



The new reference edition of the IERS Conventions

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The IERS main products are the celestial and terrestrial reference frames, ICRF and ITRF, and the set of Earth orientation parameters to transform between them. Because several independent techniques are used to generate the ITRF, its quality strongly depends on using a consistent and complete set of models and procedures in the realization. The IERS Conventions are designed to provide these, and successive reference editions have been produced, the latest in 2003. However, since that time, the document has been continually updated in an electronic version available at <http://tai.bipm.org/iers/convupdt/convupdt.html>.

Following an IERS workshop on Conventions, held in September 2007, it was decided to produce a new reference edition of the Conventions, which is now reaching completion. The paper will present the main features of the new reference edition, highlighting the most important changes vs. the Conventions (2003):

- Define classes of models and specify guidelines to choose which models should be applied for IERS core products.
- Implement the latest recommendations of scientific unions and the conclusions of the unions working groups and commissions.
- Describe the latest realizations of the ICRS and the ITRS and an updated model for the transformation between them.
- Describe updated conventional models for the gravitational field and for the effect of ocean tides.
- Describe updated or new conventional models for signal propagation in the troposphere and ionosphere.
- Describe new models for atmospheric tidal loading and the oceanic pole tide loading.