Report on the 24th meeting of the GT-RF

March 2017

M.Zeier

Completed Comparisons

Approved for equivalence, in KCDB:

- CCEM.RF-K22.W: Noise 18 -26.5 GHz (LNE)
- CCEM.RF-K23.F: Horn Antenna Gain up to 18 GHz (NIST)
- SIM.EM.RF-K5b.CL : S-parameter 2 - 18 GHz (INTI)

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
  - Measurements should finish in May 2017 (2 more labs)

Comparisons in progress 2/3

- CCEM.RF-K26: Attenuation in PC-2.4 mm, up to 40 GHz and 90dB (NMIJ)
  - Measurements started in 2015
  - Withdrawal of two labs
  - 6 months delay
  - Expected to finish measurements in June 2017

Comparisons in progress 3/3

- APMP.EM.RF-K8.CL: Power Type-N 10 MHz – 18 GHz (NMIJ)
  - Measurements finished
  - Draft A should become available in 3 months

- Pilot Study: EM properties of materials (NMIJ)
  - Material samples available
  - Technical protocol expected in April 2017

New comparisons

- Power in WR15 (NIM)
  - Participants identified
  - Technical protocol under preparation
  - Travelling standards will be provided by NIM and NIST

Ideas for new comparisons 1/2

- Next S-parameter comparison (after K5c has finished)
  - NPL interest in WR05 (140 -220 GHz)
  - Feedback: Either coax (2.92 mm or 2.4 mm) or lower freq wg band (WR15/WR10) preferred

→ Chair to gauge interest by email

Ideas for new comparisons 2/2

- Antenna comparison
  - NPL primarily interested in secondary parameters (tilt angle, axial ratio)
    → these are not key quantities
  - NIST interested in antenna gain (Key quantity!)

→NPL contacts NIST to find out if they can team up

- Noise: wg: >33 GHz, WR-22, WR-15, WR-10 (NPL)

→ Not much interest (except NIM)

KCDB 2.0/CMCs

- Presentation on KCDB 2.0 (S. Picard)

- Suggestions for harmonizing some inconsistencies in S-parameter CMC entries (M. Zeier)

→ Generally taken positively

→ Some further discussions by email

Presentations

- M. Zeier: Progress report on the revision of the EURAMET VNA Guide cg-12 «Guidelines on the Evaluation of Vector Network Analysers (VNA)»

→ Should become publicly available in 2017

Other business

- Next meeting during CCEM in 2 years
- Inofficial meeting at CPEM2016 (Paris) provisionally