

Draft Resolution to be submitted to the IAU GA 2006
(5 October 2005)

Recommendation from the Division I IAU Working Group on “Nomenclature for Fundamental Astronomy” (NFA)

Supplement to the IAU 2000 Resolutions on reference systems

RECOMMENDATION 1. Harmonizing the name of the pole and origin to “intermediate”

The XXVIth General Assembly of the IAU

NOTING

- 1)
the adoption of resolutions IAU B1.1 through B1.9 by the IAU General Assembly of 2000, and
- 2)
that the International Earth rotation and Reference Systems service (IERS) and the Standards Of Fundamental Astronomy (SOFA) activity have made available the models, procedures, data and software to implement these resolutions operationally, and that the Almanac Offices have begun to implement them beginning with their 2006 editions.

RECOGNISING

- 1)
that using the designation “intermediate” to refer to both the pole and the origin of the new systems linked to the Celestial Intermediate Pole and the Celestial or Terrestrial Ephemeris origins, defined in Resolution B1.7 and B1.8, respectively would improve the consistency of the nomenclature, and
- 2)
that the name “Conventional International Origin” with the potentially conflicting acronym CIO is no longer commonly used to refer to the reference pole for measuring polar motion as it was in the past by the International Latitude Service,

RECOMMENDS

- 1)
that the designation “intermediate” be used to describe the moving celestial and terrestrial reference systems defined in the 2000 IAU Resolutions and the various related entities, and
- 2)
that the terminology “Celestial Intermediate Origin” (CIO) and “Terrestrial Intermediate Origin” (TIO) be used in place of the previously introduced “Celestial Ephemeris Origin” (CEO) and “Terrestrial Ephemeris Origin” (TEO), and
- 3)
that authors carefully define acronyms used to designate entities of astronomical reference systems to avoid possible confusion.

RECOMMENDATION 2. Default orientation of the BCRS and GCRS

The XXVIth General Assembly of the IAU

NOTING

- 1) the adoption of resolutions IAU B1.1 through B1.9 by the IAU General Assembly of 2000, and
- 2) that the International Earth rotation and Reference Systems service (IERS) and the Standards Of Fundamental Astronomy (SOFA) activity have made available the models, procedures, data and software to implement these resolutions operationally, and that the Almanac Offices have begun to implement them beginning with their 2006 editions, and
- 3) that, in particular, the systems of space-time coordinates defined by IAU 2000 Resolution B1.3 for (a) the solar system (called the Barycentric Celestial Reference System, BCRS) and (b) the Earth (called the Geocentric Celestial Reference System, GCRS) have begun to come into use, and
- 4) the conclusions of the IAU Working Group on “Nomenclature for Fundamental Astronomy”, and
- 5) a recommendation from the IAU Working Group on “Relativity in Celestial Mechanics, Astrometry and Metrology”,

RECOGNISING

- 1) that the BCRS definition does not determine the orientation of the spatial coordinates,
- 2) that the natural choice of orientation for typical applications is that of the ICRS,
- 3) that the GCRS is defined such that its spatial coordinates are kinematically non-rotating with respect to those of the BCRS,

RECOMMENDS

that the BCRS definition is completed with the following: “For all practical applications, unless otherwise stated, the BCRS is assumed to be oriented according to the ICRS axes. The orientation of the GCRS is defined by the ICRS-oriented BCRS.”