



*International Conference on Electron, Positron,
Neutron and X-Ray Scattering under External
Influences & International School named after
G. A. Askaryan*

16–22 October 2017

Yerevan–Meghri, Armenia

Program



Date	Morning	Afternoon	Evening
<i>October 16Monday</i>	Registration (8:00 to 10:00)		
	Opening Conference and School 10:00		
	Greeting Speech		Oral Sessions
<i>October 17Tuesday</i>	Oral Sessions	Oral Sessions	Poster Sessions
<i>October 18 Wednesday</i>	(8:00) Trip to Meghri (21:00) Excursion		
<i>October 19 Thursday</i>	Lecture	Oral Sessions	Poster Sessions
<i>October 20 Friday</i>	Lecture	Oral Sessions	Oral Sessions
<i>October 21 Saturday</i>	Lecture	Closing in Meghri, Excursion	Welcome Party
<i>October 22 Sunday</i>	(8:00) Trip to Yerevan (21:00)		

October 16 Monday			
9:00 Registration			
Opening Conference and School, Greeting Speech			
10:00	<i>A.R. Mkrtchyan</i> Academician NAS RA		120 min
	<i>A.H. Mkrtchyan</i> IAPP NAS RA Director		
	Invited guests		
Coffee break			
<i>Invited talks</i>			
12:20	<u><i>S. Dabagov</i></u>	Advanced channeling technologies in plasma and laser fields	30 min
12:50	<u><i>H. Backe</i></u> <i>W. Lauth</i> <i>Thu Nhi TRAN THI</i>	Channeling experiments with electrons at the Mainz microtron MAMI	30 min
13:20 Lunch			
<i>Invited talks</i>			
15:00	<u><i>P.A. Aleksandrov</i></u> <i>S.S. Fanchenko</i>	Potentialities of fast ion neutralization at grazing incidence angles from metal surfaces for UV laser sources	30 min
15:30	<u><i>M. Shulha</i></u>	Classical and quantum effects at scattering of high energy charged particles in thin crystals	30 min
<i>Chairman: Prof. S. Dabagov</i>			
16:00	<i>A.R. Mkrtchyan</i> <i>A.H. Mkrtchyan</i> <u><i>A.H. Gevorgyan</i></u>	About peculiarities of absorption and zone structure of metamaterialbased onedimensional photonic crystals	20 min
16:20	<i>A.H. Mkrtchyan</i> <u><i>L.Sh. Grigoryan</i></u> <i>H.F. Khachatryan</i> <i>M.L. Grigoryan</i> <i>A.V. Sargsyan</i>	Features of the oscillations of electromagnetic field of charged particle rotating about a conductive ball	20 min
16:40 Coffee break			
<i>Chairman: Prof. P. Aleksandrov</i>			
17:00	<u><i>A.S. Bagdasarian</i></u> <i>S.A. Bagdasarian</i> <i>V.V. Butenko</i> <i>Yu.V. Gulyaev</i> <i>A.R. Mkrtchyan</i>	Telecommunications environment in the era of information society	20 min

17:20	<i>A.R. Mkrtchyan</i> <u><i>H.S. Yeritsyan</i></u>	The interaction of electromagnetic wave with the anisotropic medium in presence of negative and positive components of dielectric and magnetic tensors simultaneously	20 min
17:40	<u><i>A.S. Abrahamyan</i></u> <i>A.H. Mkrtchyan</i> <i>R.Yu. Chilingaryan</i>	Control of CO ₂ laser power by acoustic fields	20 min
18:00	<u><i>A.S. Abrahamyan</i></u> <i>A.H. Mkrtchyan</i> <i>R.Yu. Chilingaryan</i> <i>A.S. Hakobyan</i> <i>H.T. Hovhanisyan</i> <i>P.H. Mosoyan</i> <i>V.V. Nalbandyan</i>	Cleaning and deposition using a cylindrical planar acousto-plasma magnetron	20 min
<i>October 17 Tuesday</i>			
<i>Invited talks</i>			
9:00	<u><i>A.S. Chepurnov</i></u>	Direct dark mater search experiments	30 min
9:30	<u><i>A.R. Wagner</i></u> <i>A.P. Potylitsyn</i> <i>A.S. Gogolev</i> <i>A.R. Mkrtchyan</i> <i>V.R. Kocharyan</i>	Main results and plans of X-ray optics international Russian–Armenian laboratory	30 min
10:00	<u><i>V.A. Bushuev</i></u> <i>I.A. Petrov</i>	Analysis of a two-crystal delay line for femtosecond pulses of the X-ray free electron laser	30 min
10:30	<u><i>D. Roshchupkin</i></u> <i>O. Plotitsyna</i>	X-ray diffraction by surface acoustic wave	30 min
11:00	Coffee break		
<i>Invited talk</i>			
11:20	<u><i>P. Karataev</i></u>	Laser-wire as a world-class non-invasive transverse beam emittance scanner	30 min

Chairman: Dr. P. Karataev

11:50	<p><i>O.O. Ivashchuk</i> <i>V.Yu. Ionidi</i> <i>A.A. Kaplii</i> <i>A.A. Klenin</i> <u>A.S. Kubankin</u> <i>A. N. Oleinik</i> <i>A. S. Chepurnov</i> <i>A.V. Shchagin</i> <i>V.S. Sotnikova</i> <i>K.A. Vokhmyanina</i></p>	Experimental investigation of properties of X-ray emission in a pyroelectric X-ray source	20 min
12:10	<p><u>S.V. Blazhevich</u> <i>A.V. Noskov</i></p>	On the problem of asymmetry of reflection in a parametric X-ray emission of a divergent beam of relativistic electrons in a single crystal	20 min
12:30	<p><i>V.I. Alexeyev</i> <i>A.N. Eliseyev</i> <i>E. Irribarra</i> <i>I.A. Kishin</i> <i>A.S. Kubankin</i> <u>R.M. Nazhmudinov</u></p>	Parametric X-ray radiation from relativistic electrons interacting with a textured polycrystals	20 min
12:50	<p><i>A.R. Mkrtchyan</i> <u>V.V. Parazian</u> <i>A.A. Saharian</i></p>	Transition radiation on an acoustic superlattice	20 min
13:10	<p><u>A.S. Kotanjyan</u> <i>A.R. Mkrtchyan</i> <i>A.A. Saharian</i></p>	Radiation of surface waves in dielectric waveguides	20 min
13:30	<p><i>T.A. Ishkhanyan</i> <u>A.M. Ishkhanyan</u></p>	Bi-confluent Heun solutions of the Schrödinger equation	20 min
14:00	Lunch		
15:30	Poster Section		
	<p><u>A.M. Yeghiazaryan,</u> <i>A.R. Mkrtchyan</i></p>	Radiation new modes generation in crystals through ultrasound	
	<p><u>A.M. Petrosyan,</u> <i>G. Giester, V.V. Ghazaryan,</i> <i>L.S. Bezhanova, M. Fleck,</i> <i>A.K. Atanesyan</i></p>	New triclinic polymorph of L-histidinium 5-nitrouacilate	

<u>S.G. Gevorkian</u> , <i>A.V. Karmenyan, Chin–Kun Hu</i>	Application of light pressure in the rheology of biopolymers
<u>A.N. Avagyan</u> , <i>H.S. Karayan, N.B. Margaryan</i>	Diamond HPHT technologies in alternative energy engineering
<u>A.G. Sargsyan</u> , <i>O.S. Semirgyan, S.V. Piloyan, A.A. Shahinyan</i>	Investigation of mesomorphism of liquid crystalline: sodium pentadecyl sulfonate–water system under the influence of temperature by the method of X–ray diffraction
<u>A.S. Abrahamyan</u> , <i>R.Yu. Chilingaryan, A.S. Mikayelyan, Q.G. Sahakyan</i>	The use of incorrectly posed inverse problems and catastrophe theory in acoustoplasmic studies
<u>A.S. Abrahamyan</u> , <i>A.H. Mkrtchyan, R.Yu. Chilingaryan</i>	Comparison of glow, arc and magnetron direct current discharges
<u>A.N. Avagyan</u> , <i>G.S. Karayan, M.S. Sakanyan, R.S. Sakanyan</i>	The study of electrical properties of laser–treated diamond polycrystals
<u>M.A. Aginian</u> , <i>S.G. Arutunian, E.G. Lazareva, A.V. Margaryan</i>	Superluminal synchrotron radiation
<u>R. Ts. Gabrielyan</u>	Storage of X–ray photons. X–ray resonator
<u>A.M. Sedrakyan</u> , <i>N.Z. Grigoryan, A.V. Petrosyan</i>	Study of induction of the inductive sensor, depending on the coefficient of expansion of the thermal element
<u>N.Z. Grigoryan</u> , <i>A.M. Sedrakyan</i>	With small size and high–level erasing magnetic heads
<u>A.M. Sedrakyan</u> , <i>N.Z. Grigoryan, A.D' Alexander</i>	The inductive system as one more possible presentation of an alternative energy source
<i>L.V. Levonyan, <u>H.M. Manukyan</u></i>	Formation of the X–ray phase contrast under the diffraction focusing of the spherical wave on the short period superlattice
<u>V.V. Harutyunyan</u> , <i>E.M. Aleksanyan, A.H. Badalyan, N.E. Grigoryan</i>	Radiation stability and optical properties of thermoregulating materials
<i>O.O. Ivashchuk, V.Yu. Ionidi, <u>I.A. Kishin</u>, A.A. Klenin, A.S. Kubankin, M.V. Mishunin, I.S. Nikulin, A.N. Oleinik, A.S. Chepurnov, A.V. Shchagin, A.V. Sotnikov</i>	Improving of pyroelectric X–ray source using carbon nanotubes array

October 18 Wednesday			
8:00	Trip to Meghri, Excursion		
21:00	Arriving Meghri		
October 19 Thursday			
Opening session in Meghri, Greeting Speech			
10:00	A.R. Mkrtchyan Academician NAS RA		60 min
	Invited Guests		
Lecture			
11:00	<u>P.A. Aleksandrov</u>	Electronics, radiation and Moore's law	40 min
11:40	Coffee break		
Chairman: Prof. V.A. Bushuev			
12:10	<u>V.A. Tkal</u> <i>V.A. Bushuev</i> <i>I.A. Zhukovskaya</i> <i>A.A. Babaev</i>	The discrete Fourier analysis of images of defects of structure of single crystals	20 min
12:30	<u>V.E. Asadchikov</u> <i>I.V. Kozhevnikov</i> <i>B.S. Roshchin</i> <i>Yu.O. Volkov</i> <i>A.V. Buzmakov</i> <i>D.A. Zolotov</i> <i>V.V. Volkov</i> <i>A.M. Tikhonov</i>	X-ray methods for studying partially disordered systems: reflectometry, microtomography, small angle scattering	20 min
12:50	<u>L.I. Goray</u> <i>V.E. Asadchikov</i> <i>B.S. Roshchin</i> <i>Yu.O. Volkov</i> <i>A.M. Tikhonov</i>	Theoretical analysis of measured X-ray whispering gallery waves propagating along liquid meniscuses	20 min
Lunch			
Chairman: Prof. V. Tkal			
15:00	<i>O.V. Petrova</i> <i>S.V. Nekipelov</i> <i>A.E. Mingaleva</i> <i>N.N. Shomysov</i> <u>V.N. Sivkov</u>	Studies of NEXAFS – C1s absorption spectra of nanostructured materials with using synchrotron radiation	20 min
15:20	<u>O. Plotitsyna</u> <i>D. Roshchupkin</i>	Surface acoustic wave propagation in graphene film	20 min

15:40	<u>A.V. Targonsky</u> A.E. Blagov Yu.V. Pisarevsky P.A. Prosekov Ya.A. Eliovich V.I. Akkuratov M.V. Kovalchuk	X-ray acoustooptics based on longwave vibrations: current state and prospects	20 min
16:00	Coffee break		
16:20	<i>Poster Section</i>		
	A.E. Blagov, A.S. Boikova, Yu.A. D'yakova, <u>K.B. Il'ina</u> , P.V. Konarev, A.G. Kulikov, A.E. Kryukova, M.A. Marchenkova, Yu.V. Pisarevskii, M.V. Koval'chuk	Small-angle X-ray scattering study of the influence of solvent replacement (from H ₂ O to D ₂ O) on the initial crystallization stage of tetragonal lysozyme	
	<u>A.S. Gogolev</u> , N.A. Filatov, A.V. Vukolov	Characterization of a single photon counting pixel detector for spectroscopic imaging	
	K.Yu. Suponitsky, <u>R.P. Sukiasyan</u> , A.K. Atanesyan, A.A. Danghyan, A.M. Petrosyan	Crystal structures and spectral studies of nonlinear optical L-argininium(2+) di-perchlorate and di-tetrafluoroborate crystals	
	<u>V.V. Margaryan</u> , E.H. Bagdasaryan, V.G. Mirzoyan, A.E. Movsisyan, T.R. Muradyan, H.H. Samsonyan, V.R. Kocharyan	Hard X-ray filter with controllable parameters	
	L.Sh. Grigoryan, H.F. Khachatryan, P.H. Mosoyan, <u>A.V. Sargsyan</u>	Peculiarities of electromagnetic oscillations, generated by a charged particle crossing the flat boundary of conductive medium with vacuum	

October 20 Friday

Lecture

9:30	<u>V.A. Bushuev</u>	Lecture	40 min
10:10	<u>V.A. Tkal</u> <i>I.A. Zhukovskaya</i> <i>A.A. Babaev</i>	Digital methods of express diagnostics quality of substances of different physicochemical nature	40 min
10:50	<u>S.V. Blazhevich</u>	Lecture	40 min
11:30	Coffee break		
Chairman: Prof. D. Roshchupkin			
11:50	<u>V.I. Punegov</u>	X-ray bounded beam diffraction from a crystal modulated by a surface acoustic wave	20 min
12:10	<u>S.V. Blazhevich</u> <i>Yu.P. Gladkikh</i> <i>S.B. Dabagov</i> <i>A.Z. Ligidov</i> <i>A.A. Mazilov</i> <i>A.V. Noskov</i> <i>O.Yu. Shevchuk</i>	Dynamic scattering of X-ray waves in a periodic layered medium	20 min
12:30	<u>B.G. Goldenberg</u> <i>A.V. Dolgikh</i> <i>A.G. Lemzyakov</i> <i>V.P. Nazmov</i> <i>E.I. Palchikov</i>	LIGA method of forming high-contrast collimators and anti-scatter grids with a high aspect ratio for improving the spatial resolution of X-ray images	20 min
12:50	<i>S.A. Bagdasarian</i> <u>A.S. Bagdasarian</u> <i>A.F. Belyanin</i> <i>A.R. Mkrtchyan</i>	Layered structure on the basis of films of polycluster diamond and aluminium nitride for the devices on surface acoustic waves	20 min
13:10	<i>V.R. Kocharyan</i> <u>T.R. Muradyan</u> <i>A.E. Movsisyan</i> <i>E.H. Baghdasaryan</i>	Transfer of modulated X-rays from quartz crystal at the presence of temperature gradient	20 min
13:30	<u>A.G. Kulikov</u> <i>N.V. Marchenkov</i> <i>A.A. Petrenko</i> <i>Yu.V. Pisarevsky</i> <i>A.E. Blagov</i> <i>M.V. Kovalchuk</i>	Time-resolved X-ray diffractometry for properties and dynamics investigation in crystals under external electric field influence	20 min

Lunch

Excursion in Meghri

October 21 Saturday			
Lecture			
9:30	<i>S.A. Bagdasaryan</i> <u>A.S. Bagdasarian</u> <i>A.R. Mkrtchyan</i>	The fundamental foundations for creating a perspective element base for monitoring systems of critically important facilities: wireless sensors on surface acoustic waves	40 min
10:10	<u>V.K. Sarian</u>	Invitation to the use of a powerful experimental ground created in the Russian Federation for monitoring the global processes based on new information technologies.	40 min
11:00	Coffee break		
Chairman: Prof. P. Karataev			
11:30	<i>R.H. Avagyan</i> <u>R.V. Avetisyan</u> <i>V.S. Ivanyan</i> <i>I.A. Qerobyan</i>	The formation of neutron beam based on cyclotron C18/18 proton beam	20 min
11:50	<i>A.R. Mkrtchyan</i> <u>V.R. Kocharyan</u> <i>A.R. Wagner</i> <i>A.E. Movsisyan</i> <i>E.H. Bagdasaryan</i> <i>A.S. Gogolev</i> <i>V.Gh. Mirzoyan</i> <i>A.V. Shaverdyan</i> <i>M.L. Meloyan</i> <i>A.L. Margaryan</i>	X-ray and neutron diffraction from quartz single crystal in the presence of temperature gradient	20 min
Lunch			
Closing in Meghri, Excursion			
October 22 Sunday			
8:00	Trip to Yerevan, Excursion		
21:00	Arriving Yerevan		



Meghri 2017