



TC-IR: Activity and Highlight Report

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**Ionising
Radiation**

TC-IR currently is involved in 11 EMPIR projects (Calls 2015, 2016, 2017), almost all JRPs are coordinated by TC-IR members:

- 3 JRPs **Health** (Call 2015)
- 3 JRPs **Environment** (Call 2016)
- 1 JRP SI Broder Scope (Call 2015), 1 JRP FUN (Call 2017)
- 1 JRP SIP (Call 2014)
- 1 JRP NRM (Call 2016)
- 1 JRP RPT (Call 2017)



EMPIR Calls 2018:

- brainstorming meeting for preparation (35 participants):
13 – 14 December 2017 at PTB Berlin
 - SRTs under participation of TC-IR members:
6 SRT Health, 1 SRT SI Broder Scope, 1 SRT NRM
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- Trend: combination of expertise from different disciplines
=> **interdisciplinary metrological research**
=> projects with interdisciplinary consortia

=> **more interaction among the TCs**



Joint workshop of TC-MC and TC-IR



➤ 63 participants; one-day meeting

Topics: – revised MRA: TC-IR and TC-MC approach

– EURAMET news and capacity building in TC-MC and TC-IR

– case studies: mass spectrometry and metrology for health



TC-IR: Annual meeting 2018



- Topics:**
- reports from conferences, working groups and member institutes
 - overview about comparisons and running EMPIR projects
 - CMCs
 - elections
 - scientific talks
 - EMPIR Calls 2018



TC-IR: Capacity building



- TC-IR currently has 28 registered contact persons, 17 from NMIs and 11 from DIs. IAEA and BIPM as liaison organizations have observer status. 10 contact persons come from states with an emerging metrological infrastructure in IR, 3 institutes do not have any CMC claims.
- TC-IR contact person for capacity building: Denis Glavič-Cindro (MIRS/IJS, Slovenia)
- Needs:
 - practical training courses in the calibration of dosimeters or standard instruments
 - training in organization and coordination of comparisons
 - training in coordination of projects

EMPIR RPot JRP: DOSEtrace, *Support for claiming CMCs in calibration of radiation protection dosimeters;*

coordinator: Ambra Šabeta (IMBiH, Bosnia and Herzegovina)



TC-IR: revised MRA



➤ Present situation in IR:

EURAMET TC-IR / worldwide: 1995 (4112) CMC claims: 678 (1023) for Dosimetry, 1210 (2882) for Radioactivity and 107 (207) for Neutrons. Consequence: high number of comparisons for supporting the CMCs and a high number of very time-consuming review processes.

➤ Recommendations from the Working Group on the Implementation and Operation of the CIPM MRA (08/2016):

TC-IR prepared *Proposal for a revised scheme for the CMCs for the IR fields Radioactivity, Dosimetry and Neutrons.*

➤ Present CMC order is along the quantities / services as given in their original definition.

Proposal: to replace it by an order along the national measurement standards, which are either primary measurement methods or secondary measurement methods with traceability to a primary standard. Same approach for the three IR areas Radioactivity, Dosimetry, Neutrons.



TC-IR: revised MRA



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- **CCRI meetings June 2017:** presentation and longer discussions of the TC-IR proposal in CCRI(I-III), CCRI and CCRI-RMOWG meetings
- Request to TC-IR to show the feasibility of its implementation
- revision of the document *International Rules for completing the CMC Tables for Ionizing Radiation* and all neutron CMCs were converted according the new approach.
=> the approach is feasible and has a big benefit shown by CCRI(III)



TC-IR: outlook



- **Next TC-IR CP meeting:**
January 29 - 31, 2019, hosted by MIRS/IJS in Ljubljana, Slovenia, 2.5 days meeting combined with a brainstorming meeting for EMPIR Calls 2019
- **Strategic planning of comparisons:** identify the needs, define the scopes of comparisons to be able to underpin with one comparison a couple of CMCs, prepare a time table and a list of volunteers acting as pilot lab
- **Revised MRA:** close contact with CCRI, next CCRI meetings in 2019
- **Capacity Building:** needs for training visits or training courses learning the organization and coordination of comparisons => RPot - EMPIR projects (good example: RPot JRP: DOSEtrace)
- **Collaborations** with other organizations
=> EURADOS and ICRM are important partner

