

17 May 2010

1. General Aspects

EURAMET TC-PR has currently representative 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.

2. Projects

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. Since the last EURAMET General Assembly no new project was agreed. In respect to the year 2000 the number of traceability projects and comparisons has significantly increased.

Number of agreed or proposed TC-PR projects	2000	2010
Traceability	9	17
Comparison	7	10
Cooperation	3	4
Consultation	3	2

3. Comparisons

The current situation of the comparisons is summarised in the table below. During the last year one comparison has been completed (EUROMET.PR-K6), i.e it was the first EURAMET TC-PR non-bilateral key comparison.

BIPM - Identifier	Euramet Nr	quantity	status as of 2010-03-15	action, comments
EUROMET.PR- K1.a	1103	spectral irradiance (250-2500nm)	TP at CCPR WG KC for approval	planned since 2001
EUROMET.PR-K2.a	1116	spectral resp. (900-1600nm)		planned since 2001 as bilateral, now: RMO
EUROMET.PR-K2.b	587	spect. resp. (300-1000nm)	measurement completed, Draft A.1 in discussion, no news	started 2002
EUROMET.PR-K2.b.1	1023	spect. resp. (300-1000nm) bilateral	In progress, no news	
EUROMET.PR-K3.a	569	luminous intensity	Measurement completed, Draft A1 in preparation	
EUROMET.PR-K4	569	luminous flux	In progress	
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, bilaterl	measurement completed	
EUROMET.PR-K6.2	1073	spectr. diffus. transmittance, bilaterl	planned	
EUROMET.PR-S2	156	high laser power	Part 1 (power up to 10W) completed, 2009	

Selection criteria for EURAMET participation in a CCPR-KC

At the last CCPR WG KC meeting 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. 10. Secret ballot

Organisation of comparisons in Euramet

One of the limiting factors in terms of obtaining pilots for Euramet comparisons stems from the organisational, measurement and analysis costs which fall to the pilot NMI. In recent years it has become accepted practice that the cost of any new transfer standard artefacts which might be needed are borne by participants. However, this has not always included any subsequent tests and evaluations that might need to be performed by the pilot in addition to the measurements themselves.

At the PHORA meeting in 2009 it was proposed that one way to lessen the financial burden to pilots and to encourage this role to be taken up by a wider number of NMIs, would be to establish a mechanism for sharing the cost.

Two methods were proposed and discussed at the meeting:

- 1/ Sharing the organisation, analysis and "reference measurements" between a number of NMIs.
- 2/ Sharing the cost of "reference measurements" and artefact evaluations made by the pilot with the participants.

At the meeting, the second of these two proposals was considered the preferred route and that one mechanism for implementation was to include the cost of the pilot's measurements into the purchase cost of the transfer standard artefact.

Participants were asked to comment or raise objections to this proposal by email and no negative responses were obtained. One specific comment was that such a mechanism was likely to improve the timeliness of the process, (at least in terms of any delays caused by the pilot), as it would establish a legal contract between the participant and the pilot. However, it was also felt that the implementation of such a process might need to be considered at a higher level by the Euramet Board.

4. CMCs

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

Designation	Contents	Status	Comments
EURAMET.PR.8.2008	CMCs from DE, FR, FI, NL	Approved, should be published by 2009-03-26	CMC submitted to TC-PR in April 2008
EURAMET.PR.9.2009	CMCs from AT, CH, CZ, DE, ES, FR, HU, RO,RS	Submitted to InterRMO to interRMO 2009-11-11	Only APMP has announced to review the CMCs by 2010-03-31

The whole CMC review procedure takes still quite long (9 months). During the last year EURAMET TC-PR has reviewed batch SIM.PR.4.2008.

5. Activities of the Sub-Committees

TC-PR has presently no Sub-Committee.

6. Participation in iMERA-Plus

Several members of the EURAMET TC-PR are participating at the project JRP2.3. The project is aimed to develop quantum standards based on few photons metrology and linking these to the existing radiometric scales. There will be a scientific workshop at the next TC-PR meeting to the present progress of the project. Several members of the EURAMET TC-PR are also participating at the EMRP project JRP09 Metrology for Solid State Lighting (SSL). The proposal aims to address different scientific and technological objectives:

- The development and validation of traceable measurement facilities and traceability routes aimed specifically at SSL
- The development and validation of basic measurement methods for the characterization of SSL products, including optical, electrical and thermal properties. Both single devices and complete systems will be considered.
- The implementation of metrics for the human perception of SSL.
- The development and validation of traceable quality metrics for the specification of SSL products in various applications.

The project will start 1st May 2010.

7. Meetings

The last meeting of the EUROMET TC-PR was held from April 23 to April 24, 2009 in Sofia/BG. There were 21 members and 8 guests present. After the meeting, most participants visited the photometric laboratories at BIM-NCM.

The next TC meeting was planned to be held from April 22 to April 23, 2010 in Berlin/DE in connection with a scientific workshop on the JRP "quCandela" and technical visits to PTB's new synchrotron facility (MLS). Unfortunately the meeting had to be postponed due to the difficult travel situation in Europe (Vulcan activities in Island). The next tentative date is fixed to June 22 to June 23, 2010 in Berlin.

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.

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. The project will try to find answers to questions such as: Which future problems of general societal concern can be addressed using PR technologies. What role can PR play in the area of "Health", "Food", "Environment", or more general "Life Science"? Can PR play a role in future: space exploration, optical communication, and lighting? The outcome of the project will be important for revision of existing roadmaps for PR as well as point toward future common research projects in PR.

10. Outlook for 2010/2011

The major focus will be on preparing JRP proposals for the EMRP Calls 2010 and PRTs for the EMRP Calls 2011.

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Chair EURAMET TC-PR 2010-05-17