

ASTRONOMY IN NIGERIA

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One major problem in Africa in general is to convince governments and agencies that astronomy is relevant to Africa. Attention has been focussed on technology transfer, neglecting science and research. This attitude encourages the continued dependence on industrialized countries.

In Nigeria there has been some success in projecting the idea that Space Science does not just mean remote sensing, but that basic space science, i.e. astronomy and astrophysics, cosmology, planetary science etc. is important and necessary. Evidence of this is that Nigeria's expert committee on space policy recommended that one of three proposed National Centres should be for basic space science, laying emphasis on fundamental physics, astronomy and astrophysics, solar-terrestrial interactions and their influence on climate, planetary and atmospheric studies. In addition, the Government of Nigeria hosted the Third UN/ESA Workshop on Basic Space Science in October, 1993.

Astronomy in Nigeria is centred on the University of Nigeria, Nsukka, which has a fully established programme of teaching and research in astronomy. So far, seven Ph.D. and over 20 M.Sc. degrees have been awarded in astrophysics. The University has a Space Research Centre based in the Department of Physics and Astronomy and has so far concentrated on theoretical research in high-energy astrophysics, radio astronomy and cosmology. At the undergraduate level, all third-year undergraduates of the Department of Physics and Astronomy, including those taking a combined education/physics programme have to take an introductory course in astronomy. In the final year, the students have the option of taking four more astrophysics courses, as well as a project.

Attempts to set up observational research projects have not so far been very successful, due mainly to financial problems. The only way to be successful in this will be to have international collaboration with developed countries. In line with this, application has already been made to the Japanese Government for the provision of a professional solar telescope under the Japanese Government Cultural Aid Programme.

Also, the University of Nigeria hopes to be involved in a collaborative project on solar seismology, which is a collaboration between Arizona, Russia and the People's Republic of China. In the future, we hope for more interaction with the rest of Africa, in particular with South Africa.

Problems:

- (i) Journals --we need subscriptions to astrophysical journals, or recent back copies.
- (ii) Communications --this is a very serious problem in Nsukka.
- (iii) Computers --No computers at present, but we hope to get five 286 PCs donated by ESA.
- (iv) Brain drain --This can only be improved by improving facilities in Nigeria
- (v) Attitude of Developed Countries and Aid Agencies --Many do not feel astronomy is relevant to Africa (Visa problems).

Discussion. In answer to Wentzel, Onuora replied that she spent a very large part of her time fighting for astronomy, which did not help her research. McNally suggested that problems of obtaining visas for research visits to other countries should be taken up with the ICSU committee on the free circulation of scientists. In answer to a question, Onuora said that there are always some students interested in astronomy; the problem, as in other countries, is to interest them in physics. Dworetzky commented on the need of the whole University of Nigeria for reliable communications and suggested the use of communications satellites, if equipment could be made available. This could be an eventual African solution to the general problem. Onuora agreed, but said that the problem is financial.