



**Report
of COOMET Secretariat
2018**

REPORT OF COOMET SECRETARIAT (as of 31 March 2018)

The activity of COOMET in 2017 was conducted in all main directions and the thematic areas of cooperation provided by the Memorandum of Understanding.

1. General characteristic of the activity

The report was prepared based on the materials submitted by COOMET Committee members, Chairpersons of Structural Bodies and National COOMET Secretariats of member countries.

1.1. Information on the implementation of COOMET projects

There are **745 projects** as of 31 March 2018.

The lists of agreed, proposed, completed and deleted projects of COOMET as well as statistical information on the status of projects, dynamics of the number of proposed projects by years, distribution of projects by the fields of cooperation and by coordinating countries are given in *Appendix 1*.

28 new projects were proposed during this period: **7** – for “Mass and Related Quantities”, **5** – “Photometry and Radiometry”, **4** – “Reference Materials” and “Information and training”, **2** – for “Legal metrology”, “General questions concerning measurements (General metrology)” and “Thermometry and Thermal Physics”, **1** - “Length and Angle” and “Ionising Radiation and Radioactivity”.

14 of the new projects are related with regional comparisons of measurement standards of physical units, **3 projects** are aimed at the development of COOMET Recommendations and Documents, **3** – for organization and holding of meetings of the Structural Bodies as well as events within COOMET, **4** – to carry out training of metrologists.

During the reporting period **9 projects** were agreed, **12 – completed**, **3 - excluded** (the detailed list of projects, which status has changed during the reporting period is given in *Appendix 1* to this report).

In general, COOMET Program of Comparisons for 2018 includes 129 projects.

1.2. Implementation of the CIPM MRA

7029 CMC lines declared by NMIs of COOMET member countries were published in the KCDB as of 13 February 2018 (date when the latest statistics of KCDB was published), including by countries and types of measurements:

Country	Total	AUV	L	TF	T	PR	M	EM	RI	QM
Azerbaijan	0									
Belarus	240	25	16	31	37	11	10	41	51	18
Bulgaria	226	30	19	16	44	7	24	58	23	5
Bosnia and Herzegovina	59			15	9		8	26		1
Germany	1556	76	97	25	117	83	204	164	266	524
Georgia	30				9		5	16		
Kazakhstan	63		6	25	9		14	3		6
China	1523	56	78	34	50	27	67	180	195	836
Cuba	113				8		12	17	76	
Lithuania	78		9	16	17		20	16		
Moldova	43		1		40				2	
Russia	1728	72	23	36	143	110	68	326	329	621
Romania	226	8	21	9	44	17	32	39	37	19
Slovakia	378		18	16	82	11	47	41	76	87
Turkey	496	25	76	20	50	9	86	119	3	108
Ukraine	270	30	27	30	63	6	14	57	15	28

Through COOMET the CMCs are declared by Belarus, Georgia, Kazakhstan, Cuba, Moldova, Russia, Ukraine – all 2 487 lines are published. Other countries – through EURAMET.

2. Meetings of COOMET bodies

For the reporting period were carried out:

- 22st meeting of the **President's Council** of COOMET
(November 29-30, 2017, Braunschweig, Germany);

Meetings of the **Technical Committees** of COOMET:

- **TC 1.1** "General questions concerning measurements (General metrology)"
(June 13, 2017, St-Petersburg, Russia);
- **TC 1.2** "Acoustics, ultrasound, vibration"
(September 5-6, 2017, Vilnius, Lithuania);
- **TC 1.3** "Electricity and magnetism"
(October 2-6, 2017, Minsk, Belarus);
- **TC 1.4** "Flow measurement"
(September 7, 2017, Kazan, Russia);
- **TC 1.5** "Length and angle"
(May 16 –18, 2017, Sarajevo, Bosnia and Herzegovina);
- **TC 1.6** "Mass and related quantities"
(October 10 – 11, 2017, Minsk, Belarus);
- **TC 1.7** "Photometry and radiometry"
(June, 2017, St-Petersburg, Russia);

- **TC 1.8** “Physical chemistry”
(May 23-24, 2017, St-Petersburg, Russia);
- **TC 1.9** “Ionizing radiation and radioactivity”
(May 1-5, 2017, Havana, Cuba);
- **TC 1.10** “Thermometry and thermal physics”
(November 7 -8, 2017, Sarajevo, Bosnia and Herzegovina);
- **TC 1.11** “Time and frequency”
(March 22-23, 2018, Moscow, Russia);
- **TC 1.12** “Reference materials”
(September 12 – 13, 2017, Kazan, Russia);
- **TC 2** “Legal metrology”
(was not carried out in 2017);
- **Quality Forum**
(January 29 -30, 2018, Braunschweig, Germany);
- **TC 3.1** “Quality Forum Technical Committee”
(January 29 -30, 2018, Braunschweig, Germany);
- **TC 4** “Information and training”
(October 31 – November 1, 2017, Chisinau, Moldova).

The Secretariat keeps and updates a schedule of meetings of COOMET bodies. The schedule for 2018 is given in *Appendix 2*.

3. Establishment of the Structural Bodies of COOMET

In 2017 the activity on the establishment of Structural Bodies of COOMET continued within the on-going COOMET Project 274/BY/03 “Establishment of the Structural Bodies of COOMET”.

The information on the changes of structures, staffs of bodies, nominees for the positions of the chairpersons of their subcommittees submitted for the approval by the COOMET Committee will be considered within the relevant items of the Agenda.

4. Information activity

4.1. Preparation and publication of the COOMET Directory

The Secretariat updated the information contained in the Directory (as of 31 March 2018). The electronic version of the Directory 2018 can be found on www.coomet.net and www.coomet.org and on the flash-drives, included in the set of documents of the meeting.

4.2. Development and registration of COOMET publications

In accordance with the resolutions of the 27th COOMET Committee meeting the following new publications and updated were registered by Secretariat:

- **COOMET Recommendation R/GM/11:2017** “Regulations for comparison of measurement standards from the national metrological institutes of COOMET”;
- **COOMET Recommendation R/GM/32:2017** “Calibration of measuring instruments. Algorithms of processing measurement results and uncertainty evaluation”.

4.3. Maintenance of the COOMET Web-resources

The COOMET website (www.coomet.org) is maintained by the experts of VNIIFTRI (administrator is A. Ivanov).

The interactive version of the current COOMET Program of Comparisons is available on web-site (http://www.coomet.org/DB/com/index.htm?RU,PRJ_RU,RU/CMPR).

Maintaining a web portal of COOMET (www.coomet.net) is carried out by the Secretariat of COOMET and online editors of pages of the countries and the COOMET technical committees.

In 2017 updating of information provided on the COOMET web resources (a database on subjects COOMET, data on Members of the committee of COOMET, Chair persons of structural bodies, publications of COOMET, etc.), and the CMC databases on the basis of *the Appendix C* of KCDB was done.

4.4. Reports and information on the COOMET activity

The COOMET Secretariat prepared **presentations and reports on the COOMET activity** for the following meetings:

- the 38th and 39th meeting of JCRB (September 13 – 14, 2017, Bern, Switzerland and March 14 – 15, 2018, Paris, France);
- the 52nd meeting of CIML and meeting of the Round table of the Regional Metrological Organizations for Legal metrology (October 9 – 13, 2017, Cartagena de Indias, Colombia).

5. Participation of COOMET representatives in international and national metrological events

In 2017 official representatives of COOMET took part in the meetings of the following International Metrology Organizations where they presented information on the COOMET activities:

- 38th meeting of JCRB
(September 13 – 14, 2017, Bern, Switzerland)
representatives of COOMET – P. Neyezhmakov (Ukraine), V. Gurevich (Belarus), S. Komissarov (Russia);
- 39th meeting of JCRB
(March 14 – 15, 2018, Paris, France)
representatives of COOMET – V. Krutikov (Russia), P. Neyezhmakov (Ukraine), S. Komissarov (Russia), V. Gurevich (Belarus);
- 52nd meeting of CIML and meeting of the Round table of the Regional Metrological Organizations for Legal metrology (October 9 – 13, 2017, Cartagena de Indias, Colombia);
representatives of COOMET – P. Ulbig (Germany);
- during the reporting period the COOMET representatives participated in the meetings of CIPM Advisory Committees and the working groups at them;
- NSCLI Board of Directors Meeting, August 12-17, 2017, Maryland, the USA.

Representatives of metrological institutions of COOMET member countries also participated in the following meetings of international organizations:

- 51st meeting of Euro-Asian Council for Standardization, Metrology and Certification (May 30 – June 1, 2017, Baku, Azerbaijan);
- 52nd meeting of Euro-Asian Council for Standardization, Metrology and Certification (November 30, 2017, Dushanbe, Tajikistan);

- 45th meeting of Science & Technical Committee on Metrology of (STSMetr) (April 12 -14, 2017, Vitebsk, Belarus);
- 46th meeting of Science & Technical Committee on Metrology of (STSMetr) (October 24 -26, 2017, Tsakhkadzor Armenia);
- 19th meeting of STSMetr WG on nondestructive control (October 24 – 26, 2017, Tsakhkadzor, Armenia);
- 17th meeting of STSMetr WG on Theoretical Metrology (April 12, 2017, Bishkek, Kyrgyzstan);
- 7th meeting of STSMetr WG on reference materials of composition and properties of materials (September 11 - 12, 2017, Kazan, Russia);
- 3rd meeting of STSMetr WG on issues of metrological assurance in the field of healthcare (April 12, 2017, Vitebsk, Belarus)
- 8th meeting of STSMetr WG on the inter-laboratory comparison tests for testing laboratories proficiency testing objectives (November, 2017, Bishkek, Kyrgyzstan);
- 19th meeting of Directors of National Metrology Institutes (NMI), October 18 – 19, 2017, Paris, France;
- 40th meeting of ISO REMCO, June 27-29, 2017, Berlin, Germany;
- OIML-CS Management Committee meeting, March 20-22, 2018, Sydney, Australia;
- Meeting of IEC TC 87 “Ultrasonics” and its WGs, June, 2017, Wien, Austria;
- Meeting of EURAMET TC “Metrology in Chemistry”, February 2018, Wien, Austria;
- EURACHEM General Assembly, June, 2017, Nicosia, Cyprus;
- 21st Annual Meeting of the Israel Analytical Chemistry Society, January 23-24, 2018, Tel-Aviv, Israel

as well as in a number of International and National Conferences and Workshops on metrological problems among which are:

- XIII International Conference “New inventions and applications in optical radiometrics” (NEWRAD 2017), June 13-14, 2017, Tokyo, Japan;
- International Scientific-Technical Conference “Metrology- 2017”, April 4-5, 2017, Minsk, Belarus;
- International Conference SPIE 2018 NDE, March 4-8, 2018, Denver, the USA;
- XVIII International Metrology Congress (SIM 2017), September 19-21 2017, Paris, France;
- International Scientific and Practical Conference “175 years of D.I. Mendeleyev Institute for Metrology and National Measurement System”. June 14 – 15, 2017, St. Petersburg, Russia;
- CCRI(II)-CCRI(III) Joint Workshop “CCRI Strategic Plan 2020-2025 and CIPM MRA Review”, June 21 2017, Paris, France;
- XI Conference «Advanced mathematical and computational tools in metrology and testing», August 29-31, 2017, Glasgow, Scotland;
- NSCLI Seminar, August 12-17, 2017, Maryland, the USA;
- II International Scientific-Technical Conference “Metrology of physical and chemical measurements”, September 2017, Moscow, Russia;

- XII International Conference “Oil and Gas Standard- 2017”, September 6-8, 2017, Kazan, Russia;
- 13th Moscow international innovative forum and exhibition “Precision measurements - basis of quality and safety”, May 17-19, 2017, Moscow, Russia;
- ISRANALYTICA 2018 Conference and Exhibition, January 23-24, 2018, Tel-Aviv, Israel;
- V International Scientific-Technical Conference “Relevant issues of Metrological Assurance of Liquids and Gases Flow Measurement”, September 6-8, 2017, Kazan, Russia;
- Scientific-Practical Conference “Measurements in modern world- 2017”, June 6-7, 2017, St. Petersburg, Russia;
- International Scientific-Practical Conference “Metrological assurance of non-destructive monitoring methods of rolled metal product mechanical properties”, February 2018, Ekaterinburg, Russia;
- OIML Training Workshop for Project Group/Technical Committee Conveners/Secretariats, June 6-7, 2017, St. Petersburg, Russia;
- Seminar “Analytical decisions for monitoring the quality of food, commodities and feed, May 2017, Ekaterinburg, Russia;
- X Russian scientific and practical conference “Metrological assurance of measuring systems”, October 2017, Penza, Russia;
- Seminar “Quality control of food products and commodities. Methodical and metrological assurance”, October 2017, Ekaterinburg, Russia;
- Scientific-Technical Conference “Metrological assurance in the field of measurements of magnetic properties of magnetically soft and hard material”, October 2017, Ekaterinburg, Russia;
- Seminar “Modern requirements for methods of quantitative chemical analysis. Issues of development, application and quality assurance of analytical work”, November 2017, Ekaterinburg, Russia.

Secretariat of COOMET prepared and forwarded to the participants of cooperation the following documents:

- The schedule of meetings of governing bodies of the international organizations for 2018;
- The schedule of meetings of leading and working bodies of the regional organizations for 2019.

Information is placed on COOMET web-portal (www.coomet.net) and web-site (www.coomet.org).

6. Training and education of experts in metrology

After the last COOMET Committee meeting was carried out the Training Seminar on the issues of low level calibration, March 6-8, 2018, Wolfen, Germany.

In conclusion, I would like to thank all the participants of COOMET cooperation, who have submitted to the Secretariat information for the preparation of this report.

Sergey Komissarov

Head of COOMET Secretariat

DESCRIPTION OF THE SCOPE OF COOMET COOPERATION
1. List of new COOMET projects

(during period from 1 of April 2017 till 1 of April 2018)

#	Project ID	Subject field	Title
1.	718/GE/17	M	Bilateral supplementary comparison in the absolute pressure range from 0 MPa to 7 MPa and gauge pressure range from 0 MPa to 2 MPa
2.	719/GE/17	M	Bilateral supplementary comparison in the Small Volumes range from 10 μ L to 100 μ L
3.	720/CU/17	RI	Arranging and holding of the 14 th COOMET Technical Committee TC 1.9 “Ionizing Radiation and Radioactivity”
4.	721/AZ/17	T	“Platinum resistance thermometers” range from (-40÷660) °C
5.	722/AZ/17	M	Bilateral supplementary comparison using reference standards with nominal values of 100 mg, 2 g, 20 g, 500 g, 5 kg of E2 accuracy class
6.	723/AZ/17	M	Bilateral supplementary comparison in the gauge pressure range from 0 MPa to 34 MPa
7.	724/RU/17	M	Study of liquids of manometers – primary pressure standards
8.	725/UA/17	IT-TR	The organisation and holding the Workshop in 2018 within the BIPM Capacity Building & Knowledge Transfer Programme (CB&KT) for the countries with developing metrological infrastructure
9.	726/UZ/17	M	Comparison of stainless steel mass standards
10.	727/RU/17	GM	Working out the informative material “KC data modeling”
11.	728/RU/17	RM	Organization and conducting the 22 nd meeting of COOMET Technical Committee 1.12 “REFERENCE MATERIALS” (TC 1.12 “RMs”)
12.	729/RU/17	RM	Development of CRM for composition (agrochemical parameters) of brown heavy-loamy alkali soil SASolP-05
13.	730/MD/17	PR	Comparison of spectral regular transmittance in UV range from 200 nm to 380 nm
14.	731/BY/17	IT-TR	Review of national education & training systems for the NMIs and metrologists of the COOMET member countries
15.	732/RU/17	RM	Development of CRM for composition of refined gold
16.	733/RU/17	RM	Development of CRM for composition of refined platinum
17.	734/RU/17	GM	Preparation for and holding the international seminar “Mathematics, statistics and computation to support measurement quality” May 28- June 1, 2018, St.Petersburg, Russia
18.	735/RU/17	PR	Diffuse absorbance of reflecting samples
19.	736/RU/17	PR	Diffuse absorbance of transmitted samples
20.	737/UA/17	M	Двустороннее сличение национальных эталонов

#	Project ID	Subject field	Title
			единицы силы
21.	738/UA/17	IT-TR	The organisation and holding the seminar for the Directors of NMIs of COOMET Member Countries and the Chairpersons of COOMET Technical Committees on the procedure and conditions of participation in the European Metrology Program for Innovation and Research (EMPIR)
22.	739/CN/17	IT-TR	The organisation and holding of a training activity in 2018 in field of food safety measurement
23.	740/UA/18	LM	Translation of WELMEC 7.2 "Software Guide" (2015)
24.	741/RU/18	PR	Spectral Irradiance, from 250 nm to 2500 nm
25.	742/UA/18	L	The comparison of length standards for measuring end measures in the range up from 0,5 mm to 100 mm
26.	743/RU/18	PR	Организация и проведение дополнительных сличений по цвету отражения
27.	744/RU/18	T	Comparisons in the field of measurements of combustion energy of coals with different sulphur content
28.	745/RU/18	LM	Preparation for and holding the International Conference “Worldwide uniform requirements on prepackages - Basis for fair trade and consumer protection” and seminar on the OIML Certification System (OIML-CS) “Promoting Global Harmonization for Measuring Instruments”

Total: 28 new projects

2. List of agreed COOMET projects
(during period from 1 of April 2017 till 1 of April 2018)

#	Project ID	Subject field	Title
1.	653/RU-a/14	PR	Spectral Irradiance, from 200 nm to 350 nm
2.	691/RU-a/16	QM	Pilot comparison «Determination of polychlorinated dibenzo-p-dioxins and dibenzofurans in fatty matrixes (pork fat)»
3.	693/UA-a/16	GM	Development of the Recommendations on the justification of the measurement model (measurement equation)
4.	707/RU-a/16	EM	Bilateral comparisons of reference switching impulse voltage measuring systems in the range from 1 to 100 kV
5.	708/RU-a/16	QM	Pilot comparison « Purity determination for organic compounds by mass balance method. Anthracene »
6.	709/RU-a/16	EM	Carrying out supplementary bilateral comparison
7.	710/RU-a/16	EM	Carrying out supplementary bilateral comparison
8.	724/RU-a/17	M	Study of liquids of manometers – primary pressure standards
9.	728/RU-a/17	RM	Organization and conducting the 22 nd meeting of COOMET Technical Committee 1.12 “REFERENCE MATERIALS” (TC 1.12 “RMs”)

Total: 9 agreed projects

3. List of COOMET completed projects
(during period from 1 of April 2017 till 1 of April 2018)

#	Project ID	Subject field	Title
1.	308/RU/04	AUV	Key Comparison of the National Measurement Standards of the vibration parameters units (in regard to the vibration acceleration) in the frequency range from 20 Hz to 5 kHz
2.	423/RU/08	RI	Eu-152 radionuclide activity concentration measurement
3.	427/BY-a/08	GM	Analysis of requirements in the field of legal metrology including examples of application of these requirements to measuring instruments
4.	445/DE/08	RI	Comparison of the national standards of air kerma for Cs-137 at protection level
5.	550/RU/12	GM	Translation of international vocabulary of legal metrology (VIML)
6.	604/RU-a/13	EM	Supplementary comparisons of reference measuring systems of electric capacitance and loss factor on AC high voltage of power frequency in the voltage range from 1 to 150 kV
7.	609/UA-a/13	AUV	The comparison of the National standards of the sound pressure unit in air through calibration of the pressure-inch and half-inch microphones
8.	626/BY-a/13	AUV	The comparison of the National standards of the sound pressure unit in air through calibration of the pressure-inch and half-inch microphones
9.	637/UZ/14	RI	COOMET Technical Committee TC 1.9 "Ionizing Radiation and Radioactivity" meeting in the Uzstandard Agency, Tashkent, Uzbekistan, on 28-29 April 2014
10.	675/BY/15	GM	Development of a recommendation regarding contribution of measurement uncertainty in making decision on rejection in course of conformity assessment
11.	669/AZ/15	RI	Организация и проведение 13 заседания ТК 1.9 "Ионизирующие излучения и радиоактивность" в Агентстве «Азстандарт», г. Баку, Азербайджан, 6 – 7 октября 2015 г.
12.	692/RU/16	QM	Pilot comparisons in the field of measuring of the moisture content in wood.

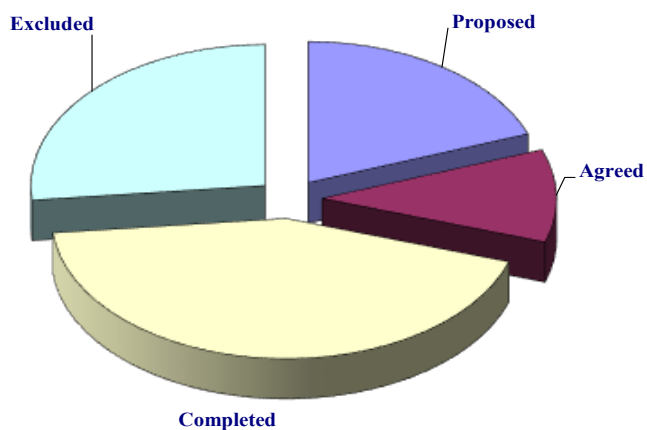
Total: 12 completed projects

4. List of COOMET excluded projects
(during period from 1 of April 2017 till 1 of April 2018)

#	Project ID	Subject field	Title
1.	446/DE/08	RI	Comparison of the national standards of air kerma for low-energy x-rays
2.	447/DE/08	RI	Comparison of the national standards of air kerma for medium-energy x-rays
3.	567/UA/12	EM	Comparisons of national standards of HF voltage

Total: 3 excluded projects

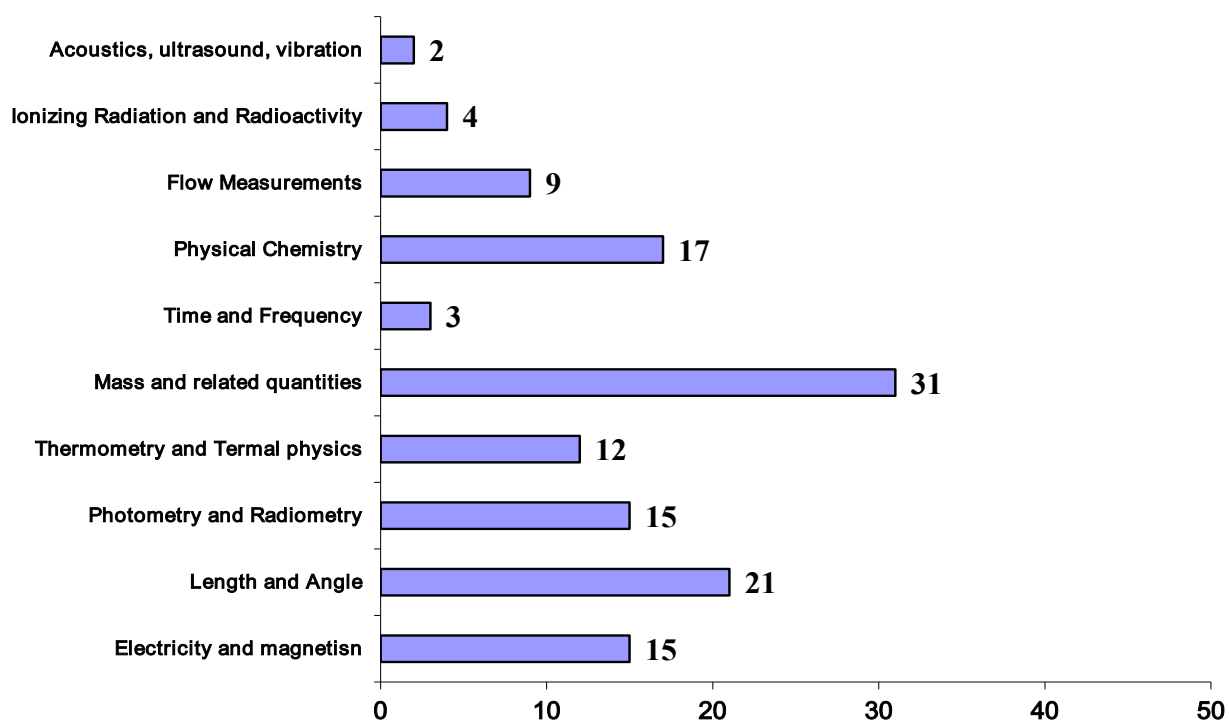
5. Status of COOMET projects



Status	Number of projects
Proposed	144
Agreed	79
Completed	322
Excluded	198
Deferred	2
Total	745

6. Distribution of COOMET projects by fields of cooperation

(according to COOMET Program of comparisons for 2018)



Total: 129

MEETINGS OF COOMET BODIES IN 2018

(as of 1 of April 2018)

Name of event	Date	NMI, city, country
28th Committee Meeting	April 11 – 12	IMBIH, Sarajevo, Bosnia and Herzegovina
23th Meeting of President's Council	November	BelGIM, Minsk, Belarus
16th Joint Committee for Measurement Standards	April 10	IMBIH, Sarajevo, Bosnia and Herzegovina
TC 1.1 “General questions concerning measurements (General metrology)”	<i>Not planned</i>	<i>Not planned</i>
TC 1.2 “Acoustics, ultrasound, vibration”	September	TÜBİTAK UME, Turkey
TC 1.3 “Electricity and magnetism”	October	Baku, Azerbaijan
TC 1.4 “Flow measurement”	September	VNIIR, Kazan, Russia
TC 1.5 “Length and angle”	September	NIM, Erevan, Armenia
TC 1.6 “Mass and related quantities”	September	IMBIH, Sarajevo, Bosnia and Herzegovina
TC 1.7 “Photometry and radiometry”	<i>under consideration</i>	Cuba
TC 1.8 “Physical chemistry”	May 23 - 24	VNIIM, Sankt-Petersburg, Russia
TC 1.9 “Ionizing radiation and radioactivity”	September 25 - 27	VNIIM, Sankt-Petersburg, Russia
TC 1.10 “Thermometry and thermal physics”	<i>under consideration</i>	GEOSTM, Tbilisi, Georgia
TC 1.11 “Time and frequency”	March 21 - 23	VNIIFTRI, Moscow, Russia
TC 1.12 “Reference materials”	September	UNIIM, Yekaterinburg, Russia
TC 2 “Legal metrology”	May 17	VNIIMS, Moscow, Russia
Quality Forum and TC 3.1 “Quality Forum Technical Committee”	January 30 - 31	PTB, Braunschweig, Germany
TC 4 “Information and training”	<i>under consideration</i>	<i>under consideration</i>