

LAAAMP: Light sources for Africa, the Americas, Asia, Middle East and Pacific. Fostering capacity building and collaboration through synchrotron science.

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Advanced Light Sources (AdLSs) have been recognized as important large-scale facilities that provide a natural place for international scientific collaboration, capacity building, and networking. The exceptionally intense light produced at these facilities allows scientists to carry out studies of the structure of proteins, of new pharmaceutical compounds, study archaeological objects, design new and better components for technological devices, among many other applications. The establishment of these facilities contributes to boosting the technical and scientific development of the region and to improving the well-being of the general population.

Funding from the International Science Council (ISC) was awarded in 2016 to the joint IUPAP-IUCr project "Utilisation of Light Source and Crystallographic Sciences to Facilitate the Enhancement of Knowledge and Improve the Economic and Social Conditions in Targeted Regions of the World" Later on, the Abdus Salam International Centre for Theoretical Physics (ICTP) and the International Union of Pure and Applied Biophysics (IUPAB) have joined the programme. LAAAMP has carried out different projects aimed at training scientists, particularly early-career researchers in the different aspects of synchrotron-related techniques. The Faculty-Student (FAST) Teams awards provide funds for a Professor and a Student to spend two months at any of its 18 participating AdLSs. Other activities of LAAAMP have allowed the establishment of crystallography hubs in Benin (X-TechLab) and in Jamaica (crXstal). Similar hubs are planned in other regions for the near future.

LAAAMP coordinates the initiative "Advanced light source facilities to empower Global-South scientists for sustainable development" endorsed by the International Decade of Sciences for Sustainable Development (2024-2033). The aim of this initiative is to promote and establish new AdLSs in Africa, Central Asia, and the Latin America-Caribbean region. In addition, schools, workshops, and conferences are regularly organized and supported by LAAAMP, which will contribute to training and secure future users of AdLSs.

The structure of LAAAMP and the programs developed and supported will be presented. Additional information can be accessed at <https://laaamp.iucr.org/>.

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