Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

CCM Working Group on the Realisation of the Kilogram

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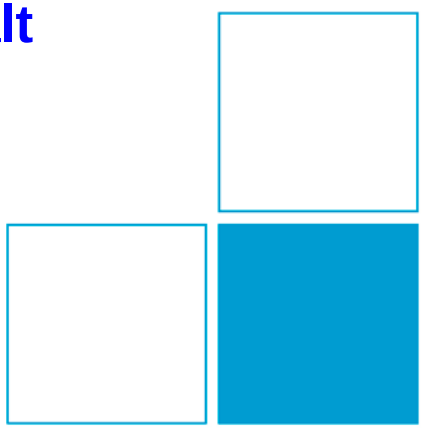


CCM Recommendation G1 (2013)

Preconditions for a new kg definition

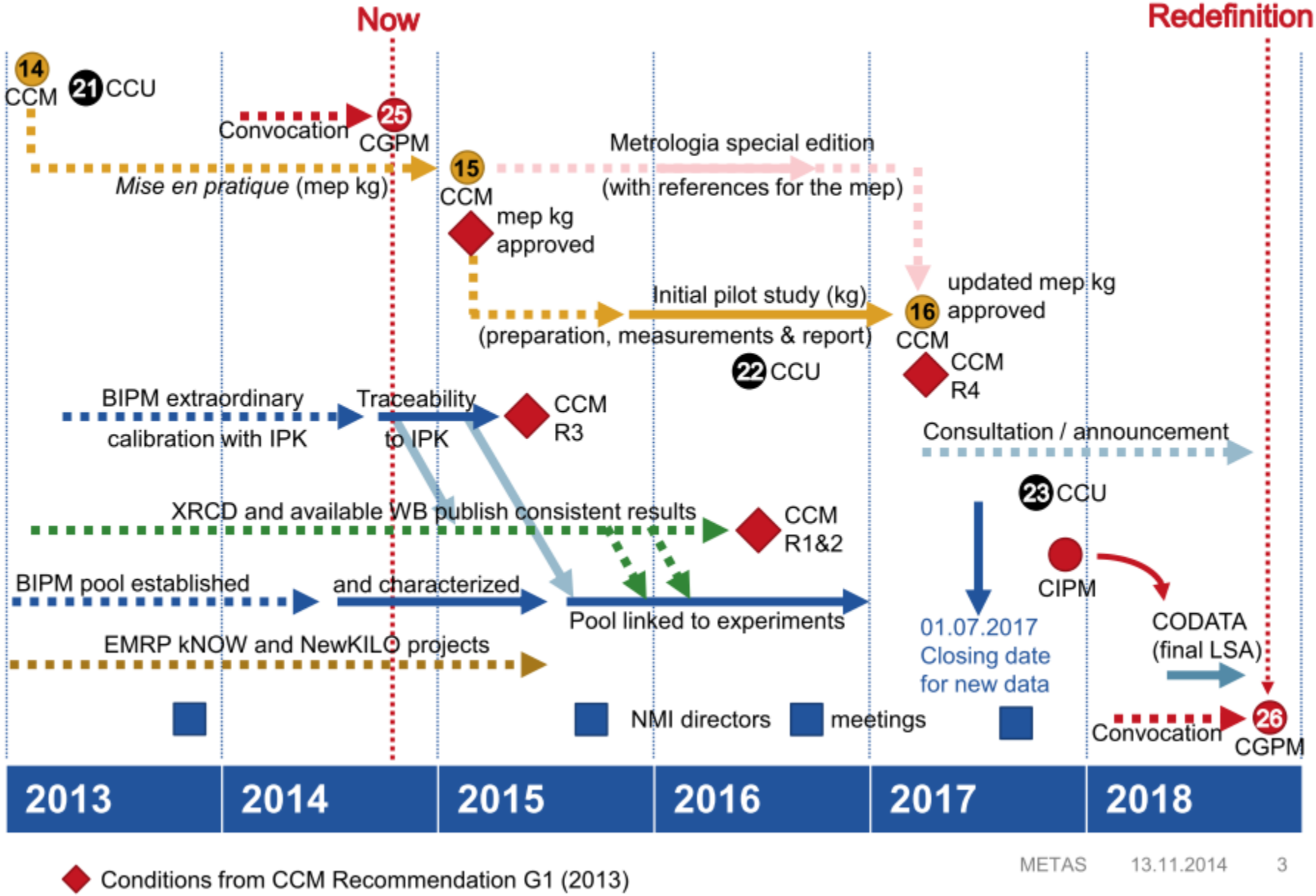
- New calibrations using the IPK
- 3 independent determinations of *h* with rel. unc. ≤ 5×10^{-8}
- Two different methods
- 1 determination of *h* with rel. unc. ≤ 2×10^{-8}
- Consistent results
- Ensemble of reference mass standards at BIPM
- *Mise en pratique*
- Procedures of realization and dissemination validated

Ian Robinson reports on Recent Experimental Results and Outlook

Estefania de Mirandes and Michael Stock report about the Status of the Extraordinary Calibrations Using the IPK

Mise en pratique

Joint CCM and CCU roadmap for the new SI



Mise en pratique of the definition of the kilogram

- Version 9 distributed December 2014

Open questions

- SI Brochure
- Periodicity of NMI participation for CMCs
- Technical protocol of the pilot study and the BIPM.M-K1
- Use of the ensemble of reference mass standards, validation?
- Special issue of *Metrologia*

Update of *mise en pratique* after the Pilot Study!

Mise en pratique of the definition of the kilogram

Questions or Comments?

Michael Stock reports about the Status of the planned CCM Pilot Study on the Realization of the (awaited) Kilogram

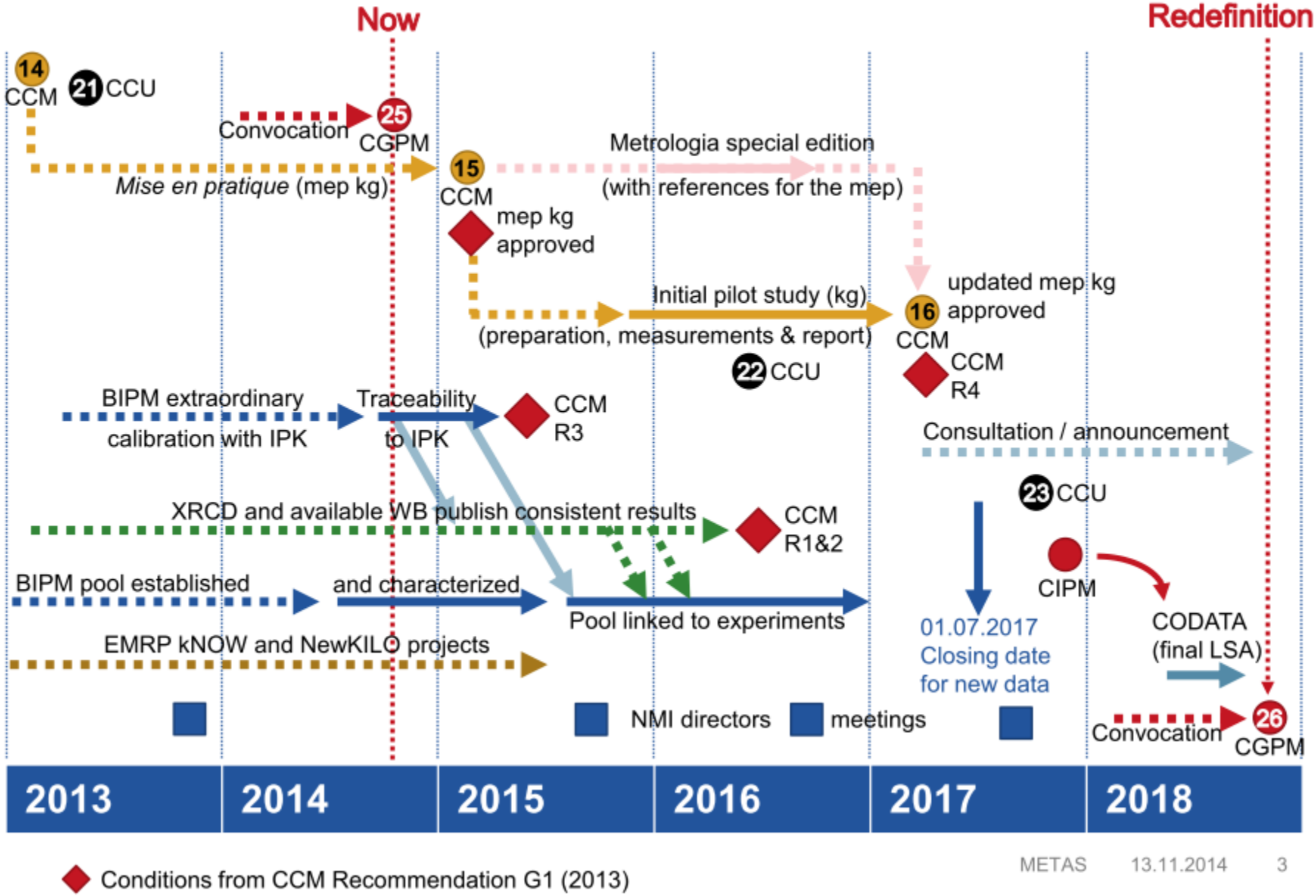
Special issue of *Metrologia* "Realization, maintenance and dissemination of the new kilogram"

Guest editors:

Horst Bettin

Stephan Schlamminger

Joint CCM and CCU roadmap for the new SI



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Special issue of *Metrologia*

Missing:

Paper about additional methods, e. g. volt balance

Proposed: Gordon Shaw (NIST)

Time schedule

- **Feb. 2015: Abstract or content list, title, co-authors**
- **Early 2016: Submission**

Walter Bich reviews the Situation with the CCM Conditions

Status of Planck Constant Determination

Results of

- NRC: 1.8×10^{-8} rel. unc.
- IAC: 2.0×10^{-8} rel. unc.
- NIST-3: 5.6×10^{-8} rel. unc.

Birge ratio: 1.45

- NRC: 1.8×10^{-8} rel. unc.
- NMIJ: 3×10^{-8} rel. unc.
- PTB: 3×10^{-8} rel. unc.

Birge ratio: <<1, but NMIJ and PTB are correlated (about 20%)

CCM WGR-kg: Membership

New members

- NPL
- KRISS
- Personal member: Leonid Vitushkin (VNIIM)

CCM WGR-kg: Next Meeting

Next meeting of the CCM WGR-kg

Friday 8 July 2016 in Ottawa, Canada, satellite meeting of the CPEM 2016

Thank you very much for your attention!

Questions?

Comments?

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