

## ASTRONOMY IN ALGERIA

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Astronomy in Algeria is linked to the Algiers Observatory which is the only place where there is any astronomical activity. The Observatory was built in 1889 and was an important contributor to the famous *Carte du Ciel* project. After independence, because there were so few Algerian astronomers and the site had deteriorated, the activity of the Observatory slowed down significantly.

In 1980, the year of the violent El-Ansam earthquake, a decision was taken, on the initiative of the present director (M. Benhallou, Professor of Seismology) to create an Algerian earthquake-surveillance network. This led to the creation of the research centre CRAAG (*Centre de Recherche en Astronomie, Astrophysique et Geophysique*) in which *l'Observatoire d'Alger* and the *Institut de Physique du Globe* have been merged. Thus, the Algiers Observatory has become more and more devoted to geophysical research. Towards the end of the 1980s, a group of Algerian astronomers, educated in foreign universities, joined CRAAG. The most recent recruit came in 1991. Today, the Department of Astronomy and Astrophysics contains ten members --nearly half the total number of Algerian astronomers.

The present staff has managed to revive the Observatory's original astronomical work, both by restoring the cultural and educational aspects and by developing new scientific projects in collaboration with national and international institutions. These projects are in several fields of astronomy and astrophysics, ranging from solar to extragalactic research. We are trying to have the Algiers Observatory re-admitted to the *Bureau International de l'Heure*. The Observatory has six atomic clocks, of which two are operational. Work has been done on the restoration and archiving of some of the approximately 5000 plates obtained for the *Carte du Ciel*. Some work was done on the restoration of old instruments, but it soon had to be abandoned because of lack of funds.

This brings me to the problems of astronomy in Algeria. Astronomy is not considered as a fundamental science in our country and is completely excluded from school and university curricula. This will, of

course, have serious consequences for the future of our astronomical research. Some Algerian students are still being educated abroad, but the present situation is such that they do not intend to return. The funding for astronomy is totally inadequate. The budget for all scientific research (being only a small fraction of the *Projet Interieur Brut*) is far from sufficient, and the budget for astronomical research is again a small fraction of that. Thus, in effect, we are prevented from undertaking any experimental project or a theoretical one that needs elaborate computer equipment.

Another great problem is that of communication. The rapid evolution of basic space science and technology has created the need for far freer and more efficient exchange of information, and this need is all the greater in countries, such as ours, that suffer from isolation. Because of the present situation in our country, the support of international organizations is urgently needed. Perhaps this could be provided within the framework of programmes to promote astronomy and basic space sciences in developing countries, such as that currently run by UN/ESA. There are special needs for computers, instruments and spare parts. The linking of Algeria to INTERNET or BITNET would help to solve many of our problems.

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An impromptu contribution on astronomy in Morocco was made by K. Chamcham (Universities of Casablanca and Sussex). No text is available for this talk, which outlined a situation very similar to that in Algeria. There is some Spanish–Moroccan cooperation. Recently, budget difficulties led to the purchase of a personal computer extending over three years. Ansari inquired about the value of publicizing the contributions of Moslems (Arab and Iranian) to astronomy during the period of high Islamic culture when western civilization was relatively poor.. This might interest politicians in astronomy. Chamcham replied that this was indeed necessary, but he felt it illogical to support religious arguments while teaching the Big Bang. Abeti commented that politicians in Italy did not respond to much to direct requests from astronomers, but would act if there was sufficient pressure from schools or public opinion. Perhaps also in Africa one might begin by disseminating astronomical information to the public, through exhibitions, lecture, and competitions, and by training schoolteachers. She expressed willingness to help.