

POSTER PRESENTATIONS

September 13 (Wednesday)

Conference hall of “Mayak” hotel

Section “Current Trends and Prospects of Nuclear Power Development”

- 1 **HIGH-TEMPERATURE OXIDATION OF ZIRCONIUM ALLOYS IN THE OPEN AIR**
E.B. Aryngazy (Kazakhstan, branch IAE NNC RK)

 - 2 **INTERACTION OF CORIUM WITH CERAMIC MATERIAL OF ALUMINIUM OXIDE (Al_2O_3) WITH A LEAD GASKET IN SEVERE CORE-MELT ACCIDENT**
M.K. Bekmulin (Kazakhstan, NNC RK, NP JSC “Shakarim University of Semey”)

 - 3 **USING OF ELECTROSLAG REMELTING TO CLEAN RADIOACTIVE CONTAMINATED METAL**
S.A. Dolzhikov (Kazakhstan, branch IAE NNC RK)

 - 4 **METHOD FOR CALCULATING DYNAMIC PARAMETERS OF THE IGR RESEARCH REACTOR**
O.M. Zhanbolatov (Kazakhstan, branch IAE NNC RK)

 - 5 **CROSS-SECTION OF PROTON AND DEUTERIUM PRODUCTION FROM THE INTERACTION OF PROTONS WITH 22 MeV ENERGY AND COBALT**
T.K. Zholdybayev (Kazakhstan, RSE “Institute of Nuclear Physics”)

 - 6 **RESULTS OF STATISTICAL DATA ANALYSIS OF RFCS-KTM OBTAINED AS A RESULT OF STUDY FROM KTM TOKAMAK RADIATION FIELD CONTROL SYSTEM**
A. T. Izbaskhanova (Kazakhstan, branch IAE NNC RK)

 - 7 **EXPERIMENTAL DEVICE TO STUDY RADIATION HEATING OF CONSTRUCTIONAL MATERIALS**
R.E. Kelsingazina (Kazakhstan, branch IAE NNC RK)

 - 8 **CAPABILITIES OF UNCHARGED SOFTWARE TO SOLVE PROBLEMS OF NUCLEAR FUEL RADIONUCLIDE COMPOSITION CHARACTERIZATION**
A.K. Mukhamediyev (Kazakhstan, branch IAE NNC RK)

 - 9 **JUSTIFICATION OF NUCLEAR AND RADIATION SAFETY OF IVG.1M SNF TEMPORARY STORAGE**
I.V. Prozorova (Kazakhstan, branch IAE NNC RK)

 - 10 **RESULTS OF PHYSICAL MEASUREMENTS WITH ACTIVATION INDICATORS AS PART OF STUDIES OF THE IGR REACTOR PARAMETERS IN SELF-QUENCHING FLASH MODES**
S.N. Svetachev (Kazakhstan, branch IAE NNC RK)

 - 11 **CALCULATION SUPPORT FOR STUDIES OF THE IGR REACTOR THERMAL CHARACTERISTICS**
A.S. Surayev (Kazakhstan, branch IAE NNC RK)

 - 12 **ANALYSIS OF ELEMENTAL AND ISOTOPIC COMPOSITION OF MATRIX PROTOTYPE SAMPLES FOR IMMOBILIZATION OF IRRADIATED IGR REACTOR FUEL**
A.Zh. Toktaushev (Kazakhstan, branch IAE NNC RK)
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**Section “Prospects of Hydrogen Energy and Controlled
Thermonuclear Fusion Development”**

- 13 **INNOVATIONS AND ACHIEVEMENTS OF THE PROTECTIVE DISCONNECTOR OF THE FAST ENERGY OUTPUT SYSTEM OF SUPERCONDUCTING COILS IN CONTROLLED THERMONUCLEAR FUSION FACILITIES**
D.I. Alexeyev (Russia, JSC “D.V. Efremov NIEEFA”)
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- 14 **TEST BENCH WITH A MOCKUP OF A LITHIUM DIVERTOR MODULE COOLED BY A LOW-PRESSURE VAPOR-GAS MIXTURE**
V.S. Bochkov (Kazakhstan, branch IAE RSE NNC)
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- 15 **DEVELOPMENT AND STUDY OF SORPTION ACTIVE MATERIAL BASED ON Ti-Al-Nb SYSTEM FOR METAL HYDRIDE APPLICATIONS**
E.A. Kozhakhmetov (Kazakhstan, branch IAE RSE NNC)
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- 16 **FEATURES OF HELIUM AND TRITIUM RELEASE FROM CERAMIC PEBBLES OF Li_2TiO_3 IN NEUTRON FLUX FLUCTUATIONS**
Timur Kulsartov (Kazakhstan, branch IAE NNC RK, Al-Farabi KazNU)
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- 17 **ASSESSMENT OF SPATIAL DISTRIBUTION OF LOW-TEMPERATURE PLASMA PARAMETERS AT THE PLASMA-BEAM FACILITY**
A.Zh. Kaiyrbekova (Kazakhstan, branch IAE NNC RK, NP JSC “Shakarim University of Semey”)
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- 18 **HYBRID SWITCHING DEVICE OF THE OPERATIONAL CURRENT SWITCHING SYSTEM FOR CONTROLLED THERMONUCLEAR FUSION FACILITIES**
Yu.N. Latmanizova (Russia, JSC “D.V. Efremov NIEEFA”)
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- 19 **HIGH-TEMPERATURE TESTS OF TIN-LITHIUM CPS UNDER DEUTERIUM PLASMA IRRADIATION**
Yu.V. Ponkratov (Kazakhstan, branch IAE NNC RK)
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- 20 **EXPERIMENTAL STUDIES ON HIGH-TEMPERATURE CORROSION INTERACTION OF TIN-LITHIUM ALLOY WITH STAINLESS STEEL AND REFRACTORY METALS**
E. Saparbek (Kazakhstan, branch IAE NNC RK; Russia, NR TPU)
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- 21 **ANALYSIS OF PLASMA HEATING EFFICIENCY BY THE SYSTEM OF ADDITIONAL ICR HEATING OF THE KTM TOKAMAK**
A.N. Satibekov (Kazakhstan, branch IAE NNC RK)
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- 22 **THE CORE STRUCTURE, FUSION**
D.M. Taniyev (Kazakhstan, Individual Enterprise “Taniyev D.M.”)
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- 23 **DEVELOPMENT AND CREATION OF AN AUTOMATED SYSTEM FOR LOW-TEMPERATURE PLASMA RESEARCH**
T.R. Tulenbergenov (Kazakhstan, branch IAE NNC RK, NP JSC “Shakarim University of Semey”)
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- 24 **TESTS OF PLASMA DENSITY CHANGE SYSTEM BASED ON GAS-DYNAMIC MOLECULAR BEAM SOURCE**
A.A. Turkach (Kazakhstan, branch IAE NNC RK, D. Serikbayev EKTU)
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- 25 **CATALYZER BASED ON $\text{Sr}_{0,5}\text{Ba}_{0,5}\text{Co}_{0,8}\text{Fe}_{0,2}\text{O}_{2,78}$ COMPOSITION FOR HYDROGEN SYNTHESIS AND STORAGE**
K.I. Yanushkevich (Belarus, SA “SPC NAS of Belarus for Material Research”)
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Section “Radiation Ecology and Medicine”

- 26 **GEOINFORMATION TECHNOLOGIES IN THE SURVEY OF THE SEMIPALATINSK TEST SITE**
M.T. Abisheva (Kazakhstan, branch IRSE NNC RK)
- 27 **EXPERIMENTAL CAPABILITIES OF THE IRT-T REACTOR FOR NEUTRON CAPTURE THERAPY**
M.N. Anikin (Russia, NR TPU)
- 28 **PECULARITIES OF IRTYSH RIVER SIMULIDAE BREEDING**
K.K. Akhmetov (Kazakhstan, NC JSC “Toraighyrov University”)
- 29 **DATABASE AS AN ELECTRONIC ARCHIVE OF SCIENTIFIC ACTIVITY OF THE INSTITUTE OF RADIATION SAFETY AND ECOLOGY**
I.A. Bachurina (Kazakhstan, branch IRSE NNC RK)
- 30 **METROLOGICAL SUPPORT OF DOSIMETRY LABORATORIES**
Yu.A. Verkhusha (Russia, Scientific Production Enterprise “ATOMTEX”)
- 31 **ASSESSMENT OF WATER QUALITY OF SAMPLES FROM KALBAJAR DISTRICT OF AZERBAIJAN**
F.Y. Humbatov (Azerbaijan, Institute of Radiation Problems, Baku)
- 32 **STUDY FOR RADIONUCLIDE VERTICAL DISTRIBUTION CHARACTER IN THE BOTTOM SEDIMENTS OF THE STS TERRITORY WATER BODIES**
R.G. Ermakova (Kazakhstan, branch IRSE NNC RK)
- 33 **NUMERICAL RESEARCH OF RADIATION SITUATION OF TYPICAL CENTER OF THE PROTON RADIATION THERAPY**
D.A. Zhidkov (Russia, NRC “Kurchatov Institute”)
- 34 **ANALYSIS OF THE SAMPLES BY LASER SPECTROSCOPY, ICP-MS, RIMS AND INAA**
I.N. Izosimov (Russia, JINR, Dubna)
- 35 **DEVELOPMENT AND IMPROVEMENT OF CYTOGENETIC BIOLOGICAL DOSIMETRY IN THE REPUBLIC OF KAZAKHSTAN**
L.B. Kenzina (Kazakhstan, branch IRSE NNC RK)
- 36 **REGARDING APPLICATION OF ^{137}Cs AND ^{239}Pu ISOTOPES IN RADIO-NUCLIDE ASSESSMENT OF SOIL EROSION**
V.V. Kolbin (Kazakhstan, branch IRSE NNC RK)
- 37 **MKS AT1117 DOSIMETER-RADIOMETER WITH THE BKDN 06 DETECTION UNIT AND A SET OF MODERATOR SPHERES TO RESTORE ENERGY DISTRIBUTION OF NEUTRON FLUX DENSITY**
D.I. Komar (Russia, Scientific Production Unitary Enterprise “ATOMTEX”)
- 38 **ASSESSMENT OF POSSIBLE MEDICAL RISKS FOR POPULATION EXPOSED TO IONIZING RADIATION AS A RESULT OF THE SEMIPALATINSK NUCLEAR TEST SITE ACTIVITY AND WAYS OF THEIR SOLUTION**
F.B. Konovalova (Kazakhstan, SRCRME, NC JSC “Semey Medical University”)
- 39 **MODELLING OF DOSE DISTRIBUTION FORMATION SYSTEM FOR CONFORMAL PROTON BEAM THERAPY OF OPHTHALMOLOGICAL CANCER PATIENTS**
K.S. Krasilschikov (Russia, NRC “Kurchatov Institute”)
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- 40 **CONTENT OF ARTIFICIAL RADIONUCLIDES IN “SOIL-PLANT” SYSTEM AT THE TERRITORY OF “SARY-UZEN” SITE**
P.E. Krivitskiy (Kazakhstan, branch IRSE NNC RK)
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- 41 **DEVELOPMENT OF A METHODOLOGY FOR INTEGRATED ASSESSMENT OF AIR BASIN CONDITION IN ZONE OF NFC FACILITIES INFLUENCE**
A.A. Kruglykhin (Kazakhstan, branch IRSE NNC RK)
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- 42 **APPLICATION OF LITHIUM-CONTAINING SCINTILLATORS FOR SEPARATE DETECTION OF GAMMA RADIATION AND NEUTRONS**
I.A. Lagutskiy (Russia, Scientific Production Unitary Enterprise “ATOMTEX”)
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- 43 **TRANSFER OF $^{239+240}\text{Pu}$ INTO POULTRY MEAT DURING LONG-TERM INGESTION WITH SOIL, WATER AND GRASS MEAL**
A.S. Mamyrbayeva (Kazakhstan, branch IRSE NNC RK)
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- 44 **STUDY OF CYTOGENETIC PARAMETERS OF CALAMAGROSTIS EPIGEJOS GROWING UNDER CONDITIONS OF RADIONUCLIDE AND CHEMICAL CONTAMINATION ON THE TERRITORY OF SEMIPALATINSK TEST SITE**
K.S. Minkenova (Kazakhstan, branch IRSE NNC RK)
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- 45 **APPROBATION OF METHOD FOR MEASURING TOTAL ALPHA-, BETA ACTIVITY IN WATER WITH THE USE OF LIQUID SCINTILLATION SPECTROMETER**
K.T. Mustafina (Kazakhstan, branch IRSE NNC RK)
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- 46 **DETERMINATION OF RADIOCARBON IN ENVIRONMENTAL MEDIA OF THE STS TERRITORY**
A.M. Raimkanova (Kazakhstan, branch IRSE NNC RK)
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- 47 **JUSTIFICATION FOR CONDUCTING RESEARCH TO ASSESS THE ENVIRONMENTAL CONSEQUENCES OF URANIUM DEPOSIT DEVELOPMENT IN THE NORTH KAZAKHSTAN REGION**
S.B. Subbotin (Kazakhstan, branch IRSE NNC RK)
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- 48 **SELECTIVE DETECTION OF $^{90}\text{Sr}/^{90}\text{Y}$ UNDER GAMMA-RAY FIELD USING THE LIQUID LIGHT GUIDE CERENKOV COUNTER**
Yuta Terasaka (Japan, Collaborative Laboratories for Advanced Decommissioning Science, Japan Atomic Energy Agency)
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- 49 **STUDY OF UNDERGROUND WATER CONDITION IN THE NORTHERN PART OF BALKHASH LAKE**
T.Sh. Toktaganov (Kazakhstan, branch IRSE NNC RK)
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- 50 **ARTIFICIAL RADIONUCLIDES IN THE VEGETATION COVER DURING NFC FACILITIES MONITORING IN THE STS TERRITORY**
A.V. Toporova (Kazakhstan, branch IRSE NNC RK)
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- 51 **PREPARATORY WORK PRIOR OPERATION OF RADIONUCLIDE NOBLE GASES STATION AT NNC RK**
D.V. Turchenko (Kazakhstan, branch IRSE NNC RK)
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- 52 **AUTOMATED RADIOMETER FOR MEASUREMENT OF URANIUM AND PLUTONIUM IN WATER SOLUTIONS**
F.F. Faizrakhmanov (Russia, FSBI “Hygiene and Epidemiology Center #15” of Federal Medical Biological Agency of Russia)
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- 53 **QUALITY ASSESMENT OF DRINKING WATER OF ALMATY CITY**
P.V. Kharkin (Kazakhstan, RSE “Institute of Nuclear Physics”)
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- 54 **MOBILITY OF TECHNOGENIC RADIONUCLIDES (^{137}Cs , ^{152}Eu , ^{60}Co) IN ALLUVIAL SEDIMENTS OF YENISEI RIVER (NEAR THE INFLUENCE ZONE OF KRASNOYARSK MINING AND CHEMICAL COMBINE)**
A.V. Chuguevskiy (Russia, V.S. Sobolev Institute of Geology and Mineralogy of the Siberian Branch of the RAS)
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- 55 **EFFECT OF NATURAL BACKGROUND RADIATION HAZARD ON HABITAT AND ENVIRONMENT**
Daya Shanker (India, Department of Earthquake Engineering, Indian Institute of Technology Roorkee)
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- 56 **USING OF MODIFIED HUMATE CONTAINING PREPARATION FOR SORPTION OF HEAVY METALLS AND RADIONUCLIDES IN MODEL SOLUTIONS AND SURFACE WATERS OF “DEGELEN” SITE TUNNELS**
E.Z. Shakenov (Kazakhstan, branch IRSE NNC RK)
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- 57 **INITIAL RESULTS OF KAPCHAGAY RESERVOIR WATER BASINS TERRITORY. DISTRIBUTION OF URANIUM ISOTOPES**
S.K. Ydyrysheva (Kazakhstan, RSE “Institute of Nuclear Physics”)
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Section “Strengthening the Nuclear Non-Proliferation Regime”

58 USE OF HISTORICAL PEACEFUL NUCLEAR EXPLOSIONS IN TASKS OF MONITORING

A.E. Velikanov (Kazakhstan, branch IGR NNC RK)

59 WAYS TO IMPROVE THE ACCURACY OF LOCALIZATION AND RECOGNITION IN MONITORING OF SEISMIC EVENTS OF DIFFERENT TYPE AT STS

V.I. Dubrovin (Kazakhstan, branch IGR NNC RK)

60 COMPLEX OF ANALYTICAL METHODS FOR IDENTIFICATION OF URANIUM CONTAINING RAW MATERIAL IN NUCLEAR FORENSICS

M.V. Krasnoperova (Kazakhstan, RSE “Institute of Nuclear Physics”)
