

International Committee for Weights and Measures (CIPM)

Session II of the 115th meeting
(16-19 June 2026)

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MEMBERS OF THE INTERNATIONAL COMMITTEE FOR WEIGHTS AND MEASURES

as of 16 June 2026

President

W. Louw, South Africa.

Secretary

T. Usuda, Japan.

Members

V.G. Achanta, India.

V. Coleman, Australia.

D. del Campo Maldonado, Spain.

C. Denz, Germany.

N. Dimarcq, France.

H.A. Frøystein, Norway.

J.-T. Janssen, United Kingdom.

H. Laiz, Argentina.

G. Macdonald, Canada.

J. Olthoff, United States of America. *CIPM Vice-President.*

S.-R. Park, Republic of Korea.

J. Qu, China.

M.L. Rastello, Italy.

P. Richard, Switzerland. *CIPM Vice-President.*

G. Rietveld, the Netherlands.

G.P. Ripper, Brazil.

BIPM Director

A. Koo

1. Opening of the session, quorum and President's remarks

The International Committee for Weights and Measures (CIPM) held Session II of its 115th meeting on Tuesday 16 to Friday 19 June 2026 as an on-line meeting.

Participants:

V.G. Achanta, V. Coleman, D. del Campo Maldonado, C. Denz, N. Dimarcq, H.A. Frøystein, J.-T. Janssen, H. Laiz, W. Louw, G. Macdonald, A. Koo (Director of the BIPM), J. Olthoff, S.-R. Park, J. Qu, M.L. Rastello, P. Richard, G. Rietveld, G. Ripper and T. Usuda.

Also attending the meeting were:

C. Fellag Ariouet (Personal Assistant to the Director and Head of the Executive and Meetings Office) and R. Sitton (Publications).

The following were in attendance for parts of the meeting:

R. Brown (Executive Secretary of the CCU), A. Rohrer (BIPM Legal Adviser) and A. Tye (PIN Communications).

With eighteen members participating in the meeting, the quorum was satisfied according to Article 12 of the Regulations annexed to the Metre Convention.

The President welcomed the participants and gave a brief summary of the meeting of CC Presidents held on 15 June to discuss the revision of document CIPM-D-01. He noted that there are five months until the 28th meeting of the CGPM in October 2026 and urged the CIPM members to support the Director and BIPM staff in the preparations for the conference. He added that the current session is the last official meeting that the CIPM will have before the 28th meeting of the CGPM.

2. Approval of the agenda and the report of Session I of the 115th meeting

The Secretary presented the draft agenda for the meeting. The CIPM discussed the agenda and the following changes were agreed. Item 5 *feedback and proposals from the CC Presidents' meeting* and item 12 *update and follow up on revision of CIPM-D-01* will be discussed together at the start of the session on Thursday 18 June. This will allow the CCU President, R. Brown, to attend this part of the meeting. Item 13 *CIPM election*, which includes a discussion on the first meeting with the new CIPM members, was moved to the start of the session on Wednesday 17 June.

The Secretary recalled that the first draft of the minutes of Session I of the 115th meeting had been circulated to the CIPM and comments were received from N. Dimarcq and P. Richard. These comments were incorporated into the report and two typos were corrected. The revised report was circulated in advance of the meeting and is available on the CIPM webpage. The CIPM noted that the CIPM Task Group on Quantum Technologies for Metrology (CIPM-TG-Q4M) had been misidentified throughout the minutes as a Sectoral Task Group (STG). It was agreed

that this should be corrected throughout the minutes. After a brief discussion, the CIPM accepted the minutes as a true record.

Decision CIPM/115-12 (2026)

The CIPM accepted the minutes of Session I of the 115th meeting of the CIPM as a true record, with the correction that the CIPM Task Group on Quantum Technologies for Metrology (CIPM-TG-Q4M) is not a Sectoral Task Group (STG).

3. Secretary's report

The Secretary referred the CIPM to document CIPM26-II-03-a, which summarizes the meeting of the bureau on 6 May 2026. He said that there were no issues arising from the bureau meeting that required discussion by the CIPM.

4. Director's report

The Director said that three countries have become Member States since the last session of the CIPM in March. Uzbekistan has an official accession date of December 2025, but its notification was only received in April 2026. The Dominican Republic completed the process to become a Member State at the end of May. Albania became a Member States in June. In addition, Nigeria became an Associate in June 2026. The BIPM, as of June 2026, has 67 Member States and 35 Associate States and Economies. Institutes from the Dominican Republic and Nigeria are not yet signatories to the CIPM MRA.

The Director presented two proposed designs for the BIPM tie and scarf, one featuring an astrolabe and the other a graduated scale. The choice between the designs was used as an opportunity for the CIPM to test the on-line voting system proposed for use at the CGPM.

A representative from the on-line voting provider, Andy Tye (PIN Communications), gave a brief presentation of the voting system. The CIPM members had been sent a link by email in advance of the meeting to access the demonstration voting system. He said that the platform is designed so that the administrator manages the voting process. It uses dynamic voting that allows the administrator to open and close the voting on request. Results of the voting can be displayed in real-time on request from the meeting Chair. He added that a Zoom meeting can be embedded in the voting platform. This allows anyone with permission to participate in the on-line meeting to enter the voting platform. If a person has been granted voting rights, they will automatically be able to participate in the voting when it is opened.

A. Tye opened the voting for the tie and scarf on the test system. He answered several technical questions during the voting process and then closed and published the results. The results were that the CIPM preferred the astrolabe design for the scarf and the graduations for the tie. The Director confirmed that the proposed voting platform will be discussed under §8.

The Director presented an update on progress with Decision CIPM/114-22 (2025) regarding delayed key comparisons. The Executive Secretary of the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB) has liaised with the CC Executive Secretaries and the regional metrology organization (RMO) Secretariats to clarify the various issues that cause delays. There will be further updates on progress with Decision CIPM/114-22 (2025) from the

CC President's as the individual CCs meet and report on actions towards resolving delayed comparisons.

The Director reported on liaison activities, noting that the theme for World Metrology Day 2026 was "Building Trust in Policy Making". There was significant engagement with countries via the dedicated website regarding celebratory events and 60 posters were submitted from 39 countries. A joint BIPM-United Nations Educational, Scientific and Cultural Organization (UNESCO) webinar on the 2026 theme, with a particular focus on AI, was hosted by the BIPM.

The Director said that upcoming capacity building and knowledge transfer (CBKT) activities include two summer schools: a BIPM-COOMET UTC Summer School in September 2026 and a CIPM MRA Summer School, aimed at RMO TC/WG Chairs, in June. The ninth cycle of the BIPM-TÜBİTAK UME project placements will start in September. A series of TCQS on-line technical exchanges for CMC writers, comparison pilots and participants have started and have been well attended.

The BIPM is collaborating with the International Organization of Legal Metrology (OIML), United Nations Industrial Development Organization (UNIDO) and the RMOs to draft a collection of case studies that will demonstrate and communicate the tangible value of metrology. The first collection will be published in parallel with the 28th meeting of the CGPM and additional case studies will be added through to 2030.

The Director presented ideas for potential future events, noting that previous events have raised awareness of metrology, built relationships and cohesiveness, and focused the BIPM's attention on its strategic themes. Two proposals were put forward. The first is for a celebration in 2029 to mark the 30th anniversary of the CIPM MRA. The event could look back on its success and engage with stakeholders, particularly policymakers, to follow up on the 2026 theme of World Metrology Day. The second proposal is for an event in 2029 to mark the 10th anniversary of the revision of the International System of Units (SI). The event would reflect on the impact of the revisions and the future direction of the SI. The event was suggested by the NPL (UK) and would be organized in collaboration with The Royal Society (UK). The proceedings would be published in the Transactions of The Royal Society.

The CIPM supported both proposals but commented that it may be challenging to organize two celebratory events in the same year. It was noted that the audience for each event would be different and consideration should be given to the "marketing" of the celebrations, possibly with a focus on the tangible benefits to the general public of both the CIPM MRA and the redefinitions. It may be possible to split the events by celebrating the revision of the International System of Units (SI) in 2028, as Resolution 1 of the 26th CGPM was adopted in November 2018. G. Macdonald suggested that the NMIs could be invited to provide a secondees to support the development of such events. In addition, a working group could be set up, with representation from the NMIs, to help engage a wider community in the promotion and development of materials for one or both of these events.

The President suggested adding a workshop or event following the potential adoption of Draft Resolution A *On universal adherence to the Metre Convention* and the introduction of the status of "Observer State".

The Director gave a summary of the feedback received on the BIPM's Draft Work Programme 2028-2031. Seven CIPM members made comments that clarified a number of items across the Work Programme. These comments included a need to revise the Vision and Mission of the

BIPM, which will be raised with the next CIPM for consideration. Nine NMIs and DIs from seven countries also supplied feedback on the Work Programme. This feedback showed strong support for the BIPM's technical programmes, although clarification was sought on specific points. The NMIs and DIs appreciated the clarity in the Work Programme regarding partnership opportunities. There were a number of questions on the digital services in the programme as well as requests to ensure equitable regional access to the BIPM's services. The BIPM was encouraged to continue to with "awareness raising" through the media and the website, with a strong desire for the BIPM to provide a hub for international metrology on behalf of the Member States. The NMIs and DIs suggested ideas for staff development and the profiles for staff that may be needed in the future. The feedback included questions on the sustainability of *Metrologia*. Detailed replies will be sent to all NMIs and DIs that supplied feedback.

The Director paused for questions. C. Denz asked for any feedback related to digitalization to be sent to the Forum on Metrology and Digitalization (FORUM-MD). P. Richard noted that there may be a missing icon in the right-hand column of section S06-5.2 on page 30 of the Work Programme.

The Director recalled that the BIPM is anticipating the donation of a transportable optical clock and will partner with an NMI to deliver a key comparison of optical frequency standards (OFS). The Director has been liaising with the BIPM Legal Adviser to ensure that the existing policy, approved by the CIPM to cover donations when the NMR was donated, is fit for purpose. The policy will be generalized and simplified, and adapted so that it covers all partnership opportunities. The policy will cover impartiality, conflict of interest, purpose of donations and the benefit to all Member States. It may be necessary to circulate the policy for approval by correspondence if it is needed before the next CIPM meeting.

The Director said that in preparation for the 28th meeting of the CGPM, she had recently visited NMIs and relevant government departments in Germany, the UK, Republic of Korea, Japan, China, Italy and the USA. A delegation from Russia visited in June and a visit from a French delegation is expected in late June. These visits had been to discuss any concerns about the draft resolutions and their support for the proposed dotation for 2028-2031.

Feedback from the meetings was concerned with continuous UTC, the Rules of Procedure for the CGPM and regional representation on the CIPM. It was noted that some countries emphasized that there should be no overlapping activities across different international organizations and the BIPM should ensure that it gives equitable benefits to all regions for its services. It is likely that Member States will scrutinize whether their contributions to IOs are valid or necessary, and they expect that the BIPM will continue to be fully transparent with its initiatives and spending. The countries visited expressed strong support for the draft resolutions. They emphasized the need for the BIPM to maintain its neutrality as a scientific organization.

Support for the proposed 1.5 % increase in the dotation was mixed. Careful communication with Member States and consideration of options to address any shortfall will need to be considered including other sources of funding, and changes to the Work Programme.

The CIPM discussed the consequences of a 0 % increase in the dotation and the possibility that there may even be a call for a reduction in the dotation. One member suggested that if one Member State voted no to the proposed increase in the dotation, others may be emboldened to do the same. The CIPM asked the Director to clarify the consequences of a negative vote on the dotation.

The CIPM suggested that there should be a very clear message about the negative impact that a zero increase would have. The BIPM would have to adapt to having no increase in its budget for 4 years. The BIPM should reinforce the message about the implications of receiving no increase in the dotation and the effect on the services it provides, particularly to Member States that may vote no. The CIPM commented that the cost to individual countries and the BIPM of having to organize, convene and attend a second meeting of the CGPM, one-year after a potential negative vote, could actually be more than the cost of a positive vote for the dotation. The Director was asked to look in detail into these costs as it could provide a compelling argument against a negative vote.

The Director presented the options to reduce the Work Programme and Budget for the BIPM's departments to accommodate a 0 % increase in the dotation. The CIPM reiterated the earlier suggestion that the BIPM should draft a document about the tangible impact of the options presented, which should raise awareness among the Member States of the severe negative consequences to the global measurement system and the risks that the world will have to accept as a result of the BIPM having to implement these options over 2028-2031.

The Director recalled that the intention had been to publish the dotation resolution by 13 July, with a value in it, along with a working document describing the assumptions that went into it and the risks associated with not getting an increase. The BIPM is planning to retain this deadline but it will now be necessary to reconsider the content of the working document, what it presents about the risks, and what would be lost if the BIPM does not get the 1.5 % increase it was originally seeking. The President suggested setting up an *ad hoc* group to assist the Director with revising the Working Document and the strategies required to deal with a 0 % increase. The CIPM agreed and the *ad hoc* group will consist of the bureau members, V. Coleman, C. Denz, H.A. Frøystein and G. Macdonald, other members that want to contribute can inform the President. The revised Working Document will be sent to the CIPM for approval by correspondence.

5. Feedback and proposals from the Consultative Committee Presidents' meeting

The discussion on the outputs from the CC President's meeting were concerned mainly with the revision of CIPM-D-01 and were discussed in §12.

6. CIPM Sub-Committee on Finance and BIPM Pension Fund Advisory Board reports

CIPM Sub-Committee on Finance (FSC)

P. Richard, Chair of the FSC, presented a report on its last meeting held on 28 May 2026. The financial statements for both the BIPM and the pension fund for 2025 were prepared early and the final version in both French and in English was available for the FSC meeting. The BIPM achieved another good financial performance in 2025 with a surplus; the situation regarding surpluses will change in the future. The Chair thanked D. Spelzini and the BIPM Finance Office team for their work and acknowledged the excellent collaboration between the Finance Office, the Director and the Chair of the FSC.

He added that the auditor had signed the financial report at the end of May and the FSC reviewed the financial statements. Following its review, the FSC unanimously recommended that the CIPM approves the 2025 accounts.

The Director presented the budget outturn for 2025 and said that the BIPM had a surplus of 860 thousand euros. There was an underspend across all areas, especially for laboratory operating costs. This will not happen in 2026 and the BIPM is working towards achieving a zero surplus. Income, including contributions and subscriptions were presented. The main change in 2025 with respect to income was that the BIPM invested its reserves in short-term investments rather than not investing it, resulting in a significant increase in income relative to previous years. A breakdown of “other income”, was presented, which showed the results of this series of short-term investments with reserved and unreserved cash.

Key points from the 2025 accounts were that the BIPM achieved a 3.9 % increase in revenue due to an increase in the dotation as well as revenue, grants and interest. The staff salary costs were higher than anticipated due to the decision to pay staff members the additional remuneration that they would have received if their salaries had been adjusted in January 2023. The subsistence allowances paid to complimentary staff have increased because of more complimentary staff working at the BIPM. The cost of meetings was high in 2025 due of the 150th anniversary celebrations. The BIPM’s electricity costs have fallen and stabilized after a couple of high years.

Contributions in June 2026 were at the level expected, with a few countries still having outstanding payments. Two new Member States have joined since May 2026 and will have an impact on the figures.

The BIPM will continue to monitor its spending against the budget and will conduct a reforecast in the middle of the year. The Director noted that areas have been identified where there will be an underspend. Work is under way to reallocate funding to projects that can deliver before the end of the year.

The President thanked P. Richard and A. Koo and invited questions. There were no questions. He asked the CIPM for their approval of the financial statements and to grant the BIPM Director quietus for the 2025 exercise. There was unanimous approval and the following decision was agreed.

Decision CIPM/115-13 (2026)

The CIPM confirmed its approval of the audited financial statements of the BIPM and of the BIPM Pension and Provident Fund, which were reviewed by the CIPM Sub Committee on Finance in May 2026.

The CIPM granted the BIPM Director quietus for the 2025 exercise.

The BIPM completed the reforecast of the 2026 budget after the close of Session II of the 115th meeting. The review identified areas of forecast underspend and higher-than-anticipated revenue. On this basis, the BIPM Director prepared a revised budget proposal for 2026 for approval by the CIPM by correspondence. The proposal was reviewed by the Chair of the FSC, who supported its submission to the CIPM in accordance with Article 11 of the Financial Regulations. The following decision was drafted and approved by the CIPM on 21 July 2026.

Decision CIPM/115-17 (2026)

The CIPM took the following decision by correspondence on 21 July 2026:

The CIPM decided that the budget for expenditure in 2026 agreed by the CIPM in March 2026 (Decision CIPM/115-3) should be updated as presented to the CIPM by the BIPM Director.

BIPM Pension Fund Advisory Board (PFAB)

H.A. Frøystein, Chair of the PFAB, said that it had met on 29 May, where it received a summary of the March CIPM meeting and started the task of finding a new independent external expert after the departure of T. Grenon in 2025. The PFAB has set up an *ad hoc* working group to prepare a recommendation for the CIPM on the appointment of this expert, which is expected to be by correspondence.

The PFAB reviewed the investment report for the pension fund. The investment strategy was agreed at Session I of the 114th meeting of the CIPM, and was implemented from May 2025 onwards. Per annum growth so far is 4.8 % and updates are received every quarter. He noted that these are long-term investments.

H.A. Frøystein said that the PFAB has been provided with the 2025 actuarial evaluation of the liabilities of the fund. The new independent expert will be able to assess all the data and consider new criteria for assessing the long-term sustainability of the pension fund.

The President thanked H.A. Frøystein.

7. CGPM preparation and Draft Resolutions

N. Dimarcq said that a template letter in support of Draft Resolution C *On the technical actions needed to ensure the continuity of UTC* has been drafted in response to a request from some Member States. He and P. Tavella are also preparing a two-page accompanying document to explain the issues and challenges with respect to continuous UTC.

N. Dimarcq recalled that there is an error in Draft Resolution D *On the definition of an international lunar reference time scale and its traceability to UTC*. The revised wording was displayed and the CIPM discussed the change. The following decision was agreed, with the new wording shown in bold.

Decision CIPM/115-14 (2026)

The CIPM agreed to change the wording in the final bullet point of the “further recommends” clause of Draft Resolution D *On the definition of an international lunar reference time scale and its traceability to UTC*. The changes (shown in bold) are: “the BIPM and the National Metrology Institutes (NMIs) work in collaboration with space agencies and international organizations to support the **realizations** of **the** lunar reference time **scale**, and ...”

The change reflects 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.

The President confirmed that the results of the voting on Draft Resolutions A to F at the 28th meeting of the CGPM would remain valid, even if there was a negative vote for the dotation.

The Director recalled that the BIPM has received a lot of feedback on the Special Procedure, which will be discussed later in the agenda. She added that no comments were received at the second consultation meeting with Member States and the next on-line consultation and information meeting is scheduled for 9 September 2026. The CIPM agreed that it is too early to draft the agenda for this meeting. The priority at the upcoming meeting will depend on the outcome of ongoing discussions with the Member States. The meeting could potentially highlight the consequences of not achieving the 1.5 % increase in the dotation in ways that are easy for Member States to understand. The meeting may also include an update on the agenda and plans for the voting at the CGPM. The President added that the agenda for the consultation and information meeting on 9 September would be developed in collaboration with the CIPM bureau. P. Richard commented that the consultation and information meeting should focus on the severe consequences of a negative vote and should not discuss the dotation itself.

8. Plans and schedules for the 28th meeting of the CGPM (2026)

The Director presented the draft detailed programme for the CGPM. It was noted that speakers are still required for some of the round table discussions and other presentations, particularly in support of the two draft resolutions related to time. She added that the BIPM is in contact with potential observer states that could produce short video messages in support of the draft resolution on universal adherence. An overview of the planned receptions was given.

The President thanked the Director and asked if there were any questions or comments. C. Denz commented that the programme is impressive and added that the speakers, particularly in support of the two time-based draft resolutions, should ensure that their content is not too technical for the participants. Consideration should also be given to reinforcing the message to Member States of the importance of the BIPM's work and the severe consequences of potentially having to reduce the work programme. The Director replied that the BIPM can give the speakers clear guidelines about the makeup of the audience, and the level of understanding they may or may not have of the field, to help them pitch their presentations to the right level.

The Director presented information on the current draft of the Special Procedure, which allows all Member States to contribute statements and participate in discussions either on-site or on-line. The draft allows all Member States to vote on all resolutions on-site or online, but only Member States in the room can vote in the elections for the CIPM and the CEC. Electronic voting can be applied to any subset of votes during the CGPM, for example only for on-line votes, only for votes on Resolutions, only for elections or for all voting. Electronic voting options have been investigated and several pros and cons have been identified and were presented. (An electronic voting system had been demonstrated to the CIPM in §4).

The Director gave a summary of the feedback received from the Member States on the Special Procedure. Twelve Member States supplied feedback. One Member State requested on-line voting to include the elections, eight supported the procedure or expressed 'no objection' and three Member States supported the Special Procedure provided that all voting is restricted to on-site delegates. The Director said that the CIPM will have to decide if the Special Procedure

should remain unchanged and whether to request the BIPM to implement secure systems to support online participation and, if permitted, online voting.

The CIPM had a comprehensive discussion on the Special Procedure and the voting. They commented that there is no clear difference between the voting for the election of the CIPM and CEC and for the draft resolutions; the reasons why on-line voting is being considered for one but not the other should be clarified. It was also noted that because of the importance of the vote for the dotation for the Work Programme 2028-2031 and the possibility of a negative vote should a member on-line not understand the consequences, voting should possibly be restricted to in-person only. One CIPM member recalled that on-line voting had been allowed at the 27th meeting of the CGPM (2022) for draft resolutions so a precedent has been established. The CIPM will need a good reason to justify why this decision may be revoked. The President replied that the conference in 2022 was a special case due to ongoing COVID-19 restrictions. The CIPM commented that if there are a large number of participants who are not represented in the room but are allowed to vote they would lose the opportunity to have useful discussions about important topics, particularly the dotation: on-line voting would thus change the dynamic of the conference. It was recalled that proxy voting is allowed at meetings of the CGPM, even if the CIPM decides not to allow on-line voting. This would give Member States the opportunity to have their opinion heard in the room, even without on-line voting.

The President summarized the discussions, noting that on-line voting will not be introduced at the 28th meeting of the CGPM. All voting will be in-person. Member States will still be able to participate in all discussions on-line and for those that cannot participate in-person, it will be possible to give a proxy vote to another Member State. The Director commented that the BIPM will have to officially notify all Member States that the Special Procedure is being changed.

The President stressed that the CIPM has five weeks to finalize the Special Procedure and asked the Director to make the necessary changes in consultation with the CIPM bureau. He reiterated that the procedure allows on-line participation in discussions, with voting only in the room. The following decision was agreed and the revised wording for the Special Procedure will be approved by correspondence.

Decision CIPM/115-15 (2026)

The CIPM decided that all voting at the 28th meeting of the CGPM will be in-person and there will be no option for on-line voting. It will remain possible for Member States to participate on-line in discussions. The Director was asked to make the necessary changes to the Special Procedure, in consultation with the CIPM bureau.

9. Reports from the Consultative Committees of the CIPM

Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM)

S.-R. Park, President of the CCQM, recalled that it had held its 31st plenary meeting on 16-17 April 2026 at the BIPM headquarters. Nine of its Working Groups had met on-site on 10-15 April, with all meetings being held in a hybrid format. He thanked the BIPM Executive and Meetings office for the efficient organization of the meetings. The availability of extra off-site meeting rooms meant that it was only necessary to hold one meeting of the CCQM

Working Group on Key Comparisons and CMC Quality (CCQM-KCWG) over the weekend. He commented that the CCQM had approved its 2030+ strategy document during its meeting.

Digitalization was one of the main themes at the meeting. The CCQM Task Group on Data Digitalization (CCQM-TG-DD) reported progress in three major areas: unique identifiers for chemical and biological data; digitalization of Certified Reference Material (CRM) certificates; and FAIR databases and AI-enabled data systems. The group is developing approaches that will allow machine-readable reports, improved data exchange and use of large language models and AI tools for data analysis.

The CCQM acknowledged that AI can significantly reduce administrative tasks while improving consistency and accessibility. However, participants emphasized that human oversight remains essential for technical judgement and quality assurance. Several working groups reported successful pilot applications of AI: extraction of historical comparison data from decades of PDF reports; automation of CMC review activities; generation of machine-readable comparison reports; and improved database management and information retrieval.

S.-R. Park said that planned digital infrastructure developments include: a new Joint Committee for Traceability in Laboratory Medicine (JCTLM) web platform; enhanced KCDB categorization systems; digital CRM Certificates; isotope Ratio Reference Systems databases; and automated CMC screening and review tools. He added that the CCQM is concerned about the resources required to carry out these actions.

He recalled that biological measurement science continues to expand rapidly within the CCQM. A dedicated CCQM workshop on “multi-omics” measurements identified several barriers to widespread clinical implementation including: lack of standardized measurement procedures; insufficient availability of reference materials; challenges in reproducibility and comparability; and a need for traceable workflows from sample collection through data analysis. Participants agreed that metrology will play a crucial role in enabling reliable genomic, proteomic and metabolomic diagnostics.

The CCQM Task Group on Gene Delivery Systems (CCQM-TG-GDS) identified measurement challenges associated with viral vectors and advanced therapeutics. Work has started to establish pilot studies that address measurement of particle count, composition and biological function.

Emerging measurement areas and working group highlights included the CCQM Task Group on Nano- and Microplastics Measurements and Standards (CCQM-TG-NMMS) completing its initial mandate and proposing a pilot study to address particle size distribution, particle number concentration and mass concentration. The CCQM agreed that this area represents a growing societal need and supported continued activity of the Task Group with the pilot study to be run under the oversight of the CCQM Working Group on Surface Analysis (CCQM-SAWG). The CCQM Task Group on Metrology for Li-ion batteries (CCQM-TG-LI-ION) concluded that harmonization remains difficult due to proprietary measurement methods, a lack of standardized terminology and inconsistent testing protocols. Although the task group was closed, the outcomes of the workshop will be used in future standardization efforts.

S.-R. Park noted interest is growing in surface and particle metrology. The CCQM Working Group on Surface Analysis (CCQM-SAWG) reported increasing activity in semiconductor materials, nanoparticles, 2D materials and surface chemistry. The group proposed expanded coordination

in the area of particle metrology, reflecting growing industrial demand for traceable nanoscale measurements.

He said that the biggest challenge facing chemical metrology is how to prepare for emerging measurement technologies, for example in biology. Conventional metrology practices cannot keep up with the demands of these rapidly advancing areas and advanced metrological skills and techniques must be developed in order to address the challenge. He added that the CCQM is confident that it has the necessary measures in place to ensure that the sustainability of CMCs and stakeholder engagement will continue to be dealt with effectively.

He noted that the CCQM's future vision anticipates that it will have a broader role in digital metrology, advanced biological systems, sustainability, healthcare innovation and global data interoperability. In order to meet these needs, the Task Groups will require strong support from the NMIs.

S.-R. Park recalled that INM (Colombia) has applied to become a member of the CCQM. He said that the application is supported by the CCQM and asked for CIPM for approval. The CIPM approved the application, which is recorded in Decision CIPM/115-16 (2026).

He concluded by informing the CIPM that the CCQM has reviewed its long-standing comparisons and found that there are seven in excess of five years old. These are mainly due to delays in the agreement of the final key comparison reference values (KCRVs). All seven are expected to be completed in 2027.

S.-R. Park reminded the CIPM that he is stepping down from the CIPM and as the CCQM President. He noted that he will be available to lead the CCQM until a new President is appointed.

The President thanked S.-R. Park and invited questions and comments. C. Denz commented that it was encouraging to see that the CCQM is working on digital calibration certificates (DCCs) and digital reference material certificates (DRMCs). The President and the CIPM thanked S.-R. Park for his hard work and leadership of the CCQM.

Consultative Committee for Thermometry (CCT)

D. del Campo Maldonado, President of the CCT, recalled that it had held its meeting on 13-17 May 2026 at the BIPM headquarters in a hybrid format. Working Group and Task Group meetings were held on 18-20 May and the CCT Plenary meeting and Technical Workshop were on 21-22 May. The next CCT meeting will be held in 2029 to allow time for the completion of ongoing technical activities. Interim Working Group meetings will be held in conjunction with the TEMPMEKO conference in 2028.

The CCT has closed the Task Group on the development of a guide for infrared thermometers, and has opened two new Task Groups on T - T_{90} and temperature sensor networks. The new Task Groups were opened in response to challenges identified by the CCT.

The CCT Technical Workshop was held to celebrate 100 years of temperature scales. The presentations reflected on the past, how the ITS-90 was developed and considered what to expect in the future of thermometry.

D. del Campo Maldonado said that during the work to update the CCT strategy, a number of challenges had been identified. The transition to a digital and thermodynamic-based measurement framework poses major technical and organizational challenges for global thermal metrology. Another key issue is resolving discrepancies in primary thermometry above

400 K, which is crucial for fully implementing the redefinition of the kelvin. There is also an issue of non-uniqueness and inconsistent manufacturing quality of Standard Platinum Resistance Thermometers (SPRTs), which reduces measurement reliability and global reproducibility. Supply chain vulnerabilities affect critical materials, including shortages of rhodium-iron sensors for cryogenics and the need to replace mercury-based standards due to environmental regulations.

There is a lack of sufficient standardization for air temperature and humidity, which limits long-term climate data consistency for environmental metrology. In medical metrology, there is limited SI traceability for clinical thermometers and a lack of clear guidance on best-performing devices, which affects diagnostic reliability.

Other challenges for the CCT include addressing the needs of Industry 4.0, which require *in situ*, autonomous traceability systems, while large sensor networks increase complexity in uncertainty analysis, especially with low-cost sensors. Emerging technologies such as quantum thermometry and nanoscale sensing require robust characterization to move from research to industrial applications. Key and regional comparisons in thermometry are slow and complex due to long measurement times needed for high precision, which delays updates to calibration capabilities. There is also a challenge to identify stable transfer standards.

D. del Campo Maldonado presented the outlook for the CCT in the short term (2026-2030). It expects to have a fully integrated kelvin redefinition and, for the first time, CMCs for thermodynamic temperature will be published. The CCT will finalize validation of High-Temperature Fixed Points (HTFPs) to complete the *MeP-K* framework and improve accuracy in thermodynamic temperature realization. It will also address discrepancies in primary thermometry above 400 K and reduce "non-uniqueness" issues in the International Temperature Scale of 1990 (ITS-90). Work will accelerate on the digital transformation through widespread use of DCCs and machine-readable standards. The CCT will develop standardized definitions, for example for air temperature, to support environmental science.

The outlook for the CCT in the longer term (2030+) includes a shift toward "traceability at the point of measurement," that will reduce reliance on periodic calibration. Work will continue on advanced practical primary thermometry methods (for example Johnson Noise, Doppler Broadening, Ring Resonator) for *in situ* SI-traceable measurements. The CCT will support the development of continuous, autonomous and highly accurate temperature measurement in advanced applications, for example in industry, space and remote monitoring. The CCT will consider replacing or restructuring ITS-90 with a fully thermodynamic-based framework and the standardization of emerging technologies such as quantum thermometry and nanoscale luminescence, including medical applications. The CCT will also support the building of a global "SI Digital Framework" where traceability is real-time and embedded in the digital economy.

D. del Campo Maldonado recalled that the CCT has achieved a consensus on the criteria for the establishment of a new international temperature scale. She presented a recommendation to the CIPM highlighting the criteria, which are as follows:

- New low-uncertainty evaluations of thermodynamic temperature above 400 K:
 - the thermodynamic data should not be uncertain by more than a factor of two of the total uncertainty of the realization of the ITS-90 up to the freezing point of silver, and
 - the data should be based on at least two fundamentally different primary thermometry methods within the *MeP-K*, where at least one result for each

should have a standard uncertainty not more than a factor of three of the total uncertainty of the realization of the ITS-90

- Additional research to:
 - Solve the Provisional Low Temperature Scale (PLTS-2000) problem below 8 mK
 - improve the operating performance of high temperature standard platinum resistance thermometers (HTSPRTs), where possible working with manufacturers
 - demonstrate one or more viable alternatives to the triple point of mercury for the calibration of both capsule and long-stem platinum resistance thermometers.

D. del Campo Maldonado presented an action list for the activities of its Working Groups before the next meeting of the CCT. The CCT Working Group for Non-Contact Thermometry (CCT-WG-NCTh) will conclude the revision of the CMC review protocol to include thermodynamic temperature CMCs. The CCT Working Group for Calibration and Measurement Capabilities (CCT-WG-CMC) will implement the harmonization of the ranges and uncertainties information for some services. The CCT Working Group for Key Comparisons (CCT-WG-KC) will implement the comments received in the guide for the data analysis of Key Comparisons and will circulate it to the CCT for approval by correspondence. It will launch the new K4 (PTB coordination) and postpone the new K9 comparison until after the next CCT meeting in 2029. It will also develop a document on the CCT policy for coverage and periodicity for Key Comparisons. The CCT has accepted the recommendation of the Working Group for Humidity (CCT-WG-Hu) to harmonize the use of %rh as “unit” for relative humidity and will engage with the Consultative Committee for Units (CCU) and CCQM about this issue.

D. del Campo Maldonado reported the lack of contact and collaboration with GULFMET within both the WG-CMC and the WG-SP, of which the TC-T Chair is a permanent member. She concluded by recalling that SASO-NMCC (Saudi Arabia) has applied to become an observer of the CCT and that the application had been reviewed and approved by the committee. The CIPM approved the application and agreed Decision CIPM/115-16 (2026), which also includes the approval of INM (Colombia) as a member of the CCQM.

Decision CIPM/115-16 (2026)

The CIPM accepted the following changes to the membership and observership of the Consultative Committees:

CCQM

- INM (Colombia) as a member

CCT

- SASO-NMCC (Saudi Arabia) as an observer

The President thanked D. del Campo Maldonado and invited questions and comments. C. Denz commented on the digitalization work of the CCT, particularly its involvement with sensor networks and DCCs. She suggested that the CCT should liaise with the FORUM-MD Task Group on Sensor Networks (FORUM-MD-TG-SN). D. del Campo Maldonado commented that there is already a very strong connection between the two groups. H.A. Frøystein commented that the

lack of cooperation between the CCT and GULFMET could be addressed at the upcoming meeting of the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB) in September 2026. D. del Campo Maldonado added that this lack of engagement, particularly with the CCT-WG-CMC and CCT-WG-SP is a concern, as many important topics are discussed in these WGs. R. Brown commented on the discussion about %rh. He said that the CCT has proposed a good solution, because there is no objection from the CCU in harmonizing the usage downstream of the SI and standards. There is interaction with the CCQM group, which is doing something very similar for quantities in biology.

Consultative Committee for Ionizing Radiation (CCRI)

J.-T. Janssen recalled that an update had been given at Session I of the 115th meeting of the CIPM and there have been no further meetings of the CCRI working groups, except for the CCRI *ad hoc* Working Group on Strategy (CCRI-SWG). This *ad hoc* WG has been occupied with updating the CCRI strategy since March 2026, a new online version of which will be available in mid-2026.

10. Reports from other CIPM activities

Quality Management System (QMS) report

The Secretary recalled that the last BIPM QMS Management Review had been conducted on 20 March 2026. The meeting confirmed that the BIPM QMS remains effective and compliant with ISO/IEC 17025 and is functioning effectively with no systemic concerns.

He recalled that concerns had been raised regarding the discontinuation of publication of comparison reports in the *Metrologia* Technical Supplement; they are now published on the BIPM website and are no longer indexed by citation indexes such as Scopus or Web of Science. This could possibly affect the motivation of contributors to work on the reports. However, this new repository could also be seen as an opportunity for BIPM technical reports. Policy-level consideration of the matter is required by the CCs and the JCRB, particularly on publication issues and recognition of comparison reports.

CIPM *ad hoc* Working Group on Conditions of Employment (CIPM-WG-EMPLOYMENT)

The Secretary said that the mission of the CIPM-WG-EMPLOYMENT is to oversee a review of the BIPM remuneration package, based on an independent survey of other international organizations headquartered in France and other Western European countries, as well as some major NMIs. The survey takes place every 5 years and the latest was completed in 2025 by the International Service for Remunerations and Pensions (SIRP). The salaries for 26 benchmarked job positions, representing a wide range of positions at BIPM, were compared against those at the European Space Agency (ESA), International Thermonuclear Experimental Reactor (ITER), World Organisation for Animal Health (WOAH), LNE (France) and NPL (UK).

It was found that BIPM basic salaries (not including allowances) are, on average, more competitive than those at the two NMIs and one of the International Organizations but generally, less competitive than salaries at one of the other international organizations. Compared to the remaining international organization, BIPM basic salaries are less competitive but when allowances, notably the expatriation allowance, are included, the BIPM's compensation becomes as competitive as that international organization.

The Secretary said the CIPM-WG-EMPLOYMENT proposed that all BIPM staff are informed, in a transparent manner, of the results of the salary survey, including the overall competitiveness of the remuneration package.

The President thanked the Secretary and invited comments and questions. A CIPM member asked if there will be any changes in the remuneration package offered to BIPM staff as a result of the survey. The President replied that some updates and modernization may be considered.

11. Reports from liaisons and workshops

Nothing to report.

12. Update and follow up on revision of CIPM-D-01

The President recalled that there had been a comprehensive discussion on the revision of document CIPM-D-01 *Rules of procedure for the Consultative Committees (CCs) created by the CIPM, CC working groups and CC workshops* at the meeting of CC Presidents, held on 15 June. He presented the latest draft of the document, showing the changes in “track changes” mode. The main points of the discussion were as follows.

Terminology relating to CIPM structures was revised to clearly distinguish between CIPM groups and subgroups throughout the document.

Provisions on Consultative Committee (CC) membership were amended to allow CCs to grant provisional membership to institutes following approval by a CC. This will allow such institutes to participate in CC activities, pending formal approval by the CIPM at its next meeting.

Responsibility for granting official observer status was delegated to the relevant CC, with the CIPM to be informed of decisions.

The existing distinction between “meeting observers” and “guests” was retained. No changes were made to these provisions, as meeting observers and guests fulfil different purposes and are subject to different participation arrangements.

The section on Forums was revised to incorporate broader and more specific objectives, based on proposals submitted during the review. The BIPM drafting team was asked to align the wording with previously approved documents while avoiding unnecessary overlap with the objectives of the CCs.

Provisions relating to observer participation in Forums were modified to reflect the different nature of Forums compared with CCs. The wording was adjusted so that national laboratories may be granted meeting observer status, subject to review by the BIPM, rather than having an automatic right to this status.

The criteria for participation in Forums were clarified by distinguishing between institutes that are active in the field, and therefore eligible for observer status, and institutes with an interest in the field, that are eligible for meeting observer status.

The provisions governing subgroups were revised to clarify that CIPM approval is required only for Working Groups. Task Groups remain more flexible in their composition and operation and are not subject to the same approval requirements.

The sections on subgroup participation, membership and organization were revised to ensure that restrictions and governance requirements apply only to Working Groups, while generic operational provisions continue to apply to all subgroup types where appropriate.

The text concerning fees for workshops and similar activities will be revised to use generic wording that accommodates all categories of participants and allows attendance fees to be charged where appropriate, while avoiding conflict with existing membership and contribution arrangements.

The review identified an inconsistency in terminology concerning the CIPM Task Group on Quantum Technologies. It was agreed that this activity is a CIPM Task Group and not a Sectoral Task Group. The relevant decision and report of Session I of the 115th meeting will be corrected (see Decision CIPM/115-12 (2026)).

A revised version of CIPM-D-01 was circulated to the CIPM members after the meeting for comment and approval. The revised version was approved by correspondence on 25 July 2026 and published on the BIPM website on 27 July. The CIPM also agreed the following decision by correspondence.

Decision CIPM/115-18 (2026)

The CIPM took the following decision by correspondence on 25 July 2026:

The CIPM decided to approve version 4.0 of CIPM D-01 'Rules of procedure for the CIPM Consultative Committees (CCs), Forums and Sectoral Task Groups (STGs), and their subgroups and workshops.

13. Report from the Committee for CIPM Election (CEC)

The President recalled that he and the Secretary had met with the Committee for CIPM Election (CEC) as observers. They asked the CEC for confirmation of the information needed from the CIPM. The CEC confirmed that they need feedback on which candidates have the skills to become CC Presidents for those positions that become vacant. The Secretary added that the CEC had also asked the CIPM to indicate if there were any potential conflicts of interest between the candidates and the members of the CEC.

The Secretary confirmed that all 24 candidates meet the necessary formal and documentary requirements to stand for election to the CIPM.

The CIPM had a comprehensive discussion on the candidates, in particular their skills in relation to becoming CC Presidents. The CIPM noted that there will definitely be vacancies for presidents of the CCEM, CCPR, CCQM and CCTF due to retirements.

The President thanked the CIPM members for their input and commented that he will work with the Secretary to collate the information they provided and send it to the CEC.

14. Next meeting

The President gave a summary of the expectations for the next meeting of the CIPM. He said that the current CIPM cannot convene a formal meeting on behalf of the incoming committee and cannot decide on the agenda. The "new" CIPM members are responsible for taking these decisions as soon as they are elected. He added that the outgoing President and Secretary

should remain available for advice if needed and stressed that the legal opinion is that they should not take any decisions or sign any documents as soon as the election is complete. The current proposal is for an informal meeting of the outgoing and incoming CIPM members after the election. He added that the CIPM needs to consider how it will take decisions after the new CIPM is elected but before a new bureau is appointed. Decisions may be needed on the salary and the pension point, and the budget for 2027.

P. Richard presented a draft document showing the proposed content of a joint session of the CIPM, to be held as an informal “closeout” meeting. The document is based on the legal advice received and after discussions with the Bureau and the Director. The suggestion is for the informal closeout meeting to be held at the Palais de Congrès on 15 October 2026 at around 16:00.

He then presented a proposal for the first formal induction meeting of the newly elected CIPM, which could be held at the BIPM headquarters on Friday 16 October. It would be Chaired by the most senior member of the newly-elected committee. This induction meeting could cover onboarding tasks and major issues such as the BIPM vision, mission, governance, different roles within the CIPM, the activities of the working groups, financial issues, and staff issues. This proposed meeting would give the newly elected CIPM the possibility to discuss the election of the CIPM bureau and for potential candidates to make a presentation. It would also decide the date of the next meeting of the CIPM.

A CIPM member asked for clarification as to whether it is only the newly elected CIPM that can decide if the proposed meeting on 16 October is a formal meeting of the CIPM; the outgoing CIPM cannot make this decision and that this is the legal opinion? The President confirmed that this is the case; the outgoing CIPM cannot take decisions for the incoming CIPM. P. Richard added that the BIPM director would have to inform all the CIPM candidates that this meeting is planned and that it can only be a formal meeting if everyone is present.

P. Richard commented that there are two options for newly elected CIPM to hold a formal meeting to elect the CIPM bureau. The first is for a meeting on Saturday 17 October at the BIPM headquarters, if the candidates for the bureau are declared on Friday 16 October. The second option is for a meeting in March 2027 (week 12). These two options are for the newly elected CIPM to decide.

The Director asked if it will be necessary for the BIPM to contact all the CIPM candidates to let them know that they may be required to remain in France until after a potential meeting on Saturday 17 October? It may also be necessary to prepare their candidatures for positions on the bureau if the newly elected CIPM decides to call for candidates on 16 October for election on 17 October. She noted that if they are not informed in advance to prepare their candidatures, it would take away the freedom of the newly elected CIPM to decide to hold a potential meeting on the Saturday. J. Olthoff agreed with this opinion noting that by giving the potential new CIPM members the information that these meetings and an additional meeting might take place is not making decisions on behalf of the incoming CIPM. Conveying as much information as possible to the potential CIPM members about the meetings that are planned and could be planned gives them the most options possible. The Director also recalled the earlier discussion about potential decisions that may be needed between October and December on the salary and the pension point, and the budget for 2027 and how these will be addressed. The President replied that legally these decisions will have to be taken by the newly elected CIPM, which will need an interim convenor or chair.

The Secretary commented that setting aside time on Saturday 17 October for a meeting that may or may not go ahead will present problems for non-European candidates due to the extra costs associated with accommodation and travel. This opinion was supported by the President.

The President summarized the discussion by suggesting that the BIPM should inform the 24 candidates they must be prepared to attend a formal induction meeting of the newly elected CIPM at the BIPM headquarters on Friday 16 October. It will be for the new CIPM to decide when they will elect the new bureau. The possibility of a meeting on Saturday 17 October should be excluded. He asked the Director and the Secretary to collaborate on the wording of a communication to the 24 candidates to inform them of these decisions.

He added that it may be necessary to hold a short meeting of the CIPM before the 28th CGPM if any important matters arise, however he hoped that such matters can be dealt with by correspondence.

15. Any other business

P. Richard made the following statement *“This is probably our last official meeting, subject to any ad hoc meeting or decision by correspondence, for example, on the dotation or on the special procedure. Today, is the final official session before the General Conference. So, I'd just like to take this opportunity to extend my warmest thanks to all those who have contributed to the smooth running of the organization over so many years and will step down. At the time of the conference, I have made a small calculation, these are 73 years of engagement in total, and if I mention the members in order of seniority, I would like to thank, Takashi, Wynand, Gert, Maria Louisa, Noël, Sang-Ryoul and Jim. Thanks to you, the BIPM is different from what it was before you joined. And thank you also for your contributions and efforts over the years. The BIPM has evolved thanks to major scientific progresses in the CCs, in other CIPM groups, and also very importantly in the BIPM labs. And also thanks to efforts in digital transformation, in communication, in finance and in governance. Together, we were very lucky, because we have experienced an intense and exciting period, with the redefinition of the SI and the 150th anniversary of the Metre Convention. We also appointed, recently, a new director, which is also a major change. So I hope your efforts have been rewarded with a great deal of satisfaction for the accomplished work, and thank you again for everything, and above all, for your friendship. It was always a very nice time together. And we will have the opportunity to celebrate once more in October.”*

The President thanked P. Richard.

16. Closure of the meeting

The President said that the retiring CIPM members are happy in the knowledge that there are enough experienced candidates to take the CIPM to new heights. He added that it has been a pleasure to work with the CIPM members, but there will be time for a more personal goodbye on the evening after the CIPM election at the 28th meeting of the CGPM.

The President thanked the CIPM members for being so efficient during the meeting, R. Brown for his contributions and A. Koo and the BIPM team. He said that the work involved in preparing for the CGPM is not finished, but he thanked the CIPM for the work so far. There are a few things that need to be finalized, for example the CIPM's report to the CEC.

He closed the meeting.



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