

# THIRTIETH GENERAL ASSEMBLY

## RESOLUTIONS PRESENTED TO THE XXXth GENERAL ASSEMBLY

### RESOLUTION B1

#### on Geocentric and International Terrestrial Reference Systems and Frames

*Proposed by the IAU Commission A2 (Rotation of the Earth)*

The XXX General Assembly of International Astronomical Union,

#### **noting**

1. The essential role of the Celestial and Terrestrial Reference Systems and Frames to monitor the Earth's rotation and orientation in space with the accuracy currently required and foreseen in the near future;
2. The increasing importance of Reference Systems and Frames to science, technology, and society, and in particular to numerous astronomical and other scientific and technical activities involving precise positioning and Earth and space navigation;
3. The adoption of Resolutions B1.1 through B1.9 on reference systems by the XXIV General Assembly of the IAU in Manchester 2000, and especially of Resolution B1.3 on the definition of the Barycentric Celestial Reference System (BCRS) and Geocentric Celestial Reference System (GCRS);
4. The endorsement of IAU 2000 Resolutions B1.1 through B1.9 by Resolution 4 of the XXIII General Assembly of the International Union of Geodesy and Geophysics (IUGG) in Sapporo 2003;
5. That the GCRS is defined as a system of geocentric space-time coordinates within the framework of General Relativity with metric tensor specified by Resolution B1.3 of IAU 2000;
6. The need for a spatial reference system co-rotating with the Earth in its diurnal rotation in space for representing the Earth's orientation with respect to the GCRS;

#### **recognizing**

7. That in agreement with Resolution B1.3 of the XXIV General Assembly of the IAU

in Manchester 2000, the XXIV General Assembly of the IUGG in Perugia 2007 adopted Resolution 2 that endorsed the definition of a Geocentric Terrestrial Reference System (GTRS) as a system of geocentric space-time coordinates within the framework of General Relativity, co-rotating with the Earth, and related to the GCRS by a spatial rotation which takes into account the Earth orientation parameters;

8. That the XXIV General Assembly of the IUGG in Perugia 2007 adopted Resolution 2 that endorsed the definition of an International Terrestrial Reference System (ITRS) as the specific GTRS for which the orientation is operationally maintained in continuity with past international agreements (BIH orientation);

9. That the General Assembly of the United Nations in New York 2015 adopted Resolution 69/266 entitled “*A Global Geodetic Reference Frame for Sustainable Development*”;

**recommends**

10. That the ITRS be adopted as the preferred GTRS for scientific and technical applications; and

11. That the IAU engage, together with other concerned organizations such as the IUGG and the International Association of Geodesy, with the United Nations (UN) Global Geospatial Information Management (GGIM) Subcommittee on Geodesy in order to promote the implementation of the UN-GGIM Road Map for the Global Geodetic Reference Frame.

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