38th Meeting of the CCQM - Gas Analysis Working Group
Pavillon de Breteuil in BIPM (Sevrés, Paris)

Chair  Jin Seog Kim
Deputy Chair  Paul Brewer

Monday, 16th April 2018 09:00

1. Welcome, roll call of participants and approval of the agenda  Jin Seog Kim

2. Approval of the minutes of the 37th meeting  Damian Smeulders

3. International Comparability

Draft B Stage
CCQM-K121 & P177  Monoterpenes in N₂  Jerry Rhoderick
CCQM-K112  Biogas  Adriaan van der Veen
CCQM-K116 & P193  H₂O in N₂  Paul Brewer

Draft A Stage
BIPM.QM-K1 (ambient level ozone)  Joëlle Viallon

Planning/Measurement Stage
CCQM-K137  NO in N₂  Joëlle Viallon
CCQM-K41.2017  H₂S in N₂  Sangil Lee
CCQM-K117  NH₃ in N₂  Janneke van Wijk
CCQM-K118  Natural gas  Heinrich Kippardt
CCQM-K74.2018 & P172  NO₂ in N₂  Edgar Flores
CCQM-K10.2018  BTEX  Jerry Rhoderick

10:30 Coffee break

11:00

4. Advancing the state of the art in measurement science part 1
CCQM-K150 & P189 particle number and charge concentration  Paul Quincey
CCQM-K120 a and b (track A) and P188.a  CO₂ in air  Edgar Flores

13:00 Lunch

14:00

5. Advancing the state of the art in measurement science part 1 continued
CCQM-K120 a and b (track A) and P188.a  CO₂ in air  Edgar Flores

15:30 Tea break

16:00 (continue CCQM-K120)

6. Meeting the needs of our stakeholders
Activities at IAEA  Sergey Assonov
Activities at WMO (to be determined)  Adriaan van derVeen
Activities in ISO/TC158  Paul Quincey
Future strategic plan  Jin Seog Kim

18:00 Close
Tuesday, 17th April 2018 09:00

7. **Progress reports from the Regional Metrology Organisations**
   - APMP: Takuya Shimosaka
   - EURAMET: Janneke van Wijk
   - COOMET: Efremova Olga
   - SIM (no report)

8. **New Key comparisons and pilot studies**
   - CCQM-K3.2019 Automotive gases (track A): Adriaan van der Veen
   - CCQM-K68.2019 N₂O in N₂: Joëlle Viallon
   - CCQM-K26b.2019 SO₂ in N₂: Paul Brewer
   - Pilot in isotope of CO: Jin Seog Kim

   **10:30 Coffee break**

11:00

9. **Progress of the review of CMCs**
   - Progress in Cycle XIX and Cycle XX: Sangil Lee
   - Track A comparison task group and CMC strategy update: Paul Brewer

10. **Task groups**
    - Particulate/Black Carbon Comparisons Task Group: Paul Quincey
    - Ozone cross section Task Group: Joseph Hodges

   **13:00 Lunch**

14:00

11. **Advancing the state of the art in measurement science part 2**
    - Summary of CCQM-K120 reference values: Edgar Flores

   **15:30 Tea break**

12. **Update on developments at the NMIs, DIs and the BIPM**
    - BIPM Chemistry Department: Robert Wielgosz
    - Calibration Curve Computing Software (INRIM): Francesca Pennecchi

13. **Next Meetings**
    - 39th GAWG meeting: CENAM, Mexico, October 8-9, 2018
      Workshop: Published Gas Metrology Science in Journal
    - 40th GAWG meeting: BIPM, April, 2019

Close

**Key Comparison reports that have been finalized and moved to the KCDB**

- CCQM-K119 (Liquefied Petroleum Gas)
- BIPM.QM-K1 (Ozone) with NMISA, INECC(Mexico), NPL
- APMP.QM-K111 (Propane in nitrogen)
- APMP.QM-S9 (Carbon monoxide in nitrogen)
CCQM Working Group on Gas Analysis (GAWG)
Meeting of 16-17 April 2018, BIPM (Sèvres)

Participants list

CCQM-GAWG Chair
Dr Jin Seog Kim, KRISS

CCQM President
Dr Willie E. May, NIST / CIPM

Director of the BIPM
Dr Martin J.T. Milton

CCQM Executive Secretary
Dr Robert I. Wielgosz, BIPM

Participants

Mr Najjy AL Yami, SASO-NMCC
Mr Jan Beranek, CMI
Dr Paul Brewer, NPL
Ms Jennifer Carney, NIST
Ms Christina Cecelski, NIST
Mr Yan Chubchenko, VNIIM
Ms Andreia de Lima Fioravante, INMETRO
Dr Florabela Dias, IPQ
Mrs Olga Efremova, VNIIM
Dr Teresa Fernández Vicente, CEM
Ms Marina Froehlich, BEV
Mrs Judit Fuko, BFKH
Dr Bradley Hall, NOAA/ESRL
Dr Joseph Hodges, NIST
Dr Prabha Johri, NPL
Mr Heinrich Kipphardt, BAM
Dr Jorge Koelliker Delgado, CENAM
Dr Sangil Lee, KRISS
Mr Tsai-Yin Lin, CMS/ITRI
Mrs Tatiana Macé, LNE
Dr Arul Murugan, NPL
Dr Bernhard Niederhauser, METAS
Mr Napo Ntsasa, NMISA
Dr Grzegorz Ochman, GUM
Dr Narine Oganyan, VNIIFTRI

Dr Paul Quincey, NPL
Dr George-Jerry Rhoderick, NIST
Dr Francesca Rolle, INRIM
Dr Daniel Rzesanke, ICOS CAL-FCL
Dr Michela Sega, INRIM
Dr Takuya Shimosaka, NMU/AIST
Dr Damian Smulders, NMIA
Mr Christophe Sutour, LNE
Dr Tanil Tarhan, UME
Mr James Tshilongo, NMISA
Dr Shinji Uehara, CERI
Dr Miroslava Valkova, SMU
Dr Adriaan van der Veen, VSL
Mrs Janneke van Wijk, VSL
Dr Konstantina Vasilatou, METAS
Dr Joëlle Viallon, BIPM
Dr Jari Waldén, MIKES-FMI
Dr Olav Werhahn, PTB
Dr David Worton, NPL
Dr Zeyi Zhou, NIM
Dr Fu Ming Kai, NMC/ASTAR

BIPM staff in attendance
Dr Edgar Flores Jardin