SIM MWG2 for Photometry and Radiometry

2023 Report on CMCs activities

1) SIM CMCs

Six SIM NMIs have CMCs published in the KCDB:

CENAM (MX); Lametro/ICE (CR); INMETRO (BR); INTI (AR); NRC (CA); NIST (US).

Lametro/ICE is a designated institute in Costa Rica for fiber optics with five claims approved and published in 2022, after last WG-CMC meeting.

SIM CMCs submitted since last meeting:

- 5 modified claims from NIST /Gaithersburg (power spectral responsivity) → current status: revision requested at JRCB review.
- 4 modified claims from NIST /Gaithersburg (fibre optics) → current status: accepted.
- 2 new claims from NIST /Gaithersburg (power spectral responsivity) derived from current CMCs → current status: revision requested at JRCB review.

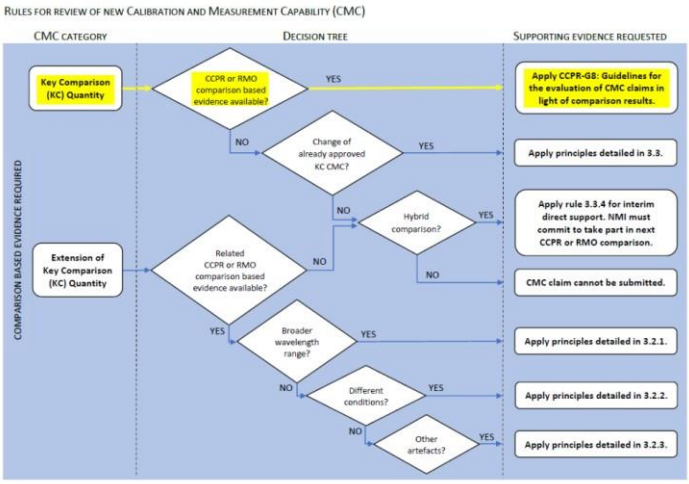
Comment: Claims above mentioned from NIST were rejected at JCRB review considering spectral power responsivity is a key quantity and that only a comparison at Draft B stage can be used as evidence. Claims were accepted on an interim basis by SIM considering CCPR-G9 3.3.2 and 3.3.3 and the unavailability of comparison results at the time of the request.

2) SIM participation in JCRB (inter-RMO) review of CMCs

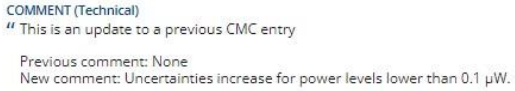
CMCs from AFRIMETS, APMP, COOMET and EURAMET were reviewed.

Recommendation for writers of CMCs:

a. State which path of the decision tree of CCPR-G9 has been followed to support the claim (this is sometimes difficult to figure out);



b. State if it is a low risk quantity submission using checklist o Appendix B of CCPR-G9 (I haven't noticed any submission confirming the status of low risk);
c. For modified CMCs, clearly identify the changes that have been made with the "private" commenting tool ("Read and add comment tool") or uploading a document.



3) Harmonization of CMCs

Harmonization CMCs on photometry:

- INTI and INMETRO – modifications done ✓.
- NIST – mostly done, except for two CMCs on luminance responsivity and luminous exposure responsivity that needs action. It is believed the request for harmonization was misleading. It indicated possible need to add ranges where they should not be included (responsivity type quantities). This is being analyzed by the NMI.

Harmonization CMCs on emission properties of sources:

- NIST – two CMCs harmonized ✓.
- NRC – four CMCs on radiance still pending. No response to last reminder. Suggested change is to modify instrument from "Tungsten lamp with PTFE diffuser" to "Tungsten lamp" with inclusion of PTFE diffuser in the comments for publication field.

Thiago Menegotto, chair of MWG2

Juan Pablo Babaro, vice-chair of MWG2

September, 2023