

the same thing he believed before the discussion started.

c) Two chemistry teachers (chemists themselves) were absolutely convinced of the influence of the moon on the growth of plants and hair.

d) About 50 per cent of the total attendance were firmly convinced of the validity of astrology (and, of course, they also accepted pyramidology, the Bermuda Triangle, *etc.*).

e) UFOs were accepted, and defended, by some 25 per cent of the total attendance. After a discussion on relativity and interstellar trips, there were still lots of phrases like "it could be, anyway," and "scientists have been wrong before," *etc.*

A final comment, which follows from the preceding results, is that this kind of course should be given as frequently as possible and that, in addition, it should be compulsory for all high-school level teachers to attend.

THE DIDACTIC ACTIVITIES OF THE ITALIAN ASTRONOMICAL SOCIETY

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The Italian Astronomical Society is one of the oldest Italian scientific associations: founded in Rome in 1871 as the Society for Italian Spectroscopists, it includes professional as well as amateur astronomers and teachers among its 800 members.

In the last 10 years, the Society has been concerned with the problems of teaching, as a result of the enormous demand from schools where astronomy is often not well taught at any level because of a lack of suitable qualified teachers.

To meet this need, the Society publishes a quarterly journal entitled *Il Giornale di Astronomia*, which includes news of astronomical events, informative articles and accounts of didactic experiences as well as other information that may be helpful to teachers of astronomy.

Issues on single topics have also been published, such as *Observation of the Sky*, *Astronomical Exercises*, *The Planetary System*, *Astrophysics*, *Analysis of Electromagnetic Waves in Astrophysics*, *etc.*, as well as a series of teaching aids that are easy to consult and practical to apply.

The Society periodically organizes refresher courses for teachers in schools of all levels. These courses are held in cities throughout Italy by professional astronomers and experts in educational problems. Summer residential courses were held, in collaboration with the Ministry of Public Education: in Asiago in 1986 for physics teachers with the topic "Analysis of Electromagnetic Waves in Astrophysics," and

in Potenza in 1987 for teachers of Natural Science with the topic "Positional Astronomy and the Planetary System." The local courses or summer schools consist of theoretical lessons, experiments, and daily and nightly observations of the sky. During the development of courses, teaching equipment, duplicated lecture notes, slides, audio-visual material, *etc.*, are assigned; later, teachers who have attended the lessons experiment with new methods of teaching and curricula together with the pupils.



Fig. 1. Exhibition of material for the teaching of astronomy.

The Astrophysical Observatory of Arcetri has prepared an exhibition of basic teaching equipment in positional astronomy in collaboration with the Society, which undertook to set up the exhibition in various Italian cities. The exhibition was prepared by the Astrophysical Observatory of Arcetri during the didactic performance "Scuola come" in Florence in 1984; the I.A.S. presented the exhibition in many Italian cities, together with lectures, lessons for the teachers, and visits for pupils. An astronomer assisted. Besides a short history of astronomical research, the exhibition included basic experimental instruments.

The exhibition was created by P. Ranfagni (Institute of Astronomy — Florence University) and E. Brunetti (Astrophysical Observatory of Arcetri).

The Society has announced a biennial prize for teaching research in astronomy named after Prof. G. Tagliaferri; the prize is open to teachers and researchers. Topics include teaching experiences from various schools, educational aids, basic computer programs, slide series, teaching grants, *etc.* P. Ranfagni, E. Brunetti, and

P. Stefanini made a series of three hundred slides; these are of special educational value and they have been used during numerous refresher courses on the subject "sky observation."

The Society is also represented in certain commissions of the Ministry of Public Education for the compilation of new programs for physics and natural science.

ASTRONOMY ACTIVITIES OF THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS

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The American Association of Physics Teachers (AAPT) was founded in 1930 by members of the American Physical Society whose main interest was the teaching of physics. Since then its primary goal has remained the improvement of physics teaching at all levels. The Association publishes two journals (*American Journal of Physics* and *The Physics Teacher*) and a bulletin (*The Announcer*). The *American Journal of Physics* is intended for papers concerning physics teaching at the level of colleges and universities in the United States while *The Physics Teacher* is concerned primarily with introductory physics, including high-school courses. Two national meetings are held annually as well as numerous regional meetings.

Fortunately for astronomy education, AAPT's definition of physics has from the first included astrophysics. Early papers in the *American Journal of Physics* (then called the *American Physics Teacher*) included "Epsilon Aurigae, Colossus Among Stars, a Story of Co-operative Research in Photometry, Spectroscopy, and the Theory of Gases" by Struve and Lemon (1938) and "Mnemonic for Bethe's Solar Energy Reactions" by Randall (1948).

In 1983 the AAPT Executive Board established a Committee on Astronomy Education whose primary duty was to provide information for physicists who are teaching astronomy. This committee has sponsored a number of symposia at various meetings of the Association as well as working to publicize activities of other societies concerned with astronomy education among AAPT members. A survey of AAPT national meetings from 1971 through 1983 (Dukes and Strauch, 1984) showed that approximately five per cent of all papers presented at national AAPT meetings concerned astronomy (approximately 170 papers on astronomy out of a total of 3000 papers). This ratio has remained approximately constant to the present when 20 of the approximately 400 papers presented at the two 1988 national meetings concerned astronomy. Also in 1988 five papers on astronomy were published in *The Physics Teacher* and approximately 18 papers in the *American Journal of Physics*.