New RAS award: for service to our sciences

This new award is to honour an individual who, through outstanding or exceptional work, has promoted, facilitated or encouraged the sciences of astronomy or geophysics and developed their role in the life of the nation, often beyond the requirements of his or her paid position. The award is to recognize individuals whose work in promoting the sciences does not fall within the criteria of the Society's awards for research work. The Society will make an award from time to time, without a fixed interval.

Nominations for the award may be made at any time, and will be considered by the Society's Awards Committees in its annual cycle. The award will be a suitable gift.

A new Gresham Professor

Congratulations to John Barrow, appointed Gresham Professor of Astronomy, a post once held by Sir Christopher Wren and more recently by Prof. Frank Close, who concludes his professorship this month. In his three-year Gresham College lecture series, Barrow will address some of the "big questions" awaiting answers in the world of astronomy. In his first year he will consider the size of the universe, the dimensions of time and space, results from the WMAP satellite, some of the unsolved problems of cosmology, and the significance of black holes for our understanding of the universe. Later he will address even "bigger questions"and appraise the future frontiers of science. Further details about the series, which will begin in the autumn, will be available on the Gresham College website at www .gresham.ac.uk during the summer.

New discounts for RAS Fellows

Blackwell Publishing now offers 20% discounts on books and journals to RAS Fellows. Details are on the RAS website, in the Discounts section of the "What's New" pages, along with other benefits of membership.

New RAS awards: the Fowler Prizes

The Royal Astronomical Society is pleased to announce the establishment of two new awards, which have been agreed by Council on the advice of its Awards Committees.

The Fowler Prizes for Early Achievement in Astronomy and Geophysics have been made possible through the generosity of Mrs Rosemary Fowler. Two prizes will be awarded, normally annually, to individuals who have made a particularly noteworthy contribution to these sciences at an early stage of their research career. The Society wishes to recognize these achievements sufficiently early to give impetus to the recipients' careers.

The two prizes will be known as the Fowler Prizes after father and son Ralph and Peter Fowler, two of the RAS's most distinguished Fellows and who both made contributions to science that were examples of what the Society would want in future to recognize (see below). Rosemary Fowler is Peter Fowler's widow and, in her earlier career, was his scientific colleague.

The prizes, currently of £500 each, will be awarded to younger scientists without specific age criteria. The scientists may be of any nationality, but must have been working in the UK or through UK facilities (e.g. UK-supported observing time on telescopes), at the time of the research for which the award is made.

For scientists following a conventional career in the UK the achievement will have been made in the first decade or so following the start of their PhD work and should be recognized soon afterwards. However, time limits will not restrict the award of the prize to an individual who has taken a career break, for example for family reasons, or who has followed another career path (e.g. was educated in a system outside the UK, came to scientific research as a mature individual etc).

The first nominations are invited in 2003, for consideration by the Society's Awards Committee for award in 2004.

R H Fowler (1889–1944)

Sir Ralph Fowler was Plummer Professor of Mathematical Physics at Cambridge University. His scientific work encompassed pure mathematics, quantum theory, ballistics, statistical mechanics and physical chemistry. His first publications were in pure mathematics, to which he later returned for the application of Emden's Equation to stellar structure (see Fowler 1930).

Out of his work on the Planck distribution came papers with E A Milne (Fowler and Milne 1923, 1924), showing that Saha's Equation explained how absorption lines appeared, passed through a maximum and then disappeared as the temperature of a stellar atmosphere increases.

In 1926 he read his most original paper to the RAS, "On dense matter" (Fowler 1926), in which he showed that the material of white dwarfs was a degenerate gas. His books *Statistical Mechanics* (1929) and *Statistical Thermodynamics* (1939, with E A Guggenheim) remained standard treatises for many decades and are still of value.

Many of his research students became themselves distinguished scientists – receiving between them fifteen FRSs and three Nobel Prizes (Dirac, Mott and Chandrasekhar). His wartime work in Canada and the USA was courageous and immensely valuable.

R H Fowler was a Fellow of the RAS (1922–44), a Fellow of the Royal Society (Royal Medallist 1936), and was knighted in 1942 for his services during WW2. He married Eileen, the only child of Ernest Rutherford, and they had four children, the oldest of them Peter Fowler. For an obituary see *MNRAS* **105** 80 (1945) or *Bio. Mem. FRS* **5** 61–78 (1945).

P H Fowler (1923–96)

Peter Fowler was Royal Society Research Professor at the University of Bristol. In 1947, after distinguished radar service in WW2 and while still an undergraduate, he published three papers – two in *Nature* and one in the *Proceedings of the Royal Society*. Very early in his research career he worked with C F Powell (Nobel Prize, 1950) on cosmic radiation.

After graduating, he and his future wife Rosemary Brown contributed to the discovery and determination of the mass of the K-meson (then termed tau-meson, Brown *et al.* 1949). He flew numerous cosmic-ray detection experiments on balloons and satellites, discovering light elements in the cosmic radiation (Dainton *et al.* 1952) arising from fragmentation of primary cosmic rays.

A lasting contribution to the technique of photographic emulsions is the standard text *The Study of Elementary Particles by the Photographic Method* (C F Powell, P H Fowler and D H Perkins 1959).

With the UK6 satellite he identified r-process elements in ultra-heavy cosmic rays, thus supporting his earlier work with balloons. A scientist with wide interests, he contributed also to meteorology and medical physics and at the time of his death was working on an epithermal neutron technique to enable the non-invasive measurement of the temperature of specimens held at P-T conditions appropriate for several hundred kilometres depth within the Earth.

P H Fowler was a Fellow of the RAS (1967–96), a Council Member (1982–84) and Vice-President (1984); he was a Fellow of the Royal Society (Hughes Medallist 1974, Rutherford Lecturer 1971).

In 1949 he married Rosemary Brown (one of the first women to gain a first-class degree in physics at Bristol University); they had three daughters, one of whom (Mary) was Vice-President of the RAS (2000–02) and is currently chair of the Geophysics Awards Committee. For an obituary see *A&G* **38** 36 (1997) or *Bio. Mem. FRS* **44** 175–89 (1998).

References

Brown R *et al.* 1949 *Nature* **163** 47.
Brown R *et al.* 1949 *Nature* **163** 82.
Dainton A D, Fowler P H and Kent D W 1952 *Phil. Mag* **43** 729.
Fowler R H and Milne E A 1923 *MNRAS* **83** 403.
Fowler R H and Milne E A 1924 **84** 499.
Fowler R H 1926 *MNRAS* **87** 114.
Fowler R H 1930 *MNRAS* **91** 63.
Fowler R H 1929 *Statistical Mechanics* CUP, Cambridge.
Fowler R H and Guggenheim E A 1939 *Statistical Thermodynamics* CUP, Cambridge.
Powell C F, Fowler P H and Perkins D F 1959 *The Study of Elementary Particles by the Photographic Method* Pergamon Press, London.