

C. JOINT DISCUSSION
ON
THE DEMANDS MADE ON CELESTIAL MECHANICS
BY THE PREPARATION OF EPHEMERIDES

Monday 21 August 1961 at 14^h00^m

ORGANIZING COMMITTEE: F. Arend, D. Brouwer, R. L. Duncombe, W. Fricke (Chairman),
W. Markowitz.

REPORT OF THE PROCEEDINGS

R. L. Duncombe and G. A. Wilkins

Introduction

The prepared contributions to the Joint Discussion follow this report in the order of their presentation; one paper will shortly appear in print elsewhere and so only a brief summary is given here. In this report of the proceedings we have endeavoured to give a more connected account of the discussion than would result from a verbatim account of the remarks made after each paper. Of necessity, we have made some omissions and some additions, but we hope that those who were present will find this to be a fair report and that readers who were not present will find it a useful introduction to the papers themselves.

The reference numbers in this report refer to the papers presented during the discussion; the authors and brief titles are as follows:

1. *Wilkins*. Computation of the lunar ephemeris.
2. *Eckert and Smith*. Numerical development of harmonic series for the Moon.
3. *Brouwer*. Application of von Zeipel's method to the lunar theory.
4. *Duncombe*. Requirements for planetary ephemerides.
5. *Clemence*. Theories of the motions of Mars and the Earth.
6. *Kovalevsky*. Nécessité d'une nouvelle théorie des quatre gros satellites du Jupiter.
7. *Herget, P*. Ephemeris calculations for minor planets.
The complete paper will appear in the *Astronomical Journal*.
8. *Rabe*. Improvement of astronomical constants in ephemeris computations.
9. *Markowitz*. Astronomical and atomic time in the observation of artificial satellites.

W. Fricke, President of Commission 4, was chairman for the first half of the discussion (papers 1-5), and D. Brouwer, President of Commission 7, was chairman for the second half (papers 6-9).