

XVIII Conference on Plasma Surface Interactions

Conference program.

Session №1

Thursday February 5th 10 a.m.

Conference hall: Auditorium

Chair: prof. A. Pisarev

10.00-10.15 – Ye. MARENKOV¹, S. KRASHENNIKOV^{1,2}

¹National Research Nuclear University “MEPhI”

²University of California, San Diego, USA

Evaporation of high-Z dust particles in edge plasma of tokamak

10.15-10.30 – S. KRAT¹, Yu. GASPARYAN, A. PISAREV, M. MAYER², G. DE SAINT-AUBIN², I. BYKOV³, P. COAD⁴, J. LIKONEN⁵, W. VAN RENTERGHEM⁶, C. RUSSET⁷, A. WIDDOWSON⁴, participants of JET-EFDA

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²*Max-Planck-Institut für Plasmaphysik, Garching, Germany*

³*Fusion Plasma Physics, Royal Institute of Technology (KTH), Stockholm, Sweden*

⁴*Culham Science Centre, Abingdon, United Kingdom*

⁵*VTT, Association EURATOM-Tekes, Finland*

⁶*Studiecentrum Voor Kernenergie, Centre D’etude De L’energie Nucleaire, Mol, Belgium*

⁷*National Institute for Laser, Plasma and Radiation Physics, Bucharest, Romania*

Erosion and deposition in JET diverter throughout 2011-2012 experimental series

10.30-10.45 – A. AYRAPETOV, L. BEGRAMBEKOV, A. VOYTYUK, V. TEREITYEV

National Research Nuclear University “MEPhI”

Removing of redeposited boron-carbonic layers

10.45-11.00 – A. SHCHERBAK¹, S. MIRNOV¹, V. LAZAREV¹, N. DZHIGAILO¹, A. BELOV¹, A. VERTKOV², M. ZHARKOV², S. KRAVCHUK¹, I. LYUBLINSKY²

¹State Research Center of Russian Federation Troitsk Institute for Innovation & Fusion Research, Moscow, Troitsk

²JSC “Red Star”, Moscow

Experimental investigations of lithium transport at longitudinal and vertical limiter shadow in T-11M tokamak

11.00-11.15 – A. PSHENOV^{1,2}, A. YEKSAEVA¹, Ye. MARENKOV¹, S. KRASHENNIKOV^{1,3}

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³ University of California, San Diego, USA

Plasma-faced materials surface screening simulation under influence of extreme energy fluxes

11.15-11.30 – D. SINELNIKOV, V. KURNAEV, N. MAMEDOV

National Research Nuclear University “MEPhI”

Modification of nanostructured tungsten surface under ion-beam irradiation

11.30-10.50 – Coffee break

11.50-12.05 – N. BOBYR¹, V. ALIMOV², B. KHRIPUNOV¹, A. SPITSYN¹, A. GOLUBEVA¹, M. MAYER³

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Impact of helium additive on hydrogen isotope exchange in tungsten under successive deuterium and protium-helium plasma irradiation

12.05-12.20 – A. YEVSIN, L. BEGRAMBEKOV, A. KAPLEVSKY

National Research Nuclear University “MEPhI”

Impact of deuterium atom irradiation on hydrogen isotope transport through surface oxide zirconium layer

12.20-12.35 – M. ZIBROV, Yu. GASPARYAN, S. RYABTSEV, A. SHUBINA, A. PISAREV

National Research Nuclear University “MEPhI”

Thermal desorption of deuterium from point defects in tungsten

12.35-12.50 – A. POPKOV, S. KRAT, Yu. GASPARYAN, A. PISAREV

National Research Nuclear University “MEPhI”

Investigations of interaction of lithium-deuterium films with atmospheric gases

12.50-13.05 – D. TRUFANOV¹, Ye. MARENKOV¹, S. KRASHENNIKOV^{1,2}

¹National Research Nuclear University “MEPhI”

²University of California, San Diego, USA

Significance of tungsten adatom diffusion for tungsten fuzz growth

13.05-13.25 – Coffee break

13.25-13.40 – V. YEFIMOV¹, Yu. GASPARYAN¹, A. PISAREV¹, I. KUPRIYANOV²

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²“A. Bochvar High-Technology Research and Development Institute for Non-Organic Materials”, Moscow

Investigation of deuterium accumulation in beryllium under high-power pulse plasma flow

13.40-13.55 – Yu. BORISYUK, A. PISAREV, G. HODACHENKO, N. ORESHNIKOVA, A. TUMARKIN, M. BERDNIKOVA

National Research Nuclear University “MEPhI”

Nitriding of BT-23 titanium alloy in abnormal glow discharge

13.55-14.10 – I. BORODKINA, I. TSVETKOV

National Research Nuclear University “MEPhI”

Calculation of charged particle dynamics in near-wall layer and scattering of plasma-faced surfaces

Session №2

Friday, February 6th 10 a.m.

Conference hall: Auditorium

Chair: prof. V. Kurnaev

10.10-10.40 – S. KRASHENNIKOV^{1,2}, R. SMIRNOV²

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He cluster dynamics in tungsten in the presence of cluster induced formation of He traps

10.40-11.10 – V. KURNAEV

National Research Nuclear University “MEPhI”

Scoping of plasma interaction with materials in Russian Federation for fusion research and technologies

11.10-11.30 – S. MIRNOV

State Research Center of Russian Federation Troitsk Institute for Innovation & Fusion Research, Moscow, Troitsk

Evolution of steady-state tokamak

11.30-11.50 – A. VERTKOV¹, I. LYUBLINSKY^{1,3}, M. ZHARKOV¹, S. MIRNOV^{2,3}, V. LAZAREV², A. SHCHERBAK²

¹ JSC “Red Star”, Moscow

² State Research Center of Russian Federation Troitsk Institute for Innovation & Fusion Research, Moscow, Troitsk

³ National Research Nuclear University “MEPhI”

Development of platelet structured limiters for enclosed lithium cycle tokamaks

11.50-12.10 – Coffee break

12.10-12.30 – Yu. MARTYNENKO

National Research Centre “Kurchatov Institute”, Moscow

National Research Nuclear University “MEPhI”

Metal erosion under influence of plasma flows characteristic of ITER transient states

12.30-12.50 – V. TSYBENKO¹, I. POZNYAK², V. SAFRONOV³

¹ Moscow Institute of Physics and Technology, Dolgoprudny

² State Research Center of Russian Federation Troitsk Institute for Innovation & Fusion Research, Moscow, Troitsk

³ Project Center ITER, Moscow

Investigation of molten metal layer movement under conditions characteristic of ITER transient plasma processes

12.50-13.10 – L. BEGRAMBEKOV, S. VERGAZOV, O. DVOYCHENKOVA, A. YEVSIN, A. KAPLEVSKY, Ya. SADOVSKY

National Research Nuclear University “MEPhI”

Hydrogen transport through oxidized metallic surface under atom and ion irradiation

13.10-13.30 – O. OGORODNIKOVA¹, V. GANN², M. ZIBROV¹, Yu. GASPARYAN¹, V. YEFIMOV¹

¹ National Research Nuclear University “MEPhI”

² National Science Center “Kharkov Institute of Physics and Technology”, Kharkov, Ukraine

Comparison of deuterium accumulation in W, preliminarily damaged by electrons, W ions and neutrons

13.30-14.30 – Lunch

14.30-14.50 – V. BUKHOVETS¹, A. GORODETSKY¹, R. ZALAVUTDINOV¹, A. ZAKHAROV¹, Ye. MUKHIN², A. RAZDOBARIN²

¹ Russian academy of sciences A.N. Frumkin Institute of Physical chemistry and Electrochemistry, Moscow

² Ioffe Physical-Technical Institute of the Russian Academy of Sciences, Saint-Petersburg

Impact of molecular gas traces on tungsten scattering in low-temperature deuterium plasma

14.50-15.10 – N. DEGTYARENKO, A. PISAREV

National Research Nuclear University “MEPhI”

H W Interaction modeling

15.10-15.30 – B. KHRIPUNOV¹, V. KOYDAN¹, A. RYAZANOV¹, V. GUREYEV, V. ZATEKIN², S. KORNIYENKO¹, V. KULIKAUSKAS¹, S. LATUSHKIN¹, A. MUKSUNOV, Ye. SEMENOV, L. DANELYAN¹, V. UNEZHEV

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²Skobeltsyn Institute of Nuclear Physics Lomonosov Moscow State University, Moscow

Investigation of W as a fusion reactor plasma-faced material

15.30-15.50 – K. GUTOROV, I. VIZGALOV, F. PODOLYAKO, I. SOROKIN

National Research Nuclear University “MEPhI”

Film deposition and film deposition removal in slits and regions shielded from plasma in the presence of high-frequency fields

15.50-16.20 – Discussion

17.00 – Welcome together (Room 103, building 33, plasma physics department)