

Meeting of the Radio Astronomy group

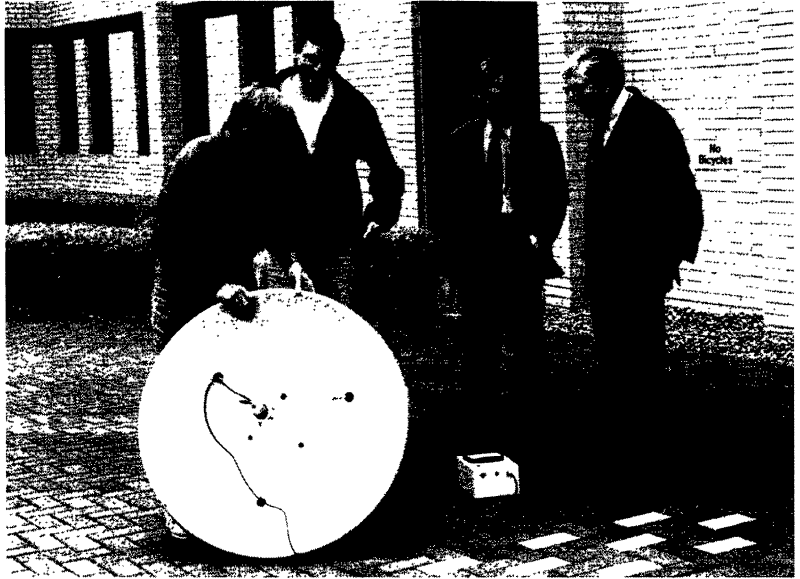
Cambridge, 2001 May 19

A meeting of the Radio Astronomy group was held at the Institute of Astronomy, Cambridge on Saturday 2001 May 19. The meeting was to have been held at the Mullard Radio Astronomy Observatory, but due to foot and mouth restrictions the venue had to be changed. The last meeting of the Radio Astronomy Section was held at MRAO in 1968.

After informal conversations as the astronomers assembled lectures were given by university research staff on the latest developments in professional radio astronomy.

The first was given by Angela Taylor, who described radio investigations at around 30GHz into the cosmic background radiation. These observations were carried out by the Very Small Array, VSA, developed at the MRAO. The array consists of up to 14 linked receivers arranged in such a pattern that chosen areas of the background could be investigated at very high resolution. The object of the investigation was to observe minute variations in the temperature of the background radiation which appeared as ripples on the Planck Curve. These ripples, if verified, could yield vital information on the very early behaviour of the Big Bang. Fascinating computer generated images were shown of these variations in the cosmic background microwave radiation.

The second talk was given by Amanda



The quiet Sun at 10GHz. Bernard Wright demonstrates a radio system to (l. to r.) Tony Razzell, John Cook and Bob Middlefell. Despite complete cloud cover, it was possible to detect and observe the radio Sun using this handheld dish. All components were from salvaged commercial equipment. W. G. Brown

George, and related to the work being carried out by the Cambridge Optical Aperture Synthesis Telescope (COAST). This telescope operates in an identical

manner to that of a radio interferometer. Light from a star is collected at two points 48m apart, and, by a system of lenses and mirrors is directed into a temperature-stable underground laboratory where interference patterns are created. Despite the very great distance from the star an additional path length equal to the interferometer baseline had to be created for one of the light sources in order to form the correct interference pattern.

Using this technique it had been possible to measure the stellar diameter of Capella (α Aurigae), display starspots on Betelgeuse (α Orionis) and separate very close binary stars. It was anticipated that it would eventually be possible to detect and image planets in orbit round a star.

Working exhibits of VLF and VHF receivers by Peter King were demonstrated as was UHF equipment by Bernard Wright. A 4-channel data logging system was demonstrated by John Cook and it is hoped that this will soon be in use by other members of the group.

Following the meeting a visit was paid to the venerable Northumberland Refractor dating from 1838.

Gordon Brown

Obituary

Thomas Rackham, 1919–2001

Tom Rackham was a long-standing member of the BAA, and played a major rôle in the work of the Lunar Section during the pre-Apollo period.

He was born on 1919 July 7, and studied at the University of Manchester, obtaining his BSc degree in 1961 and his PhD five years later. The Moon was always a major interest, and between 1959 and 1967 he worked in the University's Department of Astronomy, then run by Zdenek Kopal; in fact Rackham and Gilbert Fielder took the photographs used by Kopal in his lunar papers. He was then appointed a Senior Research Fellow in Radio Astronomy at Jodrell Bank, but in 1968 accepted an invitation to succeed me as Director of the Armagh Planetarium in Northern Ireland. He remained there until 1971, when he returned to Jodrell Bank with special

responsibility for the Concourse Building and the new Planetarium.

Subsequently Rackham was appointed Personal Assistant to the Director (Sir Bernard Lovell); one of his duties was to organise the highly successful national assembly of young astronomers held at Jodrell in 1978. After retiring he lived at Holmes Chapel, near Jodrell Bank, and continued his observational work.

Tom Rackham was the author of many papers, mainly concerning the Moon; he also wrote an excellent book, *Astronomical Photography at the Telescope*, published in 1959 with a second edition in 1961. He was liked and respected by everyone, and was always ready to give help and advice when asked. He will be greatly missed.

Patrick Moore