



FOURTH ALL-RUSSIAN CONFERENCE
ON THERMOMETRY PROBLEMS



EURO-ASIAN COOPERATION
OF STATE METROLOGY INSTITUTIONS



TEMPERATURE - 2011

**4-th All-Russian and Countries-Participants of COOMET
Conference on Thermometry Problems**

19-21 April 2011

**Saint-Petersburg
Russian Federation**





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▶ **PROGRAM**

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РЕШЕНИЕ

о проведении Четвертой Всероссийской конференции по проблемам термометрии
«ТЕМПЕРАТУРА 2011»

Третья Всероссийская конференция по проблемам термометрии была проведена 18-20 апреля 2007г. на базе ФГУП «НИИ НПО «ЛУЧ» (Росатом).

Ведущие специалисты более ста отраслевых и академических институтов, а также промышленных предприятий страны обсудили широкий круг вопросов в области термометрии и ее метрологического обеспечения, а также проблемы производства и применения контактных и радиационных средств измерений температуры. Участники констатировали, что с помощью термометрических средств контроля в промышленности получают более трети измерительной информации. В прилагаемом Меморандуме намечены важнейшие задачи по развитию вида измерения.

С целью дальнейшего совершенствования средств измерений температуры и средств их метрологического обеспечения, а также развития методов измерений температуры, необходимых при выполнении научных исследований и в промышленном производстве, Федеральное агентство по техническому регулированию и метрологии, Министерство образования и науки Российской Федерации, Государственная корпорация по атомной энергии (Росатом), Российская Академия наук, Российская Метрологическая Академия, Международное научно-техническое общество приборостроителей и метрологов

РЕШИЛИ:


1. Провести Четвертую Всероссийскую конференцию по проблемам термометрии в I полугодии 2011 года во ФГУП «ВНИИМ им. Д.И.Менделеева» (г.Санкт-Петербург) и организовать в рамках конференции специализированную выставку отечественного, измерительного, испытательного и метрологического оборудования по виду измерения.

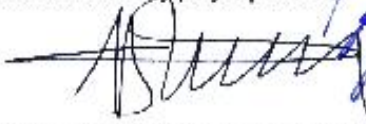
2. Для участия в конференции привлечь ведущих ученых и специалистов:


- Предприятий и организаций разных форм собственности Российской Федерации;
- Метрологических и научных центров России и стран членом КООМЕТ;
- Учреждений РАН
- Государственных учреждений образования
- Специалистов и ученых стран-участниц Евро-Азиатского сотрудничества государственных метрологических учреждений (КООМЕТ)


3. Для организации проведения конференции создать:

- **Организационный комитет** под председательством действительного члена Метрологической Академии России, директора ФГУП «ВНИИМ им.Д.И.Менделеева» Халюна Николая Ивановича
- **Программный комитет** под председательством действительного члена Метрологической Академии России, Пиходуна Анатолія Ивановича.

Первый заместитель руководителя
Федерального Агентства по техническому регулированию  В.И.Крутиков

Академик-секретарь РАН  В.Ф. Фортос

Заместитель генерального директора по стратегическому развитию –
директор Дирекции по научно-техническому комплексу
Госкорпорации по атомной энергии «Росатом»  Н.Г.Щедровицкий

Президент Российской Метрологической Академии  Ю.В. Тарбеен

Президент МПТОПМ  Г.И.Кавалеров



**Structure of the Organizing committee
Of the Fourth All-Russia conference
on thermometry problems
«TEMPERATURE 2011»**

Chairman

Nikolay I. Khanov, *Director of the FGUP "D.I.Mendeleev Institute for Metrology", St.Petersburg Russia*

Vice-chairmans

Valentin P. Deniskin, *Deputy General Director of the FSUE SRI SIA "Luch", Podolsk, Russia*

Valery S. Alexandrov, *Deputy Director of the FGUP "D.I.Mendeleev Institute for Metrology" St.Petersburg, Russia*

Alexander S. Evdokimov, *Deputy General Director of the FGU "ROSTEST-MOSKVA" Moscow, Russia*

Members:

Eugeny V. Vasilyev, *Head of department of the the FGUP" VNIIMS", Moscow, Russia*

Alexander V. Gochin, *Department of Metrology of the FATR&M, Moscow, Russia*

Sergey N. Nenashev, *Head of department of the FGU "ROSTEST-MOSKVA" , Moscow, Russia*

Andrey V. Karzhavin, *Director of the industrial company "Tesey", Obninsk, Russia*

Victor Sh. Magdeyev, *Techical Director of the Joint-Stock Company "Etalon", Volgodonsk, Russia*

Vladimir A. Nikonenko, *General Director of the Open Scientific-Industrial Society "Etalon", Omsk, Russia*

Vitaly M. Okladnikov, *General Director of the Open Scientific-Industrial Company "Elemer", Zelenograd, Russia*

Sergey S. Sergeyev, *General Director of the Open Company "TECHNO-AC", Kolomna, Russia*

Vatslav S. Givoyno, *General Director of the Open Company "Point", Polotsk, Belarus*

Vasily A. Ivanov, *Head of department of the Institute for Physical and Technical Problems of the Siberian Branch of Russian Academy of Sciences, Yakutsk, Russia*



Structure of Program committee
The fourth All-Russia conference
on thermometry problems
«TEMPERATURE 2011»

Chairman:

Prof. Anatoly I. Pokhodun, *the D.I.Mendeleyev Institute for Metrology [VNIIM], St.Petersburg, Russia*

Vice – chairmen:

Prof. Ivan I. Fedik, *Corresponding Member of the Russian Academy of Sciences, SRI SIA “Luch”, Podolsk, Russia*

Prof. Alexandr V.Kostanovskiy, *the Incorporated Institute of Higt Temperatures, Russian Academy of Sciences [OIVT RAN], Moscow, Russia*

Prof. Alexandr V. Sharkov, *the National Research University of Information Technologies, Mechanics and Optics [University ITMO], St.Petersburg, Russia*

Members of the committee:

Prof. Dariy Ya. Svet, *OIVT RAN, Moscow, Russia*

Prof. Viktor Ya. Cherepanov, *the Siberian State Geodetic Academy, Novosibirsk, Russia*

Dr. Tatiana A. Kompan, *D.I.Mendeleyev VNIIM, St.Petersburg, Russia*

Dr. Nikolay A. Sokolov, *D.I.Mendeleyev VNIIM, St.Petersburg, Russia*

Dr. Sergey V. Marinko, *32 State Institute for Metrology MD RF, Mytischi, Russia*

Dr. Boris V. Licikov, *Scientific Research Institute of Power Technics, Moscow, Russia*

Prof. Heniy I. Kavalerov, *The international scientific-technical society of Instrument and metrology, Moscow, Russia*

Dr. Sergey P. Polunin, *Open Scientific-Industrial Company “Elemer”, Zelenograd, Russia*

Prof. Vladimir Sh. Sulaberidze, *the Baltic State Technical University, St.Petersburg, Russia*

Prof. Nikolay A. Yarishev, *Utmiversity ITMO, St.Petersburg, Russia*

Prof. Sergey Z. Sapojnikov, *St.Petersburg State Polytechnical University, St. Petersburg, Russia*

Prof. Petr P. Oleynikov, *SRI SIA “Luch”, Podolsk, Russia*

Dr. Valery A. Medvedev, *“Rostest-Moskva”, Moscow, Russia*

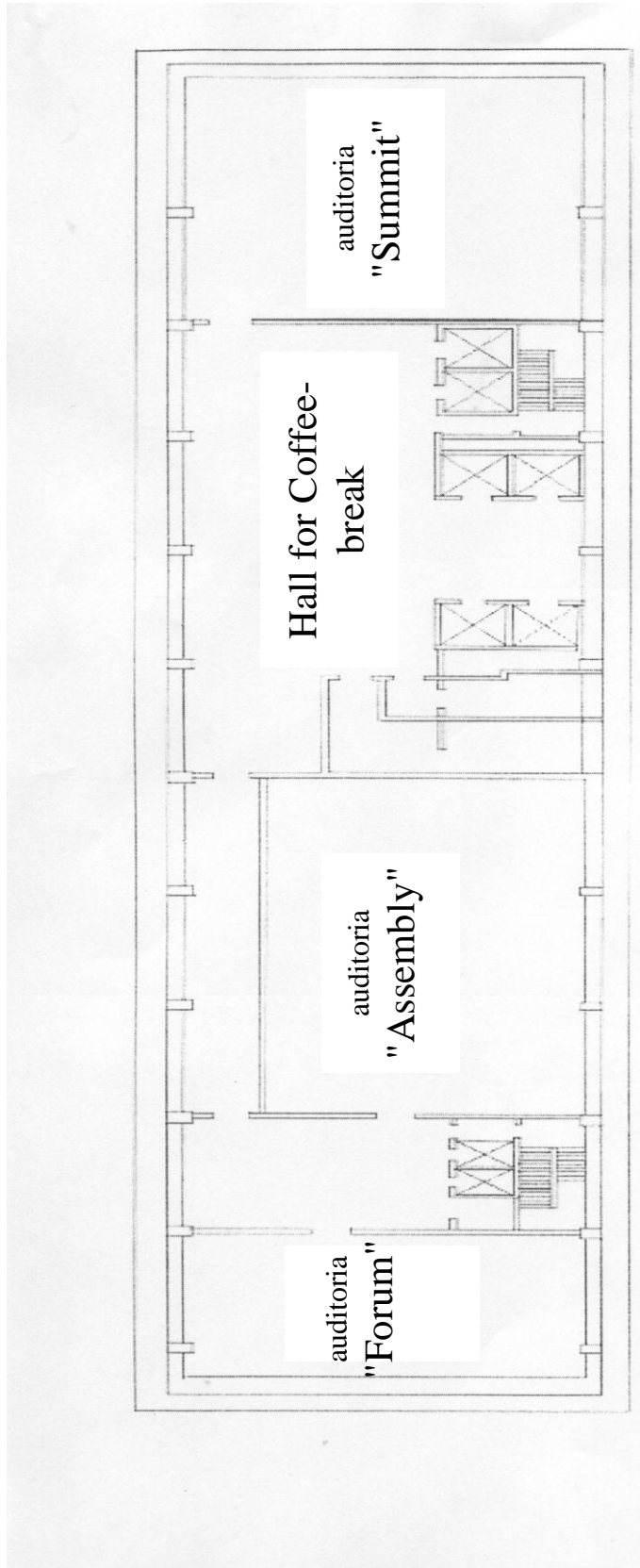
Dr. Joachim Fischer, *the Physikalisch-Technische Bundesanstalt [PTB], Berlin,*

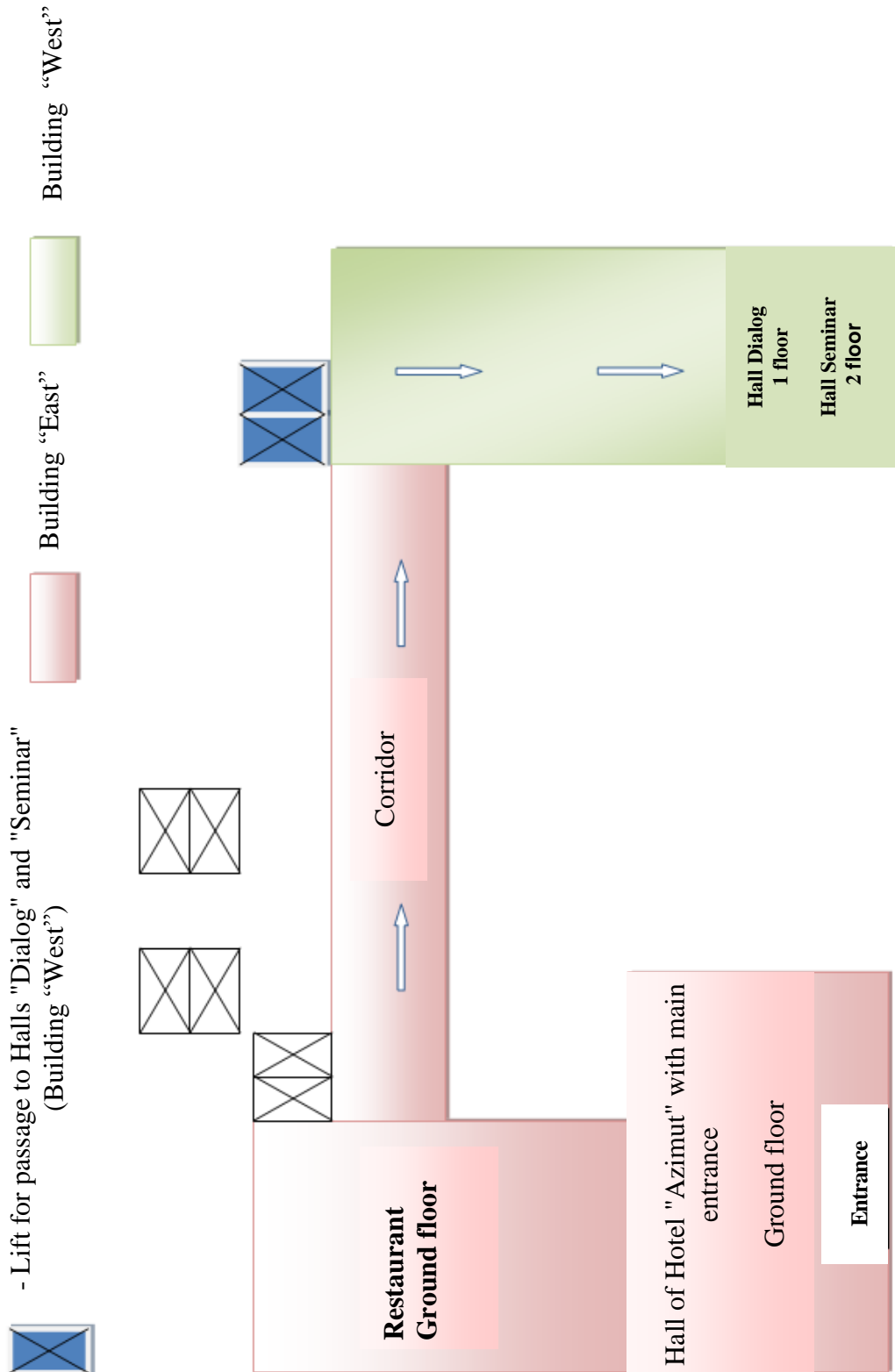
Prof. Husein Ugur, *the International Committee for Weights and Measures [CIPM], Sévres, France.*

Prof. Graham Machin, *the National Physical Laboratory [NPL], Teddington, UK.*

Dr. Stanislav Duris, *Slovak Institute of Metrology, Bratislava, Slovakia.*

Prof. Anna Szmyrka-Grzebyk, *Institute of Low Temperature and Structure Research Polish Academy of Sciences, Wroclaw, Poland.*







FOURTH ALL-RUSSIAN CONFERENCE
ON THERMOMETRY PROBLEMS

**April, 18th
2011**

Arrival of participants

Registration of conference participants

16⁰⁰ – 20⁰⁰ Hall of hotel "AZIMUTH"

**April, 19th
2011.**

Registration of conference participants

8⁰⁰ – 10⁰⁰ Hall of hotel "AZIMUTH"

The beginning of work of the exhibition

9⁰⁰ Hall "Assembly" (18 floor)

Conference opening

10⁰⁰ - 11⁰⁰ Hall "Summit" (18 floor)

Opening address of the Chairman of the conference organizing committee – Nikolay I. Hanov (FGUP «D.I.Mendeleyev VNIIM»).

Greeting of conference participants on behalf of a management: Rosatom, Agency on Technical Regulation of the Russian Federation, the Russian Academy of Sciences, the Russian Metrological Academy, the International society of instrument operators and metrologists.

Opening address of the Chairman of conference program committee, the Chairman of Technical committee on temperature both thermophysical and dilatometric measurements of the Russian Federation Technical Regulation Agency – Anatoly I. Pokhodun («D.I.Mendeleyev VNIIM»).



FOURTH ALL-RUSSIAN CONFERENCE
ON THERMOMETRY PROBLEMS

April, 19th
2011

Plenary session

auditoria "Summit"

First session Chairman: <i>Ivan I. Fedik</i> <i>SRI SIA "Luch", Podolsk</i>	
11⁰⁰ - 11³⁰	About a current state and prospects of the thermometry development Anatoly I. Pokhodun - «D.I.Mendeleyev VNIIM», St.-Petersburg
11³⁰ - 12⁰⁰	Coffee-break

Second session Chairman: <i>Anatoly I. Pokhodun</i> <i>«D.I.Mendeleyev VNIIM», St.-Petersburg</i>	
12⁰⁰ - 13⁰⁰	The Kelvin in the new SI Joachim Fischer - <i>Physikalisch-Technische Bundesanstalt, Berlin, Germany</i>
13⁰⁰ - 13³⁰	Condition and development prospects of the thermophysics and thermotechnics measurements Nikolay A. Sokolov - «D.I.Mendeleyev VNIIM», St.-Petersburg
13³⁰ - 14³⁰	Lunch



April, 20th
2011

**Section 1. Problems of Realization and Transfer
of a Temperature Scale**

auditoria "Summit"

First session	Fundamental Problems of Thermometry. Temperature Scales
Section Chair:	<i>Stanislav Duris</i> <i>Slovakian Institute for Metrology (SMU), Bratislava, Slovakia</i>
9⁰⁰-9²⁰	Concept "Temperature" and its application in equilibrium and nonequilibrium thermodynamic modes A.V.Kostanovsky, M.E.Kostanovskaya— <i>Scientific Association for High Temperatures OIVT RAN, Moscow</i>
9²⁰-9⁴⁰	Measurement of a Disorder Degree of a Temperature Scale A.A.Gorshenkov, Yu.N.Klikushin, V.A.Zakharenko,— <i>The State Technical University, Omsk</i> S.A.Orlov – " <i>Khanty-MansiyskDorStroy</i> " OJSC, <i>Khanty-Mansiysk</i>
9⁴⁰-10⁰⁰	The Analysis of Possibility of Experimental Specification of the Boltzmann Constant N.A.Kurbatova G.V.Simonova - <i>The Siberian Institute for Metrology (SNIIM), Novosibirsk</i> V.Ya.Cherepanov – <i>SNIIM; The Siberian State Academy Of Geodesy (SSGA), Novosibirsk</i>
10⁰⁰-10²⁰	Opposition Method in Noise Thermometry as Development of Ideas of P.G.Strelkov A.G.Cherevko – <i>The Siberian State Technical University, Novosibirsk</i>
10²⁰-10⁴⁰	Comparison of the VNIIFTRI Magnetic Temperature Scale with the International Scale PLTS-2000 in a Range from 0,37 to 0,56 K D.N.Astrov, N.B.Ermakov, P.J.Znatkov – <i>VNIIFTRI, Moscow</i>
10⁴⁰-11⁰⁰	The Development of Emissivity Measurements under Vacuum at PTB A.Adibekyan, M.Kehrt, C.Monte, B.Gutschwager, J.Hollandt – <i>PTB (PTB), Berlin, Germany</i> <i>S.P.Morozova – ВНИИОФИ, Москва</i>
11⁰⁰-11³⁰	Coffee-break



FOURTH ALL-RUSSIAN CONFERENCE
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2011

Section 1. Problems of Realization and Transfer
of a Temperature Scale

auditoria "Summit"

Second session	Measuring Standards. Methods and means of metrological maintenance in thermometry
Section Chair:	<i>Joachim Fischer</i> <i>Physikalisch-Technische Bundesanstalt (PTB), Berlin, Germany</i>
11 ³⁰ -11 ⁵⁰	Improvements, Using Bushes in the Measurement of the Immersion Profile of Water Triple Point R.Veltcheva, L.Musial, G.Machin, , J.Gray – <i>NPL; St. Paul's Catholic College, United Kingdom</i>
11 ⁵⁰ -12 ¹⁰	Miniature Metal-Carbon Eutectic Fixed Point Cells for Self-validating Type C Thermocouples O.Ongrai, J.V.Pearce, G.Machin, – <i>NPL; University of Surrey, United Kingdom</i> S.J.Sweeney - <i>NIM, Thailand</i>
12 ¹⁰ -12 ³⁰	Absolute Radiometry of Metal-Carbon Eutectic Fixed-Point for a New Temperature Scale Klaus Anhalt – <i>PTB, Berlin, Germany</i>
12 ³⁰ -12 ⁵⁰	Innovations in Thermal Metrology – Improvements at the Copper Point John P. Tavener, David J. Southworth - <i>Isothermal Technology Ltd (ISOTECH), Southport, United Kingdom</i>
12 ⁵⁰ -13 ¹⁰	Calibration of Temperature Calibrators Thomas Meth – <i>SIKA, Germany</i>
13 ¹⁰ -13 ³⁰	Summary and some remarks to uncertainty propagation of temperature scale realization Palencar, S.Duris, J.Ranostaj – <i>SMU, Bratislava, Slovakia</i>
13 ³⁰ -14 ³⁰	Lunch
14 ³⁰ -16 ⁰⁰	Poster and Exhibition Overview

April, 20th
2011

**Section 1. Problems of Realization and Transfer
of a Temperature Scale**

auditoria "Summit"

Third session	Measuring Standards. Methods and means of metrological maintenance in thermometry
Section Chair:	<i>Anna Szymrka-Grzebyk</i> <i>Institute of Low Temperature and Structure Research Polish Academy of Sciences, Wroclaw, Poland</i>
16 ⁰⁰ -16 ²⁰	Influence of Conditions of a Solid Phase Formation in an Initial Stage of a Freezing Process by of Measurement Temperature Result at Realization of the ITS-90 Fixed Points A.G.Ivanova, M.Yu.Abasov, S.F.Gerasimov, A.I.Pokhodun – <i>D.I.Mendeleyev Institute for Metrology (VNIIM), St.Petersburg</i>
16 ²⁰ -16 ⁴⁰	The Comparison of the Mercury Triple Point Sells V.A.Medvedev - <i>ROSTEST-MOSKVA, Moscow</i> S.N.Polunin – <i>SPI "ELEMER", Zelenograd</i>
16 ⁴⁰ -17 ⁰⁰	System and Way of Operative Control of Stability of the Standard and Precision Thermometers in the Course of their Operation E.V.Vasilev, A.A.Ignatov – <i>VNIIMS, Moscow</i>
17 ⁰⁰ -17 ²⁰	Questions of Storage and Transfer of the Temperature Unit by Standard Platinum Resistance Thermometers V.A.Medvedev, S.N.Nenashev, O.E.Olievskaja – <i>ROSTEST-MOSKVA, Moscow</i> S.P.Polunin – <i>SPI "ELEMER", Zelenograd</i>
17 ²⁰ -17 ⁴⁰	About Research of an Absolute Cryogenic Calorimeter for the Purpose of Realization of the New Temperature Scale. E.V.Vizulaynen, M.S.Matveyev, J.A.Sild, Yu.A.Dedikov, A.I.Pokhodun, M.A.Ivanova – <i>D.I.Mendeleyev Institute for Metrology (VNIIM), St.Petersburg</i>
17 ⁴⁰ -18 ⁰⁰	Research of possibility of creation of the reference small-sized cable resistance thermometer. B.V.Magdeyev - <i>D.I.Mendeleyev Institute for Metrology (VNIIM), St.Petersburg</i>



FOURTH ALL-RUSSIAN CONFERENCE
ON THERMOMETRY PROBLEMS

April, 19th
2011

Section 2. Radiating thermometry

auditoria "Forum"

First session.	General questions of radiating thermometry
Section Chair:	<i>Dariy Ya. Svet</i> <i>Scientific Association for High Temperatures of the Russian Academy of Sciences (OIVT RAN) , Moscow</i>
14³⁰-15⁰⁰	New devices and methods of optical pyrometry for scientific and industrial application V.N.Senchenko - <i>OIVT RAN, Moscow</i>
15⁰⁰-15²⁰	Terminology questions in pyrometry D.Ya.Svet - <i>OIVT RAN, Moscow</i> S.S.Sergeyev – <i>"TECHNO-AC", Kolomna</i>
15²⁰-15⁴⁰	About definition of true temperature of an opaque warm bodies on the thermal radiating spectrum: search simple dependences of emissivity versus wavelength S.P.Rusin – <i>OIVT RAN, Moscow</i>
15⁴⁰-16⁰⁰	The spectral pyrometry: advantages, features, restrictions Magunov A.N. – <i>NIIPMT, Moscow</i>
16⁰⁰-16³⁰	Coffee-break
16³⁰-16⁵⁰	Metrological aspects of the thermovision analysis for remote objects T.G.Aleksenko, V.A.Narchev., S.V.Seregin, V.P.Hodunkov – <i>VUMC VMF, Primorsk</i>
16⁵⁰-17¹⁰	The uncertainty budget at various stages of the measurement process of a radiation temperature N.N.Gots – <i>"Lvivska politekhika", Lvov, Ukraine</i>
17¹⁰-17³⁰	Correlation of a spatial resolution with a measurement time in an optical thermometry A.N.Magunov – <i>NIIPMT, Moscow</i>
17³⁰-17⁵⁰	The temperature evaluation by a radiation spectrum at the monotonous characteristic of emissivity V.N.Bodrov, S.V.Lebedev – <i>MEI, Moscow</i>



April, 20th
2011

Section 2. Radiating thermometry

auditoria "Forum"

Second session	Standards, blackbody radiators
Section Chair:	<i>Alexander V.Kostanovsky</i> <i>Scientific Association for High Temperatures of the Russian Academy of Sciences (OIVT RAN) , Moscow</i>
9⁰⁰-9²⁰	Design of the high-temperature fixed points and it an possible application in radiometry B.B.Khlevnoy, Grigoreva I.A., M.L.Samoylov, V.I.Sapritsky <i>VNIIOFI, Moscow</i>
9²⁰-9⁴⁰	Design of new models of blackbody for temperature and radiometric calibrations M.L.Samojlov, B. B.Khlevnoy, S.A. Ogaryov– <i>VNIIOFI, Moscow</i>
9⁴⁰-10⁰⁰	6 years cooperation VNIIM (Russia) and LNE-CNAM (France) in the field of design and checking high-temperature eutectic fixed points and national scales of temperature Ju.A.Sild, M.S.Matveyev, A.I.Pokhodun, V.M.Fuksov – <i>D.I.Mendeleyev VNIIM, St.Petersburg</i> M.Sadli, F.Burson - <i>INM-LNE/CNAM, La Plane St.Denis, France</i>
10⁰⁰-10²⁰	Some experimental methods used by realization of temperature scale in the Slovak institute of metrology Peter Nemecek, Ivan Christov – <i>SMU, Bratislava, Slovakia</i>
10²⁰-10⁴⁰	The analysis of a measurement uncertainty of a thermodynamic temperature for a high-temperature blackbody by radiometric methods V.R.Gavrilov, B.B.Khlevnoy, M.L.Samoylov, D.A.Otryaskin, I.A.Grigoreva – <i>VNIIOFI, Moscow</i>
10⁴⁰-11⁰⁰	The review of methods for filling of the high-temperature fixed point cells based on an eutectic alloys J.A.Sild - <i>D.I.Mendeleyev VNIIM, St.Petersburg</i>
11⁰⁰-11³⁰	Coffee-break



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Section 2. Radiating thermometry

auditoria "Forum"

Third session		Not contact methods and temperature gages	
Section Chair:		<i>Boris. B. Khlevnoy</i> <i>VNIIOFI, Moscow</i>	
11³⁰-11⁵⁰	Designing of a precision pyrometer for transfer of the temperature size unit for a range above 1000 °C	J.A.Sild, M.S.Matveyev - <i>D.I.Mendeleyev VNIIM, St.Petersburg</i> A.A.Polepishin, S.A.Burjakov, V.L.Sukhanov, V.V.Zabrodsky - <i>"Infratest", Ekaterinburg</i>	
11⁵⁰-12¹⁰	The three-wave pyrometer measuring a true temperature	D.Ya.Svet – <i>OIVT RAN, Moscow</i> S.S.Sergeyev – <i>"TECHNO-AC", Kolomna</i>	
12¹⁰-12³⁰	The micro-second micro-pyrometer for time-of-flight mass spectrometry with the lazer-induced evaporation	V.S.Voropaev, S.T.Ulbashev, K.A.Hodakov, M.A.Sheyndlin - <i>OIVT RAN, Moscow</i>	
12³⁰-12⁵⁰	Pyrometer with the built-in calibrator	V.A.Zaharenko, J.N.Klikushin, A.G.Shkaev - <i>OmGTU, Omsk</i>	
12⁵⁰-13¹⁰	Pyrometer with the temperature calibration of real object on the basis of the silicon photodiode	Aleksandrov S.E., Gavrilov G. A, Zabrodsky V.V., Sotnikova G. Yu., Sukhanov V. L. - <i>Phys-Tech.Institute named by A.F.Ioffe of the RAN, St.Petersburg</i>	
13¹⁰-13³⁰	Radiating methods of a temperature measurement with an example of pyrometers of "OPTRIS" firm	A.V.Oshchepkov - <i>Joint-Stock Company "Techkno", St.Petersburg</i>	
13³⁰-14³⁰	Lunch		
14³⁰-16⁰⁰	Poster and Exhibition Overview		



FOURTH ALL-RUSSIAN CONFERENCE
ON THERMOMETRY PROBLEMS

April, 20th
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Section 2. Radiating thermometry

auditoria "Forum"

<p>Fourth session</p> <p>Estimation of errors of measurement of temperature not contact methods</p> <p>Section Chair: <i>Mikhail S. Matveyev</i> <i>D.I.Mendeleyev VNIIM, St.Petersburg</i></p>	
<p>16⁰⁰-16²⁰</p>	<p>Increasing of the contactless temperature measurement reliability by the spectral pyrometry methods B.P.Ionov, A.B.Ionov, A.I.Mirnaja – <i>OmGTU, Omsk</i></p>
<p>16²⁰-16⁴⁰</p>	<p>Questions of the temperature unit transfer to a contactless thermometers R.A.Gorbunov – <i>"ROSTEST-MOSKVA", Moscow</i></p>
<p>16⁴⁰-17⁰⁰</p>	<p>Complex measurement of temperature of the laser torch formed by interaction of the pulse CO₂-laser with sapphire (Al₂O₃) by optical methods G.E.Belyaev, V.P.Dubenkov, A.M.Velichko - <i>OIVT RAN, Moscow</i> M.N.Larichev, A.I.Nikitin - <i>Institute for Biological Instrumentation of the RAN, Puschino</i> N.S.Shaytura, E.I.Shkolnikov, I.V.Yanilkin - <i>MEPhI, Moscow</i></p>
<p>17⁰⁰-17²⁰</p>	<p>Radiometer for measurement of density of a high-intensity thermal streams and the method of its calibration A.V.Sharkov, V.A.Korablev, D.S.Makarov, A.S.Nekrasov, D.A.Minkin, E.N.Fadeeva – <i>SpbGU ITMO, S.Petersburg</i></p>
<p>17²⁰-17⁴⁰</p>	<p>Experimental determination of the effective radiating ability of a reference radiator in the form of an absolutely blackbody model A. V.Zuev, V.A.Chistyakov – <i>"METROPIR", S.Petersburg</i></p>
<p>17⁴⁰-18⁰⁰</p>	<p>Application of the thermovision macro-filming for research of thermal modes of microelectronic products A.V.Sharkov, V.A.Korablev, V.I.Egorov, D.A.Minkin, N.I.Pyankova, E.N.Kizlyk - <i>SpbGU ITMO, S.Petersburg</i></p>



April, 19th
2011

**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Seminar"

First session	<p>Intellectual gages, Metrological control, reliability</p> <p>Section Chair: <i>Vladimir Sh. Sulaberidze</i> <i>BGTU «Voenmekh», St.Petersburg</i></p>
14³⁰-15⁰⁰	<p>Metrological self-checking of resistive gages of temperature R.E.Tajmanov, J.V.Baksheeva, K.V.Sapozhnikova – <i>D.I.Mendeleyev VNIIM, St.Petersburg</i></p>
15⁰⁰-15²⁰	<p>The intellectual thermometer working on a principle of technology «plug and play» O.I.Lah, M.I.Mykytyn, I.P.Mykytyn, B.I.Stadnyk – <i>"Lvivska Politekhika", Lvov, Ukraine</i></p>
15²⁰-15⁴⁰	<p>About some aspects of application of self-calibrated gages of temperature E.P.Ivanova, T.N.Kurskaja, C.B Shramko – <i>National Centre of science "Institute for Metrology", Kharkov Ukraine</i></p>
15⁴⁰-16⁰⁰	<p>Definition of necessity of carrying out of checking or calibration of the thermoelectric converter A.V.Karzhavin, V.A.Karzhavin - <i>Open Company "TESEY", Obninsk</i></p>
16⁰⁰-16³⁰	Coffee-break



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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Seminar"

Second session		Gages, secondary converters, Materials, designs	
Section Chair:		<i>Sergey V. Marinko</i> <i>32 GNII MO RF, Mytishi</i>	
16³⁰-16⁵⁰	Temperature in nanotechnologies A.P.Guk – <i>"Termoprylad", Lvov, Ukraine</i> B.I.Stadnyk, S.P.Jatsishin, J.T.Lutsyk – <i>"Lvivska politekhnika", Lvov, Ukraine</i>		
16⁵⁰-17¹⁰	Research of acoustic properties of materials for ultrasonic thermometry T.M.Zalutskaja, I.S.Lihnovsky, J.T.Lutsik – <i>"Lvivska politekhnika", Lvov, Ukraine</i>		
17¹⁰-17³⁰	Resource tests of platinorody-platinum thermocouples A.V.Karzhavin, V.A.Karzhavin - <i>Open Company "TESEY", Obninsk</i>		
17³⁰-17⁵⁰	Influence of x-ray radiation on parameters of silicon thermosensor controls B.V.Pavlyk, A.M.Lenovenko, A.S.Grypa – <i>"Lvivska politekhnika", Lvov, Ukraine</i>		



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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Dialog"

<p>Third session</p> <p style="text-align: right;">Practice of temperature measurements</p> <p>Section Chair: Sergey P. Polunin <i>Open Company NPP "ELEMER", Zelenograd</i></p>	
9⁰⁰-9²⁰	<p>Dynamic thermometry of a firm body a method of optical diffraction at a pulse irradiation J.V.Fattahov, M.F.Galjautdinov, B.F.Farrahov – <i>Kazan FTI, Kazan'</i></p>
9²⁰-9⁴⁰	<p>Choice of gages of temperature for diagnostics of a thermal condition of semi-conductor converting installations I.G.Kiselev, D.V.Krylov – <i>SPbGUPS, St.Petersburg</i></p>
9⁴⁰-10⁰⁰	<p>System of monitoring of temperatures of extended objects in вечномерзлых грунтах E.V.Amosov – <i>Open Society "FUNDAMENTSTROJARKOS", Omsk</i> D.J.Kropachev, D.S.Pazderin – <i>JSC RIE"ETALON", Omsk</i></p>
10⁰⁰-10²⁰	<p>Method of definition of level of a liquid with use of thermoresistors A.V.Sharkov, V.A.Korablev, D.A.Minkin – <i>St.Petersburg State University ITMO, St.Petersburg</i></p>
10²⁰-10⁴⁰	<p>Скважинный temperature monitoring as a method of research of a tectonic mode of seismoactive areas D.J.Demezhko, A.K.Jurkov, V.I.Utkin – <i>Institute of geophysics of Ural RAN, Ekaterinburg</i></p>
10⁴⁰-11⁰⁰	<p>Objective control of temperature – a basis of maintenance of high-quality and power effective metallurgy A.M.Belenky – <i>MIS&S, Moscow</i></p>
11⁰⁰-11³⁰	Coffee-break



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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Dialog"

Fourth session		Gages, Materials, Designs, Technologies	
Section Chair:		Vladimir A. Nikonenko <i>Joint-Stock Company RIE "ETALON", Omsk</i>	
11³⁰-11⁵⁰	Standardization problems in thermometry A.V.Ermakov, E.S.Studenok – <i>Joint-Stock Company "URALINTEKH", Ekaterinburg</i> V.A.Nikonenko – <i>JSC RIE "ETALON", Omsk</i>		
11⁵⁰-12¹⁰	Iridium thermocouples. Manufacture and application Ermakov A.V., Studenok E.S., Erohina L.N., Sasinova R. A – <i>Joint-Stock Company " URALINTEKH ", Ekaterinburg</i> Pohodun A.I. – <i>D.I.Mendelejev VNIIM, St.Petersburg</i>		
12¹⁰-12³⁰	Increase of operational both technological properties платинородиевых and platinum materials for thermometry A.V.Ermakov, E.S.Studenok, R.A.Sasinova, L.N.Erohina – <i>Joint-Stock Company " URALINTEKH ", Ekaterinburg</i>		
12³⁰-12⁵⁰	Широкодиапазонные thermosensitive elements of gages of temperature on diodes AlCaAs S.J.Erohin, V.A.Krasnov, A.M.Fonkich, J.M.Shvarts, S.V.Shutov – <i>IFP, Kiev, Ukraine</i>		
12⁵⁰-13¹⁰			
13¹⁰-13³⁰	Uncertainty of measurement of temperature by means of thermometers of resistance and cable thermocouples of type in a range from 300 to 660 wasps A.V.Belevtsev, A.V.Karzhavin, V.A.Karzhavin - <i>Open Company "TESEY", Obninsk</i>		
13³⁰-14³⁰	Lunch		
14³⁰-16⁰⁰	Poster papers & Exhibition		

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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Summit"

Fifth session	General questions of thermometry, Practice of temperature measurements,
:	Section Chair: <i>Alina G. Ivanova</i> <i>D.I.Mendeleyev VNIIM, St.Petersburg</i>
9⁰⁰-9²⁰	Algorithm of calculation of parameters of platinum thermometers of resistance <i>S.V.Marinko, I.G.Bojko – 32 GNII MORF, Mytischi</i>
9²⁰-9⁴⁰	Uncertainty of measurement of temperature by means of thermometers of resistance and cable thermocouples of type in a range from 300 to 660 wasps <i>A.V.Belevtsev, A.V.Karzhavin, V.A.Karzhavin - Open Company "TESEY", Obninsk</i>
9⁴⁰-10⁰⁰	Metrological trassibility and uncertainty <i>N.P.Moiseeva – D.I.Mendeleyev VNIIM, St.Petersburg</i>
10⁰⁰-10²⁰	Nonlinear digital filtration in precision thermometric bridges <i>M.N.Surdu, A.L.Lameko, A.N.Kononenko, E.V.Oligov – NIPI, Kiev, Ukraine</i>
10²⁰-10⁴⁰	About a variation of a mode of a reference measure for expansion of a measurement range in the measurement equipment for the platinum resistance thermometers <i>M.N.Surdu, A.L.Lameko – NIPI, Kiev, Ukraine</i>
10⁴⁰-11⁰⁰	Compensation of self-heating of a resistance thermometer sensitive element on the basis of parametrical identification of their discrete model <i>V.V.Gureev, S.G.Rusanov – Open Company NPP "ELEMER" – Zelenograd</i>
11⁰⁰-11³⁰	Coffee-break



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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Summit"

Sixth session		Means of the temperature measurement	
Section Chair:		<i>Evgeny V. Vasiliyev</i> <i>VNIIMS, Moscow</i>	
11³⁰-11⁵⁰	Prospects of development of the market of SI of temperature the next 10 years	A.G.Zubov – "TEPLOPRIBOR", Chelyabinsk V.A.Nikonenko – JSC RIE"ETALON", Omsk	
11⁵⁰-12¹⁰	The thermometer for temperature measurement in a range from 195 to 400 K	B.B.Alchagirov, L.H.Afaunova, Z.A.Kokov – KabBalGU, Nal'chik; V.A.Nikonenko – JSC RIE"ETALON", Omsk	
12¹⁰-12³⁰	Thermometers "LT-300". Definition of factors of function of Kallendara-Van Djuzena	S.V.Grigorev, R.M.Zakirov – Open Company "TERMEKS", Tomsk	
12³⁰-12⁵⁰	The thermometer soil AMT-5A	N.M.Skurihin, B.V.Solodovnikov, V.P.Gavrilov, S.B.Surnakova, T.A.Solodovnikova – GU "TYPHOON", Obninsk	
13⁰⁰	Final session of conference		

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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria " Forum "

Seventh session		Means of metrological control	
Section Chair:		Andrey V. Karzhavin <i>Open Company "TESEY", Obninsk</i>	
9⁰⁰-9²⁰	Liquid thermostats for checking of thermometers of resistance at selection in complete sets <i>V.S.Givojno, S.V.Givojno – Open Company "POINT", Polotsk</i>		
9²⁰-9⁴⁰	The stand for technological extra earnings of thermoconverters <i>S.P.Potehin, S.N.Sergienko – Joint-Stock Company NPK "ETALON", Volgodonsk</i>		
9⁴⁰-10⁰⁰	Means of operative control by manufacture of gages of temperature <i>D.N.Andrushkevich – Joint-Stock Company "TEKKNOW", St.Petersburg</i>		
10⁰⁰-10²⁰	Practical aspects of reproduction and transfer of unit of temperature in a science and the industry by means of standards and measuring apparatuses of temperature of working out and manufacture companies Fluke Corporation (USA) <i>V.V.Dolgov – AgencyTSM Kommunikeshn GmbH (Austria), Moscow</i>		
10²⁰-10⁴⁰			
10⁴⁰-11⁰⁰	The integrated control system of the secondary standard of temperature <i>A.A.Gorbylev, D.A.Grivastov – SNIIM, Novosibirsk</i>		
11⁰⁰-11³⁰	Coffee-break		



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**Section 3. Applied problems of thermometry.
Gages, transmitters, materials, designs**

auditoria "Forum"

Eighth session		Means of metrological control	
Section Chair:		Sergey N. Nenashev <i>"ROSTEST-MOSKVA", Moscow</i>	
11 ³⁰ -11 ⁵⁰	Role of contacts at measurement of noise temperature of samples heated up by a current <i>A.G.Cherevko – Siberian GU TI, Novosibirsk</i>		
11 ⁵⁰ -12 ¹⁰	Reprogrammed amplifiers-converters of signals of thermocouples and resistance thermometers <i>E.N.Belozerov, A.V.Mosov, D.V.Solodovnikov – Joint-Stock Company NPK "ETALON", Volgodonsk</i>		
12 ¹⁰ -12 ³⁰	The diode temperature sensor poorly sensitive to a magnetic field <i>V.L.Borblik, I.A.Rudnev - IFP, Kiev, Ukraine</i> <i>J.M.Shvarts, M.M.Schwarz - MEPhI, Moscow</i> <i>N.I.Sypko – MLSPMiNt, Wroclav, Poland</i>		
12 ³⁰ -12 ⁵⁰	Metrological maintenance of Diode thermometry <i>A.N.Ivashchenko, J.M.Shvarts, M.M.Schwarz, D.P.Kopko, V.I.Kartashev, N.D.Lutsenko - MEPhI, Moscow</i>		
13 ⁰⁰	Final session of conference		



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2011

**Section 4. Issues related to temperature measurements
in nuclear power engineering. Metrology.
Practices.**

auditoria “Dialogue”

<p>First session: Issues related to temperature measurements in the nuclear power engineering. Metrology. Practices</p> <p>Section Chair: <i>Boris V. Lysikov,</i> <i>OAO «NIKIET»</i></p>	
14 ³⁰ -15 ⁰⁰	<p>Opening address by Advisor of the Director General of “ROSATOM” State Corporation N.A.Obysov - <i>ROSATOM, Moscow</i></p>
15 ⁰⁰ -15 ²⁰	<p>Advanced material of nuclear engineering I.I. Fedik - <i>FGUP «NII NPO «LUCh» Podolsk</i></p>
15 ²⁰ -15 ⁴⁰	<p>Problematic issues related to protracted continuous measurements of high temperatures in reactors B.V.Lysikov, M.N.Mihailov, V.I.Doneckii - <i>OAO «NIKIET», Moscow</i></p>
15 ⁴⁰ -16 ⁰⁰	<p>Changes in physical properties of tungsten-rhenium thermocouples S. V. Pavlenko, A. P.Ponomarev - <i>OAO «Elemash», Elektrostal</i> P.P.Oleinikov – <i>FGUP «NPO «LUCh», Podolsk</i> A. A.Ulanovskii - <i>OOO «OTK», Obninsk</i></p>
16 ⁰⁰ -16 ³⁰	<p>Coffee break</p>
16 ³⁰ -16 ⁵⁰	<p>Main issues related to contact measurements of high temperatures S.N.Nenashev - <i>FGU «ROSTEST- Moscow»</i></p>
16 ⁵⁰ -17 ¹⁰	<p>Investigation of reactor radiation influence on thermocouples type NN (N) (nichrosil-nisil) V.P. Kornilov - <i>FGUP GNC RF FEI,</i> L.V.Stepakov - <i>FGUP IRM</i></p>
17 ¹⁰ -17 ³⁰	<p>Thermoelectric resistance transducer for precision high temperature measurements B.I. Stadnyk., F.I.Skoropad, E.I.Man'kovskaya – <i>Polytechnics of Lvov, Ukraine</i></p>
17 ³⁰ -17 ⁵⁰	<p>Metrological assurance of the temperature control of Nuclear Power Facilities M.N.Arnoldov, A.I.Trofimov – <i>FGUP «GNC RF FEI», Moscow ,</i> V.A.Karjavin – <i>OOO PK «TESEI», Obninsk</i></p>



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**Section 4. Issues related to temperature measurements
in nuclear power engineering. Metrology.
Practices.**

auditoria "Dialogue"

<p>Second session: Issues related to temperature measurements in nuclear power engineering. Metrology. Practices.</p> <p>Section Chair: <i>Piotr P. Oleynikov,</i> <i>FGUP «NII NPO «Luch»</i></p>	
9⁰⁰-9²⁰	<p>On technical possibilities of temperature measurements of heat transfer agents in the primary coolant system of nuclear power facilities and ways of their realization at Nuclear Power Plants equipped with VVER reactors A.I.Kalagin, A.E Kalinushkin, A.I.Kovel', D.I Konin, V.P.Filatov, M.V.Halizov, A.Cvetkov - <i>FGU RNC "Kurchatov Institute", Moscow</i></p>
9²⁰-9⁴⁰	<p>Thermoelectric transducers for the control of temperature A.E Doneckii, V.I Gorshkov - <i>OAO «NIKIET», Moscow</i> V.P.Orlov, P.A Zaicev. - <i>FGUP «NII NPO «Luch», Podolsk</i></p>
9⁴⁰-10⁰⁰	<p>New instruments and methods for increasing the accuracy of temperature measurements in Nuclear Power Transportation Facilities A.A.Isaev, V.N.Loginov, D.S.Rezanov – <i>OJSC "Afrikantov OKBM", Nijnii Novgorod</i> V.Sh.Magdeyev – <i>NPP "ETALON", Volgodonsk</i></p>
10⁰⁰-10²⁰	<p>Cable thermocouple with additional channel V.Sh.Magdeev - <i>OOO «NPK «Etalon», Volgodonsk;</i> A.A.Isaev - <i>OAO "OKBM Afrikantov"</i></p>
10²⁰-10⁴⁰	<p>Investigation of the efforts to introduce of the control temperature sensor in the additional channel of thermal transducers A.V.Doncov – <i>ZAO NPK «Etalon», Volgodonsk</i> B.V.Magdeev – <i>D.I. Mendeleyev VNIIM, Saint-Petersburg</i></p>
10⁴⁰-11¹⁰	<p>Drift patterns of the calibrated characteristics of thermoelectric transducers and resistance thermometers in reactor conditions P.A.Zaicev, P.P. Oleinikov, S.V.Priimak – <i>FGUP «NII NPO «LUCh», Podolsk</i> V.N. Loginov, A.A. Isaev – <i>OAO "OKBM Afrikantov", N.Novgorod</i></p>
11¹⁰-11³⁰	<p>Coffee break</p>

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2011

**Section 4. Issues related to temperature measurements
in nuclear power engineering. Metrology.
Practices.**

auditoria "Dialogue"

<p>Third session: Issues related to temperature measurements in nuclear power engineering. Metrology. Practices.</p> <p>Section Chair: <i>Mikhail N. Arnoldov,</i> <i>FGUP «GNC RF FEI»</i></p>	
11 ³⁰ -11 ⁵⁰	<p>Multizone temperature sensor units V.P. Kornilov, O.G. Martirosyan, V.V. Leshkov, V.P. Shishulin – <i>FGUP «GNC RF FEI», Obninsk</i></p>
11 ⁵⁰ -12 ¹⁰	<p>Determination of characteristics of single- double phase flows by the thermoprobing method E.A. Boltenko, V.P. Sharov, D.E. Boltenko – <i>OAO «ENIC Nuclear Power Plant Security», Elektrogorsk</i></p>
12 ¹⁰ -12 ³⁰	<p>On distribution of temperatures during the control of coolant leakage at Nuclear Power Plants I.A. Kirillov, N.G. Roschin, V.G. Firstov, V.A. Travnikov – <i>OAO «Concern «Rosenergoatom»</i></p>
12 ³⁰ -12 ⁵⁰	<p>Specific issues related to measurements of temperature of the blanket TWEL during the simulated accident at LOKA S.V. Priimak, D.N. Ignat'ev, P.P. Oleinikov., G.N. Mel'nikov, D.M. Soldatkin, V.B. Usachev - <i>FGUP «NII NPO «LUCh» Podolsk</i></p>
12 ⁵⁰ -13 ¹⁰	<p>Study on temperature components of the spent nuclear fuel in the conditions of a protracted conservation I.I. Shevchenko – <i>VNIPIET, Saint-Petersburg</i> Yu.P. Zarichnyak, V.G. Krickii, A.I. Tokarenko, A.V. Lipko – <i>SPbGU ITMO, Saint-Petersburg</i></p>
13 ¹⁰ -13 ³⁰	<p>Methods and instruments for metrological assurance of the support manning of TPC Nuclear Power Facility V.B. Usachev, N.L. Vasil'eva, A.B. Kichigin, P.P. Oleinikov, G.N. Mel'nikov, S.V. Priimak - <i>FGUP «NII NPO "LUCh", Podolsk</i></p>
13 ³⁰ -14 ³⁰	Lunch
14 ³⁰ -16 ⁰⁰	Poster papers



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**Section 4. Issues related to temperature measurements
in nuclear power engineering. Metrology.
Practices.**

auditoria "Dialogue"

<p>Fourth session: Issues related to temperature measurements in nuclear power engineering. Metrology. Practices.</p> <p>Section Chair: V.N. Loginov, <i>OAO «OKBM Afrikantov»</i></p>	
16 ⁰⁰ -16 ²⁰	<p>Instrument for measurement of the coefficient of efficiency and other output characteristics of circular TPU P.N.Inglizyan, R.Ch.Kviciniya, S.P.Krivoruchko, B.A.Lazba, E.P.Sabo, N.M.Sudak - <i>OOO «ERA-CFTI», Suhum, Abhaziya</i></p>
16 ²⁰ -16 ⁴⁰	<p>Experimental dependence of the electronic heat conduction of steel ЦРБИ-68 on irradiation-induced swelling V.S. Shihalev, A.V.Kozlov, E.N.Scherbakov, P.I. Yagovitin – <i>Institut Reaktornyh Materialov, Zarechnyi</i></p>
16 ⁴⁰ -17 ⁰⁰	<p>Investigation of temperature fields in the model of dry spent nuclear fuel storage K.M. Migunov, Yu.P Zarichnyak - <i>SPbGU ITMO, Saint-Peterburg,</i> V.G.Krickii, A.I.Tokarenko, A.V. Lipko - <i>VNIPIET, Saint-Peterburg</i></p>
17 ⁰⁰ -17 ²⁰	<p>Investigation of thermal fields of buildings and edifices in nuclear power plant areas S.R. Kostyukovskii - <i>OOO KB «DIPOL»</i></p>
17 ²⁰ -17 ⁴⁰	<p>Errors in determination of the leakage rate of air from the leakproof covers of plants VVER-1000 during pneumotests. M.G.Mitelman- <i>OOO «INKOR»</i></p>
17 ⁴⁰ -18 ⁰⁰	



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Section 5. Issues related to measurements of thermal quantities. Metrological assurance

auditoria "Summit"

First session.	Thermal properties of materials
Session Chairman:	<i>Sergey Sapozhnikov, St.Petersburg State Polytechnic University</i>
14³⁰-15⁰⁰	Experimental procedure for studies of transportation and radiation properties of current-conducting materials at high temperatures (by example of isostatic graphite DE-24). <i>A.B. Konstanovski, M.G. Zeodinov, M.E. Kostanovskaya – OIVT RAN, Moscow</i>
15⁰⁰-15²⁰	Carbides at high temperatures (experiment) <i>S.V. Onufriev, A.I. Savvatimski, V.I. Yanchuk – OIVT RAN, Moscow</i>
15²⁰-15⁴⁰	Determination of thermal parameters of conductor with current by transitional electrical characteristics at switching off the heat current <i>V.I. Babanin, A.Ya.Ender – FTI A.F.Ioffe RAN, Saint-Petersburg</i>
15⁴⁰-16⁰⁰	Determination of the thermal expansion in nanomaterial samples with uneven surface by the method of speclinterferometry <i>I.P.Gurov, T.F.Dudina, N.B.Margaryanc – SPbGU ITMO, Saint-Petersburg T.A.Kompan, A.S.Korenev – D.I.Mendeleyev VNIIM, Saint-Petersburg</i>
16⁰⁰-16³⁰	Coffee break



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Section 5. **Issues related to measurements of thermal quantities. Metrological assurance**

auditoria "Summit"

Second session: Thermal properties of materials	
Session Chair: Nikolay A. Sokolov, D.I.Mendeleyev VNIIM	
16³⁰-16⁵⁰	Determination of thermal properties of materials A.A.Lipaev – <i>Oil Institute of Almeteyevsk</i> V.A.Chugunov – <i>Kazan University</i> S.A.Lipaev – <i>Geophysical Institute UO RAN</i>
16⁵⁰-17¹⁰	Impact of the relative humidity on the value of the temperature coefficient of linear expansion of the nanoporous hydrogen materials T.A.Kompan, N.F.Puhov - <i>D.I.Mendeleyev VNIIM, Saint-Petersburg</i>
17¹⁰-17³⁰	Monitoring of thermal properties of hydrogen materials V.I.Shuvalov, A.V.Bochkarev – « <i>Uralkolektroin</i> »
17³⁰-17⁵⁰	Enthalpy for a pattern of active material in airborne information tanks V.Yu.Zaharova, D.S.Maiorov – <i>SPbGU ITMO, Saint-Petersburg</i>

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Section 5. Issues related to measurements of thermal quantities. Metrological assurance

auditoria “Seminar”

<p>Third session: Methods and instrument for realization and dissemination of thermal units</p> <p>Session Chairman: <i>Alexander V. Sharkov, SpbGU ITMO</i></p>	
<p>9⁰⁰-9²⁰</p>	<p>About the new integrated instrumentation of the State Primary Standard of the units of combustion energy, specific combustion energy and volume combustion energy E.N. Korchagina, V. P. Varganov, V.I Belyakov, E.V. Ermakova – <i>D.I.Mendeleyev VNIIM, Saint-Petersburg</i></p>
<p>9²⁰-9⁴⁰</p>	<p>International COOMET comparison in the field of thermal conduction measurements in the range between 0.03 and 0.05 W/(m•K) N.A. Sokolov, A.N. Sokolov - <i>D.I.Mendeleyev VNIIM, Sain-Petersburg</i> V.N.Mihalchenko, J.A.Begaidarov, B. J.Muhamedjanov – <i>KazInMetr, Astana</i></p>
<p>9⁴⁰-10⁰⁰</p>	<p>Upgrading of the hard- and software integrated standard instrumentation of dilatometer DIS-7 in the composition of the State Primary Standard of the temperature coefficient of linear expansion (GET 24-200) T.A.Kompan, A.S.Korenev - <i>D.I.Mendeleyev VNIIM, Saint-Petersburg</i></p>
<p>10⁰⁰-10²⁰</p>	<p>Study of new methods and standard measurement instruments for the metrological assurance of calorimetry A.D Zonova., N.A.Kurbatova, D.O.Pryashin., D.P. Trocenko - <i>SNIIM</i> V.Ya.Cherepanov, V.A.Yamshanov – <i>SibGGA, Novosibirsk</i></p>
<p>10²⁰-10⁴⁰</p>	<p>Calibration of gradient sensors of the heat flow S.Z.Sapojnikov, V. Yu.Mityakov, A.V.Mityakov – <i>Saint-Petersburg State Polytechnic University</i> A.I.Pokhodun, N.A.Sokolov, M.S.Matveev – <i>D.I.Mendeleyev VNIIM</i></p>
<p>10⁴⁰-11⁰⁰</p>	<p>Superhighfrequency moisture metering and problems of metrological assurance P.R.Ismatullaev, - <i>Tashkent State Technical University</i> P.I.Kalandarov – <i>Uzbek State Institute « Uztyajneftegazhimproekt »</i></p>
<p>11⁰⁰-11³⁰</p>	<p>Coffee break</p>

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Section 5. Issues related to measurements of thermal quantities. Metrological assurance

auditoria "Seminar"

<p>Fourth session: Thermal properties of materials</p> <p>Session Chairman: Valery A. Medvedev, <i>FGUP «ROSTEST –Moscow</i></p>	
11³⁰-11⁵⁰	Thermodynamics of measurement processes <i>S.V.Marinko – 32 GNII MO RF, Mytishi</i>
11⁵⁰-12¹⁰	On the issue of one problem from the statistic mechanics <i>G.M.Ataev – IF Dag NC RAN</i>
12¹⁰-12³⁰	Regularities of temperature waves in unsteady medium and their oil field applications <i>A.A.Lipaev – State Oil Institute of Almetevsk</i>
12³⁰-12⁵⁰	Estimate of error in recovery of the heat flow during parametric identification using Gram matrices. <i>N.V.Pilipenko, I.A.Sivakov – SpbGU ITMO, Saint-Petersburg</i>
12⁵⁰-13¹⁰	Periodical heating methods in a system of contacting bodies <i>A.A.Lipaev – State Oil Institute of Almetevsk</i>
13¹⁰-13³⁰	Contact method of solid materials thermal activity determination <i>D.Yu. Demejko, V.V.Dergachev – geophysical Institute, UrO RAN</i>
13³⁰-14³⁰	Lunch
14³⁰-16⁰⁰	Poster papers



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Section 5. Issues related to measurements of thermal quantities. Metrological assurance

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Fifth session: Methods and instruments for the measurement of thermal quantities	
Session Chair: <i>Tatiana A. Kompan,</i> <i>D.I.Mendeleyev VNIIM</i>	
16⁰⁰-16²⁰	Heterogeneous gradient sensors of heat flows S.Z.Sapojnikov, V.Yu.Mityakov, A.V.Mityakov – <i>State Polytechnical University, Saint-Petersburg</i>
16²⁰-16⁴⁰	New method for measurements of heat output from vital activity of microorganisms G.V.Kotel'nikov, S.P.Moiseeva, E.V.Mejburd – <i>IBP RAN</i>
16⁴⁰-17⁰⁰	High-tech instruments measuring thermal expansion of construction materials T.A.Kompan - <i>D.I.Mendeleyev VNIIM, Saint-Petersburg</i>
17⁰⁰-17²⁰	Heat flow measuring device V.A.Korablev, A.N.Sokolov, K.N.Suharev, A.V.Sharkov – <i>SPbGU ITMO, Saint-Petersburg</i> Yu.A.Harlamov – <i>FGUP «CNI « Kometa», Saint-Petersburg</i>
17²⁰-17⁴⁰	Recovery method for the density of heat flows on the surface of entities in aerodynamic tubes N.V.Pilipenko, K.V.Kirillov, I.A.Sivakov, O.V.Klyuchka, A.V.Pavlov – <i>SpbGU ITMO, Saint-Petersburg</i>
17⁴⁰-18⁰⁰	Density selectors of heat flows developed at the OAO NPP «Etalon V.V.Rubanov – <i>OAO NPP «ETALON», Omsk</i>

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Sixth session: Practice of thermal quantities measurements	
Session Chair: Victor Ya. Cherapanov, <i>GOU VPO "Siberian State Geodesy Academy"</i>	
9⁰⁰-9²⁰	Specifics of the use of heat-transmitting platforms with vaporizing condensation cycle in thermal metrology <i>N.S.Koneva, L.S.Domorod, S.V.Konev – Lykov ITMO, NANB, Minsk</i>
9²⁰-9⁴⁰	Calorimetry and noise method for investigation of flaws in VTSP <i>V.N.Naumov, A.G.Cherevko – INH SO RAN SibGU TI, Novosibirsk</i>
9⁴⁰-10⁰⁰	On the issue of the effect of contact thermal resistances on the measurement error in scanning calorimetry <i>V.I.Kulagin - D.I.Mendeleyev VNIIM, Saint-Petersburg</i>
10⁰⁰-10²⁰	Temperature conditions monitoring of piling grounds for the evaluation of the effects of freezing setups <i>Bol'shev K.N., Ivanov V.A., Popenko F.E., Timofeev A.M. – IFTPS SO RAN, Yakutsk</i>
10²⁰-10⁴⁰	Evaluation of filtration and thermophysical parameters of the oil stratum by the results of temperature measurements at the bottom hole <i>M.N.Shamsiev, E.R.Badertdiniva – Kazanskii GTU, Kazan</i>
10⁴⁰-11⁰⁰	Humidity measurements of the brown coal of the Angren mines and problems of metrological control <i>P.I. Kalandarov, B.I. Iskandarov - Uzbek State Institute «Uztyajneftegazhimproekt », Tashkent, Uzbekistan</i>
11⁰⁰-11³⁰	Coffee break



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Seventh session: Thermal quantities measurement practices	
Session Chair: <i>Nikolay V. Pilipenko, SpbGU ITMO</i>	
11³⁰-11⁵⁰	Borehole temperature monitoring as a method for investigation of tectonic conditions of seismic areas D.Yu.Demejko, A.K.Yurkov, V.I.Utkin – <i>Geophysics Institute, UrO RAN, Ekaterinburg</i>
11⁵⁰-12¹⁰	Thermal properties and radiogenous heat generation of the Earth crust bedrocks T.A. Ponomareva - <i>Geology Institute, Komi UrO RAN, Syktyvkar</i> I.I. Shuktomova – <i>Byology Institute, Komi UrO RAN, Syktyvkar</i>
12¹⁰-12³⁰	Temperature measurements of heterogeneous disperse flows by methods of non-stationary calorimetry. V.P.Hodunkov – <i>Ships Security and Protection Centre, VUNC VMF «VMA Kuznetsov», Primorsk</i>
12³⁰-12⁵⁰	
13⁰⁰	Closing meeting of the conference

POSTER PAPERS

1	“Thermolab” - certified program for the calculation of calibration characteristics of resistance thermometers and thermocouples used in verification laboratories By N.P. Moisseeva, T.B. Bereznyak – <i>D.I. Mendleyev VNIIM, St. Petersburg</i>
2	Efficient control of the vertical temperature gradient of cells in realization of the metal freezing temperature fixed points By A.A. Gorbulyov, D.A. Grivastov – <i>SNIIM, Novosibirsk</i>
3	Diffusion permeability of the heat dissipating elements shells By N.M. Vlasov, I.I. Fedik – <i>FGUP NII NPO “LUCH”, Podolsk</i>
4	Techniques and instruments for the thermal non-destructive control in performing the instrumental power sparing audit By S.S. Sergeyev – <i>“Techno-AC”, Kolomna</i>
5	Monitoring of temperature conditions of Central Yakutia Plain soils By S.P. Varlamov - <i>Melnikov Permafrost Institute SibO RAN, Yakutsk</i>
6	Опыт применения терморезисторов в геотермических исследованиях многолетнемерзлых пород Experience in using thermal resistors in geothermal analyses By Yu.B. Skachkov – <i>Melnikov Permafrost Institute SibO RAN, Yakutsk</i>
7	Calculation of temperatures of frozen soils using mathematical models of the temperature dependence of georadiolocation signals By L.G. Neradovsky – <i>Melnikov Permafrost Institute SibO RAN, Yakutsk</i>
8	Furnace PRT 1100-2 for the ITS-90 fixed points realization By Yu.O. Malyshev – <i>Joint-Stock Company RIE“ETALON”, Omsk</i>
9	Some features of the thermal conductivity coefficient distribution By R.I. Gavrilyev – <i>Melnikov Permafrost Institute SibO RAN, Yakutsk</i>
10	Temperature conditions of soils of disturbed landscapes By P.N. Skrybin – <i>Melnikov Permafrost Institute SibO RAN, Yakutsk</i>
11	On the issue of introducing correction for the insufficient degree of exhaustion in dilatometers By V.G. Tsorin – <i>D.I. Mendeleev VNIIM, St. Petersburg</i>
12	Main errors and influencing parameters in interferential measurements of the temperature linear expansion coefficient using high precision setups By V.G. Tsorin - <i>D.I. Mendeleev VNIIM, St. Petersburg</i>

13	<p>On the issue of introducing corrections for the refractive index in interferential measurements of the temperature linear expansion coefficient at atmospheric pressure in a wide temperature range By V.G. Tsorin – <i>D.I. Mendeleev VNIIM, St. Petersburg</i></p>
14	<p>Отработка способов контактного и бесконтактного измерения температуры поверхностей для контроля нагрева металла Try-out of the contact and non-contact surface temperature measurement methods for the metal heating control By M.A. Denisov, <i>I.S. Bugrin – Ural FGU, Ekaterinburg</i></p>
15	<p>Pyrometer with the emissivity compensation By M.A. Shishkin, V.A. Zakharenko, D.B. Ponomaryov, Yu.N. Klikushin –<i>OmGTU, Omsk</i></p>
16	<p>Platinum temperature sensors made by JUMO GmbH&Co KG, Germany. Listing, application fields A.G. Shipkov – <i>OOO "Measurement and controlling technology North-West, Rep. Office of JUMO GmbH&Co KG, Germany, in St. Petersburg</i></p>
17	<p>Electrical resistance breakdown of type N mineral insulated metal-sheathed thermocouples above 800 °C M.W.Hastings, J.V.Pearce, G.Machin – <i>NPL, Halliford School, Teddington, UK</i></p>
18	<p>Radiators in the form of a blackbody models: on the issue of question of metrological certification and verification. R.P.Sergienko - <i>National center of science "Institute for Metrology", Kharkov, Ukraine</i></p>
19	<p>Scientific and technical aspects of modernization of the primary standard of Ukraine in the field of contactless thermometry. R.P.Sergienko, V.P.Slipushenko - <i>National center of science "Institute for Metrology", Kharkov, Ukraine</i></p>