

31 May 2011

1. General Aspects

EURAMET TC-PR has currently representatives from 23 EURAMET members and 1 associate (a designated institute). Several members are participating at the joint research project 2.3 (quCandela) and the JRP09 Metrology for Solid State Lighting. At the EMRP call 2010 several projects related to TC-PR were successful.

2. Projects

Since the last GA no new project has been registered. Within TC-PR last year activities were clearly focused on EMRP (either for running accepted projects or for preparing the proposal for new projects). At the last TC-PR meeting it has been decided to close project 581 (Fibre optic consultation working group). This activity is now covered by a CCPR task group on fibre optics. All members are invited to contribute directly to the CCPR TG (N.B. even non CCPR members). In respect to the year 2000 the number of traceability projects has significantly increased.

Number of agreed or proposed TC-PR projects	2000	2011
Traceability	9	16
Comparison	7	9
Cooperation	3	2
Consultation	3	1

The latest progress reports of all TC-PR projects can be found at the TC-PR webpages. The previous reports are stored in the restricted part of the TC-PR webpages.

3. Comparisons

The current situation of the comparisons is summarised in the table below. One new supplementary comparison is in preparation: Comparison of UV-Radiometer used in industrial applications.

A first draft of the technical protocol of the comparison has been discussed within potential partners: Two mercury lines are selected: 313 nm and 365 nm at irradiance levels of 0 to 10 mW/cm². Two commercial UV-radiometer will be used for the comparison.

BIPM - Identifier	Euramet Nr	Quantity	status as of 2011-01-24	action, comments
EUROMET.PR- K1.a	1103	spectral irradiance (250-2500nm)	Started in October 2010	Return measurements to be done by participants by 2011-06-30
EUROMET.PR-K2.a	1116	spectral resp. (900-1600nm)	To start in June 2011	
EUROMET.PR-K2.b	587	spect. resp. (300-1000nm)	Draft A.1 in discussion,	started 2002
EUROMET.PR-K2.b.1	1023	spect. resp. (300-1000nm) bilateral	In progress, no news	
EUROMET.PR-K3.a	569	luminous intensity	Draft A, in progress	
EUROMET.PR-K4	569	luminous flux	In progress	Lamps of 1 participants still at pilot lab
EUROMET.PR-K4.1	823	luminous flux, bilateral	draft B	Report in discussion with CCPR WG KC
EUROMET.PR-K5	619	spectr. diffus. reflectance	Draft A-2 in discussion	
EUROMET.PR-K6	538	spectr. diffus. transmittance	completed, 2009	
EUROMET.PR-K6.1	766	spectr. diffus. transmittance, bilateral	measurement completed	
EUROMET.PR-K6.2	1073	spectr. diffus. transmittance, bilateral	In progress	
EUROMET.PR-S2	156	high laser power	Part 1 (power up to 10W) completed, 2009	
EURAMET.PR-Sx	443	Comparison of Ultraviolet Power Meters.	In preparation	

Organisation of comparisons

At the last meeting, followed by email conversations the problem of slow progress of comparison has been discussed. However still no magic solution has been found. In general it has been recognized that the amount of work of piloting a comparison is by far underestimated. As an example the pilot of one comparison finished in 2009 evaluated its effort to be in the order of 1.2 M€. One way to make things easier and cheaper for everyone would be to have strong guidelines to make particularly the analysis and reporting cycles more routine. Within CCPR WG KC several guideline documents are under preparation. Alternatively (or in addition) an independent expert panel (consisting of none participating NMIs) could assist the pilot to evaluate the data.

Bilateral comparisons

CCPR WG KC has decided a new rule for bilateral key comparisons:

In order to decrease the number of bilateral comparisons the laboratory asking for a link to the KCRV shall contact TC-PR chair to seek for advice when they have needs for a comparison to underpin CMCs. TC-PR chair contacts CCPR WG CMC chair to see whether a comparison on that quantity in another RMO is going to happen in a reasonable timescale. If yes, TC-PR chair shall suggest to the laboratory to be linked to participate at the corresponding comparison in the other RMO.

Selection criteria for EURAMET participation in a CCPR-KC

At the CCPR WG KC meeting 2009 it has been definitively decided that the number of participants on key comparison at CCPR level is limited to 12 laboratories. EURAMET together with COOMET is entitled to a maximum of 6 laboratories. It is up to the RMO's to decide on the selection process. For this purpose a questionnaire to all EURAMET TC-PR has been sent asking for their intention of participation at the next round key comparison at CCPR and EURAMET level. Parallel to that a list of selection criteria and its prioritised order, has been established to ensure that the needs of both the RMO and NMIs are taken into account, particularly in terms of optimum linkage to the KC reference value, and to provide encouragement to take on the role of pilot within the RMO. The criteria's are applied in prioritised order until the number of allowed participants is reached (i.e. 6 NMI's).

1. Must meet CCPR Criteria
2. Selected pilot of corresponding EURAMET KC
3. Be prepared to be link laboratory to RMO-KC (+ Coomet)
4. Pilot of a "current round" CCPR key comparison
5. Pilot of previous CCPR KC for same quantity
6. Pilot of another EURAMET KC or SC (but not bilateral)
7. Relative uncertainty of uncorrelated uncertainty components in CMCs
8. Relative uncertainty of declared uncorrelated uncertainty for KC
9. Participation in previous 2 CCPR-KCs for the same quantity
10. Secret ballot

The criteria's were accepted by EURAMET however negotiations with COOMET were not yet successful.

4. CMCs

An overview of the past and present CMC submissions is given in the table below.

Designation	Contents	Status
EURAMET.PR.8.2008	CMCs from DE, FR, FI, NL	Approved, should be published 2009-03-26
EURAMET.PR.9.2009	CMCs from AT, CH, CZ, DE, ES, FR, HU, RO,RS	Approved, should be published 2010-10-15
EURAMET.PR.10.2011	CMCs from DE, PL, RO,ES CH	Submitted to InterRMO review 2011-05-06, Review promised by SIM and APMP by 2011-06-30

During the last year EURAMET TC-PR has reviewed batch APMP.PR.7.2010

5. Activities of the Sub-Committees

TC-PR has presently no Sub-Committee.

6. Participation in EMRP

Several members are participating at the joint research project 2.3 (quCandela) and the JRP09 Metrology for Solid State Lighting. At the EMRP call 2010 several projects related to TC-PR were successful, in particular

- Traceability for Surface Spectral Solar Ultraviolet Radiation
- Traceable Radiometry for Remote Measurement of Climate Parameters
- Metrology for Industrial Quantum Communication Technologies

Additionally some radiometry laboratories are contributing some smaller parts to other projects.

7. Meetings

The last meeting of the EUROMET TC-PR was held from March 8 to 9, 2011 in Kjeller, Norway, organized by JV. Most participants assisted a scientific mini-conference on new optical technologies including presentations on the ongoing EMRP projects related to TC-PR.

The next TC-PR meeting will be held from 7 March to 8 March 2012 in Helsinki, Finland

8. Issues

There are some concerns on possible negative impacts of the EMRP on the “classical” EURAMET work (comparison, projects, CMC). From the Chair’s point of view the “responsivity” of the members has clearly decreased over the last year. Furthermore little progress is observed in most “classical” EURAMET projects. Another concern is the slow progress of some comparison.

9. Strategic planning

EURAMET TC-PR has set up a new project: PR1101 Future Trends in Radiometry and Photometry. It seeks to explore, which avenues research and development within photometry and radiometry (PR) will take in the future. A meeting of PR1101 was held in connection to the annual TC-PR meeting. It was decided to update the iMERA-Roadmaps by end of June 2011. After a debate the conclusion was that three road maps are maintained – but their focus should change, to reflect the impacts on different great challenges. in particular (titles to be agreed upon):

- Energy,
- Climate/Environment
- Industry.

The time line for the new roadmaps should be 2011 to 2030

10. Outlook for 2011/2012

The major focus will be to run the existing EMRP projects successfully and to prepare JRP proposals for the EMRP Calls 2011 and PRTs for the EMRP Calls 2012.

Finally, the chairmanship of EURAMET TC-PR will be taken over by Marek Smid, CMI at GA 2011 in Sarajevo.

Peter Blattner, METAS
Chair EURAMET TC-PR 2011-05-31