

The T.60 Operation at Pic du Midi

Christian Buil and Olivier Las Vergnas
28 rue Bonnat, F-31400 Toulouse, France

Since Spring 1983, the Pic du Midi and Toulouse Observatory has put the Gentyly 60-cm telescope at the disposal of amateurs. There was an initial experimental trial in 1982, and an amateur Programme Committee was set up in 1983. The "T.60 Association" took over the whole of the operation in 1984. So far, five hundred different amateur astronomers have used the equipment. The prime advantage of the T.60 is its site at the Pic du Midi, 2877 m altitude, one of the best observing sites in the world.

By giving new facilities to amateurs, the T.60 offers considerable scientific and educational rewards. Work that has already been carried out includes: determination of H-R diagrams of faint clusters, spectra of planetary nebulae, polarimetric and interferometric studies of nebulae, photoelectric and visual studies of variable stars, research into the chemical composition of faint stars, and observations of mutual phenomena of Jupiter's satellites.

The "T.60 Association" unites both users and other persons involved in the operation, and is responsible for all links with the Observatory. It is concerned with improving and providing accessory equipment for the telescope. It includes about 200 individual members, and a number of "associate members" who agree with the aims of the organization. A number of national societies, such as the S.A.F., the Association Française d'Astronomie and the Sociététe d'Astronomie Populaire come in this category, as do certain regional astronomical associations.

Amateurs use the telescope in teams of four, living at the summit alongside the professional astronomers, with whom there are frequently useful exchanges of ideas. The Programme Committee allocates telescope time, its main criteria being the suitability of the telescope for the proposed observations and that the proposed use is realistic. It seeks to make the telescope available to a maximum number of users.

Maintenance and accessory equipment are provided by a group of volunteers, the Technical Support Group. They are currently designing and commissioning a photographic plate-holder, micro-processor controlled setting, and a stellar spectrograph.

Annual "T.60 Colloquia" have been held since 1984, bringing together amateur and professional astronomers, with the aims of presenting results obtained and considering improvements and future developments. A "T.60 Letter" provides contact

between the meetings. In order to prevent usage of the telescope from being confined to a small group of privileged people, from 1988, the Association will invite any inexperienced amateurs to take part in special training sessions.

Considerable amateur-professional cooperation has developed, so that numerous collaborative programmes have taken place. This has also led to other equipment being placed at the disposal of amateurs, such as the 1-m telescope near the T.60, which will now regularly be available to amateurs. Combined teams of amateurs and professionals will be able to use this instrument for such programmes as SONATE (analysis of seeing quality) and PG1115+08 (long-term surveillance of a triple quasar).

Improvements to the telescope are continually made. In 1988, for example, a high-performance CCD camera and an image-intensifier system are to be commissioned.

The network of observers using the T.60 continues to expand, now including those in other countries in both Europe and America. Spanish, Belgian, German, Italian and Canadian teams have already used the instrument. The Association envisages this form of international cooperation becoming even more widespread in future.