region. This activity was first noted by Appleton and Hey during the War and takes the form of bursts of radiation. When Dr Wild joined the Radiophysics Division of the CSIRO in Sydney, he was encouraged by Dr Pawsey to study these bursts and he started to observe them in the late 1940s using quite crude apparatus. As a result of his observations he was soon able to propose a classification scheme for the bursts, calling them Types I, II or III according to their characteristics, and it is a tribute to his careful work and skill that this pioneering classification has survived, with additions, until now. With great energy, Wild and his colleagues then built a radioheliograph capable of obtaining two solar spectra per second over a frequency range of 5/2000 MHz. This was completed at Dapta in New South Wales in 1952, and in 1954 Wild was able to announce the detection of first and second harmonics in his spectra and to suggest their interpretation as arising from plasma oscillations. He also noted that the burst spectra have a low frequency cut-off which decreases with time, and he attributed this to a rapid outward motion of a disturbance through the corona.

The Dapta radioheliograph could only measure the flux from the whole Sun, and Wild soon realized the need for an instrument that could measure the position of the origin of a burst. The Dapta instrument remained unique until 1957, but by then it had been supplemented by an interferometer which could measure the East–West position of a burst and its angular size. Using this instrument, Wild was able to confirm directly the motion of a burst source through the corona, which he previously had only been able to infer from the frequency change with time.

Dr Wild's latest radioheliograph is located at Culgoora. It consists of 96 13-m steerable paraboloids arranged in a circle of diameter 3 km, and produces a 2-dimensional radio picture of the Sun at a frequency of 80 MHz with a resolution of 2'. This remarkable instrument has gathered a large amount of data which is leading to new insight into the nature of a wide range of radio burst phenomena and their interpretation by accurate models.

Dr Wild's work has been a true integration of observation, accomplished with progressively more advanced instruments, and imaginative theory. His own contributions have been monumental and have added greatly to our understanding of solar radio astronomy.

THE JACKSON–GWILT MEDAL AND GIFT

MR G. PERRY

The Jackson–Gwilt Medal and Gift has been awarded to Mr Geoffrey Perry for his work on tracking artificial satellites and interpreting their radio signals.
Mr Geoffrey Perry is Senior Science Master at Kettering Grammar School. His first radio observations of a satellite were made in collaboration with the Senior Chemistry Master, Mr J.D. Slater, in 1961, when they observed signals from Discoverer 32 until it decayed.

Mr Perry's remarkable success in the years that followed is due to his own devotion to the topic, to his remarkable ingenuity and energy, and to the interest that he inspires among his pupils. The observing is done in the school lunch period which lasts for 90 min., and it is fortunate that this interval almost embraces the orbital period of an ordinary satellite of 92 min. so that most satellites are likely to be observable then. The equipment used is not elaborate, but is perfectly matched to its task. The aerial usually consists of a piece of wire slung between two convenient buildings, whilst at higher frequencies he uses a dipole held by a small boy. Much of the electronic equipment is his own property, although he has equipment donated and lent to him by organizations and instrument firms.

There is not time to tell you everything that he has done. Perhaps his most spectacular achievement has been his discovery of a new Russian launching site near the town of Plesetsk, which he located as the intersection of the initial ground tracks of Cosmos 112 and Cosmos 129, and confirmed by Cosmos 144. More recently, he was receiving signals from Soyuz 11 within 10 min. of lift-off and one hour before the official announcement of the launch. The launching of the first Chinese satellite was announced from Peking at 12.32 on 1970 April 25: the first signals were received by Mr Perry only 90 min. later, and within a month he had decoded them.

Mr Perry has always emphasized the educational benefit that a school derives from a research project and it is very appropriate that the Society should make this award at a time that it is actively fostering astronomical education. This is not the first time that Mr Perry has been honoured: he received the MBE in 1973.