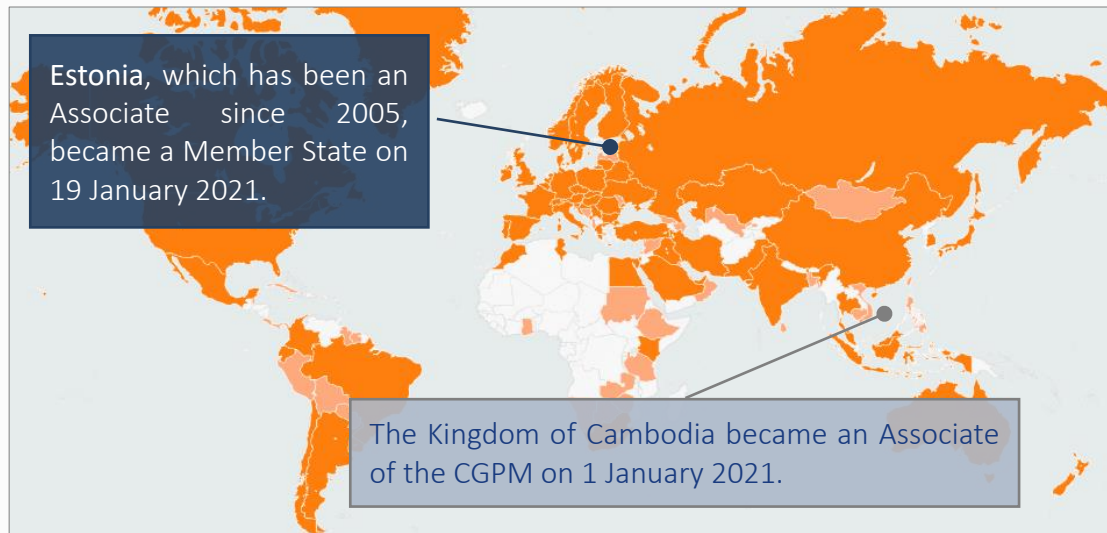


Members and Associates *(July 2021)*



- 63 Member States* and
- 39 Associates of the CGPM
(States and Economies)

** The official term is "States Parties to the Metre Convention"; the term "Member States" is its synonym and used for easy reference.*



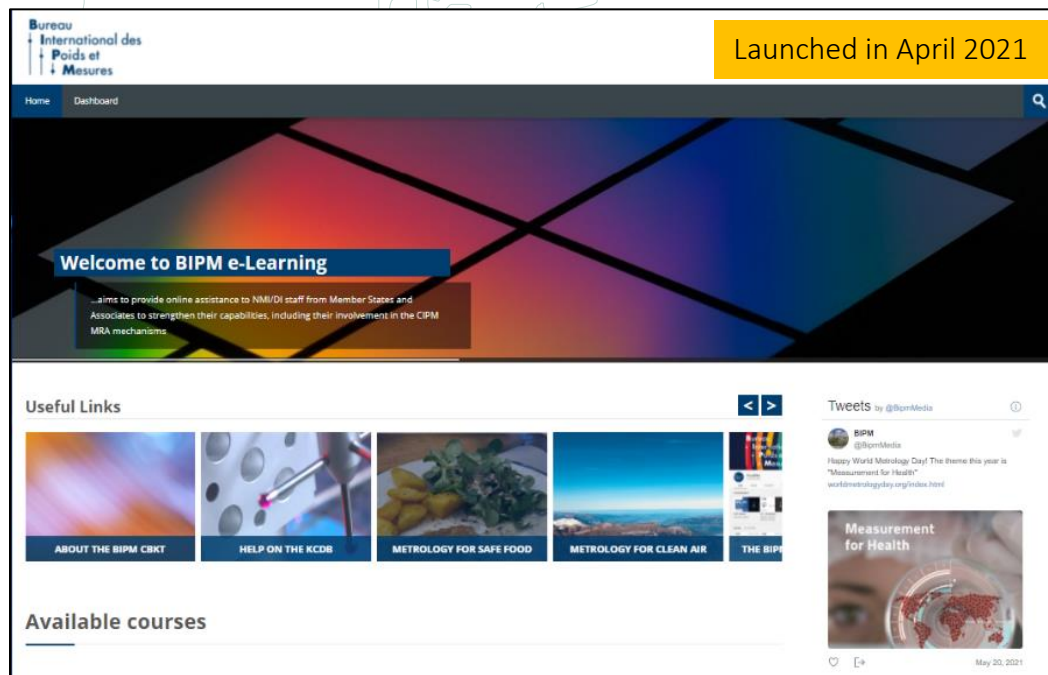
260 Institutes participating in the CIPM MRA

- 102 National Metrology Institutes
 - 63 Member States
 - 39 Associates
- 4 International organizations (ESA, IAEA, JRC, WMO)
- 154 Designated Institutes = 152 (national) + 2 (IO)

1 732 comparisons
1094 KCs, 638 SCs

25 865 CMCs
Peer-reviewed declarations

e-Learning



Bureau International des Poids et Mesures

Home Dashboard

Launched in April 2021

Welcome to BIPM e-Learning

...aims to provide online assistance to NMI/DI staff from Member States and Associates to strengthen their capabilities, including their involvement in the CIPM MRA mechanisms

Useful Links

- ABOUT THE BIPM CBKT
- HELP ON THE KCDB
- METROLOGY FOR SAFE FOOD
- METROLOGY FOR CLEAN AIR
- THE BIPM

Tweets by @BipmMedia

Happy World Metrology Day! The theme this year is "Measurement for Health" worldmetrologyday.org/index.html

Measurement for Health

Available courses

320 Users in the platform

www.bipm.org



CIPM MRA

This course is made up of 6 modules and intended to give an overall understanding of the CIPM MRA processes. For formal guidance see: <https://www.bipm.org/en/cipm-mra/cipm-mra-documents>

Course co-ordinator: Chingis KUANBAYEV

[Click to enter this course](#)



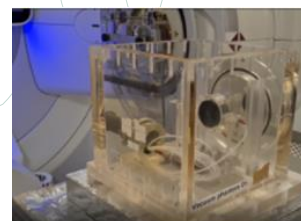
Non Structure-Related Impurity Content in Organic Pure Materials

The course is intended for NMI scientists working in organic analysis and wishing to further their theoretical and practical knowledge of the use of techniques including Karl Fischer Titration, Thermogravimetric Analysis, Sorption Analysis, Elemental Analysis and techniques based on GC- and NMR-methods to obtain an accurate, traceable quantification of the non related-structure impurity content present in a high purity organic material. The ability to undertake this assessment is a key element in the "mass balance" method for organic purity assignment. For more information on the six modules that make up the course follow the "Click to enter the course" link below.

NMIs and DIs from Member States and Associates are able to access the online course material after completing the registration form.

Course co-ordinator: Steven Westwood

[Click to enter this course](#)



How to enter a CMC claim for ionizing radiation metrology

The aim of this course is to help you enter the information needed on the KCDB for claiming a CMC for radiation dosimetry, radioactivity or neutron metrology. Here you will find the CCRI rules setting out the information required by reviewers; there are also step-by-step presentations that can be downloaded and translated.

Course co-ordinator: Sibusiso Jozela

[Click to enter this course](#)

e-Learning –



CIPM MRA

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Course co-ordinator: Chingis KUANBAYEV

[Click to enter this course](#)

Module 1: What is the CIPM MRA, and to whom is it relevant?

01 Objectives

This module is based on the CIPM MRA and related policy documents. The module provides an introduction and overview of the CIPM MRA.


Modules 2 to 6 address the CIPM MRA in detail.

Module 2: Comparisons in the CIPM MRA

02 Objectives

This module is based on CIPM MRA G 11 and will enable you to understand the comparison processes within the context of the CIPM MRA.

Full details of the process including the detailed steps that need to be followed can be found in the guidance document on comparisons - CIPM MRA G 11, which may be also supplemented by guidance issued by your RMO or relevant Consultative Committee.




Module 3: Quality management system in the CIPM MRA

03 Objectives

This module is based on the CIPM MRA-G-12 and will enable you to understand the CIPM MRA requirements on the quality management system (QMS).

Full details of the process including the detailed steps that need to be followed can be found in the guidance document on quality management systems - CIPM MRA-G-12, supplemented by guidance issued by your RMO.




Module 4: Calibration and measurement capabilities (CMCs)

04 Objectives

This module is based on the CIPM MRA-G-13 and will enable you to understand the concept of CMCs and criteria for their international acceptance within the CIPM MRA.

It is complemented by Module 5, which addresses the CMC review process.

Full details of the process including the detailed steps that need to be followed can be found in the guidance document on CMCs - CIPM MRA-G-13, which may be also supplemented by guidance issued by your RMO or relevant Consultative Committee.



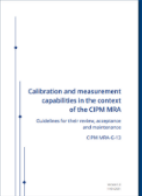
Module 5: Peer-review of CMCs

05 Objectives

This module is based on the CIPM MRA G 13 and will enable you to understand the CMC review process.

It is complementary to Module 4, which describes the CMCs.

Full details of the process including the detailed steps that need to be followed can be found in the guidance document on CMCs - CIPM MRA G 13, which may be also supplemented by guidance issued by your RMO or relevant Consultative Committee.



Module 6: Metrological traceability

06 Objectives

This module describes the CIPM MRA requirements for metrological traceability.

It is complementary to Modules 4 and 5, which describe the CMCs and their review process.

Launch of on-line programs

Metrology for Safe Food:

- Mycotoxin Standards
- Pesticides and Residues (2021)

Visit: <https://www.bipm.org/en/cbkt/safe-food.html>

Metrology for Clean Air:

- FTIR operation for accurate gas analysis
- Dynamic gas standard generation (2022)

Visit: <https://www.bipm.org/en/cbkt/clean-air.html>

Metrology for Laboratory Medicine:

- Peptide standards (2023)

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CBKT Webinars
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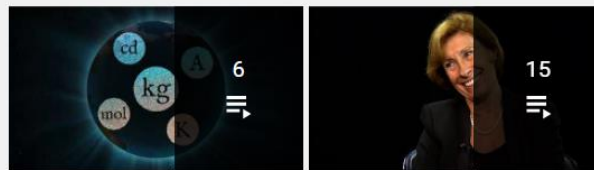
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Working together to promote and advance the global
comparability of measurements



ABOUT US

COORDINATION

LIAISON

TECHNICAL/SCIENTIFIC

PUBLICATIONS & EVENTS



The BIPM is...

- the international organization established by the **Metre Convention**, through which Member States act together on matters related to measurement science and measurement standards
- the home of the **International System of Units (SI)** and the **international reference time scale (UTC)**.

Tuesday 20 July 2021



UTC 08:46:15

Your transmission delay : 0.00 s

Working together to promote and advance the global
comparability of measurements



ABOUT US

COORDINATION

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TECHNICAL/SCIENTIFIC

PUBLICATIONS & EVENTS



INSTITUTIONAL LIAISONS

ALPHABETICAL LIST

FORMAL AGREEMENTS

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TECHNICAL LIAISONS

CODATA-TGFC

JOINT COMMITTEES

GUIDES IN METROLOGY: JCGM

LABORATORY MEDICINE: JCTLM

CIPM MRA: JCRB

**NMI DIRECTORS AND MEMBER STATE
REPRESENTATIVES**

REGIONAL METROLOGY ORGANIZATIONS

AFRIMETS

APMP

COOMET

EURAMET

GULFMET

SIM



CIPM initiative to provide a Digital SI Framework

The CIPM has launched a **Task Group on the “Digital SI Framework”**

- To enable SI-based digital communication in industry
- To support the digital science and open-science paradigms
- To get metrological services ready for artificial intelligence



The Key Comparison Database (KCDB)

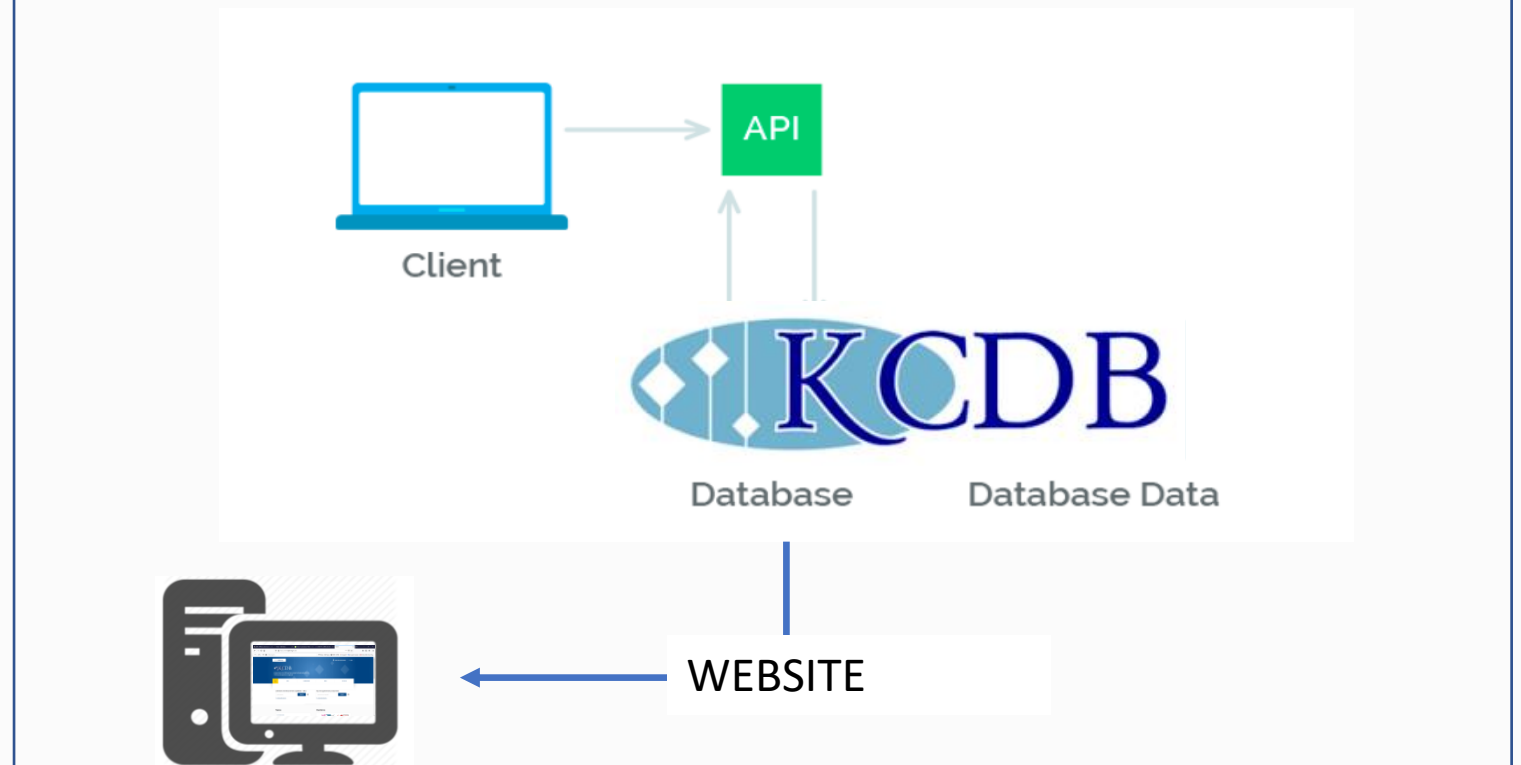
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(national) + 2 (IO)

6 RMOs

Playing an important role to support mutual confidence in the validity of calibration and measurement certificates issued by participating institutes

Machine readable access to the KCDB



1 732 comparisons

1094 key, 638 supplementary
comparisons

25 865 CMCs

regionally and internationally peer-
reviewed CMC declarations

Work in progress - machine-readable products

Approved by the CIPM. Work in progress.

Future work

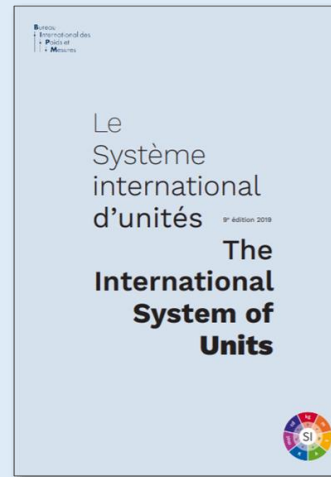


+ Time Dept database



API access

Real-time **validation of traceability and scope of recognition** for digital calibration certificates.



+ The annotated VIM

xml versions

The authoritative reference data defining the SI and how to use it.



Findable and Accessible data submitted to support key comparisons and publications

World Metrology Day



Measurement
for Health

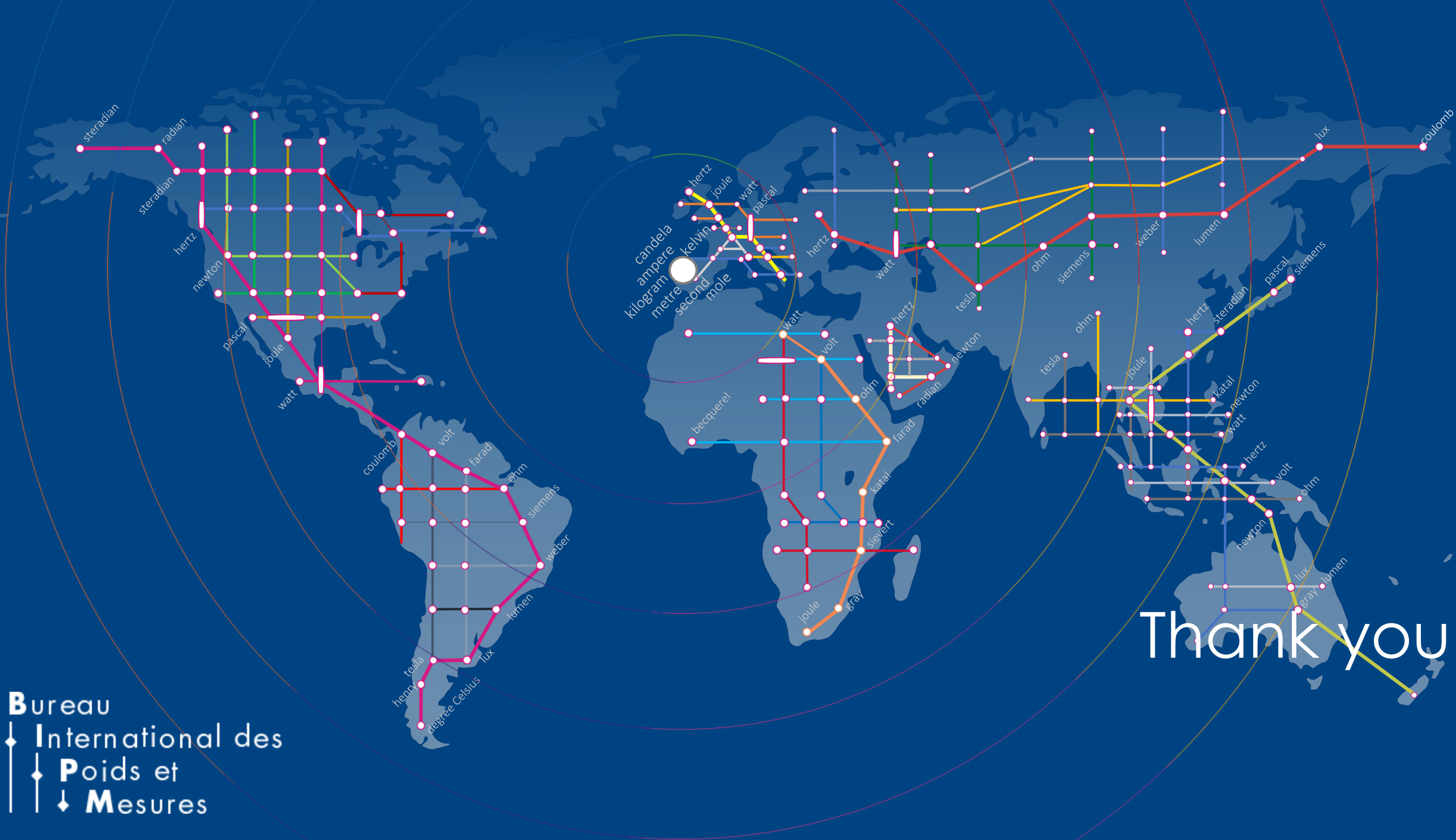


20 May 2021
www.worldmetrologyday.org

World Metrology Day

- The theme of World Metrology Day in 2021 is **“Measurement for Health”**
- Partner RMO is GULFMET

<https://www.worldmetrologyday.org/index.html>



Thank you

Bureau
 International des
 Poids et
 Mesures