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# Report of the Director of the BIPM:

# Programme implementation, scientific activities and operations

**13 October**

*Annette Koo, Director of the BIPM*

# Delivery of global measurement trust

To **represent** the world-wide measurement community, aiming to maximize its uptake and impact.

To be a centre for **scientific and technical collaboration** between Member States, providing capabilities for international measurement comparisons on a shared-cost basis.

To be the **coordinator** of the world-wide measurement system, ensuring it gives comparable and internationally accepted measurement results.

Fulfilling our mission and objectives is underpinned by our work in **capacity building and knowledge transfer**

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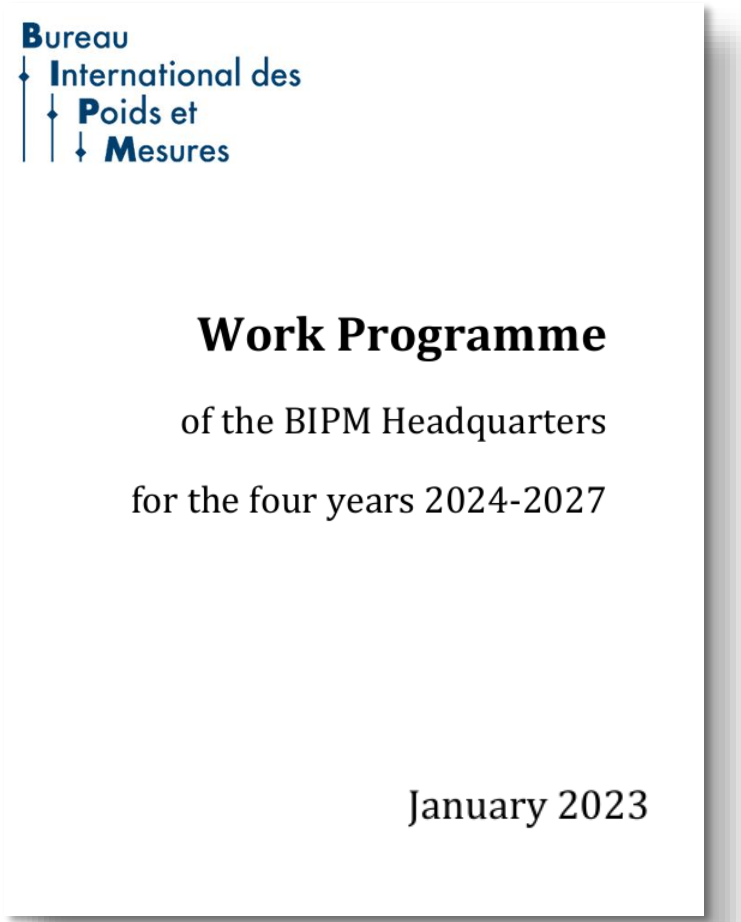

# Continuity of critical infrastructure

## Responsive to our changing world

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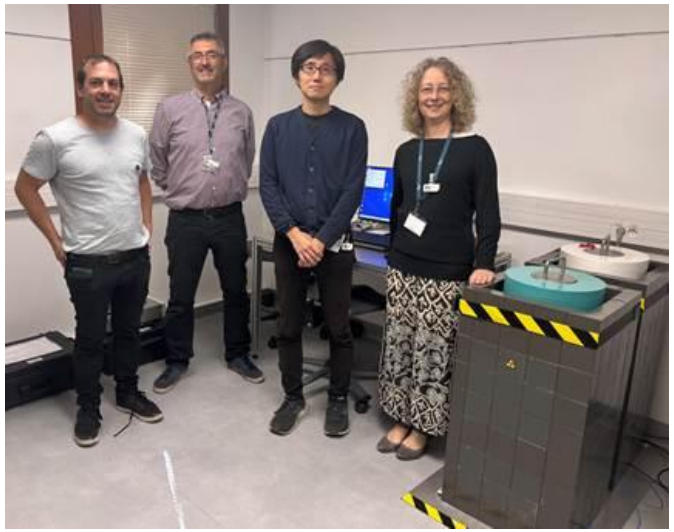
# Continuity of critical infrastructure

## Responsive to our changing world

**Upgraded** the 50-year-old radionuclide activity comparator



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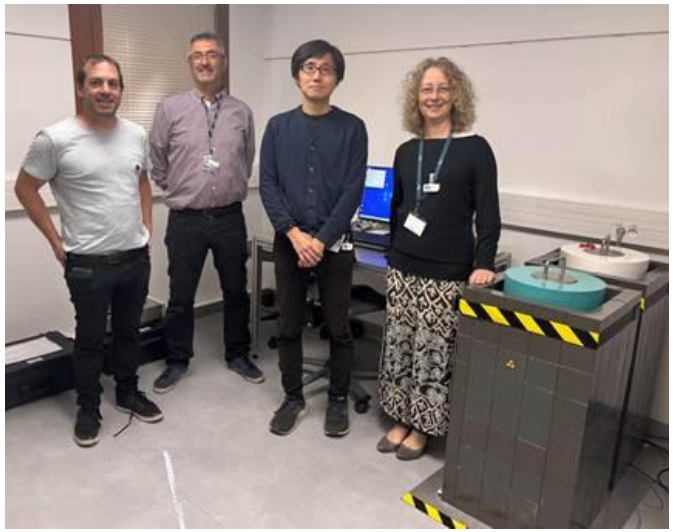
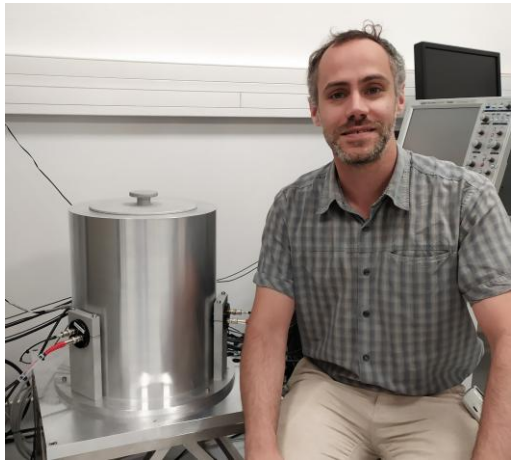


**Extended** the capability for the growing use of new nuclides for therapeutic nuclear medicine



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Provided **long-term stability** for optimal patient care worldwide

# Continuity of critical infrastructure

## Responsive to our changing world



Maintained of the BIPM Kibble Balance – **one of the few** realizations of the kilogram

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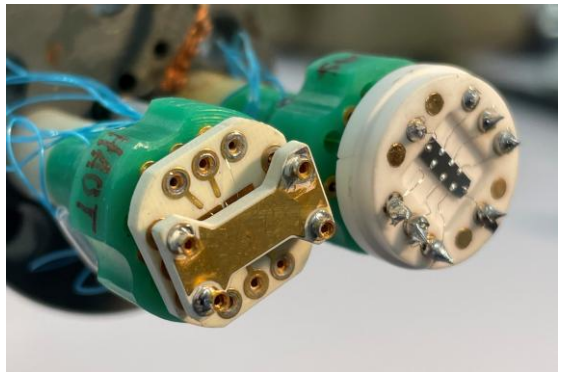
Maintained of the BIPM Kibble Balance – **one of the few** realizations of the kilogram



Investigated graphene for quantum Hall resistance standard – retaining the **level of accuracy** while making operation easier

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Maintained cutting edge quantum capabilities for **ultimate precision**

# Continuity of critical infrastructure

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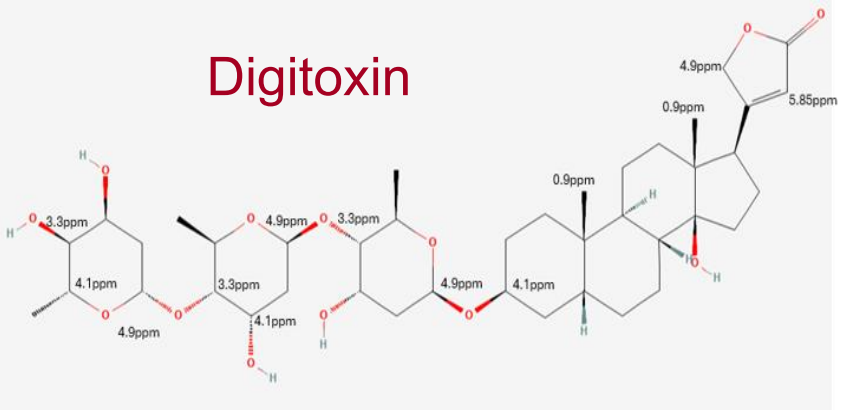


Core comparisons delivered for primary small organic molecules - **Underpin broad range** of CMCs for Member States

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# Continuity of critical infrastructure

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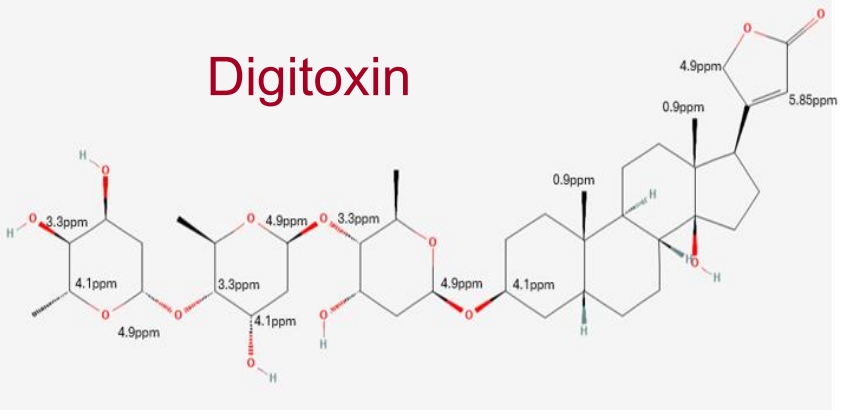
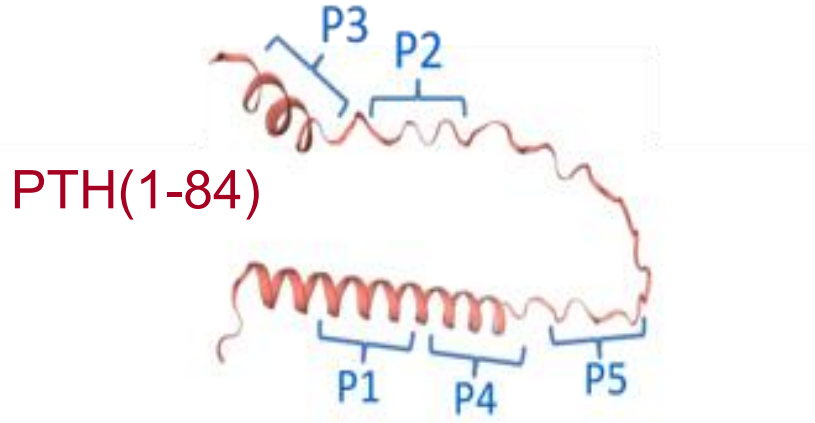



Core comparisons delivered for primary small organic molecules
- **Supporting broad range** of CMCs for Member States

Core comparisons delivered for primary protein
- **Enabling wider application** of advanced therapeutics

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**Strategically chosen** comparison services substantiate a vast range of chemical measurements for Member States

# Continuity of critical infrastructure

## Responsive to our changing world

International timekeeping bulletin (Circular T)
delivered **every month without fail**

CIRCULAR T 464 ISSN 1143-1393
2026 SEPTEMBER 09, 07h UTC

BUREAU INTERNATIONAL DES POIDS ET MESURES
THE INTERGOVERNMENTAL ORGANIZATION ESTABLISHED BY THE METRE CONVENTION
PAVILLON DE BRETEUIL F-92312 SEVRES CEDEX TEL. +33 1 45 07 70 70 tai@bipm.org

The contents of the sections of BIPM Circular T are fully described in the document "Explanatory supplement to BIPM Circular T"
available at https://webtai.bipm.org/ftp/pub/tai/other-products/notes/explanatory_supplement_v0.8.pdf

1 - Difference between UTC and its local realizations UTC(k) and corresponding uncertainties.
From 2017 January 1, 0h UTC, TAI-UTC = 37 s.

| Date 2026 | 0h UTC | JUL 28 | AUG 2 | AUG 7 | AUG 12 | AUG 17 | AUG 22 | AUG 27 |
|---|---|---|---|---|---|---|---|---|

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# Continuity of critical infrastructure

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International timekeeping bulletin (Circular T) delivered **every month without fail**

Since June 2024, **four GNSS systems added** to Circular T

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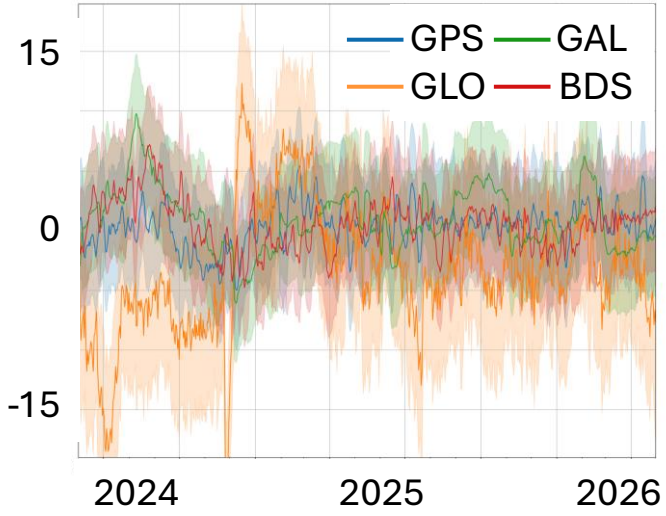


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Underpinned reliable **timekeeping for modern society**

# Technical services in numbers

| Ionizing Radiation | Mass | Electricity | Chemistry | Time |
|---|---|---|---|---|
| **85** comparison participants | **31** comparison participants | **22** comparison participants | **14** distinct comparisons | **94** participants in UTC monthly |
| **116** calibration certificates | **84** calibration certificates | **287** calibration certificates | **268** standards compared | **12** calibrations (G1 labs) |
| 30 | 43 | 44 | 37 | 57 |
| 84 States with SSDL Laboratories via IAEA | | | 3 International Organizations | 14 Associates |

Member States

# Trust in a digitized context

SI Reference Point
2024: Public beta version
2026: First stable version

Digital references for

- Units of measurement
- SI concepts, prefixes, and defining constants
- CGPM and CIPM decisions that define the SI



"Triple point of Water cell" by Marián Hubinský is licensed under CC BY-SA 4.0.

Publication of machine-readable information for international temperature scales

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Extended the Metre Convention into the digital world

# Mutual recognition of capabilities

Key Comparison Data Base (KCDB)

Repository of internationally recognized national capabilities and the comparison results that support them

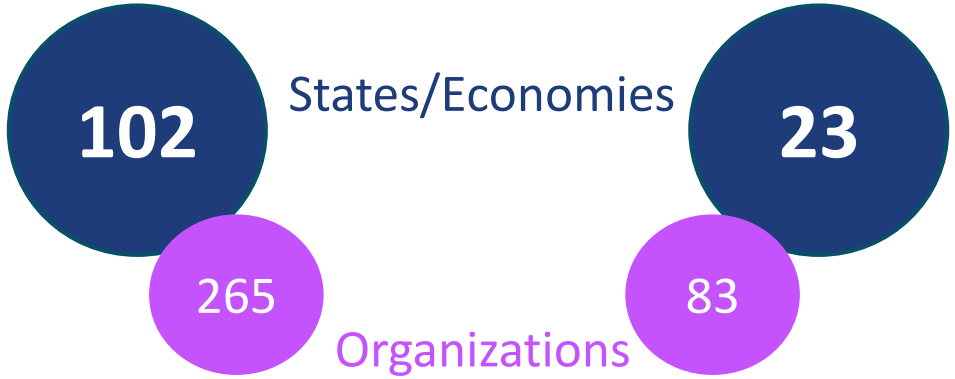
KCDB

**26 424**
Measurement Capabilities

**2057**
Comparisons of National Standards

JCTLM
Accurate results for patient care

**907**
Materials, Methods and Services




Joint Committee for Traceability in Laboratory Medicine (JCTLM)

Repository of materials, methods and services for laboratory medicine and in vitro diagnostics

# Mutual recognition of capabilities

KCDB

**26 424**
Measurement Capabilities

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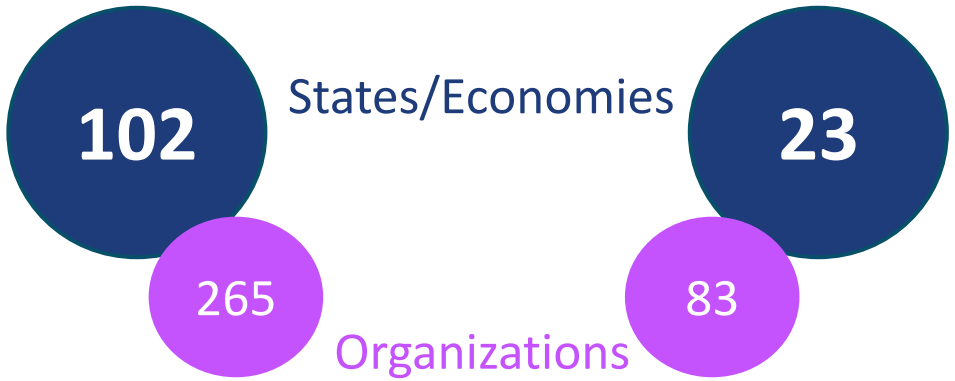



Adopting best practices in the digital age:

- Application of FAIR Principles
- API Access
- Persistent Identifiers

Providing reliable references for measurement capabilities

- Evidence based
- Peer reviewed

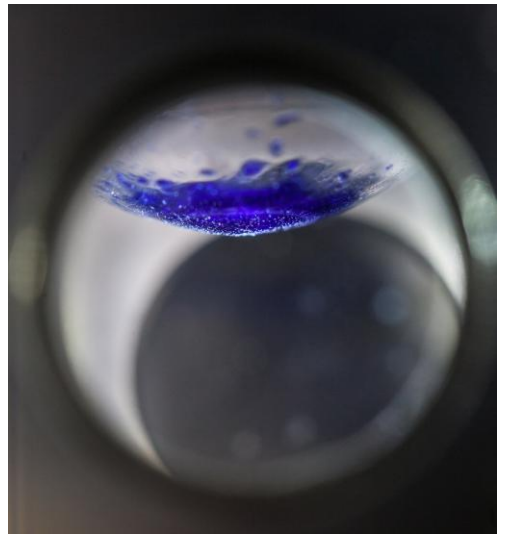
# Engaged with International Partners




CGPM (2022) **decision endorsed** by the ITU in 2023. Engagement continued in preparation of the resolution presented here.

**Recognition** of World Metrology Day by UNESCO in 2023, **coordinated awareness** through 150th celebrations



Broad **ecosystem collaboration** improved ozone measurements by a factor of 6 on 1 January 2025

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**Represented metrology** on the international stage

# Enabling cooperation among Member States

**656** meetings over the period with

**7662** in person participations

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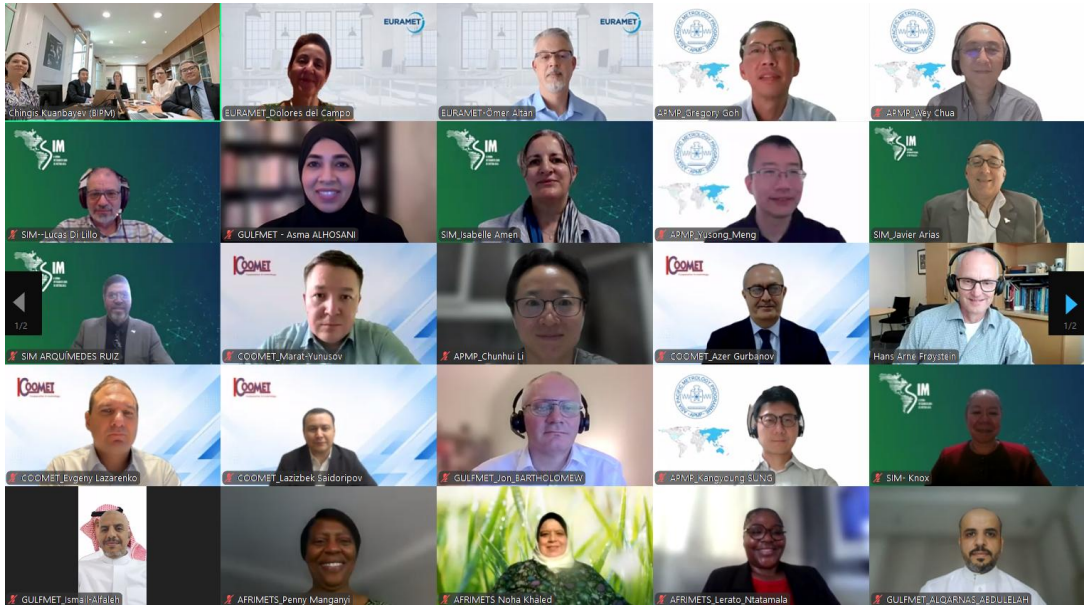
# Enabling cooperation among Member States

**656** meetings over the period with

**7662** in person participations

**25430** participations online

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**Reduced the distance** between local effort and global impact

# Exchange of knowledge between Member States

**34** CBKT activities

**3015** participations

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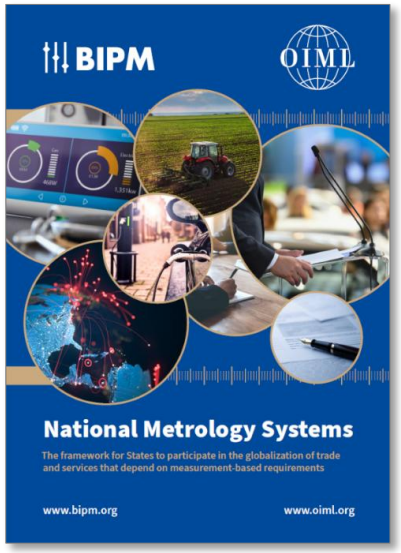
**40** E-learning courses

**2500** E-learning users

Five UTC Summer Schools **delivered practical skills**






Support for **development of metrology systems** aligned to national priorities

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Building competence and **growing participation** in Metre Convention

# Continuity of critical infrastructure

## Responsive to our changing world

Priority scientific services delivered for

- Long term stability
- Ultimate precision
- Strategic impact
- Reliability

SI extended into digital world

Validity of measurement claims sustained

Voice of metrology represented

Participation extended and deepened




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