

COMMISSION 47: COSMOLOGY (COSMOLOGIE)

Report of Meetings, 19, 20, 21, 24 and 25 August 1970

ACTING PRESIDENT: W. Bonnor.

SECRETARY: M. S. Longair.

In the absence of Ya. B. Zeldovich, W. B. Bonnor was nominated Acting President of Commission for the duration of the XIVth General Assembly.

The new commission met on the 19, 20, 21 and 25 August. The first meeting began with the nomination of the Vice-President and Organizing Committee.

The meeting of 19th August then continued with the following scientific programme under the chairmanship of W. B. Bonnor.

THE MICROWAVE BACKGROUND RADIATION

R. B. Partridge: 'New Experimental Limits on the Anisotropy of the Cosmic Microwave Background'.

E. K. Conklin: 'Observations of Large-Scale Anisotropy in the 3K Background Radiation'.

T. L. May and G. C. McVittie: 'A General Theory of Universes Containing Matter and Black-Body Radiation'.

R. A. Sunyaev and Ya. B. Zeldovich (read by M. S. Longair): 'Distortions of the Relict Radiation Spectrum'.

THE ORIGIN OF GALAXIES

CHAIRMAN: V. A. Ambartsumian.

R. A. Sunyaev and Ya. B. Zeldovich (read by M. S. Longair): 'Fluctuations in the Relict Radiation – Fluctuations of Density and Antimatter'.

E. R. Harrison: 'Comments on the Origin of Galactic Spin'.

P. J. E. Peebles: 'Recent Work on Galaxy Formation at Princeton'.

E. Schatzman: 'Cosmology and Antimatter'.

L. M. Ozernoi and G. V. Chibisov (read by M. J. Rees): 'The Parameters of Galaxies as a Result of Cosmological Turbulence'.

OPEN OR CLOSED UNIVERSE, MISSING MASSES, GRAVITATIONAL RADIATION AND BLACK HOLES

CHAIRMAN: P. J. E. Peebles.

W. A. Fowler: 'The Microwave Background Radiation and Helium Production in the Canonical Big-Bang'.

M. Rowan-Robinson: 'Do Dead Galaxies Outnumber the Living?'

A. M. Wolfe: 'The X-Ray Background and the Structure of the Universe'.

J. Pachner: 'Comment on the Paper "The Origin of Galactic Spin" by E. R. Harrison'.

R. Ruffini: 'Gravitational Radiation and Black Holes'.

R. B. Partridge: 'A Search for Pulses of Intense Electromagnetic Radiation'.

S. van den Bergh: 'Limits to the Number of Black Holes in the Virgo Cluster'.

P. D. Noerdlinger and V. Petrosian: 'The Effect of Cosmological Expansion on the Sizes of Galaxy Clusters'.

The sessions scheduled to take place on 24th August were cancelled because they clashed with the Joint Discussion on Helium.

MIXMASTER UNIVERSES – QUANTUM MECHANICS AND COSMOLOGY

CHAIRMAN: G. R. Burbidge.

I. D. Novikov: 'Mixmaster Universe Singularities – Physical Processes near a Singularity'.

M. A. H. McCallum: 'Evolution of Anisotropy and Observational Characteristics of some Simple Bianchi Cosmologies'.

R. Matzer: 'Mixmaster Universes'.

B. K. Harrison: 'Notes on Quantum Cosmology'.

F. Hoyle: 'Quantum Mechanics and Cosmology'.

Y. Ne'eman: 'Comments on Time Asymmetry'.

J. V. Narlikar: 'Quantum Mechanics and Cosmology'.

V. L. Ginzburg: 'On the Role of Quantum Fluctuations of the Gravitational Field in Cosmology'.

It was noted that at the extraordinary assembly of the IAU to be held in Poland in 1973, it is intended to hold symposia on Cosmology and a topic from relativistic astrophysics.