



African-European Radio Astronomy Platform

Workshop: Mid-Frequency Aperture Array (MFAA)

Stellenbosch, South Africa, 22 February 2014

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Background and Context



- 2012 marked the 15th anniversary of the Agreement on Scientific and Technological Cooperation between the European Union (EU) and South-Africa (SA)
 - SA co-investment in EC (FP7) more than €25 million in 160 projects
 - Rank only behind USA, Russia, China and India (5th most successful in FP7)
 - Dedicated resources within DST (Pretoria and Brussels)
- Radio Astronomy on Agenda of South Africa - EU Bilateral Summit - September 2011, 2012 and 2013 (EC DG: Research and Innovation visited SKA site in July 2013)
- SKA on ESFRI and EC funded SKA preparatory studies

Context



- Joint Africa-EU Strategy includes 8th partnership initiative on Science, Information Society and Space (launched in October 2007 in Lisbon)
- African Union Declaration on SKA
- European Parliament Declaration on science capacity building in Africa (Radio Astronomy)
- Immense political will but how do we capitalise on this ? AERAP

Snapshot of available instruments



- European Development Fund (11th EDF next cycle 2014-2020)
- EU Development Cooperation Instrument (DCI)
- Research funding (Horizon 2020)
- Researcher mobility, staff exchange and education programmes
- Africa-EU Infrastructure Trust Fund
- EIB, AfDB, etc
- Philatronic (e,g Ethiopia), Foundations, Venture capital, etc

AERAP



- AERAP is structured around a network of key stakeholders who come together in regular meetings to work on developing and updating agendas for radio astronomy cooperation
- The agenda has been developed through dialogue with industry, research institutes and the public sector from across EU Member States and African nations
- It is aimed at better aligning the priorities of the radio astronomy community with the instruments of the researches with those of industry.

The African-European Radio Astronomy Platform



- **Objectives**

- Bring together key African and European radio astronomy players from policy, funding, research and industry research sectors
- Support participants to develop and update agendas for bi-regional African-European radio astronomy cooperation
 - Strengthen research and innovation in Europe and Africa
 - Improve knowledge transfer between the continents
 - Stimulate competitiveness across both continents
- Identify and encourage, and facilitate access to, funding opportunities for Africa-EU radio astronomy cooperation
- Leverage EU-Africa collaboration in radio astronomy as a platform to support broader global partnerships

The African-European Radio Astronomy Platform



Objectives

- Develop and update science policy agendas for African-European cooperation in radio astronomy and related disciplines (ICT, renewable energies, engineering, education, etc.)
- Strengthen research and innovation in Europe and Africa radio astronomy and related disciplines
- Improve knowledge transfer between industry/SMEs and academia
- Stimulate competitiveness (as well as pre-competitive) and the socio-economic development this brings across both continents and promote science capacity building as a tool for this purpose
- **Utilise EU-Africa collaboration in radio astronomy as a platform for broader global partnerships (e.g. with Australia, Asia, USA, etc.)**

→ **AERAP is open to researchers, engineers, technicians, industry from all continents**

The African-European Radio Astronomy Platform



Participants

- ASTRON (Netherlands Institute for Radio Astronomy)



- Centre National de la Recherche Scientifique, France



- CIGCE-University of Porto, Portugal



- Coriant (formerly Nokia Siemens Networks), Germany



- European Industrial Engineering SRL, Italy



- Gestamp Solar Steel, Spain



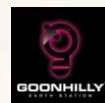
- Ghana Space Science and Technology Centre



- Ghent University, Belgium



- Goonhilly Earth Station Ltd., United Kingdom



- IBM, Netherlands



- INAF Institute for Radio Astronomy, Italy



- Institute for Astrophysics Andalusia, Spain



- Institute for Telecommunications, Portugal



- International Programme in the Physical Sciences, Sweden



- JIVE - Joint Institute for VLBI in Europe



- Omnisys Instruments, Sweden



- Onsala Space Observatory, Sweden



- Leiden Observatory, Netherlands



- Max Planck Institute for Radio Astronomy, Germany



The African-European Radio Astronomy Platform



Participants

- NOW (Netherlands Organisation for Scientific Research)



- RadioNet



- Rhodes University, South Africa



RHODES UNIVERSITY
Where leaders learn

- Science & Technology Facilities Council, United Kingdom



- SKA South Africa



- SKA Organisation, United Kingdom



- University of Cambridge, United Kingdom



- University of Groningen, Netherlands



- University of Hertfordshire, United Kingdom



- University of Leeds, United Kingdom



UNIVERSITY OF LEEDS

- University of Manchester, United Kingdom



- University of Nairobi, Kenya



- University of Oxford, United Kingdom



- University of Zambia



- VIA-SKA, Spain



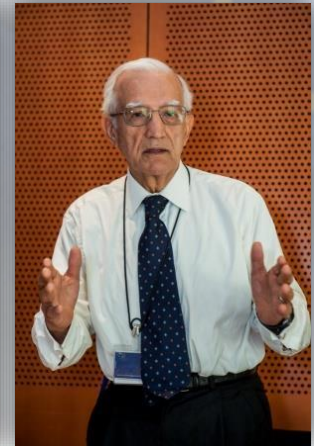
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Policy Context

- European Parliament's Written Declaration 45/2011 on **"Science Capacity Building in Africa: promoting European-African radio astronomy partnerships"**
- Decision "Assembly/AU/Dec.407 CXVIII" of the Heads of State of the African Union: **"radio astronomy to be a priority focus area for Africa-EU cooperation"**
- State of the Nation Address by SA President Jacob G. Zuma: **"We are proud of our successes in science and technology. The construction of the first telescope of the 64-dish forerunner to the Square Kilometre Array, the MeerKAT, will be completed in the first quarter of 2014."**

Engagement with MEPs



Benefits of joining AERAP



- Finding and connecting with new project partners
- Engagement with relevant policy makers and government officials to advance your projects
- Seminars and meetings to develop African-European projects
- Early information on funding opportunities (e.g. Horizon 2020) + advice on the conditions and the application procedure

→ **AERAP's Report on Horizon 2020 Calls**

Horizon 2020



Participate in project proposals supported by AERAP

- AERAP is in the process of coordinating research & development calls for proposals + finding suitable project partners for consortium building
- To, date AERAP has received **50 expressions of interest** from its members and partners who wish to respond to a call for proposals
- Topics identified in the EoI include:
 - ICT and Big Data
 - Interferometry
 - Education and Training
 - AVN
 - Technology development (especially receiver technology)
 - Outreach
 - Low & Mid frequency radio astronomy

Horizon 2020



- [AERAP's Horizon 2020 Report](#) provides an overview of the calls for proposals relevant to African-European radio astronomy cooperation
 - Topics include: human capital development, education, outreach, ICT and Big Data, etc.
 - Pillars of Horizon 2020 relevant for African-European radio astronomy cooperation:
 - Excellent Science
 - Industrial Leadership
 - Societal Challenges
 - Science with and for Society
 - Horizon 2020 Work Programmes relevant for African-European radio astronomy cooperation:
 - Future and Emerging Technologies
 - Marie Skłodowska-Curie Actions
 - European Research Infrastructures
 - Information and Communication Technologies
 - Space
 - Europe in a Changing World - Inclusive, Innovative and Reflective Societies

Horizon 2020

Extract of a call for proposals from AERAP's Horizon 2020 Report



1.3.3. Call “Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE)”, H2020-MSCA-RISE-2014, pg. 11

- Scope: The RISE scheme will promote international and inter-sector collaboration through research and innovation staff exchanges, and sharing of knowledge and ideas from research to market (and vice-versa) for the advancement of science and the development of innovation. RISE involves organisations from the academic and non-academic sectors, based in Europe (EU Member States and Associated countries) and outside Europe (third countries).
- Expected impact: Research and innovation activities under RISE are expected to build or enhance new and existing networks of international and inter-sectoral cooperation. They will significantly strengthen the interaction between organisations in the academic and non-academic sectors, and between Europe and third countries.
- Type of action: Marie Skłodowska-Curie action.
- Funding available: 70 million Euros from the 2014 budget.
- Duration: The maximum duration of support will be four years from the starting date specified in the Agreement.
- Eligible consortium partners: Participants in actions resulting from this call are NOT required to conclude a consortium agreement, as the main focus of activities is on staff exchanges.
- Publication date: 11/12/2013
- Deadline: 24/04/2014 at 17:00 Brussels time.
- Link:
<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/59-msca-rise-2014.html>

***Note:** This call will also be funded from the 2015 budget. In this case, all elements pertaining to the call remain unchanged, except for the following:

- Funding available: 80 million Euros from the 2015 budget.
- Deadline: 28/04/2015 at 17:00 Brussels time.

Horizon 2020



Benefits of participation in Horizon 2020

- Access to EU funding
- Longer term funding cycle
- Establishing new cooperation networks
- Knowledge exchange with researchers and industry
- Development of new skills

AERAP Support under Horizon 2020

- Helping to identify most suitable calls for proposals for a given research project
- Assistance with finding suitable project partners
- Support in the coordination & development of project proposals
- Advice on the application process

Interested? Contact aerap@aerap.org

Development Cooperation Instrument

DCI geographic programmes

- Poverty eradication: Millennium Development Goals;
- Essential needs of the population: primary education and health;
- Social cohesion and employment;
- Governance, democracy, human rights and support for institutional reforms;
- Trade and regional integration;
- Sustainable development: environmental protection and sustainable management of natural resources;
- Sustainable integrated water resource management: sustainable energy technologies;
- Developing infrastructure, increased use of information and communication technologies;
- Sustainable rural development: ensuring food security;
- Assistance in post-crisis situations and fragile states.

Thematic programmes

- Investing in people;
- Environment and sustainable management of natural resources including energy;
- Non-state actors and local authorities in development;
- Food security;
- Migration and asylum.

Programme of accompanying measures for the 18 African, Caribbean and Pacific (ACP) Sugar Protocol countries

- The current budget allocated €16.9bn is split into:
 - €10.06 bn to DCI geographic programmes (60% of the total)
 - €5.6 bn to thematic programmes (33% of the total)
 - €1.24 bn for ACP Sugar Protocol countries (7% of the total)

11th European Development Fund



- The Africa, Caribbean and Pacific (ACP) Joint European Union Council Meeting on 7 June 2013 signed the 11th European Development Fund (EDF):
 - €31.589 billion for the period of 2014 - 2020
 - €24 365 million to finance regional indicative programmes
 - €3590 million to finance intra-ACP and inter regional cooperation with many of the ACP states
 - €1134 million to finance the Investment Facility, comprising an additional €500 million to the resources of the investment facility
 - €634 million under the form of grants for the financing of the interest rate subsidies and project related technical assistance

Next steps



- Coordinating project proposals under Horizon 2020
 - Matching the interested participants according to the specific calls for proposals / topics they are interested in
 - Providing advice on the guidelines and regulations of the European Commission
 - Assistance with finding the right project partners (a partner with specific expertise, from a particular country or organisation, etc.)
 - Coordination & support in the project proposal writing
- Providing policy input
- Extending the dialogue with officials at the EU institutions
 - New representatives to be appointed at the European Parliament and European Commission by September 2014
- More ideas to come...

Thank you for your attention!



Further information on AERAP

www.aerap.org

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