

## PREFACE

IAU Symposium No. 82, "Time and the Earth's Rotation", met to discuss modern research in the field of the rotation of the Earth with particular emphasis on the role of new observational techniques in this work. The use of these techniques has prompted a new look at the definitions of the traditional reference systems and the concepts of the rotation of the Earth around its center of mass. Specific topics discussed were time, polar motion, reference systems, conventional radio interferometry, very long baseline interferometry (VLBI), Doppler satellite methods, satellite laser ranging, lunar laser ranging, and geophysical research concerning the Earth's rotation.

Improvement in the accuracy of the observations is a key to possible solutions of the many unsolved problems remaining in this field. It appears that such improvement, using both classical and new techniques, is forthcoming in the near future. This will surely contribute to a better understanding of some of the long-standing questions concerning the rotation of the Earth around its center of mass and lead to an improved knowledge of the rotating, deformable Earth.

This volume contains the papers presented at IAU Symposium No. 82 as well as the discussions provoked by these papers. It is hoped that it captures the principal points of the meeting and that it will contribute not only to a better understanding of existing problems, but also to future research in time and the Earth's rotation.