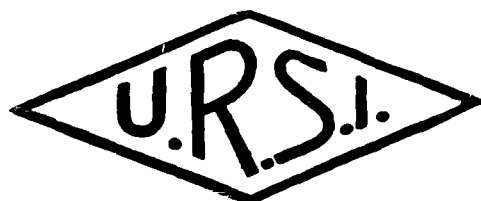


UNION RADIO-SCIENTIFIQUE INTERNATIONALE  
INTERNATIONAL UNION OF RADIO SCIENCE



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## Commission V on Radio Astronomy

*Chairman* Dr J. L. Locke (Canada)

*Vice-Chairman* Prof. G. Westerhout (USA)

### INTER-UNION COMMISSION ON FREQUENCY ALLOCATIONS FOR RADIO ASTRONOMY AND SPACE SCIENCE (IUCAF)

In view of the importance of the activities of IUCAF in making its preparations for the World Administrative Radio Conference in 1979, Commission V unanimously supported the resolution submitted to the URSI Council and subsequently adopted as Res C 10

The Commission also wished to place on record its appreciation of the services of the Secretary General of URSI during his term of office as Secretary of IUCAF (1972-1975)

### REVIEW OF RADIO SCIENCE

The views on the publication of the *Review* were generally favourable, but it was recommended that the volume should be publicised and made available outside the URSI General Assembly.

### RESOLUTIONS

Discussions on other subjects resulted in the adoption of Resolutions V 1-V 3 (see p 150).

### ELECTION OF VICE-CHAIRMAN

Following a recommendation made by the Commission, Dr H. Tanaka (Japan) was elected as Vice-Chairman of Commission J for the period 1975-1978.

## PAPERS PRESENTED DURING SCIENTIFIC SESSIONS

### SESSION ON SOLAR SYSTEM RADIO AND RADAR ASTRONOMY.

- Solar radio observations at mm and cm wavelengths, M. R. Kundu
- Culgoora results at meter wavelengths, K. V. Sheridan
- A model for solar oscillations, W. L. H. Shuter.
- 35 GHz observations with the Bordeaux interferometer, J. Delannoy.
- Spectra of microwave bursts, J. Aarons.
- Burst detectability, P. Kaufmann.
- Circular polarization of Jupiter at 21 cm, F. Ribes
- Superstars, QSO's and the black-hole myth, D. H. Menzel.

### SESSION ON SPECTRAL LINE OBSERVATIONS AND TECHNIQUES

- Review paper, B. J. Robinson.
- Front ends for mm waves, S. Weinreb.
- H<sub>2</sub>O masers, P. Kaufmann.
- High velocity H<sub>2</sub>O, B. J. Robinson.
- H<sub>2</sub>O scattering, V. Radhakrishnan.
- CS in dark clouds and NH<sub>3</sub> in Orion, A. H. Barrett
- CO in Ophiuchus (<sup>17</sup>O)/(<sup>18</sup>O), F. Biraud.
- CS, CO survey, M. Morimoto.
- Westerbork HI observations, E. Ekers.
- HI in elliptical galaxies, H. J. Wendker.

### SESSION ON HIGH-RESOLUTION MAPPING.

- Techniques and problems, G. Pooley
- Interpretation of synthesis maps, R. Ekers
- Graceful antenna arrays, F. Biraud
- Some southern radio galaxies, W. N. Christiansen
- The structure of the central component of 3C236, E. B. Fomalont
- Intercontinental synthesis, K. Kellermann
- Small spacing terms in synthesis maps, K. I. Wielebinski.

SESSION ON ACCURATE POSITION MEASUREMENTS.

- Review of techniques, results, limitations : present and future, C. C Counselman
- Results from the 5-km telescope, G Pooley
- Atmospheric fluctuations and instrumental errors, P J Hamacker
- Gravitational bending of radio waves, E B Folamont.

SESSION ON UNRESOLVED CONTINUUM SOURCES.

- Radio stars, W. J Altenhoff
- Radio source counts, I. Pauliny-Toth
- Lunar occultation observations of 400 radio sources, G Swarup
- Angular diameter redshift relation, R Ekers
- Long-term variability of radio sources at mm wavelengths, R W. Hobbs
- 18 cm flux variability observations, G. W. Swenson.
- Pulsars, R Wielebinski

SESSION ON NEW DEVELOPMENTS AT OBSERVATORIES AND LABORATORIES

- Very long baseline interferometry using a communications satellite, G. W Swenson
- A streamlined Mark II VLBI terminal : The Mark II-C, G. W Swenson.
- The European mm-wave project, R Wielebinski
- Millimetre-wave radio interferometer of a novel design, G Swarup.
- Operation of Haystack at 43 GHz, A H Barrett
- A small mm-wave dish in Australia, B J. Robinson
- Extension of the Fleurs synthesis telescope, W N Christiansen
- Multichannel solar spectrometer at Nobeyama, M Morimoto.
- New solar interferometers in Japan : 4.3, 17 and 35 GHz, M Morimoto.
- New facilities for radio astronomy in the Netherlands, J L Casse.
- VLA Status report, S Weinreb.
- A new 151 MHz telescope at Cambridge, G. Pooley
- Molecular spectroscopy at mm-waves at Tokyo and Kizazarazu, M. Morimoto

- Development of an interferometer for solar observations at 3 mm, K Sheridan
- Converting the Culgoora radio-heliograph to operate at 4 frequencies, K. Sheridan
- Broad-band polarimeter for solar radio bursts, K. Sheridan
- The Clark Lake radio-heliograph, G. Westerhout
- Mechanical and electrical performance of the Max Planck Institut 100-m telescope, B H Grahl
- The development of a new technique for pre-detection anti-dispersion of pulsar signals, T Cole
- Polarimeter for linear and circular polarization measurements, R Wielebinski.
- Developments at Algonquin Radio Observatory, Dominion Radio Astrophysical Observatory, and University of B C, W L H Shuter.

**Commission VI on Radio Waves and Circuits**

*Acting Chairman* . Prof. H L Knudsen (Denmark).

*Vice-Chairman* . Prof F L Stumpers (Netherlands)

Following the death of Professor Siegel in March 1975, the Board of Officers invited the Vice-Chairman (Prof H. L Knudsen) to be Acting Chairman Prof Knudsen agreed and at the same time Prof. F L Stumpers (Associate Vice-Chairman for Information Theory) was recognised as Vice-Chairman of Commission VI

At the first scientific session of Commission VI on 12 August, Prof A A Ksienski gave a commemorative talk honouring the memory and the activities of Prof Siegel.

ACTING CHAIRMAN'S REPORT

*Programme for Meetings in Lima* — The Acting Chairman presented a Report on the activities of Commission VI since the 1972 Assembly With regard to the organisation of the scientific sessions of Commission VI at