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17 September 2013 [African-European Radio Astronomy Platform \(AERAP\)](#)

Europe and Africa are 'blazing a trail' when it comes to developing large-scale science projects, a top conference has been told.

The AFRICON 2013 conference brought together academics and industry professionals to share ideas and present their latest research.

The conference, which took place earlier this week on the island of Mauritius, is the premier biennial event of the Institute of Electrical and Electronics Engineers in Africa (IEEE). It hosted for the first time in Africa, a dedicated workshop in close connection with the International Union of Radio Science (URSI), which was supported by AERAP. AERAP notably afforded funding for the participation of African students in the event.

There, the conference heard that scientific connections between Europe and Africa have been greatly strengthened in recent years, including a result of efforts by the African-European Radio Astronomy Platform (AERAP) which aims to make radio astronomy a priority area for cooperation in EU-Africa relations.

The importance of this cooperation was highlighted by Mr Takalani Nemaungani, Director of Global Projects at the Department of Science and Technology in South Africa, who made a presentation on the opening day of the URSI workshop "Large Scale Science Projects: Europe-Africa Connects".

In a keynote speech on 10 September, Mr Nemaungani explained South Africa's efforts to host and participate in global research infrastructure projects and initiatives.

Mr Nemaungani has also been involved in promoting and marketing South Africa as a science and technology investment destination including partnerships with multinational companies.

Following the workshop, Mr Nemaungani said, “I was very pleased with the quality of the presentations and the robustness of the discussions on how Africa and Europe can work together on delivering large scale science projects like the Square Kilometre Array Radio Telescope (SKA) as this is something that AERAP seeks to support.”

Another high-profile speaker was Prof Arnold van Ardenne, from the Chalmers Technical University in Sweden, advisor at ASTRON and principle organiser of the event.

Mr Nemaungani, a former Research and Development director at the Dutch National Institute for Research in Astronomy (ASTRON) and subsequently leading its SKA office, outlined the work of the URSI and its potential to connect the work of radio scientists and engineers.

Mr Nemaungani, who is now chairing the Dutch national URSI committee, underlined the importance of further strengthening science connections between Europe and Africa. He also highlighted opportunities for cooperation related to technologies and components for new observing instruments relevant to AERAP and SKA.

Later, he described the meeting as a “big success”, saying it had taken place in a “great atmosphere.”

Mr Van Ardenne added, “We are for example exploring how an early telescope of the advanced instrumentation programme of SKA can be built in Africa, involving African countries like Mauritius.”

The SKA radio telescope is already one of the most powerful and sensitive telescopes to be built in Africa.

More recently, Mauritius and South Africa have also jointly embarked in the building of a low frequency array telescope, officially called the ‘Multifrequency Interferometry Telescope for Radio Astronomy’ (MITRA), with stations in both countries.

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The aim of the MITRA joint project is to have nodes for radio astronomy observation established in both South Africa and Mauritius.

Once completed, extremely wide field imaging with 'heterogeneous, non-coplanar arrays' will be possible. Ultimately, the project will form part of the Africa Very Large Baseline Interferometry (VLBI) network.

The Mauritius conference, which ran from 10-11 September, provided a platform for experts from the world of academia and industry to outline and share their latest research.

Delegates also called for stronger partnerships between Africa and Europe, particularly mid frequency aperture arrays, given that Africa will host the mid frequency aperture arrays for Phase II of the SKA project.

Co-sponsored by IEEE Region 8 and IEEE South Africa, AFRICON 2013 attracted experts and stakeholders from across the globe.

The conference was divided into a total of six thematic sessions, including radio astronomy and 'fields and waves'.

AERAP, one of the event sponsors, is a new stakeholder forum convened to define priorities for radio astronomy cooperation between Africa and Europe.

It provides a framework for stakeholders from industry and academia to define research action plans across the wide range of technological areas that will be essential for the future of radio astronomy.

The overall goal is to strengthen research and innovation in Europe and Africa, improve knowledge transfer and stimulate competitiveness across both continents.

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