

Activity Report of COOMET TC 1.6

“Mass and Related Quantities”



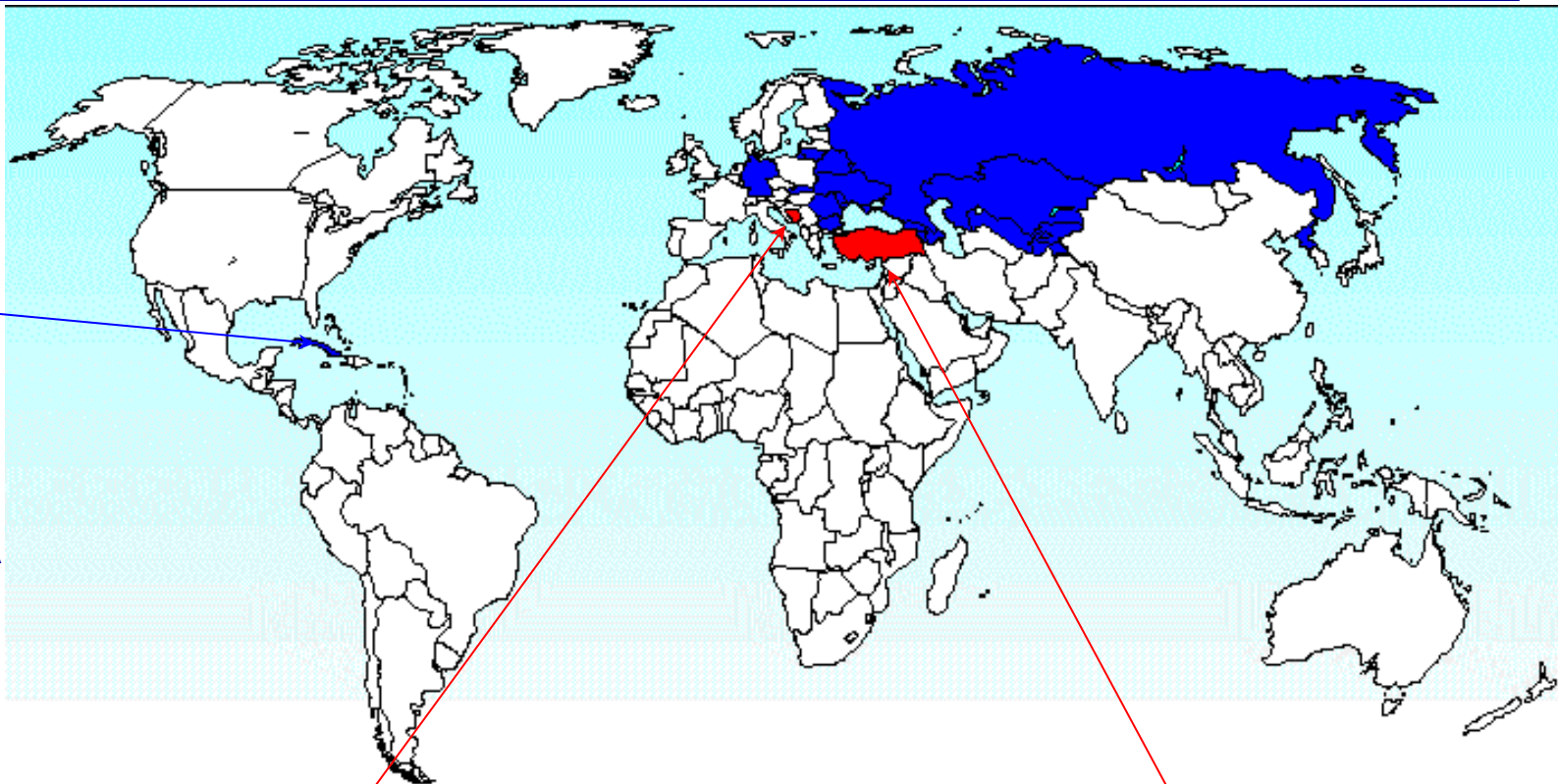
Irena Kolozinska
Chair of COOMET TC 1.6

DOMINANT DIRECTIONS

- ✓ **THE INCREASE OF THE TECHNICAL COOPERATION IN THE FIELD OF MASS AND RELATED QUANTITIES MEASUREMENTS;**
- ✓ **THE IMPROVEMENT OF THE TECHNICAL CAPABILITIES;**
- ✓ **MORE COMPLETE PRESENTATION OF THE MEASUREMENT AND CALIBRATION CAPABILITIES OF NMIs.**

COOMET members

- ARMENIA
- AZERBAIJAN
- BELARUS
- BULGARIA
- CUBA
- GERMANY
- GEORGIA
- KAZAKHSTAN
- NORTH KOREA
- KYRGYZSTAN
- LITHUANIA
- MOLDOVA
- ROMANIA
- RUSSIA
- SLOVAKIA
- TAJIKISTAN
- UKRAINE
- UZBEKISTAN



Bosnia and Herzegovina

**Our members
since 2014**



Republic of Turkey

19th Meeting of COOMET TC 1.6



Date: : **September 2-4, 2014**

Place: **PTB, Braunschweig, Germany**

Attendee: **40 (15 Country-members)**

Next TC meeting will held Bishkek, Kyrgyzstan, in August, 2015

Workshops “Management of Comparisons and CMC Review Processes in COOMET TC 1.6”

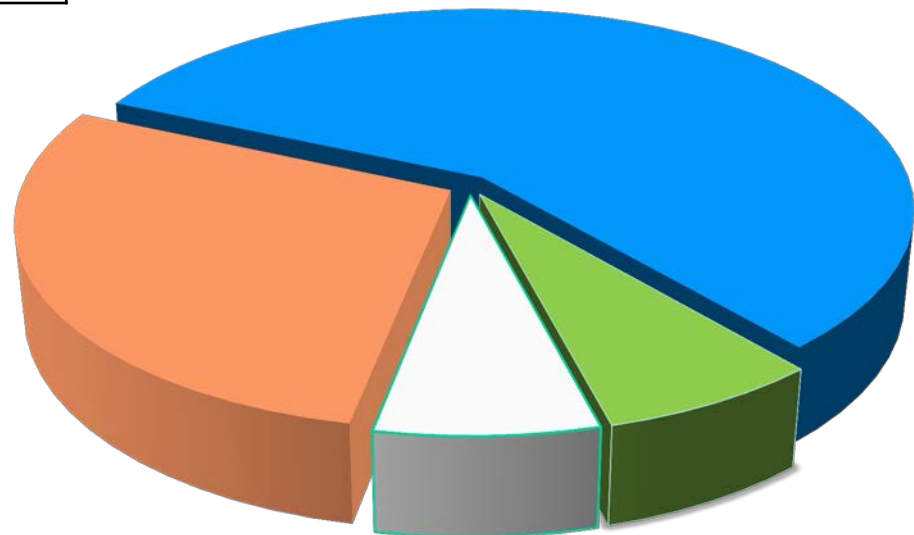
The questions were discussed:

- The Metre Convention and the CIPM-MRA. Mechanisms and outcomes of the CIPM-MRA;
- General requirements for the competence of testing and calibration laboratories according to ISO 17025;
- Reference value of comparison. Methods of calculation reference value and criteria of choosing the method. Organization of ongoing comparisons;
- Definition of the problems, obstacles, difficulties, mistakes, etc. in the organization and carrying out of comparisons;
- Practical steps for CMC entries in KCDB of BIPM;
- CMC review process in TC 1.6. Analyze of COOMET CMC in the field of mass and related quantities presented in KCDB.



COOMET PROJECTS

Key comparisons	4
Supplementary comparisons	8
Pilot comparisons	1
Other projects	1



COMPARISONS

MASS

- **COOMET.M.M-K5**

Participants: VNIIM (*pilot*), BelGIM, KazInMetr, NSC IM

Transfer standards: 200 mg, 1 g, 50 g, 200 g, 2 kg

- **COOMET.M.M-S1**

Participants: GeoSTM (*pilot*), PTB

Transfer standards: 50 mg, 50 g, 1 kg

COMPLETED
COMPLETED

- **COOMET.M.M-K8**

Participants:

Transfer standards:

50 mg, 50 g, 1 kg, 2 kg



Measurements is in progress

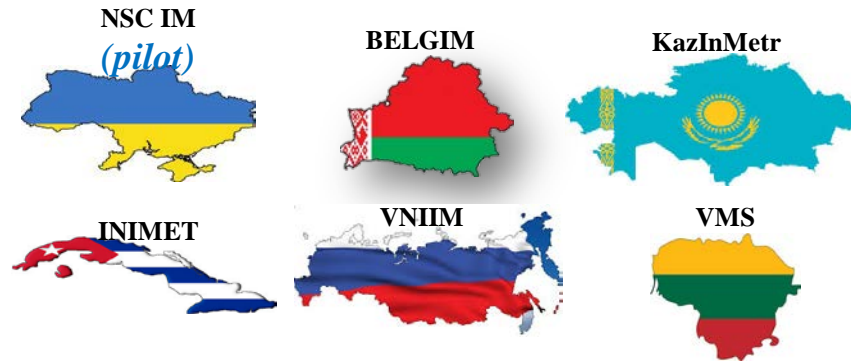
Waiting finished date: the end of 2015

COMPARISONS

PRESSURE

- COOMET.M.P-S1

Participants:



In the range from 1 MPa to 10 MPa

Measurement is in progress

FORCE and TORQUE

- **COOMET.M.F-S1**
20 kN, 50 kN, 100 kN, 250 kN, 500 kN, 1000 kN and 2000 kN
Participants: VNIIM, UkrMetrTestStandart, BelGIM
Report in progress, Draft B
- **COOMET.M.F-S2**
Bilateral: UkrMetrTestStandart, PTB
10, 14, 16, 20, 50, 60, 80, 100 kN
Report in progress, Draft B
- **COOMET.M.T-S1**
Bilateral: UNIIM, PTB
100 N·m, 500 N·m, 1500 N·m and 2500 N·m, clockwise and
anti-clockwise
Report in progress, Draft A

COMPARISONS

HARDNESS

COMPLETED

Vickers Hardness

COOMET.M.H-K1.c, COOMET.M.H-K1.b

Participants: VNIIFTRI, PTB (pilot)

COOMET.M.H-K1

Participants: VNIIFTRI (pilot), PTB, BelGIM,
KazInMetr, NSC IM

Brinell Hardness

COOMET.M.H-K2

Participants: VNIIFTRI (pilot), PTB, BelGIM,
KazInMetr, NSC IM

Report in progress, Draft B

IN PROGRESS

Rockwell Hardness

COOMET.M.H-K3

Measurements is in progress

NSC IM
(pilot)

BELGIM

KazInMetr

CzMI



COMPARISONS

VISCOSITY

- **COOMET.M.V-S1**
 Participants: VNIIM (pilot), AzStandard
 Report in progress, Draft B

IN PROGRESS

DENSITY

- **COOMET.M.D-S1**
 Participants:



IN PROGRESS

Technical protocol is completed

CMC submission	Field	NMI, Country	Status	Note
COOMET.M.25.2015	Mass	GeoSTM	under review	New (6)
COOMET.M.23.2014	Viscosity	UkrCSM, Ukraine		New (1)
COOMET.M.22.2014	Pressure	BelGIM, Belarus	Published	New (1)
COOMET.M.22.2014	Mass	BelGIM, Belarus KazInMetr, Kazakhstan NSC IM, Ukraine		New (6) New (6) New (4)
COOMET.M.20.2014	Density	VNIIM, Russia		New (1)
COOMET.M.19.2014	Hardness	KazInMetr, Kazakhstan		New (2)
COOMET.M.18.2014	Hardness	NSC IM, Ukraine		New (1)
COOMET.M.17.2014	Hardness	BelGIM, Belarus		New (1)
			Total	22 new CMCs

The improvement of the national standards:

- ✓ in the fields of **density** (VNIIM, Russia).
The range of the reproduction and dissemination of unit has been expended

- ✓ in the field of **force** (BelGIM, Belarus).
The metrological characteristics have been improved.

- ✓ in the field of **torque** (SE Ukrmetrteststandard, Ukraine, BelGIM, Belarus, UNIIM, Russia).
The metrological characteristics have been improved.

Thank You for your attention!

Irena Kolozinska
Chair of COOMET TC 1.6

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Questions?