Report on the 25th meeting of the GT-RF

March 2019

M.Zeier

Meeting

- No informal meeting at last CPEM
- Meeting on Tuesday afternoon: 35 attendees

Completed Comparisons

None

Comparisons in progress 1/3

- CCEM.RF-K5c.CL: S-parameter PC-3.5 mm (NMIJ)
  - Measurements in progress since 2012!
  - Severe delays, partly due to shipping
  - Insufficient communication of pilot
  - Draft A in progress
  - 5 laboratories have withdrawn
    → Discussion on consequences
    → Affected laboratories need to take action

Comparisons in progress 2/3

- CCEM.RF-K26: Attenuation in PC-2.4 mm, up to 40 GHz and 90dB (NMIJ)
  - Measurements 2015 - 2018
  - Draft A expected in May 2019

Comparisons in progress 3/3

- APMP.EM.RF-K8.CL: Power Type-N 10 MHz – 18 GHz (NMIJ)
  - Draft A almost completed
  - Next step: check by supporting institutes
- Pilot Study: EM properties of materials (NMIJ)
  - 4 out of 5 participants have completed measurements
  - Last data set expected in April

Supplementary comparison

APMP.EM.RF-S21.F Loop antennas 9 kHz to 30 MHz (NMIJ pilot)

- Final report approved and published in metrologia

Gulfmet.EM.RF-S2 Calibration factor in power up to 18 GHz (UME)

- Draft B currently circulating within GT-RF for final approval

New comparisons 1/2

- Power in WR15 (NIM)
  - Interest by LNE, NIST, PTB, NPL and VNIIFTRI
  - Technical protocol exists but might need modification
  - Diskussion about stability and suitability of travelling standard

→ Participants will agree by email on best course of action

New comparisons 2/2

- Antenna comparison (gain and secondary parameters)
  - Interest by NPL, NIST, KRISS, NPL, PTB, NIM, METAS, UME
  - Exact scope needs to be defined
  - Pilot needs to be found

  → NIST will coordinate further discussions by email

Ideas for new comparisons 1/4

- Next S-parameter comparison (after K5c has finished)
  - Proposed scope: 2.4 mm coaxial line (up to 50 GHz)
  - Interest from NMC, UME, NIST, NPL, NIM, LNE, VSL, SNIM, PTB
  - METAS willing to pilot star-type comparison
  - Discussion on principle, pros and cons of star-type comparisons

→ METAS to move this forward by email

Ideas for new comparisons 2/4

- Field strength (ev. < 1GHz)
  - Interest from NPL, METAS, UME, PTB, NIM, LNE, KRISS
  - Scope to be defined

→ NPL will collate views of participants regarding parameters and pilot by email

Ideas for new comparisons 3/4

- Noise
  - Interest from METAS, VNIIFTRI, NIST, NIM, UME, KRISS
  - Scope unclear

→ GT-RF members will provide feedback on preferred scope by email to chair

Ideas for new comparisons 4/4

- Voltage waveform
  - NIST, KRISS, PTB and NIM are currently carrying out an informal comparison.
  - A formal comparison might follow
  - VNIFTRII interested to join

KCDB 2.0/CMCs

- Presentation on KCDB 2.0 (S. Picard)
- Suggestion for new CMC sub-sub categories by METAS
  → mixed initial view by attendees
  → feedback to GT-RF chair by end of June
- Follow-up of discussion on harmonization of S-parameter CMC entries (M. Zeier)
  → agreed that k=2 should be adopted
  → labs with k=2.45 should adopt

Other business

- EURAMET VNA Guide cg-12 «Guidelines on the Evaluation of Vector Network Analysers (VNA)» published in 2018

Next meeting

- Next meeting at BIPM in 2 years
- Inofficial meeting at CPEM2020 (Boulder) provisionally agreed