

Review of the Division I Working Group on Precession and the Ecliptic

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Abstract. We present a review of the Division I Working Group on *Precession and the Ecliptic*.

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During the 2003-2006 triennium the members of the IAU Division I Working Group on *Precession and the Ecliptic* consisted of J.L. Hilton (Chair)(U.S. Naval Observatory), N. Capitaine (Systèmes de Référence Temps-Espace), J. Chapront (Systèmes de Référence Temps-Espace), J.M. Ferrandiz (U. de Alicante), A. Fienga (Institut de Mécanique Céleste), T. Fukushima (National Astronomical Observatory Japan, Tokyo, Japan), J. Getino (U. de Valladolid), P. Mathews (U. of Madras), J.-L. Simon (Institut de Mécanique Céleste), M. Soffel (T. U. Dresden), J. Vondrák, (Czech Acad. Sci.), P. Wallace (Her Majesty's Nautical Almanac Office), and J. Williams (Jet Propulsion Laboratory). The report of their work is published in Hilton *et al.* (2006).

This work also culminated in *Resolution 1* presented to the IAU XXVI General Assembly. The recommendations of *Resolution 1* are:

1. that the terms *lunisolar precession* and *planetary precession* be replaced by *precession of the equator* and *precession of the ecliptic*, respectively,
2. that, beginning on 1 January 2009, the precession component of the IAU 2000A precession-nutation model be replaced by the P03 precession theory, of Capitaine *et al.* (2003) for the precession of the equator (Eqs. 37) and the precession of the ecliptic (Eqs. 38); the same paper provides the polynomial developments for the P03 primary angles and a number of derived quantities for use in both the equinox based and *Celestial Intermediate Origin* based paradigms,
3. that the choice of precession parameters be left to the user, and
4. that the ecliptic pole should be explicitly defined by the mean heliocentric orbital angular momentum vector of the Earth-Moon barycenter in the Barycentric Celestial Reference Frame (BCRS), and this definition should be explicitly stated to avoid confusion with other, older definitions.

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References

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