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KCDB REPORT AS ON 16 SEPTEMBER 2003

The BIPM key comparison database Website is available at http://www.bipm.org/kcdb. We describe here the evolution of the KCDB since the 10th JCRB meeting.

1. Appendix C

On 16 September 2003 the Appendix C of the KCDB contained a total of 15830 CMCs distributed as follows:

- 935 CMCs in the field of Ionizing Radiation,
- 12763 CMCs in the fields of Acoustics, Ultrasound and Vibration, Electricity and Magnetism, Length, Mass and related quantities, and Photometry and Radiometry, and
- 2132 in the field of Chemistry.

Since the 10th JCRB meeting, it was enriched by the publication of:

- first sets of CMCs in Electricity and Magnetism declared by India and Chinese TAIPEI via APMP,
- a new set of CMCs in Acoustics, Ultrasound and Vibration declared by Germany via EUROMET,
- new sets of CMCs in Length declared by 6 countries via EUROMET,
- new sets of CMCs in Photometry and Radiometry declared by South Africa via SADCMET, and by 5 countries via SIM, and
- first sets of CMCs in Ionizing Radiation (Radioactivity) declared by 10 countries via EUROMET.

There are not yet any CMCs in Thermometry and in Time and Frequency included in the Appendix C database, but we are aware that files are being drawn up and circulating. It may thus possible that all Metrology areas be covered before the end of the transition period of the MRA. We are also expecting additional CMCs in Dosimetry.

The Cycle III CMCs in Chemistry (all RMOs) which was examined in April 2002 and reexamined in April 2003 is not yet formally approved, though Cycle IV is already being drawn up. It follows that the Appendix C Chemistry has not been updated since March 2002.

2. Appendix B

Appendix B content

The number of CIPM and RMO key and supplementary comparisons recorded in the Appendix B database is continuously increasing: on 16 September 2003, the Appendix B contained a total of 516 CIPM and RMO key and supplementary comparisons (to be compared to 479 at the time of the 10th JCRB meeting). It is now displaying the results of

some 103 comparisons, 35 more than at the time of the 10th JCRB. BIPM key comparisons have their results continuously updated with new measurements.

On 16 September 2003, five EUROMET key comparisons had their results linked to those of the corresponding CC or BIPM key comparisons: one in the field of Mass and Related Quantities (High Pressure), two in the field of Chemistry (Gases), and two in the field of Electricity (Capacitance and DC voltage). We are now preparing the results of an APMP comparison in High Pressure to be linked to those of the EUROMET and CCM key comparisons already published: for the first time we will have 3 comparisons linked together.

Since a few months, we observe an intense activity around the publication of comparison results in the field of Ionizing Radiation (Radioactivity). On 16 September 2003, results were published for 33 of the 59 BIPM key comparisons based on the SIR measurements. In addition, five CCRI (Section II) and two APMP key comparisons in radioactivity are now linked to the corresponding BIPM SIR key comparisons.

Appendix B design

No further change in the design of the KCDB (databases and Web system) has taken place since the launch onto the Web of our new Website on 04 March 2003.

For the KCDB office, the main advantages of the new system is its flexibility, which makes it possible to publish quickly and safely new results of comparisons via the Appendix B, as well as the increased stability of the modules used for importing CMCs EXCEL files into the Appendix C database. We also got an enthusiastic feedback about the data presentation from the new site.

3. Visits, publicity

Visits to the KCDB

The number of external connections to the KCDB Website is still slowly increasing: we received 3600 visits in July 2003 (against about 3000 in December 2002). We observe also that the search engines proposed in the Appendix C are more and more used.

Publicising the KCDB

We try to publicise the KCDB as often as we can through, for example, the publication of papers in Newsletters, the presentation of posters at Congresses and the wide distribution of the KCDB leaflet. We have demonstrated the KCDB live on the Web on the NIST stand at the conference PITTCOM'2003 in March 2003. We are grateful to NIST for their hospitality.

On 06 August 2003, we have inserted in the KCDB Website a facility for on-line registration to the KCDB Newsletter (1st issue planned for the end of 2003). It is mandatory for the subscriber to enter his/her e-mail address and to choose one (or several) fields of activity among those proposed (education, industry, trade, metrology, etc.).

This should serve two purposes: 1) knowing who is visiting the KCDB, and 2) publicising the KCDB by sending regular news from the KCDB. We have so far some tens of subscribers only; we will thus have to extend this list in order to reach all interested parties.