

Building African Partnership in Astronomy research : P.N.Okeke, CBSS, Nsukka.

Introduction

- Astronomy Research is the Primary way of Building Space Technological Base.
- Three major areas are involved: Optical, Radio & Gamma Ray Astronomy.
- Technologies required will include: Physics, Electronic, Mechanical, Computer, Optics Engineering.

- Astronomy Research is extremely hi-tech
You need very high precision and high resolution equipment and complex computer programs to detect and analyse very faint distant astronomical sources.
- Reference can be made with SALT (Southern African Large Telescope) as well as 26m Radio Telescope in Hartebeesthoek.
- It is surprising that African countries except South Africa do not consider Astronomical research important.

- But these are the major techniques for studying distant Space, either from ground base or from satellite platforms.
- This means that African countries except S. Africa are not participating in the study of distant Space.
- Way forward: We propose in this paper that we join hands with South Africa to develop Astronomical Research in Africa, since this is a country in Africa that has arrived in this space endeavour.

2. Early/Current Efforts by African Countries in Astronomical Research

I am not sure of the Astronomical research activities in various African countries. This is why we are here to exchange information.

Nigeria

I however know that Nigeria through the efforts of P.N. Okeke and late Bob Stobie has been collaborating with South African Astronomical Observatory since 1993. This effort was intensified recently in 2005, with the encouragement by NASRDA. Two scientists were trained in SAAO, under the supervision of Peter Martinez using facilities in SAAO and Sutherland.

In the area of Radio Astronomy as far back as 1994-2000, we graduated two Ph.D's in Observational Astronomy using the facilities in Hartebeesthoek Radio Observatory through the assistance of George Nicolson.

Recently in 2007, new collaboration was renewed between the Centre for Basic Space Science, Nigeria and Hartebeesthoek Radio Observatory. An MOU has just been sign.

Egypt

As early as 1990, Egypt had a large optical telescope for front-line research and was collaborating with SAAO. I am not sure if this effort is still on.

Morocco and Mauritius have an optical telescope for research but they are not participating in meetings.

Zambia is making good progress. They should join.

Other countries in Africa that are likely to join in Astronomical Research are: Saudi Arabia, Kenya, Algeria, Ethiopia, Ghana and others.

Proposals for African Astronomical Society

One way of bringing Astronomers in Africa together to chat way forward is through the formation of African Astronomical Society. I call on South Africa to super-head this formation by organising an Inaugural meeting.

Nigeria has recently done the following:

- (i) Formed an Astronomical Society of Nigeria
- (ii) Formed a committee for International Astronomical Year (IAY).
- (iii) Is currently a registered Member of IAU

It is recommended that every African country should do the same. S. Africa, Zambia and possibly Egypt have done so.

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Encouragements from Government and Policy Makers

African Governments should encourage fundamental space research, and fund them adequately. This stands as a proposal to the African Union. They should fund important collaborative research in basic space science

In Summary

- (1) All African countries should adequately fund Basic Space research like space applications.
- (2) African countries should to join hands with S. Africa to develop Astronomical Research.
- (3) African Astronomical Society should be formed.
- (4) A committee be set up to consider these recommendations