

Contents

INTRODUCTION

I. Relativity

LECTURES ON GENERAL RELATIVITY THEORY Alfred Schild	1
COMPARISON OF THEORY AND OBSERVATION IN GENERAL RELATIVITY L. I. Schiff	105
EXPERIMENTAL TESTS OF GENERAL RELATIVITY. RADAR Freeman J. Dyson	117
GRAVITATIONAL WAVES R. K. Sachs	129
MEASUREMENTS OF SPACE TIME CURVATURE AND SEARCH FOR GRAVITATIONAL RADIATION J. Weber	141
CONSERVED QUANTITIES AND CONFORMAL STRUCTURE IN GENERAL RELATIVITY Roger Penrose	147
TAUB-NUT SPACE AS A COUNTEREXAMPLE TO ALMOST ANYTHING C. W. Misner	160
RELATIVISTIC HYDRODYNAMICS A. H. Taub	170
GRAVITATIONAL COLLAPSE G. C. McVittie	194
DRAGGING OF INERTIAL FRAMES BY ROTATING MASSES Jeffrey M. Cohen	200

II. Cosmology

LECTURES ON QUASI-STELLAR OBJECTS Maarten Schmidt	203
COSMOLOGY E. L. Schücking	218
A UNIFIED APPROACH TO COSMOLOGY David Layzer	237
JEANS' FORMULA FOR GRAVITATIONAL INSTABILITY W. B. Bonnor	263
MICROWAVE RADIATION FROM THE BIG BANG P. J. E. Peebles	274
INDEX	285

