

XXXIst GENERAL ASSEMBLY
RESOLUTIONS PRESENTED TO THE XXXIst GENERAL
ASSEMBLY

RESOLUTION B3

On the Gaia Celestial Reference Frame

*Proposed by the IAU Division A WG 'Multi-waveband Realizations of the International
Celestial Reference System'*

The XXXI General Assembly of the International Astronomical Union,

noting

1. that Resolution B2 of the XXIIIrd General Assembly (1997) resolved “that, as from 1 January 1998, the IAU celestial reference system shall be the International Celestial Reference System(ICRS)”;
2. that Resolution B2 of the XXIIIrd General Assembly (1997) resolved ‘that the Hipparcos Catalogue shall be the primary realization of the ICRS at optical wavelengths’;
3. that Resolution B2 of the XXXth General Assembly (2018) resolved “that, as from 1 January 2019, the fundamental realization of the International Celestial Reference System (ICRS) shall be the Third Realization of the International Celestial Reference Frame (ICRF3), as constructed by the IAU Working Group on the Third Realization of the International Celestial Reference Frame”;

recognizing

4. that since the establishment of the ICRF3, the ESA space telescope Gaia has conducted relevant optical observations of extragalactic sources and made available a high quality astrometric catalogue for these sources;
5. that the observational principles of Gaia regarding the extragalactic sources meet the ICRS requirements;
6. that the Gaia reference frame in the visible (Gaia-CRF3) and the radio ICRF3 are aligned to each other thanks to a set of common sources in the optical and radio bands;
7. that the Gaia-CRF3 and the stellar Gaia catalogue have largely superseded the Hipparcos Catalogue;
8. that the Gaia-CRF3 is de facto the optical realization of the Celestial Reference Frame in use within the astronomical community;
9. that the Gaia-CRF3 data has been released in December 2020 within the Gaia EDR3 and is accessible in the Gaia archive;

resolves

10. that as from 1 January 2022, the fundamental realization of the International Celestial Reference System (ICRS) shall comprise the Third Realization of the International Celestial Reference Frame (ICRF3) for the radio domain and the Gaia-CRF3 for the optical domain.

Reference

Gaia Collaboration, Gaia Early Data Release 3. Summary of the contents and survey properties, *A&A*, 649, A1 (2021), <https://doi.org/10.1051/0004-6361/202039657>