

# BIPM Report to the EURAMET General Assembly

**Dr M. Milton**  
**Director of the BIPM**



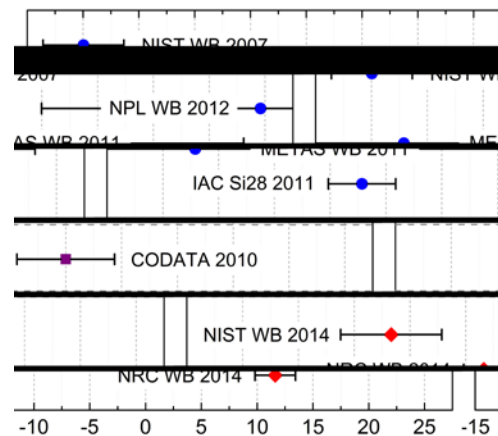
EURAMET General Assembly,  
Cavtat, June 2014

# Towards a new SI

New data published in the latest edition of *Metrologia*.

## CCM

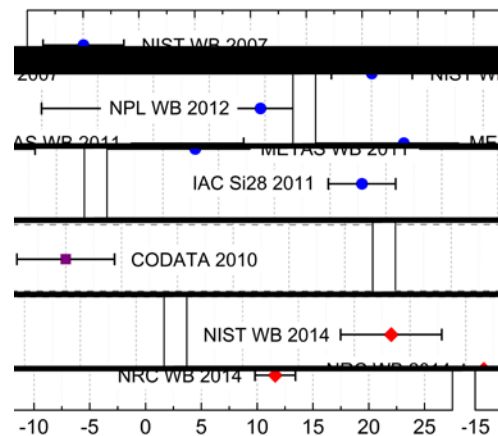
At least 3 experiments,  
using 2 different methods  
with  $u_r < 50$  ppb,  
at least one with  $u_r < 20$  ppb.



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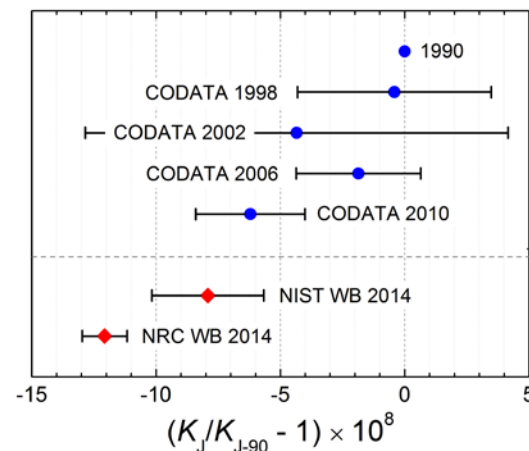
## CCM

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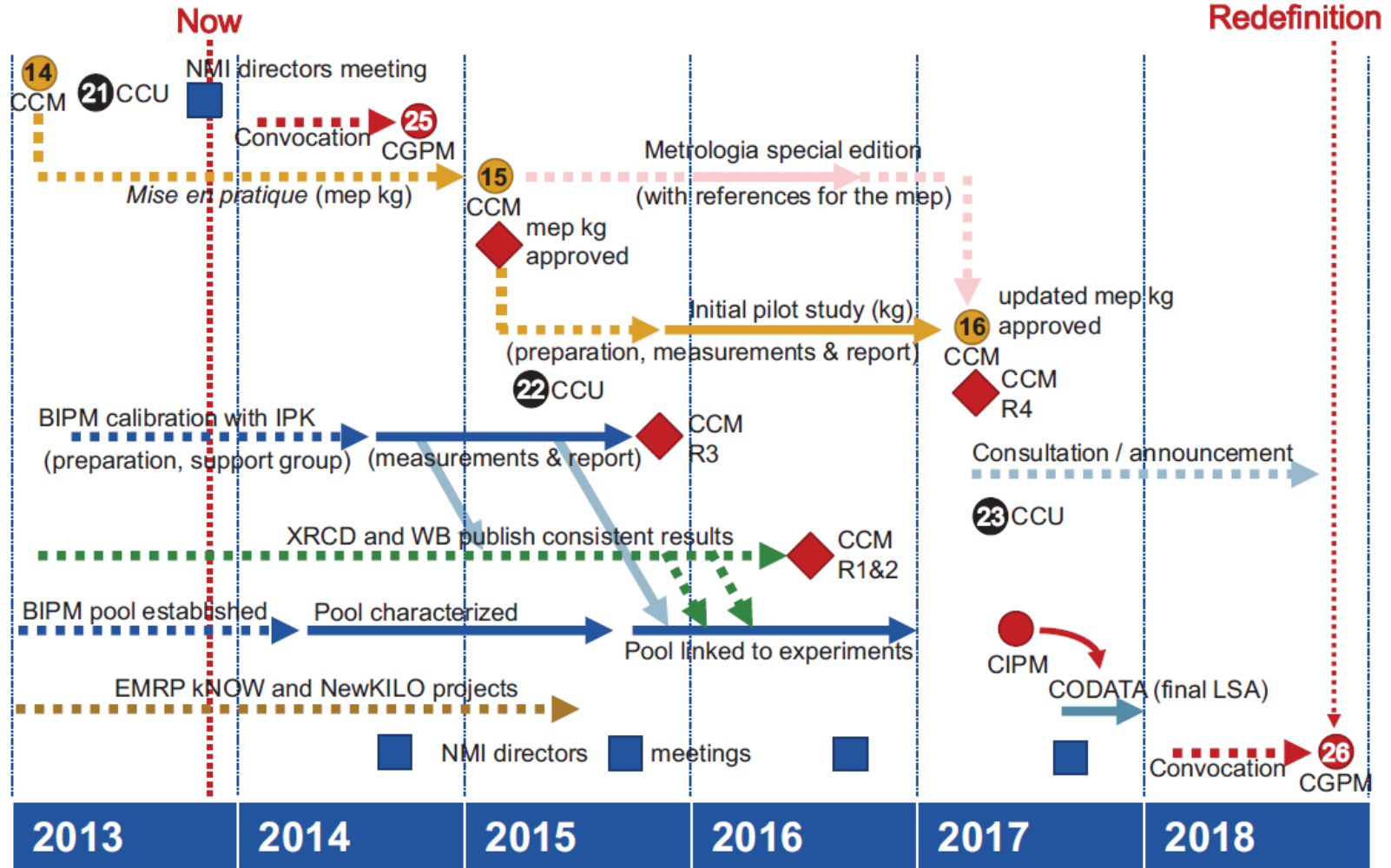


## CCE

There will be consequences  
for  $K_J$  at the level of 0.1 ppm.



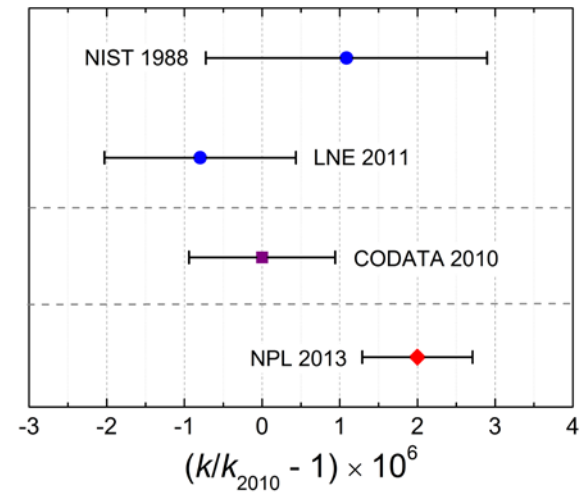
# The CCM roadmap towards a redefinition in 2018



# Towards a new SI

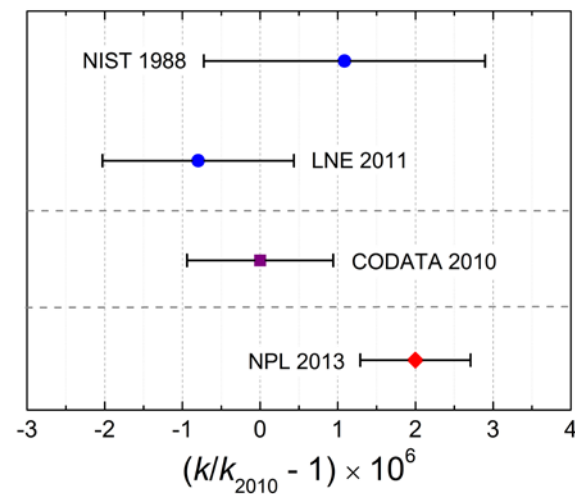
## CCT

Value of  $k$  with  $u_r < 1$  ppm  
based on two “fundamentally  
different” methods with  $u_r < 3$   
ppm.



## CCT

Value of  $k$  with  $u_r < 1$  ppm  
based on two “fundamentally  
different” methods with  $u_r < 3$   
ppm.



A very active area

61 references  
75% since 2011

# Review of the CIPM-MRA

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It is approaching 15 years since the CIPM MRA was signed, and whilst considered a great success, Member States are calling for a rationalization of the workload to enter what is being termed a “sustainable” phase.

- In March 2013, the JCRB organised a workshop on CMC review which led to some incremental improvements in efficiency, but no substantive “step” changes.

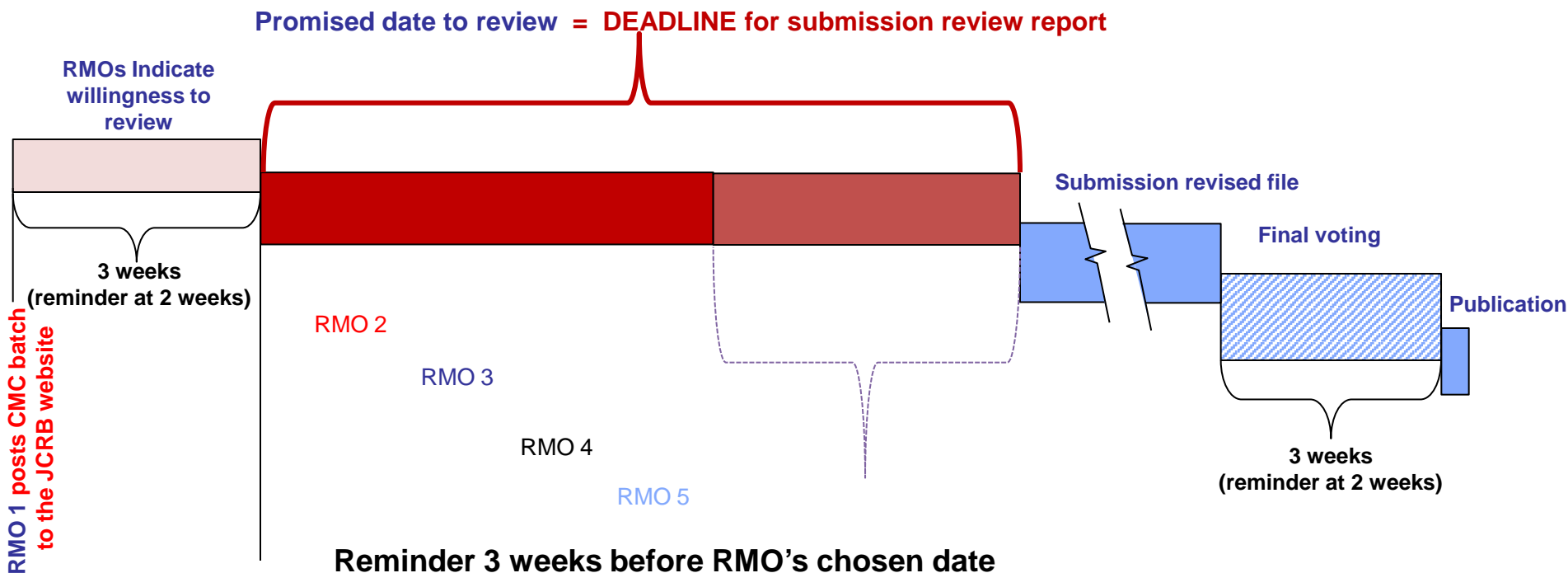
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# Improvements in Inter-regional CMC Review

Changes have been made to the CMC review process following the 30th JCRB meeting.

- The time to indicate “intention to review” has been reduced from 6 to 3 weeks (with a reminder after 2 weeks);
- The deadline chosen by each RMO for submission of its review report has been made a “hard deadline” (with a reminder 3 weeks before);
- The deadline for approval of CMCs has been reduced from 6 to 3 weeks (with a reminder after 2 weeks).





# Some statistics from the Database

## Results of analysis of CMC sets which were posted and approved on the JCRB CMC review website

in the period of January-July 2013 (7 months)		
CMC sets		Average time from posting to publication, days
Submitted to the JCRB	33	
Had not been yet approved	7	
<b>Approved</b>	<b>26</b>	
Fast track	13	17
Classic review	13	107

### "Old deadlines"

- Indication intention to review - 6 wks (reminder at 3 wks)
- Submission review report - date chosen by RMO + 6 wks (reminder at 3 wks)
- Voting - 6 wks (reminder at 3 wks)

in the period of August 2013-February 2014 (7 months)		
CMC sets		Average time from posting to publication, days
Submitted to the JCRB	35	
Had not been yet approved	11	
<b>Approved</b>	<b>24</b>	
Fast track	11	17
Classic review	13	76

### "New deadlines" (applied to the JCRB since August 2013)

- Indication intention to review - 3 wks (reminder at 2 wks)
- Submission review report - date chosen by RMO (reminder 3 wks before)
- Voting - 3 wks (reminder at 2 wks)

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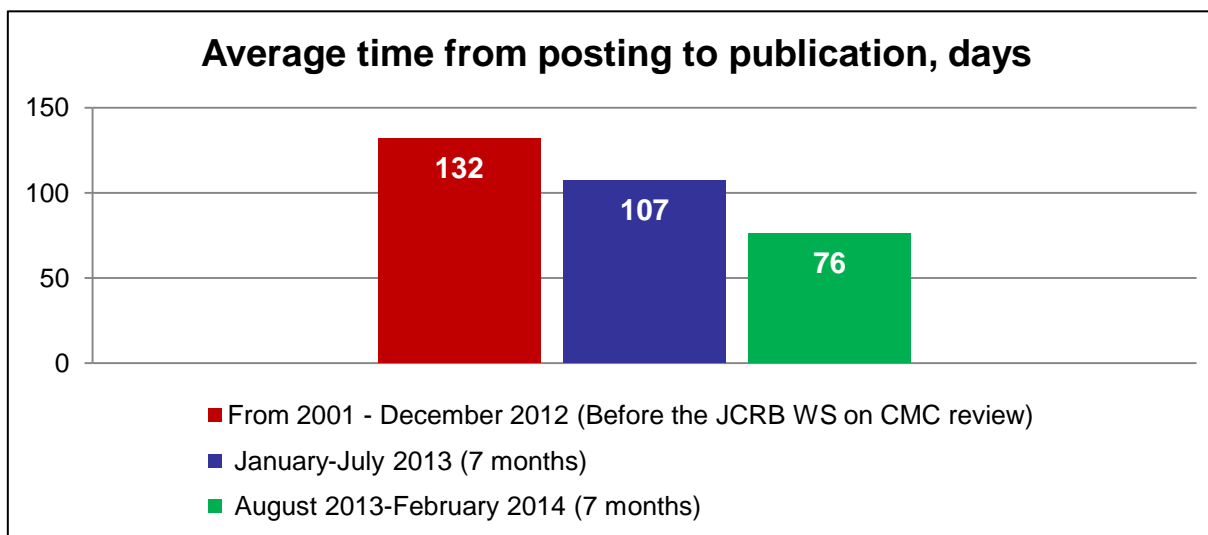
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## **Review of the CIPM-MRA**

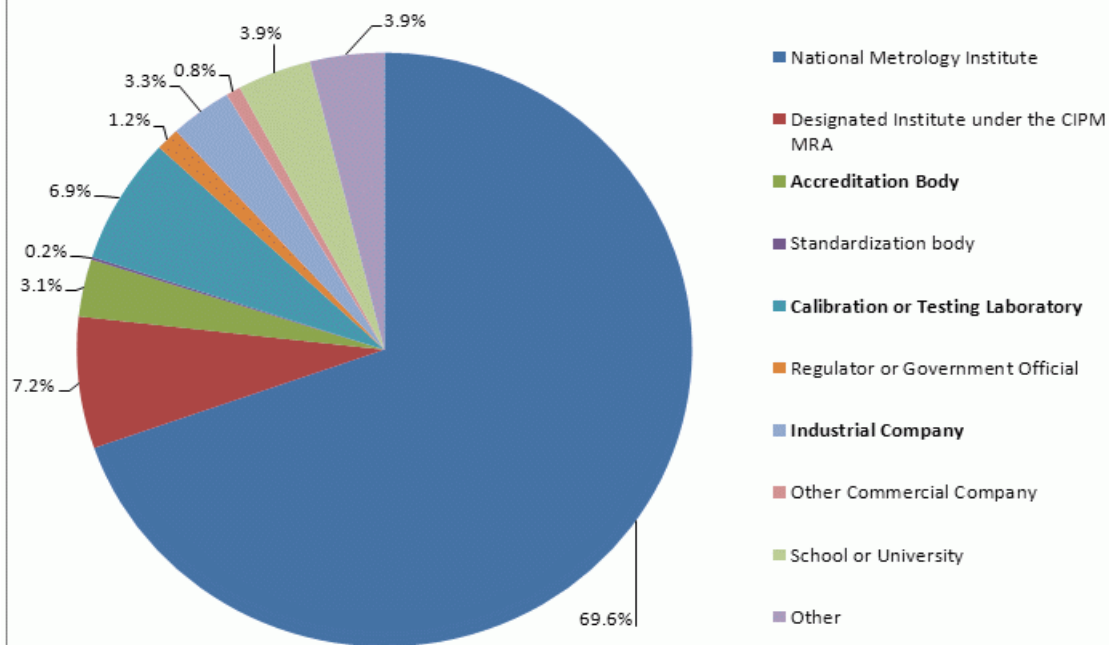
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**It is approaching 15 years since the CIPM MRA was signed, and whilst considered a great success, Member States are calling for a rationalization of the workload to enter what is being termed a “sustainable” phase.**

- In March 2013, the JCRB organised a workshop on CMC review which led to some incremental improvements in efficiency, but no substantive “step” changes.
- The CC strategies brought the planning of CC Key comparisons under a more strategic direction, and in many cases the number of planned comparisons was reduced.
- The CCQM have conducted an evaluation of their engagement in the CIPM MRA by questionnaire in early 2014.
- A “pop in” questionnaire on the KCDB provided useful information on users.

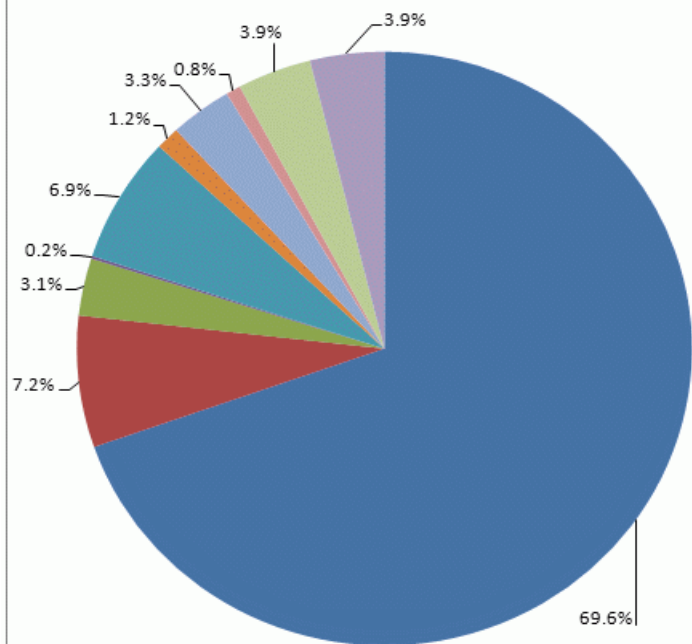
# Review of the CIPM-MRA

Key and supplementary comparisons

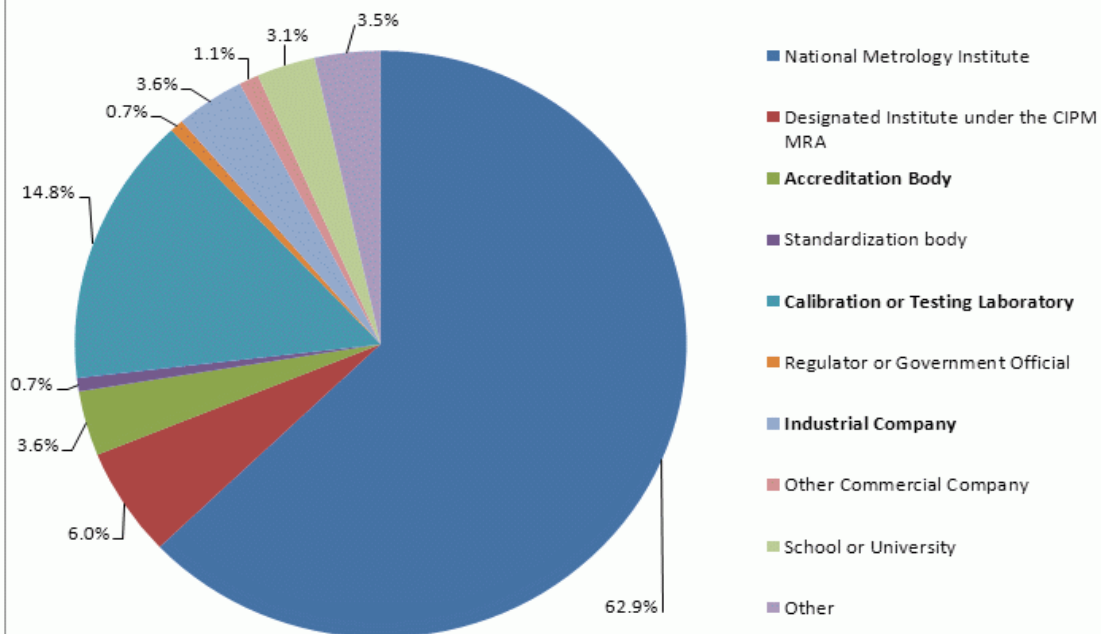


# Review of the CIPM-MRA

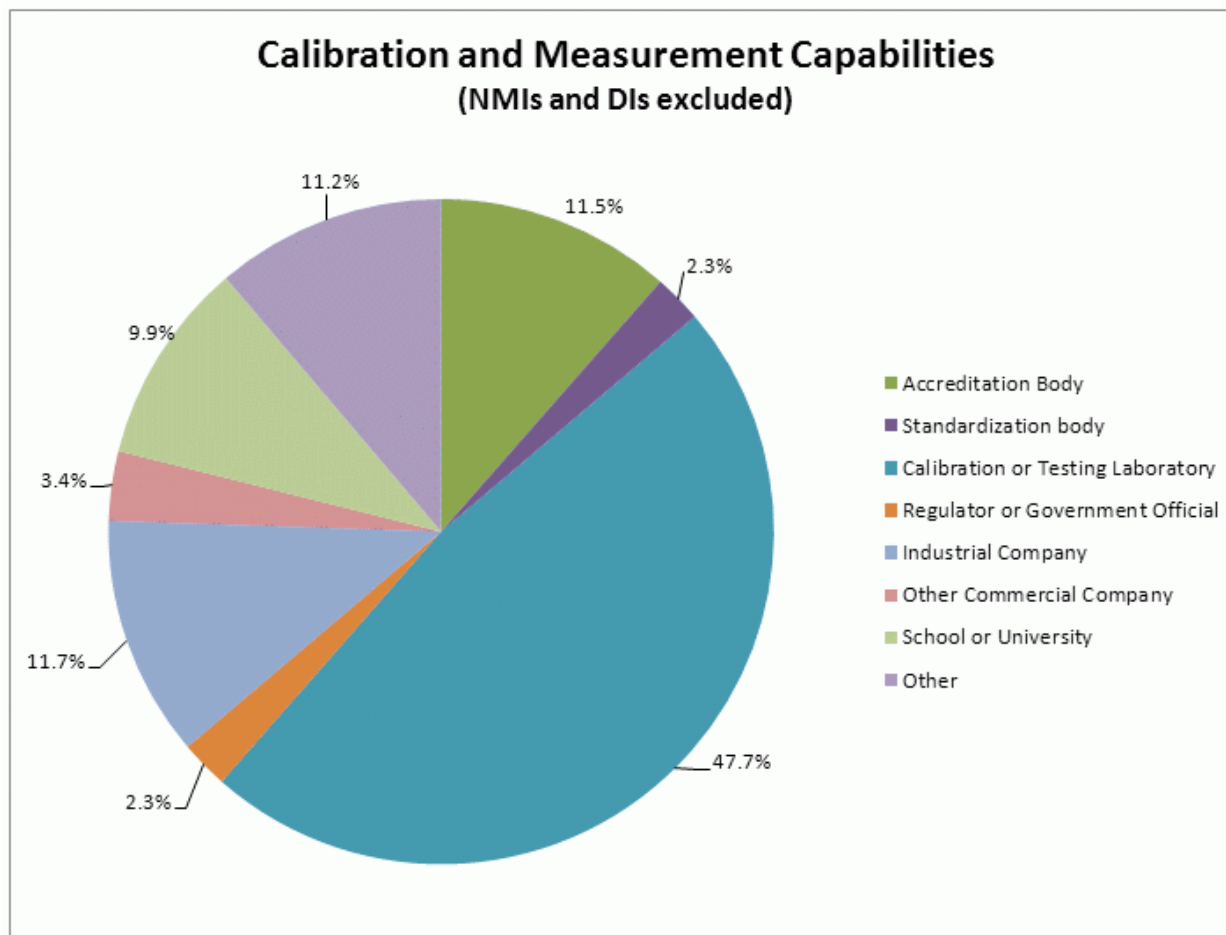
**Key and supplementary comparisons**



**Calibration and Measurement Capabilities**



# Review of the CIPM-MRA



# Review of the CIPM-MRA

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- **Decision CIPM/103-12**

“The CIPM charged the BIPM to hold **a meeting of NMI Directors in 2015** dedicated to the CIPM MRA review focusing on the benefits of the CIPM MRA, as well as establishing views on what works well, and what needs to be changed. Representatives from other key stakeholder groups will be invited to present their views. In the meantime, the CCs and the JCRB will be encouraged to continue their ongoing efforts to streamline operations within the existing framework, and prepare for the wider review in 2015.”

<http://www.bipm.org/utis/en/pdf/CIPM2014-I-Decisions-EN.pdf>

- **Draft Resolution E**

“On the importance of the CIPM Mutual Recognition Arrangement”

<http://www.bipm.org/utis/common/pdf/25th-CGPM-Convocation.pdf#page=31>

- The General Conference on Weights and Measures (CGPM) is made up of delegates of the governments of the Member States with observers from the Associates of the CGPM.
- Meets in Versailles from 8-20 November 2014
- Will address six resolutions:
  - A. On the future revision of the International System of Units, the SI
  - B. On the election of the International Committee for Weights and Measures
  - C. On the Pension and Provident Fund of the BIPM
  - D. Dotation of the BIPM for the years 2016 to 2019
  - E. On the importance of the CIPM Mutual Recognition Arrangement
  - F. On the impact of metrology and the importance of coordination for the world-wide measurement system



## ***The BIPM Work Programme for 2016-19***

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The BIPM Work programme is supported by the “dotation” divided amongst Member States.

- Proposed Work Programme published on the BIPM website (end April) for comment.
  - Now open for comment from representatives of Member States
- Financial Statements for 2013 are now completed and audited by our external auditor (KPMG Ltd)
- Long-term financial plan is being revised
- Developing and costing a proposal for a “BIPM Visitor Programme”
- BIPM Long-term Strategy (for 2020, and beyond)

## **New Election Process for the CIPM**

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**In preparation for the 25<sup>th</sup> CGPM (November 2014), the CIPM have developed a new election process:**

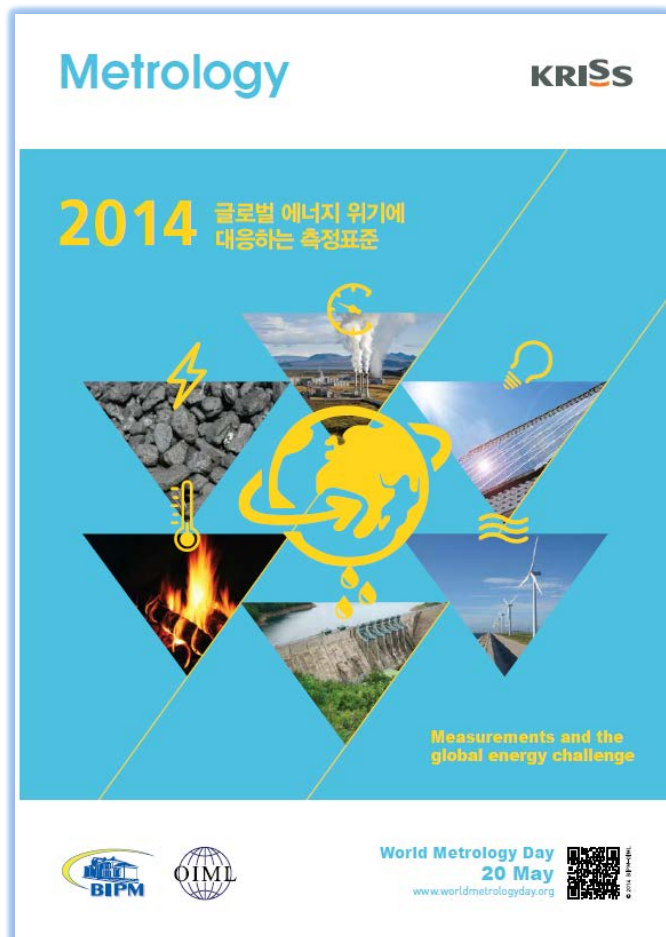
- All 18 members of the CIPM will be elected at the CGPM in November.
- Candidates are requested to submit CVs together with supporting documentation.
- All documentation reviewed by the CIPM and submitted to the CIPM “Ad hoc Working Group” who will confirm the “slate” of candidates put forward for the election.
- The “old” CIPM will hand over to the “new” CIPM at the March 2015 meeting to maintain continuity..

## Changes in the CIPM

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- Following the retirements of **Prof. Göbel**, **Dr Hengstberger** and **Dr Schwitz** from the CIPM, three new members were provisionally elected in May 2013.
  - **Prof. Humberto Brandi** (Director for Scientific and Industrial Metrology, INMETRO, Brazil),
  - **Dr Wynand Louw** (Director, Technical Infrastructure Development, NMISA, South Africa)
  - **Prof. Joachim Ullrich** (President, PTB, Germany)
- In December 2013 **Dr Dae-Im Kang**, President of KRISS (Republic of Korea) was provisionally elected to the CIPM.

# World Metrology Day



Events recorded on the website in 26 countries.

Poster translated into 24 languages.

A new record set according to all metrics: distinct visits, pages viewed, hits and volume

Argentina Azerbaijan Australia Belgium Brazil Colombia Egypt Ethiopia Gambia Germany IMEKO  
India Italy Mexico Mongolia Norway Palestine Poland Russian Federation Saint Lucia Saudi Arabia Senegal  
Singapore Spain Sri Lanka Tunisia Turkey United Kingdom United States



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## Member States and Associates

### Summary

- Procedure for a State to become a Member of the BIPM
- Procedure for a State or Economy to become an Associate of the General Conference
- The original signatories

### Restricted access for Directors of...

- NMIs of **MEMBER STATES**
- NMIs of **ASSOCIATES**

### Direct access

- BIPM METROLOGY PORTAL
- USEFUL LINKS
- ACRONYMS
- CIPM MRA
- KCDB
- JCTLM DATABASE
- MEETINGS
- CC DIRECTORY
- BIPM STAFF DIRECTORY
- PRACTICAL INFORMATION
- THE TIME
- METROLOGIA
- CODATA TASK GROUP ON FUNDAMENTAL CONSTANTS

As of 29 January 2014, there are 56 Member States of the BIPM, and 39 Associate States and Economies of the General Conference:

### Member States

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[Brazil](#)  
[Bulgaria](#)  
[Canada](#)  
[Chile](#)  
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[Germany](#)  
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[Tunisia](#)  
[Turkey](#)  
[United Kingdom](#)  
[United States of America](#)  
[Uruguay](#)  
[Venezuela \(Bolivarian Republic of\)](#)

Since 20 August 2013, Iraq is a Member State.

Since 29 January 2014, Luxembourg is an Associate of the CGPM.

### Associates of the CGPM

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# CIPM MRA Participation



Bureau International des Poids et Mesures

The CIPM MRA has now been signed by the representatives of **93 institutes** – from **52 Member States**, **37 Associates of the CGPM**, and **4 international organizations** – and covers a further **150 institutes designated** by the signatory bodies.

METRE CONVENTION CIPM MRA COMMITTEES BIPM SCIENTIFIC WORK SI PUBLICATIONS DATABASES

> You are here: [Metre Convention](#) > Member States and Associates

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[Tunisia](#)  
[Turkey](#)  
[United Kingdom](#)  
[United States of America](#)  
[Uruguay](#)  
[Venezuela \(Bolivarian Republic of\)](#)

### Associates of the CGPM

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Since 32<sup>nd</sup> JCRB, MASM, Mongolia has signed the CIPM MRA

October 23, 2013

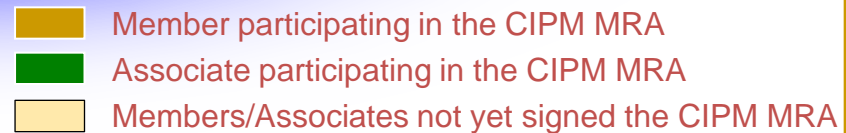





## **Future meetings:**

- November 2014 CGPM
- 2014 BIPM Workshops on the GUM and “carbon Metrology”
- Autumn 2015 - NMI Director’s Meeting (to review the MRA)

**Thank you for your attention**





 Member participating in the CIPM MRA  
 Associate participating in the CIPM MRA  
 Members/Associates not yet signed the CIPM MRA



# Regional Metrology Organizations

