



30th Joint Russian-German Meeting on ECRH and Gyrotrons June 17-24

Conference-hall of Hotel-club «Rublev».

General Programme

Sunday, June 17	Arrival of the German delegation to Nizhny Novgorod
Monday, June 18	9.20 Welcome and Opening 9.30 Workshop (Gyrotrons, ECRH, ECCD) 13.00 Lunch break 14.30 Workshop (Gyrotrons, ECRH, ECCD)
Tuesday, June 19	9.30 Workshop (Gyrotrons, ECRH, ECCD, Plasma Diagnostics) 13.00 Lunch break 14.30 Workshop (Gyrotrons, ECRH, ECCD, Plasma Diagnostics)
Wednesday, June 20	9.30 Workshop (Transmission Systems, Gyrotrons, Material Processing) 13.00 Lunch break 14.30 Workshop (Transmission Systems, Windows, Material Processing) 18.00 Reception
Thursday, June 21	9.30 Discussion & Excursion
Friday, June 22	9.30 Workshop (Gyrotrons, FEL, ECRH, ECCD, Plasma Diagnostics) 13.00 Lunch break 14.30 Workshop (Gyrotrons, FEL, ECRH, ECCD)
Saturday, June 23	9.30 Workshop (Gyrotrons, THz, DNP NMR) 13.00 Lunch break 14.30 Discussion, elaboration and approval of concluding documents.
Sunday, June 24	Departure of the German delegation from Nizhny Novgorod

The workshop sessions will be held on June 17-24, 2018 in a Conference-hall of
Hotel-club «Rublev».

Address: 94 Respublikanskaya Street, 606505, Gorodets, Russia.

Мероприятие проводится при финансовой поддержке Российского фонда фундаментальных исследований: Проект № 18-02-20056.

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Scientific Programme Monday, 18 June 2018.

- 9.20 Welcome and Opening (Prof. A.G.Litvak, Prof. H.Zohm).
- 9.30 J.Jelonnek, (KIT, IHM, IHE): **2018 Status on KIT Gyrotron Activities** (25 min. + 5 min. discussion).
- 10.00 V.E.Myasnikov, L.G.Popov, S.V.Usachev, et al (GYCOM, IAP): **Status of the gyrotron complex for ITER: composition of the complex, manufacturing, obtained parameters, delivery conditions.** (25 min. + 5 min. discussion)
- 10.30 T.Ruess (KIT): **2018 Status on the Measurements Capabilities for Fusion Gyrotrons at KIT** (25 min. + 5 min. discussion)
- 11.00 Coffee break
- 11.30 H.Zohm (IPP): **High Field Tokamaks - what should you expect?** (25 min. + 5 min. discussion)
- 12.00 A.G.Shalashov, P.A.Bagryansky, E.D.Gospodchikov et al (IAP, BINP): **Status of ECRH experiments at GDT mirror trap.** (25 min. + 5 min. discussion).
- 12.30 M.K.A.Thumm, (KIT): **Thirty Joint Russian-German Meetings on ECRH and Gyrotrons – A Retrospect.** (25 min. + 5 min. discussion)
- 13.00 Lunch break
- 14.30 S.Ruess et al. (KIT): **Current Status of the KIT Coaxial-Cavity Longer-Pulse Gyrotron and its Key Components** (25 min. +5 min. discussion).
- 15.00 T.A.Khusainov, E.D.Gospodchikov, A.G.Shalashov (IAP): **Impact of plasma turbulence on linear mode conversion of quasi-optical wave beams in toroidal magnetic traps.** (15 min.+ 5 min. discussion).
- 15.20 M.E.Viktorov, A.G.Shalashov, E.D.Gospodchikov, D.A.Mansfeld (IAP): **Studying frequency sweeping events in cyclotron emission of energetic electrons in ECR discharge plasmas.** (15 min. + 5 min. discussion).
- 15.40 Discussion.

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Scientific Programme Tuesday, 19 June 2018

- 9.30 H.Laqua (IPP): **Overview of the ECRH experiments at Wendelstein7-X** (25 min. + 5 min. discussion)
- 10.00 G.Denisov, E.Tai, A.Fokin, E.A.Soluyanov et al. (GYCOM, IAP): **Design and Experimental Test Of 250 GHz/300kw/CW Gyrotron.** (25 min. + 5 min. discussion).
- 10.30 N.S.Ginzburg, T.Idehara, V.Yu.Zaslavsky, et al (IAP, FIR FU): **Development of terahertz-range planar gyrotrons with transverse energy extraction operating at the fundamental and higher-order cyclotron harmonics.** (25 min. + 5 min. discussion).
- 11.00 Coffee break
- 11.30 H.Braune (IPP): **Concurrent operation of 10 gyrotrons at W7-X - experience and improvement opportunities** (25 min. + 5 min. discussion)
- 12.00 D.Moseev (IPP): **First Results of CTS on Wendelstein 7-X.** (25 min. +5 min. discussion).
- 12.30 W.Kasperek, S.Kubo, M.Petelin, T.Saito, E.Semenov (IAP, IVGP, NIFS): **A double filtration scheme to analyze CTS spectra.** (25 min. + 5 min. discussion).
- 13.00 Lunch break
- 14.30 S.Hansen (IPP): **Observation and Modelling of Parametric Decay Instabilities during Gyrotron Operation at ASDEX Upgrade** (25 min. + 5 min. discussion).
- 15.00 A.I.Tsvetkov, A.P.Fokin, A.S.Sedov. (IAP): **Data transmission using a gyrotron radiation as carrier.** (15 min. + 5 min. discussion).
- 15.20 V.E.Zapevalov. (IAP): **Problems and solutions for collector systems of powerful gyrotrons.** (15 min. +5 min. discussion))
- 15.40 Discussion

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Scientific Programme Wednesday, 20 June 2018

- 9.30 P.Späh (KIT): **Present status of the ITER EC Upper Launcher integration.** (25min. + 5 min. discussion)
- 10.00 V.I.Belousov, G.G.Denisov, et al. (IAP): **Versions of non-resonant quasi-optical multiplexers (IAP, GPI)** (25 min. +5 min. discussion).
- 10.30 C.Lechte, G.D.Conway, T.Görler, T.Happel, K.Schöbel (IVGP): **Using Fullwave Simulations to Understand the Turbulent Wavenumber Spectrum Measured by Doppler Reflectometry.** (25 min. + 5 min. discussion)
- 11.00 Coffee break
- 11.30 D.I.Sobolev, A.P.Gashturi, G.G.Denisov, et al. (IAP): **Waveguide DC breaks for TE₀₁ and HE₁₁ microwave transmission lines** (15 min. + 5 min. discussion)
- 11.50 V.I.Belousov, A.P.Gashturi, E.V.Koposova, D.I.Sobolev. (IAP): **Grating-based quasi-optical diplexer.** (15 min. +5 min. discussion).
- 12.10 O.A.Ivanov et.al. (IAP): **Emission properties of silicon carbide microstructured cold cathode coated by nanocrystalline diamond films.** (15 min. +5 min. discussion).
- 12.30 T.Scherer (KIT): **Recent developments of Diamond ITER-Torus-windows and large size Brewster-windows** (25 min. + 5 min. discussion).
- 13.00 Lunch break
- 14.30 V.V.Parshin, E.A. Serov (IAP): **The newest ceramic materials for microwaves.** (25 min. + 5 min. discussion).
- 15.00 Guido Link (KIT): **Status of plasma chemistry activities at KIT** (25 min. + 5 min. discussion).
- 15.30 S.V.Egorov, A.A.Sorokin, S.S.Balabanov, et al. (IAP, ICHPS): **Low loss MgAl₂O₄ ceramics for terahertz windows.** (25 min. + 5 min. discussion).
- 16.00 I.I.Volkovskaya, A.Eremeev, Yu.Bykov (IAP): **Measuring absorptivity of ceramic materials at high temperatures in Gyrotron Ceramics Sintering System.** (15 min. + 5 min. discussion).
- 16.20 E.Fedotov, R.M.Rozental, I.V.Zotova, N.S.Ginzburg, A.S.Sergeev, M.Yu.Glyavin, and T.Idehara (IAP, FIR FU): **Frequency Tunable sub-THz Gyrotron for Direct Measurements of Positronium Hyperfine Structure.** (15 min. + 5 min. discussion).
- 16.40 Discussion.

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**Scientific Programme
Thursday, 21 June 2018**

9.30 Discussion & Excursion

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Scientific Programme Friday, 22 June 2018

- 9.30 M.B.Goykhman, A.V.Gromov, N.F.Kovalev, A.V.Palitsin. (IAP): **Wave beams of short radio pulses generated by gigawatt microwave sources.** (25min. + 5 min. discussion)
- 10.00 B.Plaum, M. Schubert, A. Zeitler, C. Lechte, W. Kasparek (IVGP): **Synthesis of reflection gratings for advanced plasma heating scenarios** (25 min. +5 min. discussion).
- 10.30 P.S.Strelkov et al. (GPI): **Plasma relativistic microwave amplifier.** (25 min. + 5 min. discussion)
- 11.00 Coffee break
- 11.30 D.Wagner: (IVGP, IPP): **Prediction of Ohmic Losses in Miter Bend Polarizers** (25 min. + 5 min. discussion).
- 12.00 J.Stober(IPP): **First experiments with ECRH3 on AUG - Status and Plans** (25 min. + 5 min. discussion).
- 12.30 A.V.Sidorov et al., (IAP): **Gas discharge powered by the focused beam of the high-intensive electromagnetic waves of the terahertz frequency band.** (25 min.+5 min. discussion)
- 13.00 Lunch break
- 14.30 S.V.Sintsov et al., (IAP): **Features of the atmospheric pressure CW microwave discharge, sustained by the 24 GHz gyrotron radiation.** (15 min.+5 min. discussion).
- 14.50 N.A.Zavolsky, E.V.Ilyakov, Yu.K. Kalynov, I.S. Kulagin, V.N. Manuilov, A.S. Shevchenko (IAP): **Powerful millimeter-wave relativistic gyrotron operating at the second cyclotron harmonic** (15 min. + 5 min. discussion).
- 15.10 V.A.Skalyga, I.V.Izotov, S.V.Golubev, et al.(IAP): **New developments in the field of high current ECR ion sources at the IAP RAS.** (25 min. + 5 min. discussion)
- 15.40 I.S.Abramov, E.D.Gospodchikov, A.G.Shalashov (IAP): **Modelling of EUV light sources based on microwave discharge in inhomogeneous flow of nonequilibrium plasma with multiply charged tin and xenon ions** (15 min. + 5 min. discussion).
- 16.00 Discussion

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**Scientific Programme
Saturday, 23 June 2018**

- 9.30 I.V.Bandurkin.(IAP): **Two-beam gyrotron with frequency multiplication.** (15 min. +5 min. discussion).
- 9.50 A.I.Tsvetkov. (IAP): **On the dependence of the depressed collector gyromonotron efficiency on the longitudinal structure of the RF field** (15 min. +5 min. discussion).
- 10.10 G.Yu.Golubyatnikov, M.A.Koshelev, A.I.Tsvetkov et al. (IAP): **Medium power THz band gyrotron as a novel spectroscopy tool** (15 min.+ 5 min. discussion).
- 10.30 Coffee break
- 11.00 A.Purea, Ch.Reiter, F.Aussenac, F.Engelke (Bruker): **Augmenting microwave irradiation in MAS DNP NMR samples at 263 GHz** (25 min. + 5 min. discussion)
- 11.30 V.Manuilov, M.Proyavin, M.Glyavin (IAP): **High-efficient K-range gyrotron based complexes with magnetic-shielded coils.** (15 min.+5 min. discussion).
- 11.50 N.S.Ginzburg, M.N.Vilkov, J.Jelonnek et al. (IAP, KIT): **Ultra-Wideband Microwave Oscillator Performance by Coupling of Two Gyro-TWTs with Helical Waveguide.** (25 min.+ 5 min. discussion).
- 12.20 A.Marek (KIT): **Contributions to the Joint DFG-RSF Project - Generation of Ultrashort Microwave Pulses** (25 min.+ 5 min. discussion).
- 13.00 Lunch break
- 15.00 Discussion, elaboration and approval of concluding documents.

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PROGRAM COMMITTEE

1	Litvak A.G.	Co-Chairman	IAP RAS	N. Novgorod
2	Denisov G.G.		IAP RAS	N. Novgorod
3	Zapevalov V.E.	Scientific secretary	IAP RAS	N. Novgorod
4	Roi I.N.		NRC "Kurchatov Institute"	Moscow
5	Thumm M.		KIT	Karlsruhe
6	Jelonnek J.		KIT	Karlsruhe
7	Zohm H.	Co-Chairman	IPP	Garching
8	Wagner D.		IPP	Garching
9	Plaum B.		IVGP	Stuttgart

ORGANIZING COMMITTEE

1	Glyavin M.Yu.	Chairman	IAP RAS	N. Novgorod
2	Sedov A.S.	Deputy Chairman	IAP RAS	N. Novgorod
3	Fokin A.P.		IAP RAS	N. Novgorod
4	Mocheneva O.S.		IAP RAS	N. Novgorod
5	Krapivnitskaya T.O.		IAP RAS	N. Novgorod
6	Abramov I.S.		IAP RAS	N. Novgorod
7	Pavelyev A.B.		IAP RAS	N. Novgorod
8	Osharin I.V.		IAP RAS	N. Novgorod
9	Morozova I.P.		IAP RAS	N. Novgorod
10	Orlov V.B.		GYCOM	N. Novgorod

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List of Chairmen

Monday, June 18

9.30	Morning Session	M. Thumm.
12.30		L.G.Popov
14.30	Afternoon Session	D. Wagner

Tuesday, June 19

9.30	Morning Session	J.Jelonnek
12.10		N.S.Ginzburg
14.30	Afternoon Session	H.Zohm

Wednesday, June 20

9.30	Morning Session	B.Plaum
11.20		I.N.Roi
14.30	Afternoon Session	M.I.Petelin

Thursday, June 21

9.30
11.00

Friday, June 22

9.30	Morning Session	H.Laqua
11.30		A.G.Shalashov
14.30	Afternoon Session	J.Stober

Saturday, June 23

9.30	Morning Session	V.N.Manuilov
11.00		C.Lechte.

30-й совместный Российско-германский семинар по ЭЦРН и гиротронам проводится совместно ИИФ РАН и ЗАО НИИ ГИКОМ

30th Joint Russian-German Meeting on ECRH and Gyrotrons is conducted jointly by IAP RAS and GYCOM Ltd.

Мероприятие проводится при финансовой поддержке Российского фонда фундаментальных исследований: Проект № 18-02-20056.

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