

TABLE OF CONTENTS

IERS STANDARDS

1992

INTRODUCTION	1
Differences Between This Document and IERS Technical Note 3	2
NUMERICAL STANDARDS	4
CELESTIAL REFERENCE SYSTEM	12
CONVENTIONAL TERRESTRIAL REFERENCE FRAME	16
Definition	16
Realization	16
Transformation Parameters of World Coordinate Systems and Datums	17
Transformations to Current Datums	20
Plate Motion Model	20
LUNAR AND PLANETARY EPHEMERIDES	25
TRANSFORMATION BETWEEN THE CELESTIAL AND TERRESTRIAL SYSTEMS	28
Coordinate Transformation Referred to the Equinox	29
The IAU 1980 Theory of Nutation	31
Fundamental Arguments of the IAU 1980 Theory of Nutation	32
Coordinate Transformation Referred to the Nonrotating Origin	35
Geodesic Nutation	39
GЕOPOTENTIAL	42
SOLID EARTH TIDES	52
Calculation of the Potential Coefficients	52
Solid Tide Effect on Station Coordinates	56
OCEAN TIDE MODEL	62
LOCAL SITE DISPLACEMENT	62
Ocean Loading	67
Atmospheric Loading	109
TIDAL VARIATIONS IN THE EARTH'S ROTATION	112

TROPOSPHERIC MODEL	116
Satellite Laser Ranging	116
Very Long Baseline Interferometry	117
Global Positioning System	118
RADIATION PRESSURE REFLECTANCE MODEL	121
Global Positioning System	121
GENERAL RELATIVISTIC MODELS FOR TIME, COORDINATES AND	
EQUATIONS OF MOTION	123
Equations of Motion for an Artificial Earth Satellite	123
Equations of Motion in the Barycentric Frame	124
Scale Effect and Choice of Time Coordinate	124
GENERAL RELATIVISTIC MODELS FOR PROPAGATION	127
VLBI Time Delay	127
Gravitational Delay	130
Geometric Delay	131
Observations Close to the Sun	133
Propagation Correction for Laser Ranging	134
IAU, IAG AND IUGG RESOLUTIONS	137
IAU Resolution	137
IAG Resolution	140
IUGG Resolution	148