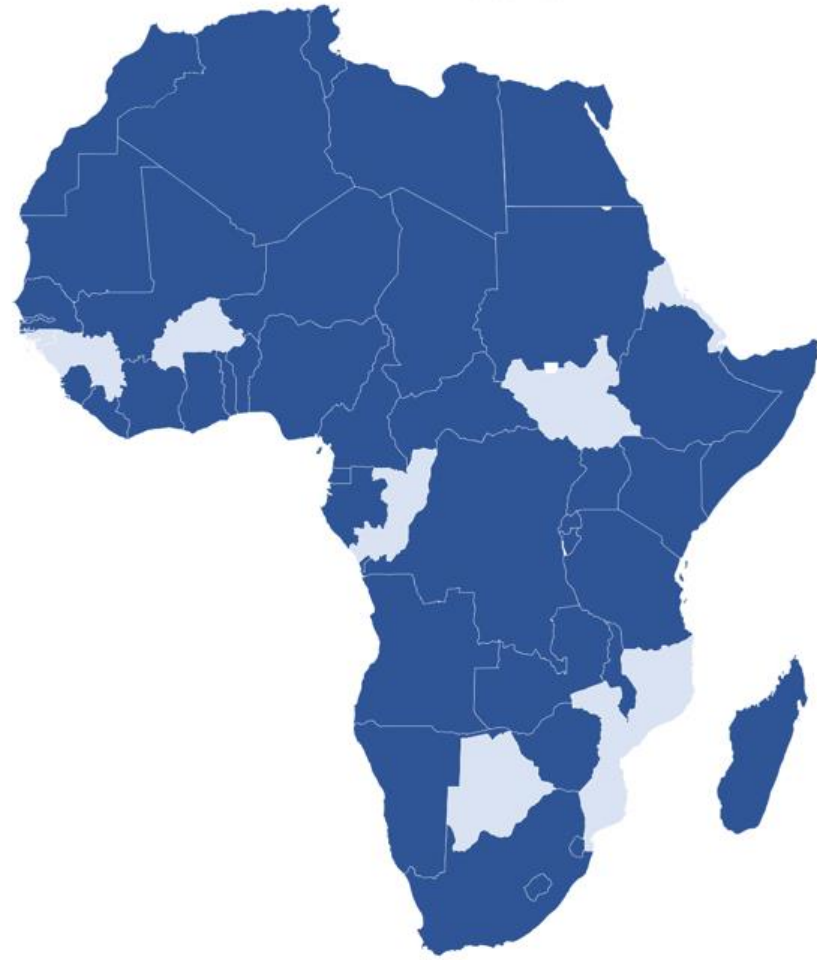
IAEA TC Project - INT0104

- Enhancing Transnational Collaboration among Light Sources and Expanding the User Base
- **Training Platform / Material, Mapping →**
Pan African Virtual University

Opportunity to expand Footprint within Africa,
and increase international linkages

**49/56 Countries in Africa
within AFRA, NEST and with TC Support**

African Country → National Liaison Office → Community



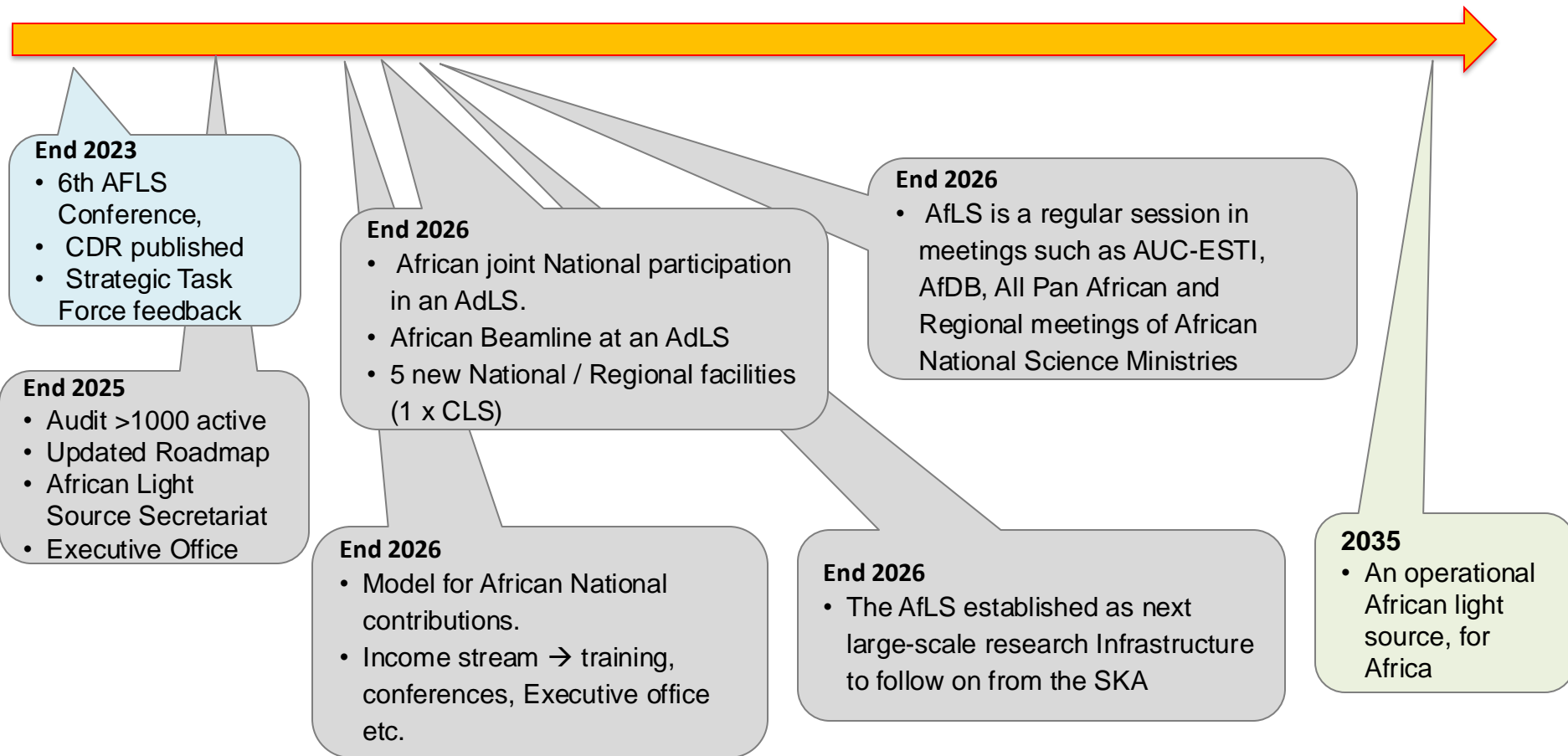


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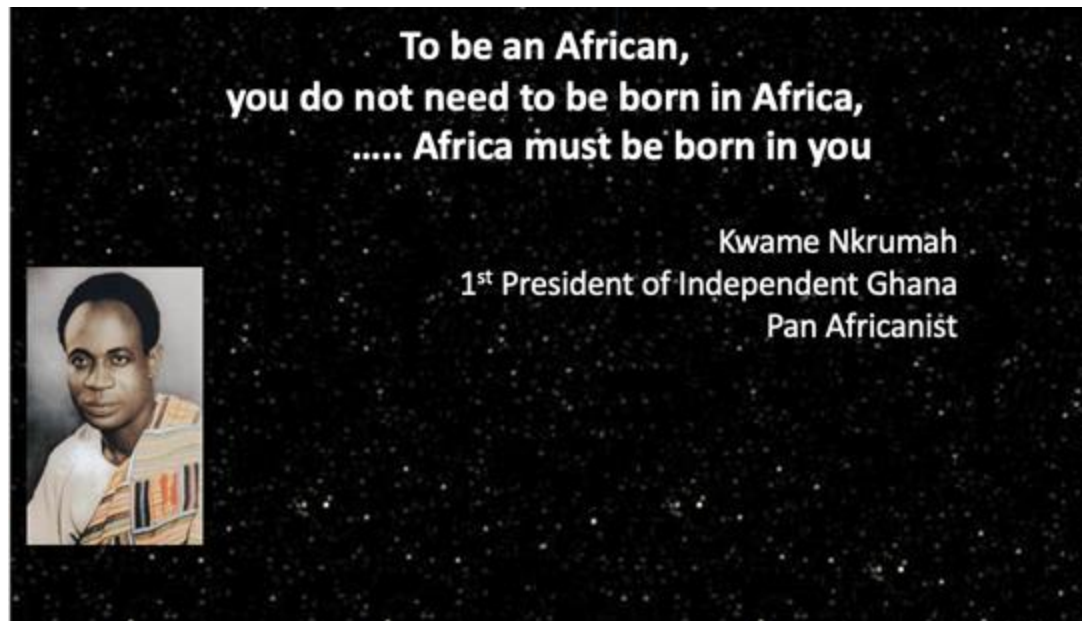


Milestones on the Timeline of the Roadmap





The Concept of Ubuntu and African Identity in Pursuit of the African Light Source



Africans, Old Diaspora, recent Science Diaspora, Friends of Africa around the world.



AfLS and AALS to partner in this venture.



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Thuma mina – Send Me

<https://www.youtube.com/watch?v=d4Bwux-btq0>

Musician Hugh Masekela



“ I WANNA BE THERE WHEN
THE PEOPLE START TO TURN
IT AROUND / WHEN THEY
TRIUMPH OVER POVERTY / I
WANNA BE THERE WHEN THE
PEOPLE WIN THE BATTLE
AGAINST AIDS / I WANNA LEND
A HAND / SEND ME.”

HUGH MASEKELA

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