IUCAA: A NEW EXPERIMENT IN THE UNIVERSITIES' SECTOR

Jayant V. Narlikar
Director, IUCAA, Poona Univ. Campus, Pune 411 007

Astronomy and astrophysics (A&A) are recognized as thrust areas internationally. India too shares this view, as is evident from large outlays on observational facilities. The biggest single project to be launched is the Giant Metrewave Radio Telescope (GMRT), to be set up by TIFR at Narayangaon, about 100 km from Pune. It is the brain child of Govind Swarup, who is the father of radio astronomy in India. The GMRT will be unmatched the world over. There are other telescopes, the 90-inch Vainu Bappu Telescope for optical astronomy at Kavalur managed by the Indian Institute of Astrophysics, Bangalore, the infra-red telescope at Mt. Abu of the Physical Research Laboratory, Ahmedabad, and the Raman Research Institute's millimetre wave telescope.

All this has happened outside the Universities' sector. This is paradoxical and most unfortunate, for the potential users and the scientists of tomorrow are being trained in the universities today. Unless the excitement of A&A is conveyed to young undergraduates, how are we going to get the astronomers and astrophysicists of tomorrow? Thus creation of opportunities for high quality research and teaching in the university sector is most imperative; else it would be impossible to sustain, leave alone enhance, the momentum being generated by these world-class facilities.

What is needed is a centralized inter-university facility that will cater to the needs and interests of the university community. The Inter-University Centre for Astronomy and Astrophysics (IUCAA) recently set up on the campus of Poona University will be designed to fulfill this purpose. It is the second such centre set up by the University Grants Commission (UGC), the first being the Nuclear Science Centre for accelerator-based physics on the campus of Jawaharlal Nehru University, New Delhi.

The initiative for the setting up of IUCAA came from the UGC Chairman Professor Yash Pal and it was adequately supported by the Vice-Chancellor of Poona University, Professor V.G. Bhide. The location of GMRT centre on the Poona University campus and the University's reputed Physics Department made Pune an ideal location for IUCAA too. Scientists and students from the

universities would be able to work on this exciting instrument through IUCAA, the proximity making it easier. For this purpose, IUCAA has recently awarded some fellowships to young research workers.

How will IUCAA function? Its aims and objectives may be broadly classified in eight categories:

a) To have a core academic staff of about 20 persons to sustain the Centre's own activities of fundamental research in A&A and related areas.
b) To run a graduate school programme, to cater to in-house Ph.D. students of IUCAA as well as those deputed from other universities.
c) To nucleate and promote A&A programs in a few selected universities, by paying special attention to talented and motivated individuals already working in some universities, by sending staff members to universities for lectures and discussions, and by sponsoring in-site R&D activities in these places. Already several such places can be identified.
d) To institute an associateship program by which the university academic members can visit the Centre for long durations by right, once they are made associates of IUCAA. This will promote mobility amongst the university community and increase their mutual interaction.
e) To hold refresher courses, schools and advanced workshops with resource persons drawn from India and abroad.
f) To have on-site experimental programs involving development of astronomical instrumentation. In particular, we will have a close collaboration with GMRT, taking up projects as part of the GMRT development program.
g) To serve as a channel for helping the university academics to participate in national and international facilities as guest observers.
h) To popularize A&A in several ways, e.g. by having a local astronomy club and by holding vacation programs for students in the age group 16-20 wherein they can enjoy first-hand the thrill of doing real astronomy.

To translate this vision into reality IUCAA needs an excellent campus with well equipped buildings, guest house facilities (the visitors at any given time should far outnumber the core staff, if IUCAA is a success!) library, computer, etc. A happy start has been made by the Government of Maharashtra leasing a good plot of land to the Centre on the campus of Poona University. And the renowned architect Mr. Charles Correa is designing the Centre's buildings and campus.

Like any new idea, the notion of an inter-university centre has received a mixed welcome. Typical reservations include: "Is this a white elephant that the UGC has created at the cost of universites?" "Will it play a big-brother role in A&A funding?" "Will it be an ivory tower?" "What tangible gains would accrue to universities from IUCAA?" "How many years before we know what IUCAA has achieved?". These questions are only to be expected. They pose challenges to IUCAA.

The most important questions will be: in how many universities A&A teaching and research have taken roots and how many university scientists have started taking advantage of major observing facilities at home and abroad. Above all, the universities' academic community should consider the Centre as their own central facility on which they have a claim, however far they may be from it geographically. The propagation of this spirit of co-operation and collaboration at a national and international level, as required by the current nature of astronomical research, will be the main determining parameter for the success of IUCAA.

To meet these challenges the Centre needs to evolve a pragmatic modus operandi. As an autonomous registered society it should be in a position to do just that. Its success (and succeed it must!) will go a long way towards restoring some measure of confidence and dignity to our much battered university system. Inter-university centres in other fields may follow if this experiment succeeds.

Keeping in mind the global nature of astronomical research today, a successful IUCAA could very well expand its role and be a focal point of research and developmental activities in A&A in the Afro-Asian region.

The Centre expects to begin its activities during 1989, when several tenured as well as visiting positions will become available. More information may be obtained by writing to me or to the Project Coordinator, Dr. Naresh Dadhich.