

CCAUV/17-45

# **Report from CCAUV-KCWG to the 11<sup>th</sup> CCAUV meeting**

KCWG meeting was held at the BIPM  
Tuesday, 19 September 2017, starting 2:00 pm

KCWG Chairman – Dr. Gustavo P. Ripper  
KCWG Executive Secretary – Dr. Gianna Panfilo

# Draft Agenda for the meeting of the CCAUV-Key Comparison Working Group (P1)

- 1) Welcome to the BIPM (CCAUV President)
- 2) Opening of the meeting (KCWG chair and executive secretary)
- 3) Role call of the participants of the meeting
- 4) Appointment of a *Rapporteur* – *Dr. Thomas Bruns*
- 5) Confirmation of the agenda
- 6) Review of the CCAUV KCWG / ToR and Guideline
- 7) Report on MRA-review working group and CC president meeting (CCAUV president)
- 8) KCDB issues (KCDB coordinator)
- 9) Review of current KCWG members x expertise available
- 10) Report on the recent activities of the KCWG
- 11) Review of ongoing key comparisons
- 12) Pilot studies
- 13) Guidance documents available (Any update?)
- 14) Authorship of comparisons reports
- 15) Discussion of issues with the uncertainties reported by participants in comparisons
- 16) Uncertainty budgets for comparisons and the inclusion of all relevant influences on the DUT during calibration - Document JCRB-8/9

# Draft Agenda for the meeting of the CCAUV-Key Comparison Working Group (P2)

- 17) Discussion of topics related to the review of the MRA
- 18) Harmonization of the methods of planning, analysis and reporting – Can we use templates?
- 19) Specific technical criteria for the approval of CMCs not supported by comparisons (subject proposed by Valentina Pozdeeva / Coomet)
- 20) Strategic planning of CCAUV KCs (scope and periodicity of KCs)
- 21) Actions of NMIs and RMOs based on the results of comparisons
- 22) Any other business
  - 22.1 *Recommended validity of measurement data / interlaboratory comparisons for supporting CMCs and for linking RMO KCs*
  - 22.2 *Can a single linking laboratory with higher uncertainty support a CMC claim of linked laboratories with smaller uncertainties?*
  - 22.3 *Precautions / actions to minimize damage to travelling standards during comparisons (sensitivity shifts and damage to microphone during recent acoustics comparisons were observed)*
  - 22.4 *Review of COOMET.AUV.V-K1 draft B report*
- 23) Date of next meeting
- 24) Report of KCWG to the CCAUV
- 25) Closing of the meeting

## 2) Opening of the KCWG meeting

### The KCWG history

- The CCAUV KCWG was established in February 2011
- Dr. Thomas Bruns – nominated 1<sup>st</sup> Chairman, February 2011
- Dr. Gustavo Ripper – nominated 2<sup>nd</sup> Chairman, October 2013  
(Report of the 10<sup>th</sup> meeting, decision CCAUV9/D2)
- In 2015, Dr. Takashi Usuda was nominated president of CCAUV and Dr. Gianna Panfilo started as executive secretary

# 3) Participants of the meeting (1)

Name	Affiliation	Status	Did attend?
Gustavo Ripper	INMETRO / <b>SIM MWG-9</b>	<b>KCWG member / KCWG chair</b>	YES
Danuta Dobrowolska	GUM	KCWG member	YES
Peter Harris	NPL	KCWG member	<b>NO</b>
Ryuzo Horiuchi	NMIJ	KCWG member	YES
Maria Nieves Medina	CEM	KCWG member	YES
Lars Nielsen	DTU	KCWG member	<b>NO</b>
Akihiro Ota	NMIJ	KCWG member	YES
Guillermo Silva	CENAM	KCWG member	<b>NO</b>
Sun Qiao	NIM	KCWG member / <b>RMOWG chair</b>	YES
Thomas Bruns	PTB	KCWG member	YES
Salvador B Figueroa	DFM	KCWG member	YES
Takashi Usuda	NMIJ	<b>CCAUV president</b>	YES
Gianna Panfilo	BIPM	<b>CCAUV executive secretary</b>	YES
Susanne Picard	BIPM	<b>KCDB Coordinator</b>	YES
Michael Gaitan	NIST	<b>SPWG chair</b>	<b>NO</b>

### 3) Participants of the meeting (2)

Name	Affiliation	Status
Ian Veldman	NMISA	guest
Stephen Robinson	NPL / <b>EURAMET TC-AUV</b>	guest
Ping YANG	NIM	guest
Lixue Wu	NRC	guest
Yu Chung Huang	CMS / <b>APMP TC-AUV</b>	guest
Alexander Enyakov	VNIIFTRI / <b>COOMET TC-AUV</b>	guest
Alexander Yankovsky	VNIIM	guest
Riaan Nel	NMISA / <b>AFRIMETS TC-AUV</b>	guest
Enver Sadikoğlu	UME / <b>GULFMET</b>	guest
Andres Perez Matzumoto	CENAM	guest

## 4) Appointment of *rapporteur*

- Dr. Thomas Bruns volunteered to be rapporteur of the meeting
- Draft Minutes was already uploaded as WD to the KCWG website

Minutes of the  
CCAUV-Key Comparison Working Group (KCWG) meeting  
held at the BIPM,  
Tuesday, 19<sup>th</sup> September 2017, starting 2:00 pm

- 1) Welcome of the participants to the BIPM by the president of CCAUV, Dr. Takashi Usuda
- 2) Opening of the meeting by the chairman Dr. Gustavo Ripper
- 3) Appointment of Dr. Thomas Bruns as Rapporteur of the meeting
- 4) Role call of the participants (see attendance list)
- 5) The agenda was approved with the addition of a discussion of COOMET.AUV.V-K1 as item 22.4
- 6) The chairman gave a brief resume of the history of the KC-WG starting in 2013
- 7) The chairman presented a review of the terms of reference of the KC-WG including the information about minor changes. The president pointed out that the information is available on the BIPM/CCAUV web pages. (c.f. presentation of G. Ripper in the working documents)
- 8) The president of CCAUV provided information on the outcome of the work of the CIPM WG on the revision of the CIPM-MRA. The respective report includes implications for the work and strategy of the consultative committees with respect to comparisons and CMCs.
- 9) The KC-DB coordinator Susanne Picard gave a verbal report about the initiative to modernize the infrastructure and user interface of the key comparison data base (KC-DB). While the existing entries will be preserved, the new system will be more automated and user-related. There will be a web-application for CMC submission and KC-reporting. It is the aim to provide first results of the effort to the CGPM at the meeting in October 2018.
- 10) The Chairman gave an overview of the current list of formal members of the KC-WG and the associated experts which help in many cases with their specific expertise.
- 11) Furthermore, the chair gave a report on the activities of the KC-WG since the last meeting in Nov. 2015 (c.f. presentation).
- 12) The list of currently active KCs was presented and the representatives of the pilot laboratories gave a short verbal report on the status of the KCs.
- 13) The Chairman introduced the participants to the new task of considering pilot studies (PS) attributed to the KC-WG. Pilot studies now need to be registered with the KC-WG, they need a technical protocol which needs approval by the WG prior to the execution of the PS. The web page of CCAUV now identifies all PS in a submenu. The KC-WG acts as reviewer of the reports of PS prior to publication in Metrologia Techn. Suppl., the approval of the KC-WG is mandatory for such publication.
- 14) The chairman gave an overview of the existing guidelines compiled within the KC-WG.
- 15) The chairman reported the issue that sometimes participants of KCs report uncertainties significantly smaller than their established CMCs. He raised the question how to handle the calculation of the reference value if such small uncertainties lead to inconsistent results of the respective participant. After a short discussion, the following was concluded:

## 5) Confirmation of the agenda

- The agenda was approved with the addition of a discussion of comparison report COOMET.AUV.V-K1 as item 22.4

# 6) Review of the CCAUV KCWG / ToR and Guideline proposal

WD CCAUV-KCWG/15-02 (submitted by Dr. Takasi Usuda)

**DRAFT** : Terms of Reference (ToR) and Rules for the CCAUV KCWG

- Proposal of text for the CCAUV KCWG Terms of Reference
- Guidelines for Membership for the CCAUV Key Comparison Working Group
  - General rules
  - Criteria for membership
  - Responsibilities
  - Change of membership
  - Observers
  - Chairperson



# KCWG - Mission and Tasks

[Current version in the website](#)

## Mission

- The Key Comparisons Working Group of the CCAUV supports the CC **in its task** to establish and maintain a global compatibility in the measurements in the field of acoustics, ultrasound and vibration.
- It takes special responsibility for a consistent implementation of the requirements of the CIPM MRA in terms of comparisons between NMIs and DIs within the scope of the MRA.

## Within this objective, its tasks are to:

- identify the need and feasibility of CCAUV key comparisons (KCs) and supplementary comparisons (SCs);
- review and approve technical protocols for all comparisons that are intended to be used for the subsequent support of CMC claims, i.e. CIPM KCs, RMO KCs and SCs;
- give advice on the analysis of KCs, calculation of KCRVs and linking procedures;
- review and **commenting of** Draft B reports prior to submission **to and approval by the CCAUV**;
- **provide input** to the SPWG on matters of key comparisons;
- give advice in case of disagreement during a comparison.

# KCWG - Mission and Tasks

Proposal in CCAUV-KCWG/15-02

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- give advice on the analysis of KCs, calculation of KCRVs and linking procedures;
- review and **comment** Draft B reports prior to **their submission to the CCAUV for approval**;
- **contribute to** the SPWG on matters of key comparisons;
- give advice in case of disagreement during a comparison.

## 7) Report on MRA review WG and CC presidents meeting

- Report by Dr. Takashi Usuda, President of the CCAUV
- Dr. Usuda provided information on the outcome of the work of the CIPM WG on the revision of the CIPM-MRA.

## 8) KCDB issues

- Report by Dr. Susanne Picard, KCDB coordinator
- Dr. Picard gave a verbal report about the initiative to modernize the infrastructure and user interface of the key comparison data base.

# 9) Review of current KCWG members and their expertise

			A	U	W	V	S	M
#	name	Affiliation	Acoustics	Ultra sound	Under water	Vibration	Shock	Math / Statistics
1	D. Dobrowolska	GUM	X					
2	Peter Harris	NPL						X
3	Ryuzo Horiuchi	NMIJ	X					
4	M. Nieves Medina	CEM				X		
5	Lars Nielsen	DFM						X
6	Akihiro Ota	NMIJ				X	X	
7	Guillermo Silva	CENAM				X	X	X
8	Thomas Bruns	PTB				X	X	X
9	Sun Qiao	NIM				X	X	
10	Gustavo Ripper	INMETRO				X	X	X
11	Salvador Barrera	DFM	X					

Lack in: A, U, W

# Additional experts

			A	U	W	V	S	M
#	name	Affiliation	Acoustics	Ultra sound	Under water	Vibration	Shock	Math / Statistics
1	Claire Bartoli	LNE				X		
2	Joanna Kolasa	GUM				X		
3	Bajram Zeqiri	NPL		X				
4	Christian Koch	PTB		X				
5	Sandro Miqueleti	INMETRO		X	X			
6	Rodrigo P Felix	INMETRO		X	X			
7	Zemar M Soares	INMETRO	X					
8	Lixue Wu	NRC	X	X		X	X	
9	Randall Wagner	NIST	X					
10	Stephen Robinson	NPL			X			
<del>11</del>	<del>Richard Barham</del>	<del>NPL</del>	X					

# 10) Report on the activities of the WG

- Review and approval of **TPs**
- Review of **Draft B reports** of KCs, SCs and PSs
- Review and pre-approval of **Final reports** of KCs and SCs for submitting to the CCAUV for final approval
- Review of Final reports of **Pilot Studies** for publication in Metrologia

## Current KCWG review process – kept the same

- The Pilot laboratory sends document to be reviewed to the executive secretary of KCWG.
- The KCWG secretary submits the documentation to the KCWG chair with a suggested deadline for the review
- The KCWG chair circulates documentation for review by the KCWG members, and additional experts if necessary, establishing a deadline for comments
- The KCWG chair compiles all comments received from experts until the deadline and discusses meanwhile critical points with the secretary
- The KCWG reports the results of the review to the KCWG secretary
- The secretary communicate the results of the KCWG review to the pilot laboratory
- A revised document is submitted by the Pilot for approval by the KCWG chair

# Typical time for analysis by the KCWG

## Technical Protocols (TP):

- KCWG review and approval of TP
  - 2 working weeks

## Draft B reports:

- KCWG review and report of compiled comments
  - 4 working weeks

## Final reports:

- Approval of the final report by the KCWG chair
  - 2 working weeks

### **Bottle necks:**

- vacation and holidays periods
- possible delay in busy periods

### ➤ **Action agreed:**

The chair will not hold reports but will circulate them for review as soon as they arrive even in critical periods.



# 10) Recent comparisons carried out within the frame of the CCAUV (published)

## CC comparisons, published:

- **CCAUV.U-K3.1** Metrologia, 2016, **53**, Tech. Suppl. 09002
- **CCAUV.U-K4** Metrologia, 2016, **53**, Tech. Suppl. 09004
- **CCAUV.V-K3** Metrologia, 2017, **54**, Tech. Suppl. 09001

## RMO comparisons, published:

- **AFRIMETS.AUV.A-S1** Metrologia, 2016, **53**, Tech. Suppl. 09001
- **COOMET.AUV.A-K5** Metrologia, 2016, **53**, Tech. Suppl. 09003
- **APMP.AUV.V-K2** Metrologia, 2017, **54**, Tech. Suppl. 09004
- **AFRIMETS.AUV.A-K5** Metrologia, 2017, **54**, Tech. Suppl. 09003

# 11) Comparisons in progress

WD CCAUV KCWG/17-20

## CC comparisons, in progress:

- **CCAUV.W-K2** TP was approved by the KCWG on Nov/2015
- **CCAUV.V-K4** TP was approved by the KCWG on Jul/2016
- **CCAUV.V-K5** TP was approved by the KCWG on Sep/2016

➤ the representatives of the pilot laboratories (S. Robinson, Q. Sun and T. Bruns) gave a short verbal report on the status of these KCs.

## RMO comparisons, in progress:

- **AFRIMETS.AUV.V-S4** TP was approved by the KCWG on Jun/2016
- **COOMET.AUV.A-S2** Draft B is under review by the KCWG until Sep/2017
- **COOMET.AUV.V-K1** Draft B was reviewed by the KCWG on Jul/2017
- **EURAMET.AUV.A-K5** Draft B is under review by the KCWG until Oct/2017
- **EURAMET.AUV.A-S2** TP was approved by the KCWG. In progress or standby?

# RMO KCs to be linked to CCAUV.V-K3

- **APMP.AUV.V-K3** Metrologia, 2013, 50, Tech. Suppl., 09001
  - Appendix for linking was reviewed by the KCWG and comments were submitted to the pilot laboratory on Aug/2017



will serve as reference for linking of the 3 RMO KCs

- **EURAMET.AUV.V-K3** Metrologia, 2015, 52, Tech. Suppl., 09003
- **AFRIMETS.AUV.V-S2** Metrologia, 2012, 49, Tech. Suppl., 09001  
(To be renamed as AFRIMETS.AUV.V-K3)

# Pilot studies

## Pilot Study, published:

- **EURAMET.AUV.V-P1** Metrologia, 2017, 54, Tech. Suppl., 09004  
*(formerly registered as EURAMET.AUV.V-S1)*
- **APMP.AUV.V-P1** Metrologia, 2015, 52, Tech. Suppl., 09003

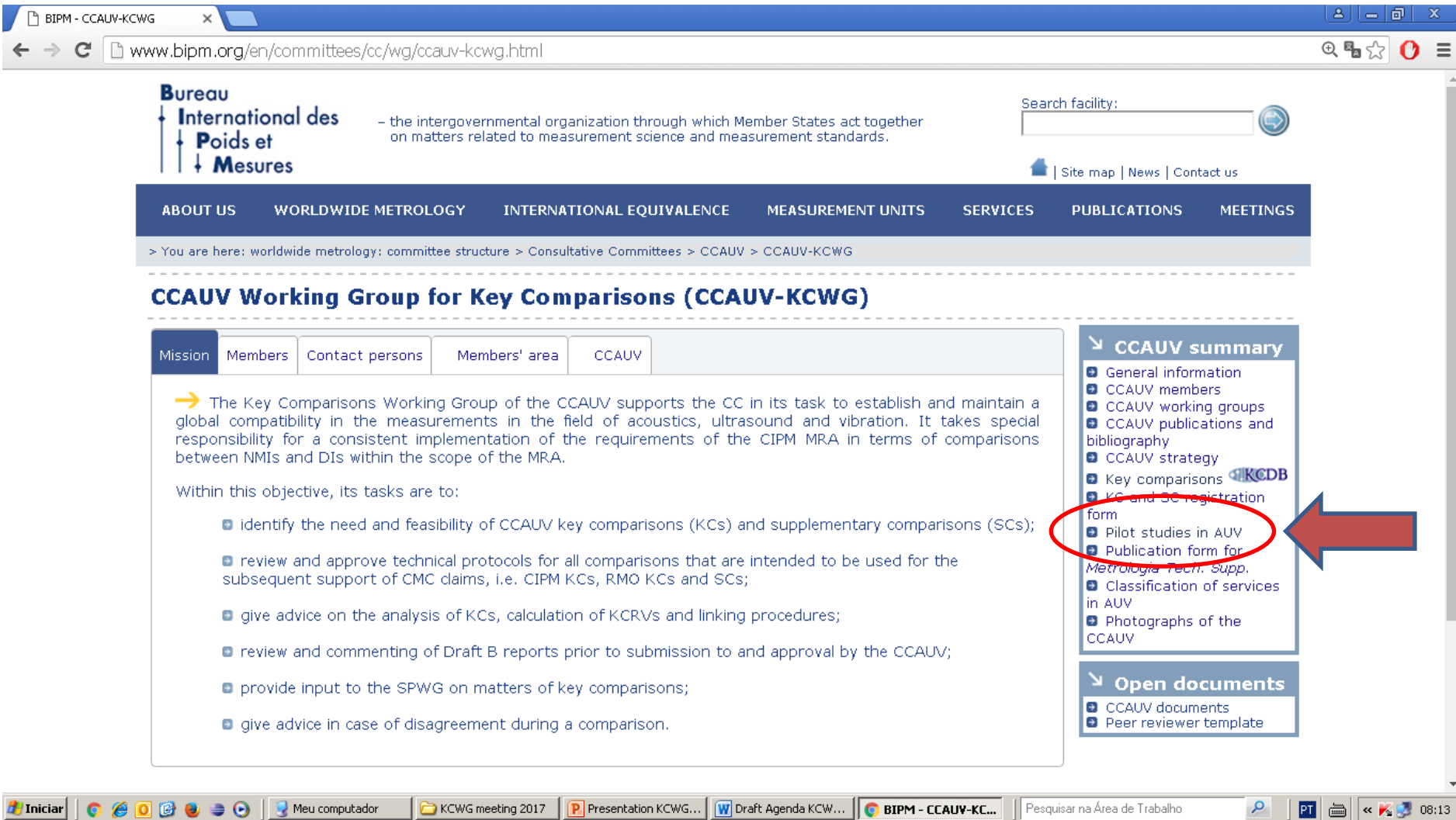
## Pilot Study, in progress:

- **COOMET.AUV.U-P1** Draft B is under review by the KCWG until Sep/2017  
*(formerly registered as COOMET.AUV.U-K3)*

## 12) Pilot studies – flow from registration to publication

- a. Registration of PS by the KCWG executive secretary (**no registration at the KCDB**) following the instructions for identification stated in CIPM-MRA-D-05
- b. Technical Protocol needs approval by the KCWG **before** start of measurements
- c. **Webpage** identifies the Pilot Studies in AUV
- d. **KCWG acts as reviewer for** the publication of the pilot study in the ***Metrologia Technical Supplement***
- e. Review and approval by the KCWG is needed for publication of the final report in the *Metrologia Technical Supplement*

# Access to webpage “Pilot studies in AUV”



The screenshot shows a web browser window with the URL [www.bipm.org/en/committees/cc/wg/ccauv-kcwg.html](http://www.bipm.org/en/committees/cc/wg/ccauv-kcwg.html). The page header includes the BIPM logo and the text: "Bureau International des Poids et Mesures - the intergovernmental organization through which Member States act together on matters related to measurement science and measurement standards." A search facility is located in the top right corner.

The main navigation menu includes: ABOUT US, WORLDWIDE METROLOGY, INTERNATIONAL EQUIVALENCE, MEASUREMENT UNITS, SERVICES, PUBLICATIONS, MEETINGS. The breadcrumb trail reads: > You are here: worldwide metrology: committee structure > Consultative Committees > CCAUV > CCAUV-KCWG.

## CCAUV Working Group for Key Comparisons (CCAUV-KCWG)


**Mission** | Members | Contact persons | Members' area | CCAUV

→ The Key Comparisons Working Group of the CCAUV supports the CC in its task to establish and maintain a global compatibility in the measurements in the field of acoustics, ultrasound and vibration. It takes special responsibility for a consistent implementation of the requirements of the CIPM MRA in terms of comparisons between NMIs and DIs within the scope of the MRA.

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- give advice in case of disagreement during a comparison.

**CCAUV summary**

- General information
- CCAUV members
- CCAUV working groups
- CCAUV publications and bibliography
- CCAUV strategy
- Key comparisons 
- KC and SC registration form
- **Pilot studies in AUV**
- Publication form for *Metrologia Techn. Supp.*
- Classification of services in AUV
- Photographs of the CCAUV

**Open documents**

- CCAUV documents
- Peer reviewer template

A red arrow points to the "Pilot studies in AUV" link in the sidebar.

Windows taskbar: Iniciar, Meu computador, KCWG meeting 2017, Presentation KCWG..., Draft Agenda KCW..., BIPM - CCAUV-KC..., Pesquisar na Área de Trabalho, PT, 08:13

http://www.bipm.org/en/committees/cc/ccauv/pilot-studies.html

The screenshot shows the BIPM website page for 'Pilot studies in AUV'. The page features a header with the BIPM logo and a search facility. A navigation menu includes 'ABOUT US', 'WORLDWIDE METROLOGY', 'INTERNATIONAL EQUIVALENCE', 'MEASUREMENT UNITS', 'SERVICES', 'PUBLICATIONS', and 'MEETINGS'. A breadcrumb trail indicates the current location: 'You are here: worldwide metrology: committee structure > Consultative Committees > CCAUV > Pilot studies in AUV'. The main content area is titled 'Pilot studies in AUV' and lists three pilot studies:

- **APMP.AUV.V-P1:** Final report on pilot comparison of low intensity shock APMP.AUV.V-P1  
NIM, SPEKTRA, NIMT, CMS/ITRI
- **COOMET-473/RU-a/09:** Comparison of hydrophone calibrations in the frequency range 250 Hz to 200 kHz  
HAARI, VNIIFTRI
- **EURAMET.AUV.V-P1:** Bilateral comparison on magnitude of the complex charge sensitivity of accelerometers from 10 Hz to 10 kHz  
LNE, RCM-LIPI

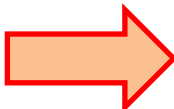
A large red arrow points from the list to a text box that reads: 'Hyperlink connects to Metrologia publication of the Pilot Study Final Report'. On the right side of the page, there is a 'Summary' sidebar with a list of links: 'CCAUV members', 'CCAUV working groups', 'CCAUV publications and bibliography', 'CCAUV strategy', 'Key comparisons' (with a KCDB logo), 'KC and SC registration form', 'Pilot studies in AUV', 'Publication form for Metrologia Tech. Supp.', 'Classification of services in AUV', and 'Photographs of the CCAUV'. Below the summary is a 'Governance' section with a link for 'Criteria for membership of'.

At the bottom of the screenshot, the Windows taskbar is visible, showing several open applications including 'Meu computador', 'KCWG meeting 2017', 'Presentation KCWG...', 'Draft Agenda KCW...', and 'BIPM - Pilot studi...'. The system clock shows '08:16'.

# 13) Guidance documents available

- *Guidance for carrying out key comparisons within the CCAUV, October 2013 – Review in 2015 (CCAUV KCWG/15-04)*
- *Rules of Procedure of the Key Comparison Working Group of CCAUV, October 2013*

The screenshot shows a web browser window with the URL [www.bipm.org/en/committees/cc/ccauv/publications-cc.html](http://www.bipm.org/en/committees/cc/ccauv/publications-cc.html). The page title is "CCAUV publications and bibliography". There are five tabs: "Meeting reports", "Strategy document", "Guidance documents" (which is selected), "Member bibliographies", and "CCAUV". Under the "Guidance documents" tab, there is a list of documents:

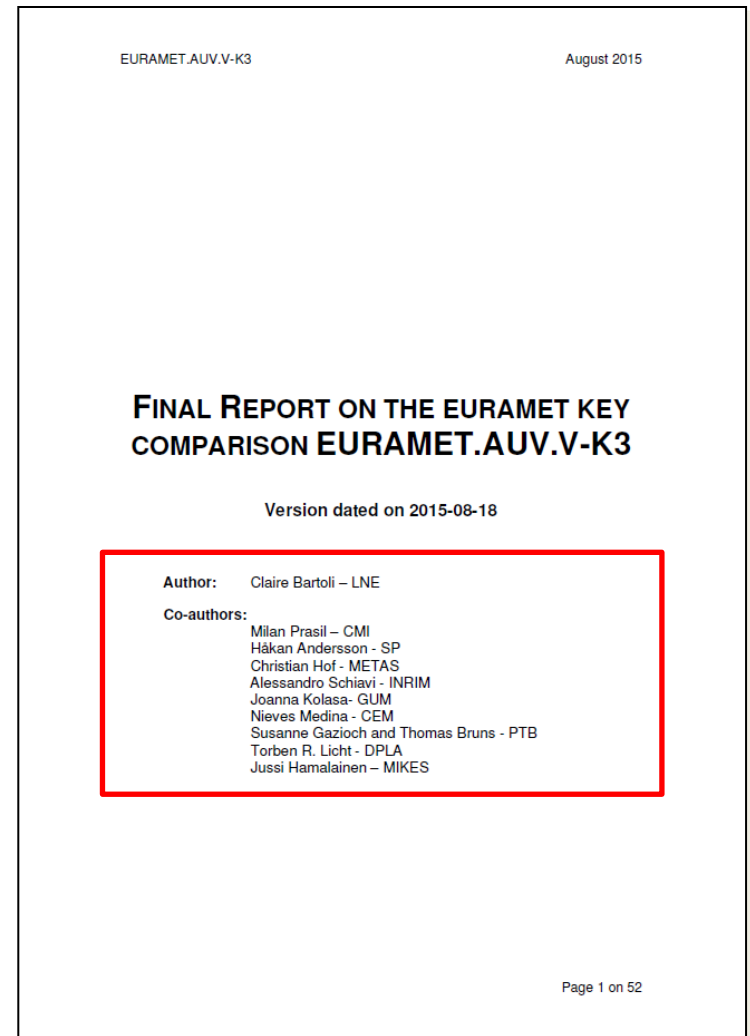
- Classification of services in AUV
- CCAUV guidance for key comparisons (2015), 7 pp.  **UPDATED VERSION**
- Rules of Procedure for the CCAUV-KCWG (2013), 3 pp.
- Peer reviewer template, 1 pp.
- Registration and progress report form for KCs and SCs
- Publication of a Final Report in *Metrologia's Technical Supplement*  
(please save to your computer and complete locally)



# 14) Authorship of comparison final reports

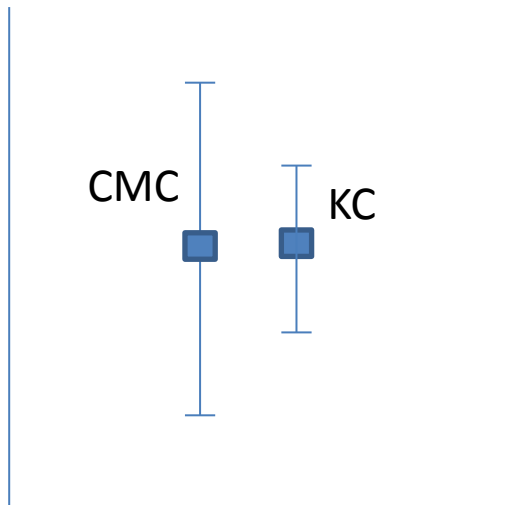
## Document CIPM MRA-G-04 v. 1

- CIPM MRA Guidelines for Authorship of Key, Supplementary and Pilot Study Comparison Reports
- “Applying these criteria means that there will not be just one sole **author**, but that from every participating NMI/DI at least one person will qualify as a **co-author**, inasmuch as at least one person has carried out the measurements and by that has contributed substantially in the execution of the comparison.”



# 15) Discussion of issues with the uncertainties reported by participants in comparisons

- a. It is usual to have uncertainties reported by participants much smaller than values in published CMC
- b. What values are to be used for calculation of the KCRV?
- c. What criteria can be used by the pilot laboratory to take a decision?



➤ The KCWG decided that it will not interfere on the uncertainty reported by the participant, which CAN BE smaller than any published CMC value

- After a short discussion, the following was concluded:
- The submitted uncertainties associated with KC results are by no way restricted by already established CMCs, they are based on actual (new) estimations of measurement uncertainty.
  - Any inconsistency as a consequence of the reported results must be dealt with by the participant and the its QM-system with inclusion of the RMO procedures and RMO/TC-Quality.
  - The pilot laboratory is supposed to analyse and report the KC based on the reported results, without consideration of former established CMCs.

## 16) Uncertainty budgets for comparisons and the inclusion of all relevant influences on the DUT during calibration - Document JCRB-8/9

- Recent TPs implemented actions to reduce the effect of some components of influence in the uncertainty budgets and compare the best CMCs

### For example:

- *CCAUV.V-K5 – use of mechanical adapter with SE accelerometers to reduce influence of shaker / mounting effects*
- *CCAUV.V-K4 – circulation of BTB accelerometer with a loading mass and requirement to measure acceleration at the centre of mass*
- *CCAUV.W-K2 – circulation of the mount of the hydrophone*

# 17) Discussion of topics related to the review of the MRA

## Source: [Summary of actions for the CC Presidents.pdf](#)

- a. *Progress on CC strategy updates particularly related to defining the long-term timetable for CC KCs (including the policy on repeat cycle).*
- b. *The approach adopted to limiting participation in CC KCs that use sequentially travelling standards*
- c. *Progress towards better consistency in the expression of CMCs (e.g. units, uncertainty ranges) within their CC.*
- d. *The approach adopted or planned to clarify ‘**how far the light shines**’ such that KCs and SCs are interpreted as widely as reasonably applicable to indicate coverage of CMCs.*
- e. *The approach taken to ensure CMCs cover as many services as is technically justified, constrain the proliferation of CMCs and express CMCs as concisely as practical. It was recalled that the objective is to manage workload rather than CMC numbers per se.*
- f. *The approach adopted (or planned) to implement a ‘risk-based’ approach to CMC review.*
- g. *The CC approach to CIPM MRA-D-O4 section 3 (which addresses the **evidence needed to support CMC claims when not supported by comparison**) with a view to harmonizing the approaches across CCs.*
- h. *The availability of CCs specific methodologies for carrying out comparisons, including evaluation tools templates (including reporting) guidance/ templates, and guidance material to ensure right first time CMCs.*

- *The approach adopted or planned to clarify ‘**how far the light shines**’ such that KCs and SCs are interpreted as widely as reasonably applicable to indicate coverage of CMCs.*
- **Future TPs shall define the services that are intended to be supported by the results of the proposed comparison (KC and SC)**

## 18) Harmonization of the methods of planning, analysis and reporting – Can we use templates?

- *Unified approach to link the Low-Frequency RMO key comparisons to CCAUV.V-K3 is under discussion*
  - **APMP.AUV.V-K3**
  - **AFRIMETS.AUV.V-K3**
  - **EURAMET.AUV.V-K3**

# 19) CMCs not supported by comparisons

- Specific technical criteria for the approval of CMCs not supported by comparisons

(subject proposed by Valentina Pozdeeva / Coomet)

- This topic related to Agenda, Item 17) g.

➤ This subject fits better the RMO-WG, therefore it was addressed to their analysis



## 20) Strategic planning of CCAUV KCs (scope and periodicity of KCs)

- Strategic planning of KCs

- Acoustics
- Vibration
- Ultrasound
  
- Scope
- Periodicity
- Validity

➤ A repetition period for KCs of 10 years was considered an appropriate compromise between workload, time for proliferation to the RMOs and requirements of validation of QM-systems, specially considering the need to RMOs conduct KCs in sequence

## 21) Actions of NMIs and RMOs based on the results of comparisons

- Analysis of results
- Improvements based on results of comparisons
- Outliers

➤ It was concluded that the responsibility for this analysis and actions are responsibility of the NMIs and of their RMOs

## 22) Any other business

### 22.1 *Recommended validity of measurement data / interlaboratory comparisons for supporting CMCs and for linking of RMO KCs*

- KCWG could not conclude a general recommendation for validity. It was commonly accepted that the results should reflect the current situation in the submitting NMI/DI.
- RMO KCs shall start as soon as possible after a CCAUV KC and consider the repeat interval of 10 years in strategic plan.

### 22.2 *Can a single linking laboratory with higher uncertainty support a CMC claim of linked laboratories with smaller uncertainties?*

- A linked result can be supported by the expanded uncertainty of the linked DoE, NOT the uncertainty claimed by the linked NMI.
- Pilot laboratories were requested to include clear, strict statements on the limits imposed by linking uncertainties in the respective reports.

### 22.3 *Precautions / actions to minimize damage to travelling standards during comparisons (sensitivity shifts and damage to microphone during recent acoustics comparisons were observed)*

- Risk mentality when elaborating the TP and defining transportation and storage of standards. Danger of manipulation of goods by customs

## 22) Any other business

### *22.4 COOMET.AUV.V-K1 report – Presentation from Coomet*

- Presentation was not needed after discussions and agreement on actions
- It was agreed to include statements in the Conclusions and in the Abstract that this comparison is not to be used for supporting CMCs because the results are very outdated (more than 10 year old).
- The Final report will be approved by the KCWG after some format revisions and will then be submitted to the CCAUV for approval and publication.

## 23) Date of next meeting

- It was agreed keep having the KCWG meeting right before the next CCAUV meeting in 2019.
- A half-day meeting is enough for the KCWG

## 24) Report of the KCWG to the CCAUV

## 25) Closing of the meeting

Thank you!