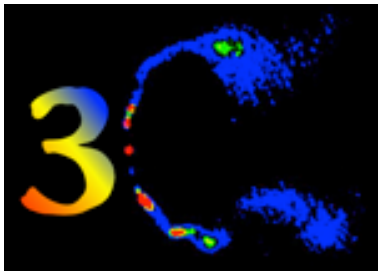

Contribution ID: **21** Type: **not specified**

Observing the 3C Survey of Radio Sources

Monday, 16 September 2019 11:00 (30 minutes)

I am one of the authors of the 3C Catalogue. I observed the Northern part of the Survey called 3C(c) in August-September 1956 as part of my PhD thesis.

Abstract: In 1956, David Edge and I observed the Northern sky using the 4-aerial interferometer from the 2C Survey, with feeds modified for 159 MHz. David's thesis was the major 3C(a) survey. My observations - just 63 years ago - were the 3C(c) survey at lower culmination in the zone from declination +52 to +70 where the interferometer EW fringes had frequencies from 8 –12 mHz and a band-pass filter at the output reduced the NS side-fringes which improved the resolution.

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The 3C(c) survey was observed by transit scans between 27 August and 14 September 1956. Analysis took most of 1957, but was complete by November. I confirmed positions and source reality of David's analysis for the northern scans of the main 3C(a) catalogue and added sources up to declination +70. The 3C(c) survey also showed that source distribution in space - the log N/log S slope and P(D) - in its small area of sky did not support Steady State cosmology.

These results were discussed freely at the Cavendish but not elsewhere ⋯until Ryle, Scheuer and Archer went with others to Paris for the joint IAU/URSI symposium in 1958. The catalogue was submitted to Memoirs RAS for publication in July 1959.

3C was the last Cambridge survey to use paper charts, with pen & ruler analysis, hand drawn contour maps and integration by a chemical balance. We were pre-Sputnik physicists and engineers emerging as astronomers into a violent, extragalactic universe.

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Session Classification: A historical perspective of the Third Cambridge catalogue