



Draft Resolution C

On the technical actions needed to ensure the continuity of UTC

**28th meeting of the
General Conference on
Weights and Measures
(2026)**



The documents presented to the General Conference on Weights and Measures (CGPM) are prepared in English as well as French.

Please note, however, that the official version, particularly of the Resolutions voted by the CGPM, is the French one.

Version history

Version 1	2026/01/13	Publication of Draft Resolutions
Version 2	2026/01/30	Draft Resolution C: effective date of continuous UTC set on 20 May 2027
Version 3	2026/03/30	Draft Resolution D: need to use conventional values fixed by international organizations and to consider the role of the BIPM
Version 4	2026/06/30	Draft Resolution D: “the realization of lunar reference time scales” replaced by “the realizations of the lunar reference time scale” in the “further recommends” section, to reflect the aim of the draft resolution to state that there must be a unique lunar reference time scale, even if there may be several realizations
Version 5	2026/07/13	Draft Resolution V: amounts for the proposed dotation added

To contact the Director of the BIPM:

Dr Annette Koo
Pavillon de Breteuil
F-92312 Sèvres Cedex, France
annette.koo@bipm.org
+33 (0) 1 45 07 70 00
<https://www.bipm.org>

Text approved by the CIPM in January, March and June 2026
Published by the BIPM

On the technical actions needed to ensure the continuity of UTC

The General Conference on Weights and Measures (CGPM), at its 28th meeting,

recalling that

- the CGPM, when adopting Resolution 2 “On the definition of time scales” at its 26th meeting (2018),
 - confirmed that Coordinated Universal Time (UTC) is a time scale produced by the International Bureau of Weights and Measures (BIPM) with the same rate as International Atomic Time (TAI), but differing from TAI only by an integral number of seconds,
 - stated that UTC is the only recommended time scale for international reference and the basis of civil time in most countries,
- the CGPM, when adopting Resolution 4 “On the use and future development of UTC” at its 27th meeting (2022),
 - recalled that the offset by an integral number of seconds is due to the agreement maintained between UTC and the time scale describing the angular rotation of the Earth (UT1),
 - decided that the maximum value for the difference $|\text{UT1}-\text{UTC}|$ will be increased in, or before, 2035, to ensure the continuity of UTC for at least a century,
 - requested the CIPM to draft a resolution for the 28th meeting of the CGPM (2026),

recognizing that

- industrial users and the synchronization needs of national critical infrastructures, for example transportation, energy distribution, telecommunication, and space projects require UTC to be continuous without any future adjustment,
- for some applications it is necessary to fix a maximum value for the difference $|\text{UT1}-\text{UTC}|$ to appropriately design the software underlying operational systems,
- in many countries there are differences of more than one hour between local apparent solar time and civil time due to the choice of time zone, and changes of an hour are regularly introduced when daylight-saving time is used,

further recognizing that

- users of UT1 can find information on the value of the difference $\text{UT1}-\text{UTC}$ in the Global Navigation Satellite Services (GNSS) navigation messages, and internet services provided by the International Earth Rotation and Reference Systems Service (IERS), National Metrology Institutes (NMIs), and other services,
- the International Telecommunication Union Radiocommunication Sector (ITU-R), through its Working Party 7A, is studying possible updates of the code for the transmission of the difference $\text{UT1}-\text{UTC}$ by radio stations and Resolution 655 (REV.WRC-23) resolved to “establish a transition

period for implementation and allow for the possibility to disseminate the increased difference between UT1 and UTC via radiocommunication system until 2035, but no later than 2040, in cases where existing equipment cannot be replaced earlier”,

noting that

- a workshop organized by the Consultative Committee for Time and Frequency (CCTF) and IERS in March 2025, which included experts on Earth rotation, estimated that the probability of a negative leap second will increase rapidly in the near future, reaching a 30 % probability by 2035,
- a negative leap second has not previously been applied, and it is considered to pose a high risk of causing anomalies and disruption to critical infrastructures that are largely unprepared, and the preparation would create, for the industries that rely on time synchronization, a need for financial investment, whose amount is estimated to be similar to their preparations for the millennium bug,
- the growing influence of IoT (Internet of Things) technologies, dispersed multi-sensor systems, smart grids, and virtual services for contemporary society, creates an increasing risk of malfunction in operation of systems and services with the insertion of any leap second, especially with a negative one,
- the use of different mitigation methods for leap second introductions by global service providers in their server systems, in order to avoid time steps, leads to inconsistency in timing between different systems and in the disseminated time and frequency, which do not conform to the SI unit,
- international organizations including the International Telecommunication Union Telecommunication Standardization Sector (ITU-T), the International Union of Radio Science (URSI), international working groups such as the Institute of Electrical and Electronics Engineers (IEEE) 1588, and individual industry representatives have provided formal statements to the BIPM on the need to bring forward the implementation of UTC as a continuous time scale to avoid the risk of the insertion of a negative leap second,
- the additional risk of a delay in updating UTC could cause some user organizations to change their reference time scales to, for example, a GNSS time instead of UTC, seriously compromising the concept of international standardization in metrology,

welcoming

- the excellent collaboration between the BIPM and the ITU-R and the endorsement of CGPM Resolution 4 (2022) at the World Radiocommunication Conference by Resolution 655 (REV.WRC-2023),
- the support and engagement of the IERS to take all necessary measures to change its operational provision for, and its announcement of, leap seconds according to the CGPM resolutions,

decides that

- continuous UTC will become effective on 20 May 2027,
- the maximum value for the difference $|\text{UT1}-\text{UTC}|$ will be 3 600 seconds (1 hour), ensuring the long-term continuity for UTC for several centuries,

requests the BIPM

- to continue to collaborate with the International Telecommunication Union (ITU), International Astronomical Union (IAU), International Union of Geodesy and Geophysics (IUGG), IERS, and other organizations that may be impacted by this decision in order to
 - inform users and support the application of this decision,
 - continue to monitor the value of UT1-UTC, its estimated evolution and modelling as determined by the IERS,
 - inform the CIPM regularly on the evolution of the value of UT1-UTC,
- and to continue to work with the Regional Metrology Organizations, the NMIs, and users to promote the understanding of the importance of a continuous UTC and its prompt and efficient provision to the users.

Pavillon de Breteuil
F-92312 Sèvres Cedex
FRANCE
bipm.org

© *bipm.org*, 2026.