

IERS Technical Note No 3. IERS Standards (1989).

There are some major differences between of the IERS Standards(1989) and the Project MERIT Standards. The biggest changes have been the elimination of all references to optical observations and deletion of all information for artificial Earth satellites other than Lageos. These changes were made because these observations are no longer used operationally by the IERS. Included for the first time is a chapter on the tropospheric model.

Minor changes have also been made to many of the chapters. The following is a brief list of the modifications by chapter.

CHAPTER 1

- equatorial radius of the Earth
- dynamical form factor of the Earth
- geocentric constant of gravitation
- constant of gravitation
- mass of the Earth-Moon system
- mass of Saturn
- geopotential - use of GEM-T1
- change in radii for penumbra model
- change in relativistic corrections
- slight change in empirical force parameter for Lageos
- slight change in lunar secular acceleration
- plate motion model added

CHAPTER 2 - celestial reference frame is based on ICRF

CHAPTER 3 - conventional terrestrial reference frame is based on ITRF

CHAPTER 4 - same

CHAPTER 5 - same

CHAPTER 6 - addition of rotational deformation due to polar motion

CHAPTER 7 - same

CHAPTER 8 - addition of some horizontal site displacement
addition of site displacement due to atmospheric loading

CHAPTER 9 - same as Update #1

CHAPTER 10 - new

CHAPTER 11 - same
fixed errors in MERIT Standards in l' , ω , and 386-day tide

CHAPTER 12 - rewritten

CHAPTER 13 - rewritten
uses GEM-T1
lists GEM-T1 coefficients by table

CHAPTER 14 - same

CHAPTER 15 - rewritten
now includes relativistic corrections used in SLR

CHAPTER 16 - rewritten
now includes multiple models for relativistic corrections in VLBI