

PREFACE

The IAU Symposium No. 78, "Nutation and the Earth's Rotation," was held in Kiev, USSR, from 23 to 28 May, 1977. The Organizing Committee included E. P. Fedorov and R. O. Vicente (Joint Chairmen), W. Fricke, J. Kovalevsky, P. Melchior, N. Pariisky, M. Rochester, C. Sugawa, G. Wilkins and Ya. Yatskiv, who presided over the Local Organizing Committee. The meeting was sponsored by Commission 19 and co-sponsored by Commissions 4, 8, and 31. There were 114 registered participants from 14 countries. The main topics covered were as follows: the specification of nutation in the IAU system of astronomical constants; determination of forced nutation and nearly diurnal free polar motion from astronomical observations; expected use of lunar ranging data and long baseline interferometers for precise measurement of the nutation terms; models of the internal constitution of the Earth as the basis of a new theory of nutation; the effect of the ocean and liquid core on the rotation of the Earth; and the interaction between Earth tides and nutation.

Thirty-eight invited and contributed papers were presented. The Symposium recommended a set of coefficients to be substituted for the corresponding coefficients in Woolard's series for the nutation in order to provide a more accurate representation of the forced nutation of the deformable Earth with its liquid core. This recommendation was submitted to the IAU Commission 4 with a request to set up a small working group of experts to prepare a fully documented proposal for the adoption of a new series for the nutation at the IAU General Assembly in 1979.

The Proceedings have been edited by Prof. E. P. Fedorov, Dr. M. L. Smith, and Dr. P. L. Bender, with extensive assistance from Lorraine Volsky.