

International Committee  
for Weights and Measures

**Proceedings of Session II**

**of the 113th meeting**

(19-21 June 2024)

## Executive Summary

### Session II of the 113th meeting of the CIPM (19-21 June 2024)

#### President of the CCAUV

The CIPM appointed G.P. Ripper as the President.

#### President of the CCU

The CIPM appointed R.J.C. Brown, NPL (UK) as President.

#### Recruitment of the next Director for the BIPM

The CIPM shall establish a search committee and a selection committee to assist with the recruitment.

#### Change to the RRI

The CIPM approved the proposed amendment of Staff Rule 14.5.1 (Paid annual leave).

#### Attendance of a CCE representative at CIPM sessions

The CIPM approved the attendance of a representative of the CCE, with the status of an observer, at those parts of CIPM sessions that examine proposals on conditions of employment.

#### Membership of the CCs

The CIPM accepted the following changes to the membership of the CCs:

- CCPR
  - NSC-IM (Ukraine) as a member
- CCQM
  - IPQ (Portugal) as a member

#### Representation in JCGM-WG2 (VIM)

The CIPM appointed S. Ulbricht (PTB) and R.J.C. Brown (NPL) to represent the BIPM in JCGM-WG2 (VIM).

#### 9th edition of the SI Brochure

The CIPM approved a new version of the 9th edition of the SI Brochure (v3.01) incorporating changes suggested by the CCU Task Group and Focus Group considering angles, dimensionless quantities, counting and number quantities.

#### Accession of Uzbekistan

The CIPM decided, based on the criteria it has previously adopted, that it would be appropriate for the Republic of Uzbekistan to accede to the Metre Convention.

## **MEMBERS OF THE INTERNATIONAL COMMITTEE FOR WEIGHTS AND MEASURES**

As of 19 June 2024

### **President**

W. Louw, South Africa.

### **Secretary**

T. Usuda, Japan.

### **Members**

V.G. Achanta, India.

D. del Campo Maldonado, Spain.

V. Coleman, Australia.

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.

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## 1. WELCOME, QUORUM AND OPENING REMARKS

The International Committee for Weights and Measures (CIPM) held Session II of its 113th meeting on Wednesday 19 June to Friday 21 June 2024 as an online 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, M. Milton (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), C. Planche (Web and Translation) and R. Sitton (Publications).

The following were in attendance for parts of the meeting: P. Gournay (BIPM), R. Guliyeva (CCE), F. Idrees (CCE), P. Moussay (CCE), S. Solve (Executive Secretary of the CCT), M. Stock (Executive Secretary of the CCU), R. Wielgosz (Executive Secretary of the CCQM).

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

The President opened the meeting and welcomed the participants. He said that José Maria Los Arcos, the former Director of the BIPM Ionizing Radiation Department, had died in May 2024. The Director's report (§11) includes a tribute to José Maria.

## 2. APPROVAL OF THE AGENDA AND THE REPORT OF SESSION I OF THE 113TH MEETING

The CIPM approved the agenda and accepted the report of Session I of its 113th meeting as a true record.

**Decision CIPM/113-11 (2024)** The CIPM accepted the minutes of Session I of the 113th meeting of the CIPM as a true record.

## 3. SECRETARY'S REPORT

The Secretary gave his report ([CIPM/2024-II-03-a](#)), which covered the CIPM bureau meetings held on 25 April, 27 May and 18 June 2024 and the Quadripartite meeting between the BIPM, International Organization of Legal Metrology (OIML), International Organization for Standardization (ISO) and International Laboratory Accreditation Cooperation (ILAC) on 13 May 2024. The main topics discussed by the bureau included an update on the plans for the 150th anniversary of the signing of the Metre Convention, the forthcoming UN Climate Change Conference (COP 29), the process of recruiting the next Director and financial updates.

The Secretary was asked to elaborate on the topics discussed at the Quadripartite meeting. He said that the meeting report will be made available on the CIPM webpage. The President added that the participants in the Quadripartite meeting had discussed whether the meetings should continue following a lack of major items on the agenda. They had agreed that the meetings should continue in order to provide a forum for the organizations to discuss issues of mutual interest, although the periodicity will increase from 12 months to 18 months. The Director recalled that the Quadripartite meeting had discussed several topics of interest to the CIPM. ILAC and the International Accreditation Forum (IAF) will merge in 2026 to establish a single international accreditation organization to be known as the Global Accreditation Cooperation (GLOBAC). ISO had promoted the "Walbrook AI Accord" which will respond to the ethical challenges of AI. ILAC raised questions with ISO about potential contradictions on the topic of metrology within the suite of standards maintained by ISO CASCO, in particular ISO 10012:2003 *Measurement management systems - Requirements for measurement processes and measuring equipment*. J. Olthoff recalled that ILAC is preparing an annex to the document P10 *ILAC Policy on Metrological Traceability of Measurement Results*, which includes information on the traceability of SRMs.

#### 4. PRESIDENT'S REPORT

The President said that the process for the recruitment of the next Director of the BIPM is proceeding on schedule and the bureau has prepared the text for an advertisement, which includes the goals of the next Director. Following discussions between the bureau and F. Aktaş, the Head of the BIPM Human Resources Service, an external company will be appointed to support the CIPM with the recruitment process. The President clarified that the BIPM Headquarters will advertise the position and, with the assistance of the CIPM, all NMIs and RMOs will be made aware of the vacancy. The bureau has asked F. Aktaş to carry out a benchmarking study to compare the salaries of the Directors of other intergovernmental organizations (IOs).

The President said that the BIPM Human Resources Service had carried out a staff survey since the last session of the CIPM in March and the bureau has discussed the feedback. He recalled that he had attended the Director's briefing to the BIPM staff in May 2024 via a video link, where he gave a summary of the strategy and his views on the future of the BIPM. The questions from staff at the briefing had centred on the future of the BIPM laboratories.

#### 5. CONSULTATIVE COMMITTEE ELECTIONS

The President said that G. Ripper was the only candidate for the Presidency of the Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV) and, following a show of hands, he was unanimously appointed.

**Decision CIPM/113-12** The CIPM appointed G.P. Ripper as the President of the Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV).

The President recalled that expressions of interest had been received for the Presidency of the CCU from H.A. Frøystein and Dr Richard J.C. Brown, NPL (UK). H.A. Frøystein said that after giving consideration to R.J.C. Brown's experience on the CCU and the previous examples of having a non-CIPM member as a CC President, he had decided to withdraw his application. The members discussed the value of having CC Presidents from within the CIPM in preference to external candidates. The President recalled that the bureau had discussed this topic and agreed that the preference is for CC Presidents from within the CIPM, particularly for those CCs that have activities relevant to the laboratory activities in the BIPM work programme. The CCU is a special case and previously had Presidents from the external community. If the best candidate is from outside the CIPM, the CIPM should focus on ensuring good communication with such an external President.

The President asked for a show of hands to decide whether to appoint R.J.C. Brown as President of the CCU. R.J.C. Brown was appointed, with six abstentions.

**Decision CIPM/113-13** The CIPM appointed R.J.C. Brown (NPL, UK) as President of the Consultative Committee for Units (CCU).

The CIPM agreed that the appointment of R.J.C. Brown is for the period until March 2027, at which time the incoming CIPM will meet, and the appointment will either be confirmed or a new candidate for the CCU will be sought.

The President confirmed that any CC President who is not a member of the CIPM will be invited to CIPM sessions during which they give their report. In this case, it may not be an immediate issue as the next meeting of the CCU is not planned until 2027. He added that the bureau had discussed the possibility of H.A. Frøystein participating in CCU meetings and reporting to the CIPM to aid communication. H.A. Frøystein said that he would be interested in providing an official liaison role between the CIPM and the CCU. The CIPM agreed to this proposal and noted that this liaison role will not overlap with the tasks of the CCU President.

The CIPM proceeded to discuss whether guidelines are needed to clarify the process for the confirmation and appointment of new CC Presidents at the first meeting of an incoming CIPM after a meeting of the CGPM. P. Richard recalled a comment made earlier, noting that there is a need for clear rules to fill CC vacancies, and

particularly whether an open call should be made for candidates when the work of a CC is directly related to the BIPM work programme.

The President expanded on an idea proposed by the Director that the CCs can be considered in three categories, noting that this had also been discussed by the bureau the previous before. The first category of CC is for the CCU due to the unique nature of its work. The second category is for CCs whose scope concerns laboratory activities in the BIPM work programme. The third category is for CCs whose scope does not concern laboratory activities in the BIPM work programme.

C. Denz suggested that the discussions over the Presidencies and the wider governance issues that relate to the CCs should be expanded to include the Sectoral Task Groups (STGs), Forums, and other groups that may be created in the future. The STGs and Forums are equivalent to a CC and the CIPM should consider how to define and organize them and how they fit into the three designated categories. The President agreed and cited the example of a possible future STG on metrology for artificial intelligence and considered if there would be expertise within the CIPM in this area or whether an open call would be necessary to find a suitable chair.

## 6. CIPM STRATEGY: UPDATE ON THE FINAL DRAFT OF THE REPORT

The President presented document [CIPM24-II-06-a](#) *CIPM Strategy 2030+* for discussion, noting that the CIPM is not required to approve the document at the meeting. He summarized the document and its background and invited comments.

The CIPM noted that the foreword does not include any indication of where the ideas for the strategy came from, who was consulted during the development of the strategy and the evidence that was used to support the ideas. By including this information in the foreword, or as a supplementary paragraph, the assumption that the CIPM had been solely responsible for drafting the strategy will be avoided. It was suggested that the document should state that the CIPM has already established a Sectoral Task Group on Climate Change and Environment to address this cross-cutting challenge. This will illustrate how the CIPM is engaging in and working with the wider community, including external agencies and other IOs.

The CIPM favoured the approach used in the section *Evolving needs for Metrology: Metrology for Global Challenges*, which is to have an introductory title and including a short explanatory paragraph. It was noted that the strategy is not exhaustive and if new challenges were to be identified, for example green technologies, then these could be added to the section. Two additional challenges; artificial intelligence and quantum-based technologies, have been added to the document since it was originally drafted. The President noted that the dynamic nature of the document should be reflected in the introduction or the supplementary paragraph to the foreword. If the document expands to add new challenges, the section will be restructured into logical categories, for example technologies or issues. G. Rietveld clarified that although the first five grand challenges listed in the strategy are actual challenges, others are technologies that may be used in one or more of them, for example digitalization. The challenges outlined in the section will aim to show how metrology is affected by new technologies as well as how metrology will impact these technologies. The CIPM and metrology community must be clear about how they will respond to the challenges. The CIPM agreed that more thought will be given to the distinction between grand challenges and new technologies and where they fit into the strategy.

M.L. Rastello said that the text on the redefinition of the candela in the Strategy document does not reflect the discussions and position of the Consultative Committee for Photometry and Radiometry (CCPR) plenary session held in June 2024 and proposed drafting a new text (see §12).

D. del Campo Maldonado added that the Consultative Committee for Thermometry (CCT) is working on a revision of the International Temperature Scale (ITS) as a transitional point towards realization of absolute thermodynamic temperature. In 2026 the CCT may present a recommendation on the requirements for a new scale and the Strategy document could include information on this development (see §12). V.G. Achanta

volunteered to coordinate the updating of the Consultative Committee section in the Strategy document.

The Director said that the section on revised definitions of base units should highlight the rapid progress in standards and traceability for biological quantities. The CIPM should consider how the unit system works for biology, and how it may have to adapt over the next 10 years to address the needs of biological measurements. S.-R. Park added that a Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM) Task Group is discussing the topic.

The President gave a summary of the sections on *Implementation of the Strategy: Addressing metrology challenges in a horizontal approach* and *Universal Adherence to the Metre Convention*. He asked the CIPM if they considered the section on Universal Adherence, including the benefits of becoming an Observer to the BIPM, to be too detailed for inclusion in the Strategy document. The Director said that the section on Universal Adherence will require a careful review to ensure there are no conflicts with the contents of the forthcoming By-Laws. This process would be helped by not including too much detail in the Strategy document that could be inconsistent with the By-Laws. The CIPM supported the view that it would be more appropriate for the detailed information in the section to be in a separate document and for information, such as the bulleted lists of benefits of becoming an Observer, to be summarized in a short paragraph. The CIPM agreed that there may be value in using the separate document on Universal Adherence as information for potential Observers. C. Denz reminded the CIPM that this is a strategy document and suggested that the detailed information in the Universal Adherence section could be replaced by a visionary statement on membership over the next 20-30 years, thus eliminating the detailed information and making the section easier to update.

## 7. IN CAMERA SESSION

The CIPM was convened for a session in camera to discuss the recruitment process for the next Director of the BIPM.

In the following session, the President explained the key issues raised during the discussion to include them in the meeting report. One major point of debate was whether the tasks listed in the recruitment document accurately reflect the work of the Director and the relative importance of each task. Another significant discussion point was whether to specify the qualifications for applicants, such as their scientific background, PhD requirement and management experience.

It was agreed that the tasks listed in the recruitment document should be evaluated in terms of their individual importance. Additionally, it was decided that the qualifications for candidates should be broad and not limited to specific criteria. It was also agreed that the final redaction of the job advert will be carried out by HR experts (Filiz Aktaş and an external company) based on the available documents and comments from the CIPM members. The HR experts will be able to develop wording to attract the appropriate candidates.

To ensure confidentiality and to efficiently handle a potentially large volume of applications, it was confirmed that an external professional expert would undertake the first processing of the applications, after which the Selection committee will carry out the final processing. Furthermore, a survey of salaries in similar institutions was conducted under contract by an expert consultancy with experience of this type of survey. The results of this survey will be used to form a salary model, which will be included in the recruitment document.

The retirement age for the next Director will follow the organizational rules that is currently set at 67 years for new employees.

The CIPM will establish two committees: a Search Committee, comprising of all CIPM members and the Director, tasked with identifying potential candidates; and a Selection Committee, comprising the President, the Secretary, the Vice-Presidents, G. Macdonald, V. Coleman, D. del Campo Maldonado, and F. Aktaş, responsible for selecting and finalizing candidates. The selection committee is expected to recommend a final candidate, or candidates, to the CIPM for final decision.



The Secretary confirmed the recruitment process and timeline. The call for candidates will open by 1 October 2024, with the application deadline set for the end of December 2024. The retirement date for the current Director is at the end of June 2026. The appointee will be expected to join the BIPM before the current Director leaves for a handover period and will take office as Director in July 2026.

The Director said that he was, of course, fully willing to support the next Director with the handover in every way possible. The handover will occur less than ten working weeks before the CGPM. He said that preparing a successful CGPM requires substantial work from the Director, and it would be challenging to do this at the same time as the handover of responsibilities for the management of staff, finances, and operations. He said that he had not seen planning for this yet and reiterated his commitment to make the handover work for the benefit of BIPM in every way. The President emphasized that this timetable aligns with the schedule agreed at the CIPM meetings in October 2023 and again in March 2024. The Directors' pledge to support the process was acknowledged, and the bureau will monitor the planning schedule and preparations for the CGPM 2026.

**Decision CIPM/113-14** The CIPM decided to establish two committees to assist with the recruitment of the next Director for the BIPM:

- a Search Committee, comprising all CIPM members and the Director, tasked with identifying possible candidates;
- a Selection Committee, comprising the President, the Secretary, the Vice Presidents, G. Macdonald, V. Coleman, D. del Campo Maldonado, and the Head of HR at the BIPM tasked to review all applications, to interview the leading candidates and to recommend a preferred final candidate, or candidates, to the CIPM for a final decision.

## 8. CIPM STRATEGY: FUTURE CIPM AND BIPM HEADQUARTERS

The President introduced the discussion about the future of the CIPM and the future of the BIPM headquarters. He proposed that the discussions on these two sections of the CIPM Strategy 2030+ did not require detailed minutes and could be presented in summary form.

### Future CIPM

The CIPM discussed the section of the CIPM Strategy 2030+ on “The evolving role of the CIPM and the CCs”. The discussions were summarized in the following statement for inclusion in the section. *“The CIPM should consider broadening its areas of expertise and responsibilities to include the world’s major issues and newer technologies and to address the metrology needs of NMIs from all countries around the world. The CBKT programme is an indication of how the CIPM is trying to accomplish these activities.”*

### Future BIPM Headquarters

The CIPM continued by discussing the section of the CIPM Strategy 2030+ on “The Headquarters of the Future.” The discussions were summarized as follows. *“The BIPM laboratories should focus on fulfilling the traceability needs of the smaller NMIs around the world. The direction of the laboratories needs to align with the priorities in the strategy and this will require them to change.”* In addition, the CIPM noted that the vision for the BIPM Headquarters and the laboratories needs to be put into context considering the revised SI. A strategic vision for the laboratories is needed for inclusion at the start of the strategy document.

## 9. REPORT FROM THE CIPM SUB-COMMITTEE ON GOVERNANCE (SC-G)

P. Richard, the Chair of the SC-G, presented report [CIPM/2024-II-09-a](#). He gave a summary of the development of the By-Laws since the last meeting of the CIPM and noted that the BIPM had launched the Member State consultation exercise on 21 May 2024 through the embassies in Paris of all Member States. This consultation will be completed on 2 September. A three-month consultation exercise was agreed to allow the embassies sufficient time to forward the By-Laws to the appropriate authorities. P. Richard recalled that the By-Laws have gone through three drafting stages for: the SC-G; the CIPM; and the Member States. Each draft has undergone a separate consultation exercise, with a consultation report issued each time. The consultation report on the Member States' version of the By-Laws is expected in September 2024.

The SC-G is working in parallel to drafting the By-Laws to produce Rules of Procedure (RoP) for the CGPM. The RoP will have a similar structure to those drafted for the CIPM. The contents will include: sessions; agenda and working documents; delegations; credentials; president and secretariat; language and records; conduct of business; resolutions and decisions; election of the CIPM; and amendments. A concise commentary will connect the RoP to the articles of the Metre Convention. The SC-G gave a mandate to P. Quayle (an external legal expert) to draft the RoP of the CGPM within the timeframe 29 May to 28 June 2024. A consultation on the RoP will be carried out with the SC-G in July and with the CIPM in August 2024. The Chair of the SC-G will give an update on the By-Laws and the RoP of the CGPM to the meetings of the CIPM and the NMI Directors and Member State Representatives in October 2024. P. Richard said that P. Quayle could be invited to report directly on legal issues at the NMI Directors and Member State Representatives in October.

The President thanked P. Richard and invited questions. The CIPM discussed the possible structure of the meeting of the NMI Directors and Member State Representatives to ensure that there is sufficient time to discuss the CIPM Strategy 2030+, including universal adherence, and governance issues, including the By-Laws and the RoP of the CGPM. The Director reminded the CIPM that COOMET and GULFMET are jointly developing the programme for the meeting. The CIPM agreed that the meeting should include the role of NMIs and RMOs in the discussions on universal adherence as the RMOs will need to consider how they engage with countries that are outside their current membership. The CIPM will convene a group to discuss this issue and to develop a position before its next meeting in October 2024.

## 10. REPORT FROM THE CIPM SUB-COMMITTEE ON FINANCE (FSC)

P. Richard, Chair of the FSC, presented report [CIPM/2024-II-10-a](#), which is available on the CIPM webpage for information. He noted that the Financial Report 2023 is also available ([CIPM/2024-II-10-c](#)) and thanked the Director, D. Spelzini (Head of the Finance Office) and the team at the BIPM Headquarters with respect to the good financial performance for 2023 as well as the efficient preparation and completion of the external audit by KPMG. The external auditor signed off the financial statements for the BIPM and the BIPM Pension and Provident Fund at the end of May 2024. There had been an excellent collaboration between the Chair of the FSC, the Finance Office and the Director throughout the year with regular meetings to provide financial updates.

The FSC had discussed the financial reports at its meeting in June 2024 and agreed unanimously to recommend to the CIPM to approve the 2023 financial statements for both the BIPM and BIPM Pension and Provident Fund and to grant quietus to the Director.

P. Richard drew the CIPM's attention to Note 5 to the BIPM financial statements which he said definitively closes the long-standing issue of supplementary sums from the Member States. He noted that this is a major achievement for the BIPM.

There was a pause for questions. The Secretary recalled that there are three Member States at risk of suspension in 2025 (Argentina, Iran and Pakistan) and asked if the CIPM should consider the possibility of redistributing their contributions in the 2025 notification. The Director replied that this will be discussed in the Director's report (§11). The President said that the meeting of the Pension Fund Advisory Board (PFAB) on 24 June will discuss future investments in the pension fund.

The CIPM agreed the following decision.

**Decision CIPM/113-15** 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 June 2024.

The CIPM granted the BIPM Director quietus for the 2023 exercise.

P. Richard continued by presenting document [CIPM/2024-II-10-b](#) *Note to the CIPM Proposal for an amendment to the Financial Regulations concerning Article 16 - Reserve Fund*. This document notes that the current version of Article 16 of the BIPM Financial Regulations does not provide any definition of the purposes for which either the "Reserve Fund" or the "Unreserved cash" may be used. The background and details of the proposed change are in document [CIPM/2024-II-10-b](#). The proposed change will clarify, through the Financial Regulations, how the CIPM might use unreserved cash. The revised text is as follows:

***Article 16 – Reserve Fund and the use of unreserved cash or cash equivalent***

*16.1 A Reserve Fund exists aimed at covering the fluctuations in payments of annual contributions from Member States. The Reserve Fund shall represent 50 % of the annual dotation.*

*16.2 When unreserved cash and cash equivalent is available, the CIPM may authorize expenditure beyond the agreed budget for:*

- Exceptional investment in equipment or building infrastructure that could not have been foreseen at the time of the development of the long-term financial plan,*
- Exceptional spend required to improve long-term environmental conditions or to carry out other site remediation work resulting from historic events,*
- Exceptional un-insured loss,*
- Any other exceptional, unforeseen or unavoidable expenses, including, but not limited to, transfers to the BIPM Pension and Provident Fund.*

P. Richard said that the FSC supports the change and unanimously recommended the CIPM to adopt the proposed amendment to the Financial Regulations.

The President thanked P. Richard and asked for a show of hands in support of the change to Article 16 of the Financial Regulations. The CIPM adopted the change unanimously.

**Decision CIPM/113-16** The CIPM approved the proposed amendment to Article 16 (Reserve Fund and the use of unreserved cash and cash equivalent) of the BIPM Financial Regulations.

## 11. DIRECTOR'S REPORT

The Director started his report by paying tribute to José Maria Los Arcos who died in May 2024. José Maria joined the BIPM in July 2012 and succeeded Penelope Allisy Roberts as the third Director of the BIPM Ionizing Radiation Department and as Executive Secretary of the Consultative Committee for Ionizing Radiation (CCRI). José Maria was very familiar with the activities of the CCRI, having been a contributor to the work of the Committee since 1999 as CIEMAT representative to CCRI Section II: Measurement of radionuclides (CCRI(II)). He spent five years at the BIPM Headquarters before returning to Spain, where he continued to work at CIEMAT as Scientist Emeritus.

The Director gave an overview of the BIPM finances, including operating revenue against operating expenses. Operating expenses have been increasing in recent years but remain lower than revenue. They were impacted by the increase in electricity costs, although the BIPM Headquarters has implemented a programme of savings to reduce consumption to compensate for the increase in the rate for electricity. He noted that the rate for electricity has declined in France in 2024 and the peak in costs has passed. Overall expenses in 2023 were close to the budget. Staff costs rose in 2023 with a 4.5 % increase in salaries. In addition, there was an increase in family and social allowances and subsistence payments for seconded staff. He presented the situation regarding reserves and unreserved cash and recalled that the BIPM has an obligation to maintain a reserve fund of 50 % of the dotation to protect against income related risks. In addition, the BIPM has unreserved cash that was the subject of the amendment in Decision CIPM/113-16 and an amount of reserved cash for commitments that the BIPM has made for the following financial year. The amount of unreserved cash decreased in 2021, 2022 and 2023 following a transfer of 3 million euros each year into the pension fund.

The Director recalled the comments by P. Richard that the external auditor from KPMG signed off the financial statements for the BIPM and the BIPM Pension and Provident Fund at the end of May 2024 with only two notes; the first recognized that there is unprecedented inflation in the global economy and the second note was added to the report on the pension fund.

He gave a summary of outstanding payments due from Member States and Associates for 2022-2024. Two Member States (Argentina and Iran) have outstanding payments from 2022 and risk being suspended from January 2025; discussions are ongoing with both Member States. Iran, along with the Russian Federation and Belarus are subject to international banking sanctions in France making it difficult for them to transfer money. He added that the overall situation regarding payments is much better than in any previous year.

The Director said that there have been five recruitments since the last session of the CIPM in March 2024: G. Thiriot (Site Maintenance) on 1 April; A. Villevalde (Ionizing Radiation Department) on 1 April; F. Collini (Time Department) on 1 May; R. Naouali (Gardien) on 1 June and C. Robertson (Chemistry Department) on 1 June. The recruitment process is ongoing for a Senior Communications Officer in the International Liaison and Communication Department. R. Coulon will take over from G. Panfilo as the Executive Secretary of the Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV), following the appointment of G. Ripper as the President.

The BIPM Human Resources Office carried out a staff survey in May-June 2024 and the results are available as document [CIPM/2024-II-11-b](#). The Director said that 71 % of staff completed the survey and he asked the members of the CIPM if they could send the results of comparable surveys from their own organizations for a benchmarking exercise.

The Director recalled that the Chemistry Department had held a successful “open doors” day on 20 May and the intention is to have similar days in the other departments to allow all staff to see the work that they are carrying out.

He presented the BIPM’s cross-department digital transformation activities including the responsibilities of different BIPM staff in this area. The first meeting of the Forum on Metrology and Digitalization (FORUM-MD) in March 2024 established eight task groups and working groups, of which three are directly linked to the BIPM Work Programme: *Ad hoc* Task Group on SI Digital Framework, which oversees and reviews requests for changes to the SI Reference Point; Working Group on Coordination between Consultative Committees, which shares initiatives and plans between the CCs; and Working Group on coordination between Regional Metrology Organizations, which shares initiatives and plans between the RMOs.

The BIPM launched the SI Reference Point in early 2024 and it will be open for beta testing during the rest of the year. In addition, the BIPM is introducing new digital reference points for the CC Service Categories and permanent references for CMCs were launched at the start of 2024. Further developments include preparatory steps towards making the data in the KCDB Findable, Accessible, Interoperable and Reusable (FAIR). The Director thanked Jean-Laurent Hippolyte, NPL (UK) who is an expert in this area of programming and who has been on secondment to the BIPM.

The Director recalled the recognition by the United Nations Educational, Scientific and Cultural Organization (UNESCO) of World Metrology Day as an official “World Day”, starting on 20 May 2024. He said that the Secretary General of UNESCO had made a statement paying tribute to World Metrology Day and added that a launch event had taken place at the UNESCO Headquarters on 14 May 2024. A measure of the success of World Metrology Day is the extent to which it engages with states that are not Member States or Associates. For example, in 2024 there were posters from Bahrain, Nigeria and Tajikistan.

The Director completed his presentation by noting that he had received visits from the Mayor of Sèvres, Grégoire de la Roncière on 13 May 2024 to discuss the 150th anniversary of the Metre Convention, and the Ambassador of Kosovo, Mehdi Halimi, accompanied by Liridon Bajrami, Third Secretary, on 29 May 2024.

P. Richard asked if the Director anticipated difficulties at the 28th meeting of the CGPM (2026) if any Member States were to be suspended. The Director replied that this should not be a problem because suspended States are invited to attend. The extent of the measures applicable in the case of suspension has not been elucidated and should be revisited after the By-Laws are published. P. Richard also asked if any technical possibilities existed that would allow Member States to pay their contributions even if there are banking sanctions. The Director confirmed that technical possibilities do exist, such as paying through an embassy.

The Director said that there had been a proposal to amend the text of Staff Rule 14.5.1 (Paid annual leave) of the Regulations, Rules and Instructions applicable to staff members of the BIPM (RRI) following an appeal by a staff member against the existing text. The appeal was rejected; however, the Appeals Committee proposed that the text be clarified. The CIPM approved the amendment and agreed Decision CIPM/113-17 (2024).

**Decision CIPM/113-17 (2024)** The CIPM approved the proposed amendment of Staff Rule 14.5.1 (Paid annual leave) of the Staff Rule.

R. Guliyeva (Commission for Conditions of Employment (CCE) President), F. Idrees and P. Moussay (CCE Members) joined the session to present their paper *Draft boundary conditions/terms of reference for attendance of a CCE staff representative at CIPM sessions with the status of an observer* (available as document [CIPM/2024-II-11-bis](#)). R. Guliyeva gave some background information to the proposal, noting that it is intended to enhance transparency between the CIPM and the BIPM staff. A Working Group-CCE recommendation from 7 September 2023, Point B2, noted that “*Possible interactions with the CIPM, at the discretion of the CIPM, would be welcome. CCE members could be invited as observers to CIPM sessions dealing with conditions of employment...*” The CIPM bureau considered how transparency could be improved in response to this recommendation. The meeting between the bureau and the CCE in March 2024 discussed the issue and invited the CCE to develop boundary conditions/terms of reference for attendance of a CCE staff representative at CIPM sessions with the status of an observer. The development process included examining best practices in other International organizations (IOs). The draft boundary conditions/terms of reference include definitions of the role, rights and obligations of a CCE staff representative with the status of an observer as well as a confidentiality clause/non-disclosure agreement. The President thanked the members of the CCE and excused them from the meeting. He invited questions and comments.

The CIPM discussed the proposal, which received their support. The Director said that the CIPM could include information in its Rules of Procedure to cover the guidelines on the attendance of a CCE observer at those parts of CIPM sessions that examine proposals on conditions of employment. The CIPM agreed the following decision.

**Decision CIPM/113-18 (2024)** The CIPM approved the attendance of a staff representative of the BIPM Commission for Conditions of Employment (CCE), with the status of an observer, at those parts of CIPM sessions that examine proposals on conditions of employment.

## 12. CONSULTATIVE COMMITTEE, SECTORIAL TASK GROUP AND WORKSHOP REPORTS

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

S.-R. Park, President of the CCQM, gave the report [CIPM/2024-II-12-a](#). The CCQM had held its last meeting at the BIPM Headquarters on 20-26 April 2024. Ten working groups had met during the week, with all of the meetings being available as a hybrid format. The CCQM initiated 14 new comparisons in 2024 in line with its ten-year Strategic Plan. All CCQM working groups have started to check if their individual strategic plans require updating, with a deadline of April 2025.

The CCQM Task Group on Food Measurement (CCQM-TG-FOOD) has requested that other CCs with activities in this area, notably the Consultative Committee for Ionizing Radiation (CCRI), Consultative Committee for Mass and Related Quantities (CCM) and Consultative Committee for Photometry and Radiometry (CCPR), should nominate a liaison person to improve communication and to allow the identification of measurements related to food and food safety that are outside those of chemical and biological measurements. The aim is to produce a broad document covering food measurements.

The CCQM Task Group on Metrology for Li-ion batteries (CCQM-TG-LI-ION) expects greater collaboration with other CCs, particularly the Consultative Committee for Electricity and Magnetism (CCEM) and the Consultative Committee for Thermometry (CCT).

The CCQM Task Group on Infectious Disease Diagnostics and Metrology for Pandemic Preparedness (CCQM-TG-PANDEMIC) is preparing its first “fire drill” comparison. The CCQM-TG-PANDEMIC will run the comparison as a CCQM pilot study, but less formally, to allow it to be carried out as quickly as possible. The study *CCQM-P232 (NAWG) Fire drill for rapid development of reference methods for PCR: H5N1 – Avian Bird Flu* will have a target of six months for completion as a worst case or ten days as a best case scenario. The “fire drill” exercise will differ from other pilot studies by allowing the participation of outside laboratories, particularly those from national health organizations or authorities.

S.-R. Park said that the CCQM is exercising caution to ensure that there is no unnecessary proliferation of task groups. Each new task group has clear terms of reference with specific goals and will be closed when the goals have been achieved. The membership of the CCQM task groups includes external experts from outside the metrology sector to give practical advice. He suggested that the CIPM could use this model when setting up cross-cutting task groups.

The CCQM will hold an online workshop on *Digital and FAIR Chemical and Biological Reference Data and Certificates: Challenges and Opportunities* on 9-12 September 2024. In addition, the BIPM Chemistry Department is organizing a *qNMR Summer School* at the BIPM Headquarters on 24-28 June 2024. Quantitative NMR (qNMR) is a relatively new technique that allows rapid assignment of reference values to pure organic materials and it is unfamiliar to many researchers throughout the NMI community. The summer school is supported by an e-learning course.

S.-R. Park concluded his presentation by informing the CIPM that IPQ (Portugal) has applied to become a member of the CCQM. IPQ is currently an observer and the CCQM supports the request. He asked the CIPM for approval.

The President thanked S.-R. Park and invited questions and comments. The Director said that the CCQM Task Groups are carrying out a lot of work and they are well structured. He highlighted the work on pandemic preparedness, noting that many organizations are prioritizing this area in their strategies for 2030+. He suggested that this could be included in one of the forward-looking sections of the CIPM strategy for 2030+. S.-R. Park agreed that the CCQM-TG-PANDEMIC would welcome such an endorsement of its work, which the TG perceives can be undervalued by the CIPM. The President asked if the CCQM-TG-LI-ION could be considered for conversion to a Sectorial Task Group in the future, considering it is collaborating with the CCEM and CCT.



R. Wielgosz replied that the lithium-ion batteries are a sub-set of the energy sector, which is a much broader area that would fit within a Sectorial Task Group. He added that the major area of interest for the lithium-ion battery sector is being able to measure their remaining useful life; this is currently a hindrance to the establishment of a potential industry working on the re-use of lithium ion batteries.

### **Consultative Committee for Thermometry (CCT) and CIPM Sectorial Task Group on Climate Change and Environment**

D. del Campo Maldonado, President of the CCT, presented the report [CIPM/2024-II-12-b](#). The CCT had held its last meeting at the BIPM Headquarters on 13-17 May 2024. The next meeting will be in 2026, with interim meetings of the Working Groups at the TEMPMEKO meeting in Reims (France) in October 2025. She noted that this had been her first meeting as President of the CCT and S. Solve as the Executive Secretary. The CCT meeting included a Technical Workshop on Traceability and Dissemination of the kelvin. The workshop discussed the difficulties of operating, in parallel, direct dissemination of the thermodynamic temperature and dissemination of the kelvin through the International Temperature Scale of 1990 (ITS-90) since its redefinition in 2018, as is the case in radiation thermometry. The workshop also examined the possible effects on industry of making changes to the ITS-90, as it is not currently possible to disseminate thermodynamic temperature in the medium temperature range.

The outcomes of the workshop were that the CCT Working Group for Contact Thermometry (CCT-WG-CTh) and the CCT Working Group for Non-Contact Thermometry (CCT-WG-NCTh) will collaborate to prepare a list of requirements that will be necessary for a future update of the temperature scale for presentation at the next CCT meeting and the CCT will set up a new Task Group on Future Traceability.

D. del Campo Maldonado presented changes to the structure of the CCT Working Groups and Task Groups. The CCT Working Group for Environment (CCT-WG-Env) has made a formal request to participate in the CIPM Sectorial Task Group on Climate Change and Environment (CIPM-STG-CENV). The CCT made a request to the CIPM to convert the Task Group on Thermophysical Quantities (TG-ThQ) and the Task Group on Digitalization (TG-DIG) into Working Groups. The Terms of Reference (ToR) of the proposed Working Group on Digitalization were presented. The CIPM agreed these changes.

The CCT has devised an action list that includes: a proposal to the CIPM for the development of a data management plan for all CCs; the CCT Working Group for Calibration and Measurement Capabilities (CCT-WG-CMC) is to revise all service categories to propose a reduction in the number of CMCs and duration of comparisons; WG-CTH and CCT Working Group for Key Comparisons (CCT-WG-KC) to jointly discuss and draft a proposal for a new comparison in the medium temperature range at the next CCT meeting (follow-up of CCT-K9 with fixed points); and WG-KC to prepare guidance to assist Pilots in data analysis of Key Comparisons.

D. del Campo Maldonado said that INM (Colombia) has applied to become a member of the CCT. The CCT considers that INM should remain as an observer, even though it has not been formally recognized as such, as it does not fulfil all the criteria for membership in the document CIPM-D-01. She said that the CIPM will need to discuss the criteria in CIPM-D-01 that apply membership and observership of the CCs.

D. del Campo Maldonado completed her presentation by saying that the CIPM-STG-CENV has received 145 abstracts for the first Stakeholder meeting of the CIPM Sectorial Task Group on Climate Change and Environment to be held at the BIPM Headquarters on 16-18 September 2024. The Metrology for Integrated Marine Management and Knowledge-Transfer Network (MINKE project) has requested membership of the CIPM-STG-CENV after being referred by the CCQM. She asked for CIPM permission for this application so that they can attend the STG meeting after the workshop in September and noted that this is part of a wider discussion on the development of the STG. The CIPM-STG-CENV is planning to set up a new Task Team on engagement with the United Nations Framework Convention on Climate Change (UNFCCC) on topics related to “Metrology for Climate Action”.

The President thanked D. del Campo Maldonado and invited questions and comments. The Director suggested that due to time constraints, discussions on the application of CIPM-D-01 and governance of the CIPM-STG-CENV should be postponed until the next session of the CIPM. D. del Campo Maldonado said that discussions regarding INM could wait until the next meeting in October, but asked the CIPM for permission to invite the CCT-WG-Env and representatives from the MINKE project to participate in the CIPM-STG-CENV ready for the workshop in September 2024. The Secretary commented that other CCs, particularly the Consultative Committee for Length (CCL), should be included in any discussions regarding a future update of the temperature scale. D. del Campo Maldonado confirmed that written information on any proposal will be shared with the CCs and the wider length community.

### **Consultative Committee for Units (CCU)**

M. Stock, the Executive Secretary of the CCU, gave the presentation ([CIPM/2024-II-12-c-1](#)) on behalf of the President, R.J.C. Brown. The CIPM confirmed R.J.C. Brown as the CCU President by Decision CIPM/113-13 on 19 June 2024, having previously been invited by the CIPM to chair the CCU meeting in April 2024.

The CCU held its 26th meeting at the BIPM Headquarters on 9-10 April 2024 in a hybrid format. The meeting marked the 60th anniversary of the establishment of the CCU in 1964, replacing the Commission for the System of Units that was set up by the CIPM in 1954. The major outcomes of the CCU meeting had been: the Report by the CCU Task Group on Core Metrological Terms (CCU-TG-CMT); the Report by the CCU Task Group on Angle and Dimensionless Quantities in the SI Brochure (CCU-TG-ADQSIB); the discussion on the proposed extension of the definition of “metrology” in the VIM4; considerations about non-SI units in the SI Brochure; considerations on the distinction between base and derived units in the SI Brochure; and the report on the SI Reference Point.

M. Stock recalled that the CCU-WG-CMT (now the CCU-TG-CMT) had previously been unable to agree on definitions for “unit”, “quantity” and “quantity value”. The WG-CMT resolved this impasse when it decided to consider the machine readability of the terms and significant progress has been made since it started to take a detailed axiomatic approach. This approach provides useful input into understanding relationships between concepts for digital frameworks as well as useful input for the BIPM representative to JCGM-WG2:VIM towards the drafting of the VIM4. A schematic of the axiomatic approach was presented. The CCU decided at its April meeting that the Working Group on Core Metrological Terms (WG-CMT) should continue its work as a Task Group (TG-CMT) focusing on how to move forward with various aspects of ontology, logical and, where possible, mathematical descriptions and machine readability. The CCU appointed L. Mari, University of Carlo Cattaneo (Italy) and JCGM-WG2:VIM, as the Chair of the TG-CMT. P. Blattner (METAS) will be the CCU representative in the FORUM-MD. The CCU recommended to the CIPM that S. Ulbricht (PTB) and R.J.C. Brown (NPL) represent the BIPM in JCGM-WG2:VIM. A third position remains available for a CIPM or BIPM representative to JCGM-WG2:VIM, if required.

The CCU has been discussing the status of the radian in the SI for many years, particularly if it should remain a derived unit or should it become a base unit. There has been a consultation among the CCU members and liaisons to determine their official position with respect to the radian. The consensus is to maintain the status quo, but it was recognized that the treatment of the radian in the SI Brochure is not optimal. The CCU tasked the newly created TG-ADQSIB with reviewing the 9th edition of the SI Brochure and updating the parts where improvement would be beneficial. In addition, the CCU-TG-ADQSIB received input from the CCU/CCQM workshop on “the metrology of quantities which can be counted” and created a Focus Group to update the text related to counting and number quantities. The result was proposed edits to the SI Brochure regarding how the treatment of unit one and dimensionless quantities can be improved. It is important to note that there are no proposals to change the status of the radian or the unit one. The proposal is to update the language used in the SI Brochure to better reflect current understanding, nomenclatural best practice and to acknowledge the nuance related to angle and dimensionless quantities. The suggested changes are detailed in the document [CIPM/2024-](#)



[II-12-c-2](#) “*SI Brochure -version 3.01*”. M. Stock recalled that the CCU had recommended that the CIPM should approve the publication of a new version of the 9th edition of the SI Brochure (v3.01) incorporating the changes suggested by the CCU Task Group and Focus Group considering angles, dimensionless quantities, counting and number quantities. The CCU also recommended that the CIPM should approve the minor updates to the “*Concise summary of the SI*” required to mirror the changes to the SI Brochure.

M. Stock said that the CCU has established a Task Group on Key Topics in the SI Brochure (TG-KTSIB) to review the current treatment of non-SI units, and base and derived units, in the 9th Edition of the SI Brochure and to review historical perspectives, existing authoritative documentation and current stakeholder needs relating to these topics. It will recommend criteria on how the SI Brochure should address these topics in the future and will provide updates to the CCU Working Group on Strategy (CCU-WG-S) and present progress to the next meeting of the CCU.

M. Stock concluded by recalling that SASO-NMCC (Saudi Arabia) had applied to become a member of the CCU. The CCU-WG-S concluded there was not enough evidence of research into, or the development of, the SI to recommend membership or observership (according to 4.2 of CIPM-D-01). The CCU recommends to the CIPM that SASO-NMCC are encouraged, under the terms of paragraph 4.5 of CIPM-D-01, to attend CCU meetings as an Observer by request. The CCU will invite SASO-NMCC to join and contribute to TG-KTSIB and TG-CMT to gain experience relevant to the CCU’s mission. The CCU suggested that the CIPM should discuss the issue of CC membership in order to homogenize the criteria, reflecting the earlier discussion in the CCT.

The President said that the new version of the 9th edition of the SI Brochure (v3.01) will require an update to the introductory statement to include the signatures of the latest Presidents of the CIPM and CCU. The Director added that if the signatures are updated, the introductory statement may need to be reviewed. The CIPM agreed and approved the following decisions.

**Decision CIPM/113-20 (2024)** The CIPM appointed S. Ulbricht (PTB) and R. Brown (NPL) to represent the BIPM in JCGM-WG2 (VIM).

**Decision CIPM/113-21 (2024)** The CIPM approved a new version of the 9th edition of the SI Brochure (v3.01) incorporating the changes suggested by the CCU Task Group and Focus Group considering angles, dimensionless quantities, counting and number quantities, and the associated revision of the Concise Summary.

### **Consultative Committee for Photometry and Radiometry (CCPR)**

M.L. Rastello, President of the CCPR, presented report [CIPM/2024-II-12-d](#). The CCPR has three Working Groups: CCPR Working Group on CMCs (CCPR-WG-CMC); CCPR Working Group on Key Comparisons (CCPR-WG-KC); and CCPR Working Group on Strategic Planning (CCPR-WG-SP). The CCPR-WG-KC has appointed H. Gan, NIM (China) as its new Chair.

The CCPR held Working Group meetings at the NPL (UK) on 7-8 September 2023. It also held meetings of the CCPR, Working Groups and a workshop at the BIPM Headquarters on 3-7 June 2024. The CCPR-International Commission on Illumination (CIE) Expert Workshop on “100 years of  $V(\lambda)$  and Future of Photometry” was held on 3 June. The workshop attracted 84 on-site participants and 142 on-line.

The CCPR-WG-SP held a half-day workshop on “the Future of the Candela” on 4 June 2024. The workshop was open to NMIs and DIs involved in Photometry and Radiometry. The workshop was intended to provoke discussions on the future of the candela. M.L. Rastello said that the presentation by R.J.C. Brown on the CCU interest in the future of the Candela had set a list of questions that need to be answered regarding any future redefinition:

- does a real problem exist in the user community that we are trying to solve?
- will the solution actually benefit all end users?
- will any change be fully adopted by all stakeholders? If not, there is the likelihood that we will cause more problems than we will solve.

- can the problem be adequately solved instead by updates to supporting documentation (for instance the *mise-en-pratique* or the CIPM/CIE Principles Governing Photometry)?

The CCPR-WG-SP-TG 16 “Cone Fundamentals” will take care of these questions and consider the implementation of cone-fundamental-based spectral luminous efficiency functions. Some preliminary conclusions can already be drawn. In the current SI, the candela is defined with a fixed defining constant,  $K_{cd}$  (683 lm/W), without reference to any spectral luminous efficiency functions. Thus only changing the  $V(\lambda)$  would not require revision of the candela definition in the SI. However, changing the  $V(\lambda)$  would result in a change of photometric values of real lighting sources. Such changes of photometric values (for example the lumen rating of lamps) could be a serious problem for industry and the market. There are three approaches that could be used: revising the value of  $K_{cd}$ ; re-scaling the  $V_F(\lambda)$ ,  $V_{F10}(\lambda)$  functions; or applying a correction factor. M.L. Rastello commented that the second option is not considered to be viable because of a CIE/CIPM convention that all action spectra, including spectral luminous efficiency functions, must be normalized at a peak of 1. The next steps will be for CCPR-WG-SP-TG 16 to work with CIE RF05 (Implementation of CIE 2006 cone fundamentals in photometric and colorimetric measurements) to continue discussions, exchange of information and research results. It will also monitor progress in CIE colorimetry following the TC 1-98 (a roadmap toward basing CIE colorimetry on cone fundamentals) report.

The CCPR has set up a Task Group (CCPR-WG-SP-TG-17) as a discussion forum on metrology for satellite observations. It will provide a consistent and coordinated response from the NMI radiometry community to the needs of the satellite-observation communities, particularly those related to climate change. It will act as the CCPR link to the CIPM-STG-CENV. The newly created Task Group CCPR-WG-SP-TG15 will monitor the impact of digitalization on matters related to the CCPR.

M.L. Rastello said that NSC-IM (Ukraine) has applied to become a member of the CCPR. It has been an official observer since 2022 and the CCPR supports the request. The President asked the CIPM for approval. They agreed the following decision.

**Decision CIPM/113-19 (2024)** The CIPM accepted the following changes to the membership of the Consultative Committees:

- CCPR
  - NSC-IM (Ukraine) as a member
- CCQM
  - IPQ (Portugal) as a member

The President thanked M.L. Rastello and said that questions and comments will be postponed until the next session of the CIPM in October due to time constraints.

### **BIPM Workshop on accelerating the adoption of Quantum Technologies through Measurements and Standards**

J.T. Janssen gave a presentation on the workshop held at the BIPM Headquarters on 21-22 March 2024. The presentation is available as document [CIPM/2024-II-12-e](#). Seventy delegates attended the workshop on-site and 68 on-line. The context of the workshop was to determine how the metrology community can deal with emerging quantum technologies and how to respond. He said that emerging technologies will demand innovations in metrology such as agility to keep pace with the rapidly changing technical landscape and ability to make measurements. In addition, comparability will be needed quickly and continuously across vendors and accelerated delivery will need to consider that formal standards may be obsolete by the time they are required.

The outcome of the meeting can be considered in two ways: quantum for metrology and metrology for quantum. Quantum for metrology fits within the remit and ways of working of the CIPM and BIPM. There is ongoing work in this area in the CCs, particularly the CCEM, CCTF, CCPR and CCT. The main role is to build quantum metrology capability across the community and specifically, after redefinition leading to “democratization of the SI”. Metrology for quantum is not such a good fit for a CIPM Horizontal Forum. It would be better organized using a different model. The speed of developments will require agility and it would be better led by a small group of active NMIs. The structure of a group to deal with metrology for quantum is under consideration, however the BIPM will remain the focal point for publishing the outcomes.

### 13. ANY OTHER BUSINESS

The President said that the bureau had discussed the format of CIPM meetings. The conclusion was that physical meetings at the BIPM Headquarters are preferred. The intention is to maintain the status quo with two physical meetings each year, with the option for additional on-line meetings.

J. Olthoff noted that the schedule of CIPM meetings for 2025 and 2026 will need to consider the 150th anniversary celebrations and the 28th meeting of the CGPM. He asked the Secretary to send the list of proposed meeting dates to the CIPM for discussion in October. The President suggested that the March 2025 meeting of the CIPM should be held on-line due to its proximity to the 150th anniversary in May 2025. The Director commented that there are not expected to be any specific issues that will require a decision in March 2025.

The Director recalled that Uzbekistan has met the criteria to accede to the Metre Convention and a CIPM decision is needed to encourage them to become a Member State. The CIPM agreed the following decision.

**Decision CIPM/113-22 (2024)** The CIPM decided, based on the criteria it has previously adopted, that it would be appropriate for the Republic of Uzbekistan to accede to the Metre Convention. The BIPM Director will convey the Decision, recalling Resolution 4 ‘On the status of Associate State of the General Conference’ adopted by the CGPM at its 24th meeting (2011), and the implications regarding the increase in subscription should the Republic of Uzbekistan choose to remain as an Associate of the CGPM.

The President thanked the members for their participation and input, particularly with regard to the strategy discussions and the in camera session. He added that the advertisement for the next Director of the BIPM will be revised so that it does not include a specific starting date. This will be determined depending on the schedule for the CGPM. He thanked the participants again and closed the meeting.