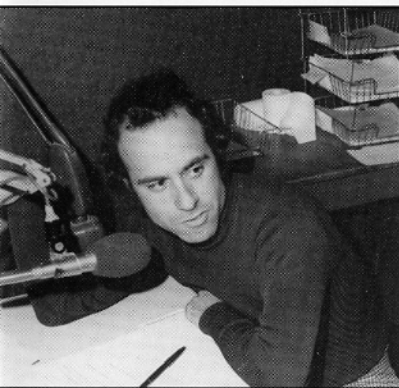


adding 6,000 new members. Ads in *Mercury* set forth the benefits of membership, including book discounts and the beginnings of a mail-order catalog of astronomical items. Within a year almost 1,800 members had been added, though at the same time the deficit for 1976 was in excess of \$75,000. President Burbidge called special meetings of the Board in response to the financial crisis, and deep cuts were made in the staff of the Society and the size of *Mercury*. By 1977 the tide had turned, and the 1977 fiscal year ended without a deficit.

At the beginning of 1978 Reis resigned as executive officer, to take an administrative position at Stanford. At his departure he could point to several new developments for the Society, in addition to the various fund-raising efforts. Perhaps the most important of these was the establishment of the A.S.P. catalog, featuring astronomical books, slide sets, and other educational materials. This catalog has become one of the most important ways in which the Society now serves the international astronomical community.

Another project the Society could point to with pride was a weekly newspaper column on astronomy, begun in a San Francisco area paper in 1975, and syndicated nationally in 1976. Under the title *Exploring the Universe*, these 500-word columns each dealt with a single astronomical topic (such as the volcanoes of Mars, the discovery of Comet Kohoutek, or "What the Atoms in Your Body Were Doing Eight Billion Years Ago"). The columns were written in a popular style by Reis, Andrew Fraknoi, and Sherwood Harrington, with occasional guest columns by astronomers from around the country. A.S.P. members were urged to work at getting their local newspapers to carry the column, and at its height of popularity in 1979 it was running in seventeen papers in North America, from Alberta to Florida.

Unfortunately, interest among newspaper editors never reached the levels required to sustain long-term national syndication, and the column was reluctantly terminated in March of 1981. Still, the project reached millions of readers during its existence and also gave the Society's staff valuable experience in dealing with the media, which was to stand them in good stead during the next phase of the A.S.P.'s growth.



Richard Reis conducting his radio program "Perspectives on Science" in the mid-1970's. Reis was the Society's second Executive Officer. (A.S.P. archives.)

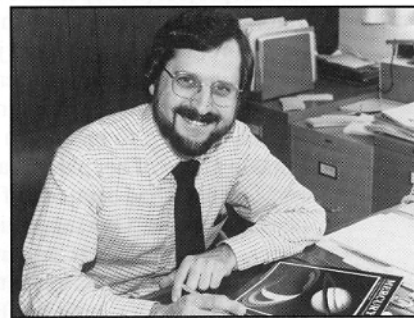
Chapter 16:

New People, New Awards, New Approaches

The Board of Directors chose Andrew Fraknoi to replace Reis as executive officer. Fraknoi, an instructor in astronomy and physics at Cañada College in California, held a B.A. from Harvard and an M.A. in astronomy from the University of California at Berkeley. He had been working for the A.S.P. already for several years, particularly as an editorial consultant and contributor to *Mercury*, and had a special interest in astronomy education.

Fraknoi has now served as executive officer for more than eleven years, and has helped the Society to grow and expand its endeavors in many directions, especially towards the greater involvement of teachers, amateurs, and lay people. Membership has doubled, and the financial state of the Society is generally much healthier. A strong emphasis has been placed on getting the Society and its work more widely known and extending the programs of the Society to be truly national and international in scope.

One interesting area of expansion has been that of awards. The Society had recognized astronomical achievement from its earliest years, in the form of the Bruce Medal for distinguished services to astronomy and the Donohoe Comet Medal for the discovery of a new comet. The latter had been discontinued in 1950 after the 250th medal had been awarded, but in 1968 the Board voted to create a new Comet Medal, to be awarded once a year "to an outstanding nonprofessional



Andrew Fraknoi, third and current Executive Officer of the Astronomical Society of the Pacific. (A.S.P. photograph.)

Dorothea Klumpke Roberts (1861-1942) as a young woman. She joined the Society in 1890, and her support of astronomy is still felt today, in the form of her bequest. Interest from the Klumpke-Roberts fund is used for the A.S.P.'s annual award for "outstanding contributions to education or popularization in astronomy". (Photograph courtesy of the Mary Lea Shane Archives of Lick Observatory.)



astronomer in recognition of his past contributions to the study of comets." The first Comet Medal was given in 1969 to Reginald L. Waterfield, a British physician and amateur astronomer noted for his position measurements of comets (which were of great help in the calculation of preliminary orbits). After 1974 this medal was also discontinued, and a more general award for amateurs eventually took its place.

The Robert J. Trumpler Award, mentioned earlier, was given first in 1963 and again in 1966, but was inactive for some years thereafter. In 1973 the Society decided to offer an annual award to a young astronomer in North America who had recently completed the Ph.D. and "whose thesis research [was] considered unusually important to astronomy." Each recipient gives a talk on his or her research at the following scientific meeting of the Society. This reactivated Trumpler Award was first given in 1974 to David L. Schramm of the University of Texas for his work on the chronology of nuclear processes in stars and has gone to a host of promising research astronomers since then.

At about the same time the A.S.P. instituted the Klumpke-Roberts Award, for "outstanding contributions to education or popularization in astronomy." This award, the Board of Directors hoped, would demonstrate the importance the Society placed on the need for scientists to help the public understand the new discoveries and developments in astronomy and their significance. It was named in honor of Dorothea Klumpke Roberts (1861-1942), a native San Franciscan who became the first woman to receive a Doctor of Science degree at the University of Paris. She worked at the Paris Observatory for many years on the gigantic Carte du Ciel project (a cooperative effort among many observatories to photograph the entire sky).

Dorothea Klumpke had joined the A.S.P. in 1890 (becoming one of the first female members). Near the end of her life, and then again in her will, she gave the Society money, to be known as the Klumpke-Roberts Fund in honor of her parents and husband (her husband Isaac Roberts had been one of the premier astronomical photographers). One suggestion was to endow a lecture series to share the excitement of astronomy with the public. A few lectures under this fund were given in the next twenty years, until the Board decided in 1974 to

redirect it to a Klumpke-Roberts Award.

The first recipient was Carl Sagan, who was recognized for having "become the leading astronomical spokesman to the American public." (And this was years before the *Cosmos* television series!) Other recipients have included science popularizer Isaac Asimov, astronomy author and TV host Patrick Moore, astronomers Bart Bok and William Kaufmann, planetarium director E. C. Krupp, and journalists Walter Sullivan and Timothy Ferris.

In 1978 the Awards Committee recommended the creation of an Amateur Achievement Award, to recognize the many contributions of amateurs to astronomy. The first award went in 1979 to James H. McMahon, a metallurgical engineer of China Lake, California, who was active both in public education (as one of the guiding spirits of the China Lake Astronomical Society and as a presenter of astronomy in local schools) and in observational astronomy (specializing in occultations of stars and asteroids by the Moon). The Amateur Achievement Award has turned out to be one of the most geographically diverse of all astronomical awards, having gone since its inception to amateurs in Australia, New Zealand, Great Britain, France, Belgium, Canada, and many regions of the U.S.

The most recent A.S.P. award to be inaugurated is the Muhlmann Prize, stemming from a gift by Maria and Eric Muhlmann of Kona, Hawaii, both A.S.P. members and astronomy enthusiasts. The prize is given annually "for outstanding research done at any Mauna Kea observatory." Mauna Kea, a dormant volcano at an elevation of nearly 14,000 feet on the island of Hawaii, is the site of one of the leading astronomical research centers of the world, with a battery of large optical and infrared telescopes at its summit. The first Muhlmann Prize was given to Monique and François Spite of the Paris Observatory, who studied the abundance of the

Eric and Maria Muhlmann (seated) congratulating François Spite (right). Spite and his wife Monique won the first Muhlmann Prize in 1983. A.S.P. President Sidney Wolff (standing next to Spite) looks on. (Photograph by A. Fraknoi)





Sherwood Harrington (left), the Society's education projects coordinator and current managing editor of Mercury, amusing Clyde Tombaugh (right) at the A.S.P.'s 1985 summer meeting in Flagstaff, Arizona. (A.S.P. photograph.)

element lithium in old stars with the Canada-France-Hawaii 3.6-meter telescope, an observation which has great significance for our understanding of the processes that shaped the early history of the universe. Appropriately, this first presentation took place in Hawaii, when the A.S.P. met there in 1983, and the Muhlmanns were able to participate.

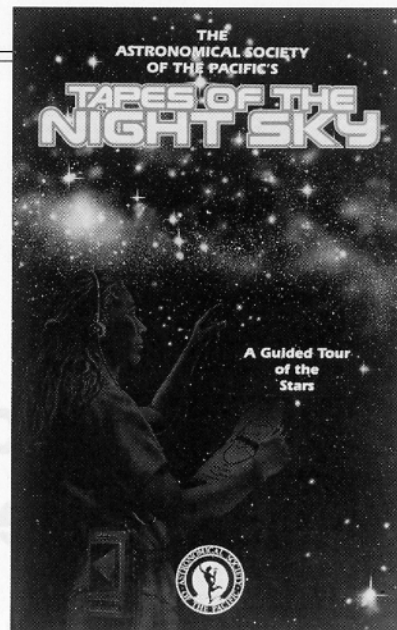
The Society has developed many other activities in the past decade which are designed to enhance the teaching and public understanding of astronomy. Perhaps the largest and most important of these is the mail order catalog, whose success has led to much wider recognition and appreciation of the Society's educational work. Growing out of the film library and the development of gift items for fund-raising, the catalog added books and posters in the late 1970's and was soon being mailed not only to Society members but also to thousands of other people with an interest in astronomy and education.

At first most of the items in the catalog were produced by others and simply resold by the Society. But as the popularity of the catalog grew (and especially after Sherwood Harrington joined the A.S.P. staff as educational projects coordinator), the Society began to produce more and more of its own materials, combining the expertise of its many professional members with the skills of its staff in interpreting astronomy in everyday language.

The A.S.P.'s slide sets have been particularly successful, and have earned high praise for including extensive booklets with captions, background materials, and reading lists, so that even beginners can use these slides for teaching, lecturing, or in social gatherings. The sets cover a wide variety of astronomical topics ranging from *The Solar System Close-up*, devoted to the results of planetary flyby missions, to *The Radio Universe*, giving 50 outstanding radio images from the Very Large Array of radio telescopes in New Mexico. Other popular sets include *The Sky at Many Wavelengths*, *Splendors of the Universe*, *Telescopes of the World*, and *Astronomers of the Past* with portraits and brief biographies of fifty famous astronomers from Copernicus to Rudolph Minkowski.

In 1987, the Society's staff began to add a series of slide kits created specifically for teachers of grades 3 - 12, which include even more detailed background ma-

The redesigned Tapes of the Night Sky. Originally developed by Tom Gates in the mid-1970's, the Tapes were revised, updated, and re-packaged in 1988. They have become the A.S.P.'s most widely distributed educational item.



terial and class activities and research projects. Recently the catalog has also included astronomical software and several videotapes, as well as books and activities for children.

Perhaps the greatest success for the catalog has been the Society's innovative *Tapes of the Night Sky*, which feature guided tours of the heavens for each season of the year and are ideal for the modern era of portable cassette players. Over 30,000 of these tapes have been carried over the years and in 1989, the tapes have been sold not only by the A.S.P., but such outlets as the Smithsonian Institution, *Sky & Telescope* magazine, *Science News*, and the Adler Planetarium.

Through the efforts of many staff members, particularly Shawn Lockyear, who took over as its manager in 1987, the A.S.P.'s catalog has become one of the most successful programs in the Society's history. Reviews of the A.S.P. materials have appeared in *Scientific American*, *Science Teacher*, *Popular Science*, and many other science and education oriented magazines. Over 150,000 catalogs were distributed between fall 1988 and summer 1989 and the Society's staff filled over 10,000 orders from around the world. Any surplus from sales goes to help support the other educational programs of the Society and increases its ability to reach students, teachers, and the public with up-to-date information and materials.

"The Moon Kit", one of the Society's new resource materials designed for use by teachers in grade schools and high schools.

