

“Under the Radar, the first Woman in Radio Astronomy, Ruby Payne-Scott”

Professor W. Miller Goss, National Radio Astronomy Observatory, Socorro New Mexico

Ruby Payne-Scott (1912-1981) was an eminent Australian scientist who made major contributions to the WWII radar effort (CSIR) from 1941 to 1945. In late 1945, she pioneered radio astronomy efforts at Dover Heights in Sydney, Australia at a beautiful cliff top overlooking the Tasman Sea. Again at Dover Heights, Payne-Scott carried out the first interferometry in radio astronomy using an Australian Army radar antenna as a radio telescope at sunrise, 26 January 1946. She continued these ground breaking activities until 1951.

Ruby Payne-Scott played a major role in discovering and elucidating the properties of Type III bursts from the sun, the most common of the five classes of transient phenomena from the solar corona. These bursts are one of the most intensively studied forms of radio emission in all of astronomy. She is also one of the inventors of aperture synthesis in radio astronomy.

I examine her career at the University of Sydney and her conflicts with the CSIR hierarchy concerning the rights of women in the work place, specifically equal wages and the lack of permanent status for married women. I also explore her membership in the Communist Party of Australia as well as her partially released Australian Scientific Intelligence Organization file.

Payne-Scott's role as a major participant in the flourishing radio astronomy research of the post war era remains a remarkable story. She had a number of strong collaborations with the pioneers of early radio astronomy in Australia: Pawsey, Mills, Christiansen, Bolton and Little. I am currently working on a popular version of the Payne-Scott story; “Making Waves, The Story of Ruby Payne-Scott: Australian Pioneer Radio Astronomer” will be published in 2013 by Springer in the Astronomers' Universe Series.

Miller Goss received his undergraduate degree in astronomy from Harvard in 1963 and a PhD from the University of California (Berkeley) in 1967, working on the newly discovered OH radio frequency line at the Hat Creek Observatory. He then moved to Australia to the CSIRO Division of Radiophysics, first as a postdoctoral fellow and later as a staff member. In 1976 he was the recipient of the Pawsey Medal of the Australian Academy of Science. From 1977 to 1986 he was on the staff of the Kapteyn Astronomical Institute of the University of Groningen, the Netherlands, and then professor from 1980 to 1986. In 1986 he moved to the National Radio Astronomy Observatory (NRAO) in Socorro New Mexico (USA). He was Director of the Very Large Array and the Very Long Baseline Array from 1988 to 2002. He and Dick McGee began working on Under the Radar, the First Woman in Radio Astronomy: Ruby Payne-Scott, in 1997. It was published in 2009 with book launches in Sydney and Canberra. At present Goss and Claire Hooker are working on a joint biography of J.L. Pawsey and J.G. Bolton. Goss' scientific interests are radio astronomical studies of the interstellar medium in the Milky Way and nearby galaxies. Goss is currently on the scientific staff of NRAO.

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8:00pm

Elisabeth Murdoch Theatre
University of Melbourne
Parkville

Admission is FREE.

No booking
is necessary.



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LECTURE**