TERCENTENARY OF THE ROYAL GREENWICH OBSERVATORY

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The Tercentenary of the Royal Observatory Greenwich (RGO) was celebrated by holding an International Historical Symposium from July 14–18, 1975, at the National Maritime Museum situated at the foot of the Observatory hill, Greenwich. This was the Fourth Joint IAU/IUHPS Symposium on the History of Astronomy. The theme of the symposium was "The Origins, Achievements, and Influence of the Royal Greenwich Observatory, 1675–1975".

The published list of participants in the Symposium included 107 names, late registrations brought the number to about 140, representing many nations: South Africa, Japan, India, USSR, Poland, Czechoslovakia, Hungary, East and West Germany, Switzerland, Denmark, France, Portugal, U.S.A., Canada (five representatives) and of course, the United Kingdom. As at all such meetings the informal social events are of special value. The "Meridian Party" was a reception by the Trustees and Director of the National Maritime Museum in the "Queen's House", the central section of the Museum which was built as a summer palace for Queen Charlotte, wife of Charles I. On the fourth evening, most of us went in to London to the spacious rooms of Carleton Terrace as guests of the President of the Royal Society and the President of the Royal Astronomical Society. The next day we went by bus to visit the Royal Observatory at Herstmonceux with its Isaac Newton telescope and six smaller domes, its library and lovely gardens. Here, following the unveiling by Princess Anne of a bust of the first Astronomer Royal, Rev. John Flamsteed, and a large sundial, a garden party was held. The "Transit Dinner" in the Trafalgar Tavern in Greenwich concluded the program except for a Commemoration Service in Westminster Abbey on Sunday July 20 at the invitation of the Dean and Chapter. Just before Evensong, Sir Richard Woolley laid a wreath on the flagstone over the grave of King Charles II, founder of the Royal Observatory in 1675. The first lesson was read from Ecclesiasticus XLIII, 1–10 by Alan Hunter, C.B.E., Director of R.G.O. Herstmonceux. The second from portions of Acts XXVII was read by Basil Greenhill, C.M.G., Director of the National Maritime Museum. The address was given by Sir Bernard Lovell, O.B.E. The first hymn was Addison's poem, "The Spacious Firmament on High".

To mark this Tercentenary, a special 80-page illustrated booklet was ably

compiled and written by Professor W. H. McCrea, F.R.S. This is a beautiful and valuable record of events of astronomical importance through the terms of eleven Astronomers Royal, 1675–1971, and 2 Directors, 1971–75. The Director-designate is Dr. F. Graham Smith who takes over from Dr. Alan Hunter in 1976. This book is issued by Her Majesty's Stationery Office at £1 net. In it we read that after Flamsteed had set up his great clocks, his equatorial sextant and his 7-foot mural arc, he was visited by Peter the Great in 1698; that the first Nautical Almanac (for the year 1767) was published in 1766 under the directorship of Maskelyne; that in 1818 the Admiralty took control of the RGO and this control lasted until 1965 when it was handed over to the Science Research Council; that since 1822 the RGO has had charge of the Navy chronometers; that in 1884 the Greenwich meridian was chosen to be the Prime Meridian for the whole earth; that in 1880 Greenwich Mean Time became legal time in Great Britain; and that the transfer of all instruments from Greenwich to Herstmonceux was completed by 1958.

The opening paper at the first session was a well-illustrated invited discourse given by Prof. Owen Gingerich of the Smithsonian Astrophysical Observatory, a formidable task ably accomplished. The assigned topic was "The Development of Astronomical Theory and Practice from the 17th to the 20th Centuries". Subsequent papers covered a wide range: the founding of the Royal Observatory; the problems of navigation and quest for reliable chronometers; lunar tables; the observations and calculations of the early Astronomers Royal, Flamsteed, Halley, Bradley; early European observatories; the Paris Observatory planned in 1667 and established in 1671; Newtonian astronomy; the Nautical Almanac; instruments and their uses at RGO from 1675 to 1775; the "Airy Era"; Greenwich Time and the Prime Meridian; western astronomy in India; Greenwich instruments and the aberration of light; refraction, twilight and the height of the atmosphere; positional astronomy from Bradley to Bessel; the RGO in the mainstream of science – (i) gravitation, (ii) measurement, keeping and distribution of time, (iii) principles of observation and theory of errors, (iv) geophysics and planetary science arising from astronomical observations, and (v) structure of the universe using optical astronomy directly and in cooperation with radio, infrared, X-ray, gamma ray and cosmic ray astronomy.

I conclude this report with one lengthy quotation from a paper presented by Alan Chapman.

> By the mid-eighteenth century, the Greenwich observations had become acknowledged as an international standard of accuracy, which had been achieved through the successful application of the telescopic sight, micrometer and improved methods of graduating circles to astronomical measurement by the instrument

makers of London. Indeed, the early Royal Observatory was fortunate to flourish at a time when the works of craftsmen such as Sharp and Bird could be put to maximum effect by observers of the calibre of Flamsteed and Bradley. Resulting from these developments, the observations of Bradley showed an improvement of ten-fold upon those of Flamsteed, and sixty-fold upon those of Tycho.

Particular mention must be made of the warm courtesy and kind helpfulness of Commander D. W. Waters, Deputy Director of the National Maritime Museum and of Commander H. D. Howse, Head of the Astronomy Department of the Museum. Their contribution to the success of this gathering merits sincerest thanks.