

REPORT

Joint Committee for Measurement Standards



Meetings of the TC 1.1 -1.12

№ TC	Meeting data	Place
TC 1.1 “GM”	12.04.2016	Minsk, Belarus
TC 1.2 “AUV”	20-21.09.2016	Minsk, Belarus
TC 1.3 “EM”	27-28.09.2016	Tbilisi, Georgia
TC 1.4 “Flow Measurement”	8.09.2016	Kazan', Russia
TC 1.5 “L”	2016	Vilnius, Lithuania
TC 1.6 “M”	10.2016	Kishinev, Moldova
TC 1.7 “PR”	26.05.2016	Kishinev, Moldova
TC 1.8 “Physico-chemistry”	26-27.05.2016	St.Petersburg, Russia
TC 1.9 “Ionising Radiation and Radioactivity	3-5.05.2016	Gavana, Kuba
TC 1.10 “Thermometry and Thermal Physics”	7-8.09.2016	Bishkek, Kyrgyzstan
TC 1.11 “Time and Frequency”	29-30.10.2016	Minsk, Belarus
TC 1.12 “Reference Materials”	18-19.09.2016	Yekaterinburg, Russia

MSJC Meeting, 25.04.2017

- Reports of technical committees TC1.1-TC1.12
- Program of comparisons of standards of national metrological institutes of COOMET:
 - Current status of COOMET comparisons
 - On the development of a new version of COOMET Document R / GM / 11: 2010 " Regulations for comparison of measurement standards from the national metrological institutes of COOMET «
- COOMET participation in the implementation of the CIPM MRA Agreement



Completed projects

420/RU/08	Development of the Recommendation for uncertainty evaluation in calibration
675/BY/15	Development of a recommendation regarding contribution of measurement uncertainty in making decision on rejection in course of conformity assessment
668/RU/15	Revision of Development of COOMET R/GM/11:2010 "REGULATIONS for comparison of measurement standards from the national metrological institutes of COOMET"
535/UA/11	Comparison of the standards of the unit of power ultrasound in the water in the frequency range from 2 to 15 MHz

Completed projects

609/UA/13	Comparison of national standards of the sound pressure unit in air through calibration of the pressure-inch and half-inch microphones.
666/UA/15	Key comparison of the standards of the unit of sound pressure in the air in the frequency range from 2 Hz to 10 KHz
584/UA/12	Supplementary comparison of National standards of inductance
566/UA/12	Comparisons of the national AC/DC voltage transfer references up to 1000 V in the frequency range from 10 Hz to 1 MHz

Completed projects

527/RU/11	Additional comparisons of national measurement standards in the field of surface density of coatings measurements in the range (0,04-0,90) kg/m² and coating thickness in the range (4-100) μm
568/UA/12	Comparisons of reference measuring instruments of surface parameters
569/UA/12	Comparison of length standards in the range of 0.001 to 1 mm
529/RU/11	Comparison of interferometers for measurement of tapes up to 20 m



Completed projects

570/UA/12	Comparisons of standards of flatness
636/UA/14	Comparisons of luminous flux national standards
664/RU/15	Supplementary comparisons of primary standard gas mixtures "Ambient air: Carbon monoxide (CO) in nitrogen 5 $\mu\text{mol/mol}$"
519/RU/11	Pilot comparisons in the field of ethanol mass fraction measurements in aqueous solutions

Completed projects

649/RU/14	Pilot comparison "Study in the field of measuring of formed elements of blood: erythrocytes (RBC), leukocytes (WBC)"
635/DE/14	Comparison of the national standards of air kerma for x-radiation qualities used in radiation protection, general diagnostic radiology, computed tomography and mammography
450/UA/09	Comparison of measurement standards of length unit for roughness parameters
527/RU/11	Additional comparisons of national measurement standards in the field of surface density of coatings measurements in the range (0,04-0,90) kg/m ² and coating thickness in the range (4-100) m



Completed projects

698/RU/16	Work on the recognition of CRM for composition of potassium biphthalate of the 1st order, included in Appendix C CIPM MRA as COOMET CRM.
699/RU/16	Work on the recognition of CRM for composition of potassium bichromate of the 1st order, included in Appendix C CIPM MRA as COOMET CRM.
498/RU/10	Development of publication "COOMET Recommendation. The content and procedure of works on CRM comparisons within COOMET".
543/AM/11	Development and administration a database of RM of COOMET



Published SMS

SMS	Metrology area	RMO Initiator	Status	Last update
COOMET.RI.11. 2016	Ionizing Radiation and Radiactivity	COOMET	Published in BIPM KCDB	2016-11-15
COOMET.T.11. 2016	Thermometry	COOMET	Published in BIPM KCDB	2016-11-10
COOMET.L.13. 2016	Length	COOMET	Published in BIPM KCDB	2016-10-24
COOMET.L.11. 2015	Length	COOMET	Published in BIPM KCDB	2016-10-18



Participation in the examination of SMS

T.C 1.2:

APMP.AUV.12.2016 (NMI, China), APMP.AUV.13.2016 (KRISS, Korea), SIM.AUV.3.2016 (NRC, Canada).

T.C 1.6:

country	Subsection		Status
Ukraine	Force	COOMET.M.26.20 15	Inter-regional review
Russian Federation	Torque	COOMET.M.28.20 17	Inter-regional review
Azerbaijan	Viscosity	–	On intraregional review
Kazakhstan	Viscosity	–	On intraregional review

Participation in the review of SMS

TC 1.6:

During the reporting period, an interregional review of the following SMS was conducted:

RMO	Status	Subsection	
EURAMET	1 on review	Mass	EURAMET.M.48.2017
		Force	EURAMET.M.49.2017
SIM	4 reviewed 2 on review	Density	SIM.M.31.2016
			SIM.M.34.2016
		Volume	SIM.M.33.2016
		Mass	SIM.M.35.2017
		Force	SIM.M.36.2017
			SIM.M.37.2017

Participation in the review of SMS

T.C 1.7 conducted an examination of two applications:

- EURAMET.PR.12.2016, application from 10 countries, which included more than 180 lines. Of these, 56 lines were not accepted. Currently, the corrections made by EURAMET are being coordinated.
- Repeat application SIM.PR.8.2015 from NIST, which included 69 lines. Despite the fact that most of the comments made in the first round of review, 8 lines were not approved, and it was recommended to conduct another audit of the application.



TC 1.2 AUV

Participated in:

The meetings of the CIPM CC in the field of “AUV” and its working groups: RMO WG Working Group on CMC - CCAUV RMO WG and Strategic Planning Working Group - CCAUV SPWG, Paris, France (October 2016);

the meeting of the working groups of TC 43 ISO, London, United Kingdom (June 2016);

the meeting of the working groups of TC 87 Ultrasound IEC, Tokyo, Japan (September 2016);

external evaluation of the hydroacoustic calibration laboratory of the Institute of Materials of the Marmara Sea Research Center, TÜBİTAK - MAM, Turkey (November 2016).



INTERACTION WITH INTERNATIONAL ORGANIZATIONS

TC 1.6 “Mass and related quantities”

COOMET TC 1.6 actively cooperates with SSM BIPM by participating in meetings of SSM Working Groups on weight, hardness and pressure.

COOMET TC 1.6 members take part in the following key comparisons of advisory committees:

- SSM.N-K2 Key comparisons by hardness on the Brinell scale;
- SSM.D-K3 Key comparisons in the density field of solids;
- CCM.F-K3 Key comparisons of strength in the range of 0.5-1 MN;
- SSM.M-K7 Key comparisons of multiple and partial kilogram units.

TC 1.8 «Physical Chemistry»:

1. The participation of representatives of TC 1.8 "Physical Chemistry" was organized:
2. At the 14th meeting of the COOMET Joint Committee for Measurement Standards (JCMS) and the 26th meeting of the COOMET Committee (April 19-21, 2016, Armenia).

INTERACTION WITH INTERNATIONAL ORGANIZATIONS

TC 1.11

International Bureau of Weights and Measures (BIPM):

Consultative Committee for Time and Frequency (CCTF):

Consultative Committee for Length (CCL)

International Telecommunication Union (ITU):

International Earth Rotation and Reference Systems Service (IERS):

International GNSS Service (IGS):

International Laser Ranging Service (ILRS):

regular data exchange to form TAI;

participation in the CCTF and its working groups;

participation in the development of recommendations for the secondary presentation of the second;

participation in the work of group 7A;

regular data exchange;

exchange of observational data and the results of their processing;

exchange of observational data and the results of their processing;



INTERACTION WITH INTERNATIONAL ORGANIZATIONS

TC 1.12

Liaison with leading international organizations: ISO / REMCO, TK3 / PK3 OIML, EAS (NTKMetr), COMAR, etc .;

In the journal "Standard Samples" articles on cooperation in COOMET, information materials on the activities of JI in other international organizations - ISO / REMCO, BIPM, COMAR database, OIML and the CIS are regularly printed.



PARTICIPATION IN INTERNATIONAL CONFERENCES, SEMINARS ..

1. **The 45th International Congress and Exhibition on Anti-Noise Problems “InterNoise 2016”, Hamburg, Germany (August 2016);**
2. **Scientific and technical seminar in honor of the 25th anniversary of cooperation of VNIIFTRI and the Hangzhou Research Institute of Applied Acoustics, Hangzhou, China (October 2016);**
3. **6th International Scientific and Technical Conference "Sudometrika 2016. Measurements and tests in shipbuilding and related fields", St. Petersburg, Russia (October 2016);**
4. **10th International Scientific and Technical Conference "Metrology - 2016", Kharkov, Ukraine;**
5. **The 6th All-Russian Scientific-Practical Conference with International Participation “Protection against increased noise and vibration”, St. Petersburg, Russia (March 2017);**



6. “Actual issues of metrological assurance of flow and quantity measurement of liquids and gases” in September 2016, NIM, China (APMP);
7. Seminar “Preparation of the SMS application and examination of the SMS”, Chisinau, Moldova
8. International Conference on Thermometry "TEMPMEKO-2016", Zakopany, Poland;
9. MathMet - 2016, November 7–9, 2016, PTB, Berlin, Germany

PARTICIPATION IN INTERNATIONAL CONFERENCES, SEMINARS ..

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12. 5th International Scientific and Technical Conference “Light Engineering and Electric Power Engineering: History, Problems, Prospects”, Ternopil, Ukraine

13. Conference "Temperature 2015", St. Petersburg, Russia

14. Seminar "Implementation of the new Kelvin", UK

15. Congress IMEKO, Prague, Czech Republic

16. Annual Conference on JJ, Ekaterinburg, Russia

17. Conference on Flow Measurement, Kazan, Russia

18. 13th International Scientific and Technical Seminar

**“Measurement uncertainty: scientific, applied,
regulatory and methodological aspects ”(UM-2016).**

April 13-14, 2016 in BelGIM, Minsk, Belarus



Thanks for attention!

