

December 11, 1947

Visit of Dr. Pawsey

Dr. J. L. Pawsey of the Radiophysics Laboratory, Chippendale, N.S.W. Australia, visited the Bureau on December 5, 1947. During the morning an informal conference was held in the office of K.A. Norton. In addition to Dr. Pawsey, those present included A. R. Beach, of CGSigO.; Morris Schulkin of N.R.L.; K.A. Norton, J. W. Herbstreit, Allan Shapley, Herman V. Cottony, T. J. Carroll and Grote Reber, of CRPL.

Pawsey showed us his latest results which included the identification of a point source in Cygnus at position of 19 hrs. 59 min. 32 sec. ± 10 sec. right ascension and plus 41 deg. 47 min. ± 4 min. declination. High, effective, angular resolution was secured by using Lloyd's mirror technique over the sea. Results of measurements at 60 mc and 200 mc were in substantial agreement. At 60 mc the intensity of the source seemed to vary over a range of approximately two to one in a random manner with times of from 10 seconds to a minute or so. Little, if any, intensity variation could be found at 200 mc.

Pawsey also described further experiments on solar radiation at 60 mc. The results were substantially the same as those secured at 200 mc and published in the 12 August 1947 issue of Proc. Royal. Soc. (London). One fundamental difference was found in that at 60 mc the radiation from spot was not constant in position but made spot seem to move around over an area in the sky having about ten times the area of the sun. Apparently this peculiarity is another manifestation of the variation of intensity from source in Cygnus. Both are probably caused by irregularities in the ionosphere as these anomalies were not present at 200 mc.

Pawsey, Cottony, Norton, Herbstreit and Reber then went to Sterling and inspected the solar and cosmic noise measuring apparatus in the afternoon. Considerable discussion was had on amplifier stability, antenna directivity, etc.

Corrected position by Cottony
 19 hrs 59 min 32 sec ± 10 sec
 + 41 deg 47 min ± 4 min.

Bolton
①

Radio physics

60 - 200 mc - Solar

Polarization & interrelations
on diff. frequencies

②

Cosmic J & Saturn -

Large aerial - some noise

High cliff - (New Zealand)

Ruby Payne - Scott

③

Spark receiver exps -

④

Lehman & Abaley -

Simultaneous on 200 600 1200

⑤

Mc Gurdy - (start)

Spectrum analyzer -

⑥

Turbane - (interference with
two aereals) 100 mc
slow - starting.

⑦ Theny - 5 merid -

These are notes left by Pawsey about
workers in Australia & New Zealand.