

**List of resolutions
of the 17th meeting of TC 1.2 «Acoustics, Ultrasound, Vibration»**

The seventeenth meeting of TC 1.2 was held on May 11, 2023, online.

The meeting was attended by representatives of 8 COOMET member countries (Armenia, Azerbaijan, Belarus, Georgia, China, Russia, Türkiye, Uzbekistan): members of TC 1.2, as well as technical experts in the field of «AUV» from COOMET NMIs.

During the meeting, the progress on the implementation of the current projects carried out within TC 1.2, as well as other issues on the agenda, were discussed.

List of participants of the 17th meeting of TC 1.2

Russia	
Dr. Aleksandr Isaev	Chair of TC 1.2, FSUE «VNIIFTRI»
Mr. Fyodor Gorbachev	Secretary of TC 1.2, FSUE «VNIIFTRI»
Dr. Aleksey Nikolaenko	FSUE «VNIIFTRI»
Dr. Anton Matveev	FSUE «VNIIFTRI»
Mr. Georgiy Lukin	FSUE «VNIIFTRI»
Mr. Petr Bazylev	Far East Branch of FSUE «VNIIFTRI»
Mr. Anton Kozlyakovsky	FSUE «D.I. Mendeleev Institute for Metrology (VNIIM)»
Belarus	
Ms. Valentina Pozdeeva	Deputy Chair of TC 1.2, BelGIM
Mr. Andrey Kolchin	Member of TC 1.2, BelGIM
Armenia	
Ms. Armenui Khachatryan	Member of TC 1.2, National Body for Standardization and Metrology «Armstandart»
Azerbaijan	
Mr. Rasim Bayramov	Member of TC 1.2, LEPL «Azerbaijan Institute of Metrology» (AzMI)
Georgia	
Ms. Maya Zardiashvili	Member of TC 1.2, Georgian National Agency for Standards and Metrology (GEOSTM)
Uzbekistan	
Ms. Lyubov Gazieva	Member of TC 1.2, SE «Uzbek National Institute of Metrology» (UzNIM)
Mr. Ulugbek Panzhiev	SE «Uzbek National Institute of Metrology» (UzNIM)
Türkiye	
Dr. Enver Sadikoğlu	Member of TC 1.2, TÜBİTAK UME
Dr. Alper Biber	TÜBİTAK MRC UAL
China	
Dr. Longbiao He	Member of TC 1.2, NIM
Dr. Xing Guangzhen	NIM
Dr. Feng Xiujuan	NIM
Dr. Chenguang Cai	NIM
Dr. Jia Guanghui	HAARI
COOMET Secretariat	
Ms. Nadezhda Liakhova	Head of COOMET Secretariat, BelGIM

QUORUM CHECK:

TC members from 12 COOMET member countries have been appointed.

8 countries participate in the calculation of the quorum, TC members from 3 countries have the status of an "observer" (Bulgaria, Germany, Tajikistan), Ukraine's participation in all structural bodies of COOMET was suspended at the initiative of the country.

Taking into account the requirements for the quorum at the meeting of a COOMET structural body in accordance with document COOMET D5/2021, **the quorum at the meeting of TC 1.2 was reached** (the quorum is reached with the participation of representatives of at least 4 countries).

The meeting was held in accordance with the agenda adopted by the participants.

№	Issue	Speaker
1	1.1 Annual report of TC 1.2 for 2022 including information on the participation of TC representatives in meetings of the working bodies of international organizations and RMOs 1.2 Analysis of the implementation of the previous meeting resolutions	Dr. Aleksandr Isaev Deputy TC Chair; responsible TC members
2	About the changes in composition of TC About the appointments of coordinators in the fields and TC secretary	Dr. Aleksandr Isaev TC members or their official representatives
3	Information about the main decisions of the meeting of the COOMET Committee and the COOMET Presidential Council	Ms. Nadezhda Liakhova, Head of COOMET Secretariat
4	About the current state of comparisons in AUV field	Dr. Aleksandr Isaev, project coordinators
4.1	Pilot COOMET comparison 706/RU/16 «Pilot comparison of longitudinal ultrasonic wave propagation velocity in solid media»	Dr. Petr Bazylev (Far East branch of FSUE «VNIIFTRI»)
4.2	Pilot COOMET comparison 786/RU/19 «Comparisons of the results of amplitude-phase calibrations of hydrophones in the frequency range from 10 kHz to 500 kHz»	Dr. Anton Matveev (FSUE «VNIIFTRI»)
4.3	Key comparison CCAUV.A-K6 «Primary pressure calibration of Laboratory Standard Microphones LS2P» Supplementary COOMET comparison 757/RU/18 «Comparisons of national measurement standards for the unit of sound pressure in the air in the frequency range from 0,1 to 100 Hz» (COOMET.AUV.A-S3)	Dr. Aleksey Nikolaenko (FSUE «VNIIFTRI»)
4.4	Key comparison CCAUV.W-K2	Dr. Anton Matveev (FSUE «VNIIFTRI»)
4.5	Key COOMET comparison 846/RU/21 «Regional key comparison in the field of the ultrasound power measurements in the water»	Dr. Enver Sadikoglu, TÜBİTAK UME Mr. Georgiy Lukin, FSUE «VNIIFTRI»
4.6	Supplementary COOMET comparison 790/TR-a/19 « Calibration of sound calibrators » (COOMET.AUV.A-S4)	Dr. Enver Sadikoglu, TÜBİTAK UME
5	Proposals to the COOMET program of comparisons	
5.1	About the supplementary comparison in the field of microphone calibration in order to confirm calibration capabilities (services) during microphone calibration.	Mrs. Lyubov Gazieva, SE «Uzbek National Institute of Metrology»
5.2	Other proposals	Dr. Aleksandr Isaev, meeting participants
6	Brief report about the decisions of 22nd and 23rd meetings of the Joint Committee for Measurement Standards and discussion of issues related to the decisions made	Dr. Aleksandr Isaev, meeting participants

№	Issue	Speaker
6.1	Information about the Presidential Council's decision on the completion of long-lasting COOMET comparisons	Dr. Aleksandr Isaev, meeting participants
6.2	About the monitoring and corrective actions regarding long-term comparisons not completed in KCDB (COOMET.AUV.V-K1 "Vibration acceleration", pilot NMI – VNIIM, COOMET project 308/RU-a/04)	
6.3	About the capabilities of the BIPM e-learning platform and the creation of COOMET courses (in the TC 1.2 area of responsibility)	Ms. Nadezhda Liakhova, Dr. Aleksandr Isaev, meeting participants
7	Information report on the resolutions of the 24th meeting of the COOMET Joint Committee for Measurement Standards and discussion of issues related to the decisions made (providing support to CEEMS for 2022-2026; hybrid comparisons, creation of learning courses in AUV field)	Dr. Aleksandr Isaev, Mrs. Valentina Pozdeeva, meeting participants
8.	About the implementation of the CIPM MRA	
8.1	Discussion of the state and prospects for preparation of new CMC entries in the AUV field by COOMET NMIs according to the results of completed and published comparisons	Dr. Aleksandr Isaev, meeting participants
8.2	Consideration of issues of interregional CMC review in the AUV field	
8.3	Update of the lists of technical experts on CMC review and peer review of QMS in the AUV field	
9	Miscellaneous issues	Dr. Aleksandr Isaev, meeting participants
10	Information about the venue and date of the next TC 1.2 meeting	Dr. Aleksandr Isaev, meeting participants

The main issues discussed and resolutions based on the results of the meeting.

Under item 1 of the agenda:

To endorse the report of the TC Chair on the TC activities for the year.

Under item 2 of the agenda:

1) To appoint the TC Secretary and field coordinators (term of office – 2023-2028):

- TC Secretary: F. Gorbachev, FSUE «VNIIFTRI»;
- Coordinator in the field «Acoustics of the air»: A. Nikolaenko, FSUE «VNIIFTRI»;
- Coordinator in the field «Ultrasound»: G. Lukin, FSUE «VNIIFTRI».

Candidates for the field coordinators were approved based on the results of a vote held among TC 1.2 members in accordance with the requirements of 3.4.1.4 of COOMET D5.2/2022.

2) To consider the issue of the candidacy for the coordinator in the field «Vibration» in the working order (if necessary, to organize electronic voting among members of TC 1.2).

Under item 3 of the agenda:

As part of the report on the main resolutions of the COOMET Committee meeting and Presidential Council meeting, the following issues were discussed:

- COOMET concept for the issues of digital transformation in metrology;
- procedure for completing long-lasting comparisons;
- providing assistance to countries with emerging metrology systems (CEEMS);
- development of courses for the BIPM e-learning platform.

Under item 4 of the agenda:

Reports on the successfully completed comparisons were heard:

- Pilot COOMET comparison 706/RU/16 «Pilot comparison of longitudinal ultrasonic wave propagation velocity in solid media»;
- Pilot COOMET comparison 786/RU/19 «Comparisons of the results of amplitude-phase calibrations of hydrophones in the frequency range from 10 kHz to 500 kHz»;
- Key comparison CCAUV.A-K6 «Primary pressure calibration of Laboratory Standard Microphones LS2P»;
- Key comparison CCAUV.W-K2 «Comparison of free-field hydrophone calibrations in water».

A number of decisions were made on comparisons that are in progress:

- 1) To continue work on the supplementary comparison under COOMET project 757/RU/18 «Comparisons of national measurement standards for the unit of sound pressure in the air in the frequency range from 0,1 to 100 Hz» (COOMET.AUV.A-S3):
 - By June 15, 2023, Dr. E. Sadikoglu (TÜBİTAK UME) should submit calibration certificates to the pilot NMI - VNIIFTRI;
 - Pilot NMI (VNIIFTRI) should correct information about the pilot NMI on current comparisons on the KCDB platform: to replace BelGIM with VNIIFTRI.
- 2) On comparison COOMET.AUV.V-K1 «Vibration acceleration» (COOMET project 308/RU-a/04):
 - Pilot NMI (VNIIM) should decide on the possibility to complete this long-lasting comparison in 2023 and to inform TC 1.2 members about the results by August 11, 2023, to make a decision on the completion/cancellation of the comparison.
- 3) To exclude COOMET project 846/RU/21 «Regional key comparisons in the field of ultrasound power measurement in water» from the COOMET Program of Comparisons due to the irrelevance of the project for all prospective participants.

Under item 5 of the agenda:

To include supplementary bilateral comparisons in the field of microphone calibration in the COOMET Program of Comparisons in order to confirm the calibration capabilities (services) for microphone calibration (participants: UzNIM, TÜBİTAK UME). To request UzNIM to send to the COOMET Secretariat the form of the proposed COOMET project for registration in accordance with the established procedure.

To discuss in the working order the possibility of organizing trilateral (VNIIFTRI, BelGIM, TÜBİTAK UME) pilot comparisons in the field of airborne ultrasound. In case of a positive decision, to send to the COOMET Secretariat the form of the proposed COOMET project for registration in accordance with the established procedure.

To continue in the working order the discussion of the possibility of conducting pilot comparisons to measure the attenuation of transverse ultrasonic waves. The initiator of the proposal, BelGIM, should send additional information on the proposed project to Dr. Longbiao He (NIM). Based on the results of the discussion, to decide on the organization of comparisons.

Under item 6 of the agenda:

To continue the discussion of works on the projects proposed to the COOMET Program of Comparisons based on the results of the 16th meeting of TC 1.2: comparisons of pure tone audiometer calibrations and comparisons of ear simulators and artificial mastoid calibrations. Representatives of VNIIFTRI

were invited to consider the possibility of accepting the status of the pilot laboratory, as well as to agree with the interested parties on the technical details of the comparisons in the working order, and based on the results of the discussion, to decide on the organization of comparisons.

To request Dr. E. Sadikoglu (TÜBİTAK UME) to prepare proposals on the topics of COOMET courses from TC 1.2 for the BIPM e-learning platform by 31.08.2023, and to send them to TC members for feedback and subsequent online discussion for further steps to implement the COOMET Committee's resolution for the development of COOMET courses (preliminary dates for the online meeting - the first half of September 2023).

Under item 7 of the agenda:

Issues, related to this item, were discussed under items 3 and 6.

Under item 8 of the agenda:

To include the following persons in the list of TC 1.2 technical experts on CMC review and peer review of QMS:

- G.Lukin (VNIIFTRI) in the field of ultrasound;
- A.Matveev (VNIIFTRI) in the field of underwater acoustics;
- A.Kozlyakovskiy (VNIIM) in the field of vibration;
- D.Golovin and A. Polikarpov (VNIIFTRI) in the field of sound in air.

The candidatures of the technical experts were approved unanimously based on the results of voting among members of TC 1.2

Under item 10 of the agenda:

To request TC members to decide on the possibility of holding subsequent TC meetings at the premises of their institutes.

The willingness to organize regular meetings of TC 1.2 at the premises of their NMIs was expressed by:

- NIM (China) in 2024;
- FSUE «VNIIFTRI» (Russia) in 2025.

The venue and dates of the meetings will be specified in due course.

Aleksandr Isaev
Chair of COOMET TC 1.2

Valentina Pozdeeva
Deputy Chair of COOMET TC 1.2