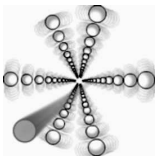
5 - 10 October 2014

Capri - Italy

Channeling 2014



6^{th} International Conference

Charged & Neutral Particles Channeling Phenomena

organized by

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Channeling 2014: *Advance Program*

Sunday, 5 **October**

10:00-12:00 - **Registration at the Reception of Hotel La Residenza**

"CHANNELING PRIMER" at Comune di Anacapri

13:00 - **S.B. Dabagov** Opening

13:10 - **Vice-Mayor by Culture** Greetings from Comune di Anacapri

13:30 - **L. Feldman,** Channeling for Advanced Electronic Material Research *(Invited)*

14:15 - **F. Zimmermann,** CERN Strategy & Future Large Scale Projects *(Invited)*

15:00 - **C.A. Ur & L. Palumbo,** Extreme Light Infrastructure Project *(Invited)*

15:45 - **D. Mazon,** Magnetic Confinement Principles in Tokamak Devices and Actual Challenges *(Invited)*

16:30 - **S. Haroutiunian & A.H. Mkrtchyan** Main Directions of Armenia's Cooperation with other Countries in Science and Innovations. Scientific and Technical Achievements of IAPP NAS RA *(Invited)*

17:15 - **F. Tuguz,** Greetings from AdSU

18:00-20:00 - **Welcome Party at Villa San Michele**

Monday, 6 **October -** ***Hotel La Residenza***

S1: ***Channeling & Radiations in Crystals***
Session 1.1 Chair: S. Dabagov
Dedicated to the memory of M.A. Kumakhov

9:00-9:45 **X. Artru**
Status of QED in Radiation by Relativistic Electrons in Matter *(Invited)*

9:45-10:00 **U. Uggerhøj**
Small Amplitude Short Period Crystal Undulators

10:00-10:15 **A. Shchagin**
Parametric and Characteristic X-ray Radiation for Diagnostics of Interaction of Ultra-Relativistic Particles with Crystalline Deflectors

10:15-10:30 **Yu. Kunashenko**
Combined Effect in Coherent Bremsstrahlung

10:30-10:45 **V. Malyshevsky**
The Features of Transition and Cherenkov Radiation of Multi-Charged Ions

10:45-11:00 **E. Tsyganov**
DD Fusion in Conducting Crystals

Coffee break (30 min)

S1: ***Channeling & Radiations in Crystals***
Session 1.2 Chair: A. Potylitsyn

11:30-12:00 **V. Baryshevsky**
Quasi-Cherenkov Parametric Radiation in a Photonic Crystal *(Invited)*

12:00-12:15 **R. Chehab**
Investigations on a Hybrid Positron Source with a Granular Converter

12:15-12:30 **N. Kalashnikov**
Orientation Dependence of Electron-Positron Pair Production in Single Crystals

12:30-12:45 **Y. Pivovarov**
Quantum Jumps in PXRC Angular Distributions from Relativistic Channeled Electrons and Positrons in a Crystal

12:45-13:00 **S. Trofymenko**
Ionization Effect from Ultra Relativistic Electron-Positron Pair in Thin Plate

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Lunch break (1 h 30 min)

S2: ***Channeling & Radiations in Various Fields***
Session 2.1 **Chair: A. Pathak**

14:30-15:00 **N. Shul'ga**
Electromagnetic Processes at High Energies with "Half-Bare" Particles *(Invited)*

15:00-15:15 **V. Katkov**
Effective Mass of a Photon in Strong Fields

15:15-15:30 **M. Bondarenco**
Multiphoton Effects in Channeling Radiation

15:30-15:45 **A. Tishchenko**
Polarization Radiation from Metamaterials

15:45-16:00 **V. Vysotskii**
Unknown Preconditions and Abnormal Features of Cherenkov Radiation and X-ray Laser Amplification in Realistic Media

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Coffee break (30 min)

S2: ***Channeling & Radiations in Various Fields***
Session 2.2 **Chair: Kh. Chouffani**

16:30-17:00 **H. Yamada**
Synchrotron-Cherenkov Radiation Observed in Laboratory being Predicted in Astronomy *(Invited)*

17:00-17:15 **G. Naumenko**
Coherent Radiation of Relativistic Electrons in Dielectric Fibers

17:15-17:30 **L. Grigoryan**
Transition Radiation Formed on a Smoothly Varying Boundary between Medium and Vacuum: Exact Solution of the Problem

17:30-17:45 **A. Kubankin**
Diagnostics of Polycrystals using Polarization Bremsstrahlung from Relativistic Electrons in Backscattering Geometry

17:45-18:00 **D. Sergeeva**
Conical Effect in Optical and X-Ray Diffraction Radiation

18:00-18:15 **H. Takenaka**
Proposal of a Compact Coherent X-ray Source for the Medical Imaging Use based on an Energy-Recovery Linac and Parametric X-Ray Radiation

18:15-18:30 **K. Batrakov**
Collective Parametric (quasi-Cherenkov) radiation from quantum noise

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PS: *Poster Session*
Session PS1 Chair: D. Hampai

PS1-01 S.V. Anishchenko, V.G. Baryshevsky - Cooperative Parametric (quasi-Cherenkov) Radiation Produced by Electron Bunches in Natural or Photonic Crystals

PS1-02 E.A. Mazur - Generation of Electron Excitations by Quantum Channeled Particle in Crystal

PS1-03 N.P. Kalashnikov, A.S. Olchak - Single Photon Annihilation of Positrons in the Channeling Regime

PS1-04 V.V. Tikhomirov - Optimal Conditions for Positron Radiation in Crystal Undulators

PS1-05 N.V. Maksyuta, V.I. Vysotskii, S.V. Efimenko - Channeling and Quasi-Characteristic Radiation of Charged Particles in Charged Axis of Ionic Crystals of CsCl-type

PS1-06 V.V. Kaplin - Asymmetry in Generation of Near-surface X-rays by 33 MeV Electrons at Grazing Interaction with Thin Si Plate in Magnetic Field

PS1-07 S. A. Mahdipour, B. Azadegan, W. Wagner, S.B. Dabagov - Simulation of positron energy spectra generated by axial channeling radiation of GeV electrons in a thick tungsten single crystal

PS1-08 Yu.A. Chesnokov, G.I. Britvich, R.M. Nazhmudinov, A.S. Kubankin, N.F. Shul'ga, A.V. Shchagin, S.R. Uglov - Characteristic X-ray radiation excited 450 MeV/nucleon C+6 ions and 1 GeV protons in extracted and circulated beams of accelerator U70

PS1-09 Yu.P. Kunashenko, I.V. Fartushev - Creation of electron-positron pairs by channelled positrons

PS1-10 E.I. Fiks, Yu.L. Pivovarov, Y. Takabayashi - Cherenkov radiation from 255 MeV electrons in a diamond crystal

PS1-11 L. Bandiera, E. Bagli, V. Guidi, V. Tikhomirov - RADCHARM++: a Software to Simulate Electromagnetic Radiation Generated by Relativistic Electrons and Positrons in Crystals and Complex Structures

PS1-12 V.V. Bleko, V.V. Soboleva, A.S. Konkov, G.A. Naumenko - Coherent diffraction and Cherenkov radiation of relativistic electrons from a dielectric target in the millimeter wavelength range

PS1-13 A.S. Konkov, A.P. Potylitsyn, M.V Shevelev, A.S. Aryshev - X-Ray Cherenkov Radiation: Theory Limitations and Inconsistency of Experimental Results

PS1-14 S. Abdrashitov, V. Bordovistyn, Y. Pivovarov - Angular Momentum of Channeling Radiation from Relativistic Electrons and Positrons

PS1-15 Y. Takabayashi, V. Bagrov, Y. Pivovarov, O. Bogdanov, T. Tukhfatullin - Spatial-angular distributions of relativistic electrons under channeling in half-wave crystals and corresponding radiation

PS1-16 G. Sushko, A. Korol, A. Solov'yov - Electron and positron channeling in straight and periodically bent axial Si channels

PS1-17 S. Abdrashitov, O. Bogdanov, Y. Pivovarov, S.B. Dabagov - Hybrid Scheme of Positron Source at SPARC LNF Facility

PS1-18 L. Grigoryan, A. Mkrtchyan, H. Khachatryan, H. Muradyan - Continuous potentials of crystallographic axes for a series of single crystals

PS1-19 S. Blazhevich, A. Noskov, G. Grazdankin, R. Zagorodnyuk - Influence of the divergence of ultrarelativistic electron beam on spectral-angular characteristics of coherent X-radiation generated by it in a single-crystal target

PS1-20 I. Vnukov, Y. Goponov, O. Pligina, S. Laktionava, M. Sidnin - Influence of real photon diffraction on parametric X-ray radiation angular distribution in thin perfect crystals

PS1-21 A. Movsisyan, A. Mkrtchyan, A. Mkrtchyan, V. Kocharyan, A. Ghalumyan, V. Nikoghosyan, A. Babayan - Parametrix X-Ray radiation of 50 MeV electrons in crystals

PS1-22 K. Lekomtsev, P. Karataev, A. Tishchenko, J. Urakawa - CST Simulations of Smith-Purcell Radiation from Lamellar and Echelle Gratings for Sub-THz Frequencies

PS1-23 D.A. Shkitov, A.S. Konkov - Coherent Radiation from Bunch Sequences: Theory Background

PS1-24 N. Shulga, E. Bulyak - Formation Length of Undulator Radiation Emitted by High Energy Electrons

PS1-25 M.V. Bondarenco, N.F. Shul'ga - Enhancing Interference in the Spectrum of Bremsstrahlung on a Composite Target

PS1-26 D.Yu. Sergeeva, A.A. Tishchenko, M.N. Strikhanov - Influence of Beam Divergence on Form-factor in X-Ray Diffraction Radiation

PS1-27 V.I. Vysotskii, A.A. Kornilova - Abnormal Optical and X-Ray Phenomena at Motion of Fast Water Stream through Thin Channels

PS1-28 A.V. Shchagin, V.S. Miroshnik, V.I. Volkov - Ceramic Accelerator

Tuesday,* 7 October - *Hotel La Residenza

S3: *X-Rays/Neutrons/Atoms Channeling*
Session 3.1 Chair: L. Allocca

9:00-9:30 **P. Wobrauschek**
Polycapillary Optics for Advanced X-ray Instrumentations *(Invited)*

9:30-9:45 **R. Avakian**
Conceptual Design Project: Accelerator Complex for Nuclear Physics Studies and Boron Neutron Capture TherapyApplication at the Yerevan Physics Institute (YerPhI)

9:45-10:00 **D. Mazon**
Polycapillary Lenses for Soft-X-Ray Transmission: Model, Comparison with Experiments and Potential Application for Tomographic Measurements in Tokamaks

10:10-10:15 **Y. Hayakawa**
Element-sensitive Computed Tomography by Fine Tuning of PXR-based X-ray Source

10:15-10:30 **K. Tsuji**
WD-XRS Imaging with Polycapillary Optics

10:30-10:45 **D. Hampai**
Advanced Studies on the PolyCO Optics Use at XLab-Frascati

10:45-11:00 **L. Marchitto**
3D Structure of Liquid Sprays: X- Ray μ-Radiography and Tomography by Polycapillary Based Technique

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Coffee break (30 min)

S3: *X-Rays/Neutrons/Atoms Channeling*
Session 3.2 Chair: K. Tsuji

11:30-12:00 **J. Fernandez**
Simulation of Direct Transport of X-Ray Photons using the General Purpose Monte Carlo code MCSHAPE: Main Features and Recent Developments *(Invited)*

12:00-12:15 **M. Mazuritsky & A. Marcelli**
Spectroscopy of Excited X-Ray Radiation Channeling through Micro-Channel Plates

12:15-12:30 **A. Gogolev**
Background X-Ray Scattering in Wavelength Dispersive Absorptiometry

12:30-12:45 **A. Lobko**
Peculiarities of Parametric Gamma-Rays in Condition of Anomalous Transmission

12:45-13:00 **A.R. Mkrtchyan**
Accumulation of Thermal Neutrons

Lunch break (1 h 30 min)

S1: ***Channeling & Radiations in Crystals***
Session 1.3 **Chair: V. Guidi**

14:30-15:00 **A. Solov'yov**
Channeling and Radiation of Ultra-Relativistic Electrons and Positrons in Linear, Bent and Periodically Bent Crystals as seen from Simulations with MBN Explorer *(Invited)*

15:00-15:15 **H. Backe**
Channeling of Sub-GeV Electrons in Bent and Periodically Bent Single Crystals

15:15-15:30 **L. Bandiera**
Investigation on the Radiation Emitted by Sub-GeV Electrons in a Bent crystal

15:30-15:45 **A. Korol**
Radiation from Multi-GeV Electrons and Positrons in Periodically Bent Silicon Crystal

15:45-16:00 **N.F. Shul'ga**
Radiation by High Energy Electrons in Ultra Thin Crystal

Coffee break (30 min)

S1: ***Channeling & Radiations in Crystals***
Session 1.4 **Chair: A. Tishchenko**

16:30-17:00 **A. Pathak**
Channeling and Channeling Radiation from Imperfect Crystals with Dislocations and Anharmonic interactions *(Invited)*

17:00-17:15 **E. Mazur**
Crystal Excitation Features in the Photon Emission Spectra of the Quantum Channeled Particle

17:15-17:30 **S. Blazhevich**
Interference Effects in the Radiation of Relativistic electron in the Structure of "Amorphous Matter Layers - Single Crystal"

17:30-17:45 **A. Saharian**
Soft X-Ray Coherent Bremsstrahlung Induced by Hypersonic Waves

17:45-18:00 **O. Bogdanov**
Cherenkov Radiation from Relativistic Channeled Particles

18:00-18:15 **E. Babakhanyan**
Handling of Planar Channeling of Particle in Crystals Depending on Their Parameters

18:15-18:30 **A. Ghalumyan**
Coherent Bremsstrahlung of 20-50 Mev Energy Relativistic Electrons in Quartz Single Crystal Under the External Acoustic Oscillations

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PS: ***Poster Session***
Session PS2 Chair: A. Liedl

PS2-01 S.R. Uglov, V.V. Kaplin, L.G. Sukhikh, A.V. Vukolov - Observation of Quasimonochromatic EUV Radiation Generated by 5.7 MeV Electrons in Periodic Structure of Multilayer Mo/Si Mirror

PS2-02 A.Yu. Savchenko, A.A. Tishchenko, M.N. Strikhanov, M.I. Ryazanov - Parametric X-ray radiation from composite bunches

PS2-03 A.A. Ponomarenko, A.A. Tishchenko, K.V. Lekomtsev, J. Urakawa, M.N. Strikhanov - Physical and CST modelling for THz radiation of electrons in tube with periodically changing internal radius

PS2-04 E.I. Fiks, Yu.L. Pivovarov - Interference Effects in Angular Distributions of X-Ray Transition Radiation from Relativistic Heavy Ions Crossing a Plate: Influence of Absorption and Slowing-Down

PS2-05 K.A. Ispiryan, M. Ispiryan, V. J. Yaralov - Channeling Radiation of Moderate Energy Electrons in the Presence of Laser Beams

PS2-06 V. Soboleva, G. Naumenko, A. Potylitsyn, V. Bleko - Radiation of relativistic electrons in a periodic wire structure

PS2-07 A. Kotanjyan, A. Saharian - The Radiation from a Charge Moving Along a Helical Trajectory With an Arbitrary Cross Section

PS2-08 A.A. Ponomarenko, A.A. Tishchenko, M.N. Strikhanov - X-ray polarization radiation from electrons moving through hole with variable radius

PS2-09 P. Karataev, T. Aumeyr, E. Bravin, T. Lefevre, S. Mazzoni - Experimental investigation of interference effects on transverse beam profile measurements using OTR imaging

PS2-10 H. Khachatryan, L. Grigoryan, M. Grigoryan - Peculiarities of the Oscillations of Electromagnetic Field of a Charged Particle Rotating About a Metallic Ball

PS2-11 K. Gevorgian, L. Gevorgian, H. Gevorgian - Source of circularly polarized monoenergetic X-ray photons

PS2-12 L. Gevorgian - Energy losses of positrons in wiggler nanotubes and spectrum of emitted photons

PS2-13 A. Shamamian, L. Gevorgyan - Microbunched beam as a source of monochromatic X-rays

PS2-14 V. Grishin, D. Nikitin - Full Structure of the Spectra of Polarization Bremsstrahlung (PBR) by Fast Electorn on Atoms

PS2-15 L.A. Avakyan, G.V. Fomin, V.S. Malyshevsky, T.I. Zhilina - Rainbow Scattering of Neutral Atoms by the Crystal Surface

PS2-16 A.S. Gogolev, D. Hampai, A.Kh. Khusainov, M.P. Zhukov, S.B. Dabagov, A.P. Potylitsyn - Results of Testing for Energy Dispersive Si Detector with Large Working Area

PS2-17 A. Lobko, P. Kuzhir, S. Maksimenko - Nanodiamond Targets for Accelerator X-Ray Experiments

PS2-18 V.I. Vysotskii, A.A. Kornilova, Yu.V. Korneeva, T.B.Krit - Modeling and Experimental Investigation of Refractive Short-focus "(X-ray)-(Acousto)-(X-ray)" Lens for Pulse X-ray Radiation

PS2-19 V.M. Sukharev, A.A. Tishchenko, M.I. Ryazanov, M.N. Strikhanov - Analogue of anomalous reflection of X-rays from rough surface in X-ray transition radiation

PS2-20 G. Germogli - Manufacturing and Characterization of Ultra Thin and Bent Silicon Crystals for Studies of Coherent Interactions with Negatively Charged Particle Beams

PS2-21 Yu. Cherepennikov, A. Gogolev, R. Rezaev, A. Ogrebo - Comparison of one- and two-crystals schemes for dual wave x-ray absorptiometry

PS2-22 Yu. Pivovarov, O. Bogdanov, S.B. Dabagov - Generation of Neutrons by Channeling Radiation from Relativistic Electrons

PS2-23 S. Stuchebrov, Yu. Cherepennikov, A. Gogolev, A. Krasnykh, A. Wagner - Dose rate in one-photon and two-photon X-ray investigations

PS2-24 N. Shul'ga, V. Syshchenko - Kinetics of the wave propagation in the system of parallel fibers

PS2-25 C. Polese, S.B. Dabagov, A. Esposito, A. Liedl, D. Hampai - Proposal for a Prototype of Portable micro-XRF Spectrometer

PS2-26 F. Mikhailov - Study elastic properties of the carbyne method of molecular dynamics

PS2-27 V. Kocharyan, A. Mkrtchyan, V. Margaryan, S. Khlopuzyan - Laue lenses for Hard X-rays with Controllable Parameters

PS2-28 V. Kocharyan, V. Margaryan, S. Khlopuzyan, A. Gogolev, P. Grigoryan, M. Tigran - Intensive Laue monochromator for Hard X-rays

Wednesday,
8 **October -** ***Hotel La Residenza***

S4: ***Charged Beams Shaping***
Session 4.1 Chair: S. Redaelli

9:00-9:30 **U. Wienands**
Observation of a Remarkable Deflection of Multi-GeV Electron Beams by a Thin Crystal *(Invited)*

9:30-9:45 **J. Remillieux**
High Energy Channeling and the Experimental Search for the Internal Clock Predicted by L.de Broglie

9:45-10:00 **K. Korotchenko**
Quantum Resonances in Reflection of Relativistic e^- and e^+

10:00-10:15 **K. Vokhmyanina**
Guiding of the Beam of 10 keV Electrons by Micro Size Tapered Glass Capillary

10:15-10:30 **S. Sarros**
Channeling of Protons in Various Types of Radially Compressed Carbon Nanotubes

10:30-10:45 **G. Filippov**
The Effect of Space Dispersion on Polarization Field at Channeling in Nanotube

10:45-11:00 **M.A. Negodaev & A.S. Rusetskii**
Channeling Effect in Polycrystalline Deuterium-Saturated CVD Diamond Target Bombarded by Deuterium Ion Beam

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Coffee break (30 min)

S4: ***Charged Beams Shaping***
Session 4.2 Chair: G. Cavoto

11:30-12:00 **Y.M. Shin**
Toward TeV/m Acceleration: Current Status of CNT-Channelling Acceleration Research at Fermilab's Advanced Superconducting Test Accelerator (ASTA) Facility *(Invited)*

12:00-12:15 **V. Berec**
Backscattering/Transmission of 2 MeV He^{++} ions Quantitative Correlation Study

12:15-12:30 **A. Kovalenko**
Bent Crystal Extraction from a 100 TeV Proton Collider

12:30-12:45 **Yu. Chesnokov**
Study of Crystal Extraction of Circulating Beam from U-70 at Injection Energy

12:45-13:00 **A. Mazzolari**
Manufactuing of Advanced Laue Optics for Gamma ObservationS (LOGOS)

Excursion

18:30-20:00 **Round Table: D. Giulietti**
Propagation of Ultra-Intense Laser Pulses in Plasma Channels and Related Phenomena

Thursday, 9 **October -** ***Hotel La Residenza***

S2: Channeling & Radiations in Various Fields
Session 2.3 Chair: R. Chehab

9:00-9:30 **A. Potylitsyn**
Spectral Characteristics of Radiation from Thomson and Compton Scattering of an Intense Laser Field by Relativistic Electrons *(Invited)*

9:30-9:45 **K. Ispiryan**
Channeling, Dechanneling and Focusing of Charged Particle beams in Hollow Laser Beams *(Invited)*

9:45-10:00 **E. Frolov**
Unified Beam Dynamics and Radiation in Potential Channels formed by Lasers of Arbitrary Polarization

10:00-10:15 **D. Palmer**
The STAR Project

10:15-10:30 **K. Chouffani**
Non-Proliferation Research with Laser Backscattered X-rays

10:30-10:45 **X. Artru**
Similarity between Synchroton Radiation and Photons leaving Bent Optical Fibers

10:45-11:00 **P. Karataev**
Investigation of Optical Diffraction Radiation for Non-invasive Diagnostics in Circular Accelerators

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Coffee break (30 min)

S5: ***Novel sources: FEL/Laser/Plasma Channels***
Session 5.1 Chair: A. Esposito

11:30-12:00 **A. Caldwell**
AWAKE - the Proton Wakefield Acceleration Experiment *(Invited)*

12:00-12:30 **V. Malka**
Compact X Ray Beams produced with Laser Plasma Accelerators *(Invited)*

12:30-13:00 **G. Dattoli**
Multivariable and Multiindex Bessel Functions: A computational tool for Electromagnetic Processes *(Invited)*

Lunch break (1 h 30 min)

S5: ***Novel sources: FEL/Laser/Plasma Channels***
Session 5.2 **Chair: L. Serafini**

14:30-15:00 **M. Ferrario**
Advanced Accelerator Experiments at SPARC_LAB *(Invited)*

15:00-15:30 **L. Gizzi**
Laser-Plasma Acceleration of Electrons for Radiobiology and Radiation Sources *(Invited)*

15:30-15:45 **M. Galimberti**
Future Challenges in Multi Petawatt High Repetition Rate Laser System

15:45-16:00 **M. Galletti**
Innovative Technique for the Characterization of Ultra-Short Laser Pulses

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Coffee break (30 min)

S5: ***Novel sources: FEL/Laser/Plasma Channels***
Session 5.3 **Chair: M. Ferrario**

16:30-17:00 **D. Giulietti**
Laser-Induced Plasma Channels by Nanosecond to Femtosecond Pulses *(Invited)*

17:00-17:30 **L. Serafini**
Applications and Approaches of Advanced Gamma Ray Compton Sources

17:30-17:45 **M. Gambaccini**
Monte Carlo Simulation of a Collimation System for Low-Energy Beamline (1-5 MeV) of ELI-NP Gamma Beam System

17:45-18:00 **V. Zvorykin**
Multiple Filamentation of Supercritical UV Laser Beam in Atmospheric Air

18:00-18:15 **L. Torrisi**
Ion Acceleration Enhancing from Advanced TNSA Laser–Generated Plasma

18:15-18:30 **A. Curcio**
Innovative X-gamma Ray Sources Based on Laser-Produced Plasmas

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PS: ***Poster Session***
Session PS3 **Chair: C. Polese**

PS3-01 A. Liedl, S.B. Dabagov, D. Hampai, K. Tsuji, C. Polese - On X-ray channeling in a vibrating capillary

PS3-02 V. Trunova, A. Sidorina, K. Zolotarev, V. Kriventsov - The influence of attenuation properties of different materials on the results of X-ray fluorescence analysis

PS3-03 Z. Kókai, L. Zanini, F. Mezei, A. Takibayev, E. Klinkby, P. Zagyvai, S. Török - Activation of the neutron guides designed for the European Spallation Source

PS3-04 A.M. Rasulov, F.F. Umarov, A.A. Dzhurakhalov, A.B. Sagyndykov, D.K. Ahmadaliev - Computer Simulation of Low-Energy Ion Near-Surface Implantation at Channeling Conditions and Different Mass Ratio of Colliding Particles

PS3-05 E. Bagli, V. Guidi - Study of the Influence of Defects on Channeling and Volume Reflection with DYNECHARM++

PS3-06 Y. Takabayashi - Observation of Channeling Effects for Relativistic Electrons in a Polycrystal

PS3-07 B. Azadegan, F. Memariani, S.B. Dabagov - Electron Channeling Resonance and de Broglie's Internal Clock

PS3-08 A.S. Kubankin, R.M. Nazhmudinov, A.N. Oleinik, A.V. Schagin, K.A. Vokhmyanina - Turning of Electron Beam by Pyroelectric Crystals

PS3-09 N.F. Shul'ga, I.V. Kirillin - About the Probability of Close Collisions during Stochastic Deflection of Positively and Negatively Charged Particles by a Bent Crystal

PS3-10 A.S. Sabirov - Channeling of Fast Ions in Nanotubes with Weak Chaotic Curvature

PS3-11 A.V. Shchagin, N.F. Shul'ga, S.V. Trofymenko - Semiconductor detectors with smoothly tunable thickness for study of relativistic charged particles ionization loss

PS3-12 O.C. Druj, V.V. Yegorenkov, A.V. Shchagin, V.B. Yuferov - Bent glass tube as a deflector of powerful pulsed moderately relativistic electron beam

PS3-13 M.A. Aginian, K.A. Ispirian, M. Ispiryan - Numerical Simulations of Transversal Deflections of Electrons in Tightly Focused Gaussian Laser Beams Necessary for Production of Femtosecond Oscilloscopes and Trains of Attosecond Bunches

PS3-14 I. Lysova, A. Mikhailov - Energy characteristics of particles of atomic flux in carbon nanotube

PS3-15 Yu.N. Shtanov, V.P. Koshcheev, D.A. Morgun - Modelling the deflection of 855 MeV relativistic electrons by a bent silicon crystal using TROPICS software package

PS3-16 N.P. Kalashnikov - Combination (Raman) Scattering Photons by the Channeling Particles

PS3-17 Yu.L. Eykhorn, K.B. Korotchenko, Yu.L. Pivovarov - Band Structure of Transverse Energy Levels of Relativistic Planar Channeled e^- and e^+

PS3-18 A. Dik, S.B. Dabagov, E. Frolov - Beam reflection by planar and curved laser channels

PS3-19 Yu. A. Goponov, S.A. Laktionova, O.O. Pligina, I.E. Vnukov - Influence of grains size on interaction processes of fast particles and quanta with mosaic crystals

PS3-20 A. Stepanov, G. Filippov - Influence of carbon nanotube walls elastic waves on slow particles channeling

PS3-21 A. Ivanov - Interaction of ions with graphene on a substrate

PS3-22 G. Kovalev - Two-Elliptic Coordinates for Study the Scattering of Particles in Arbitrary Bent Crystal

PS3-23 I. Yadgarov, A. Dzhurakhalov, D. Alyabev - Hydrogen atoms channeling through carbon nanotubes

PS3-24 Y. Gavrikov, Y. Chesnokov - The Status of Goniometers for Crystal Collimation Experiment at CERN SPS

PS3-25 Y. Gavrikov - The Development of Angular Measurement System for Crystal Collimation and Channelling Experiments

PS3-26 A.R. Mkrtchyan, A.H. Mkrtchyan, A.A. Saharian, V.R. Kocharyan, A.S. Ghalumyan, et al - Low energy coherent bremsstrahlung of 50 MeV energy relativistic electrons in quartz single crystal under the external acoustic oscillations

PS3-27 V. Shpakov, M. Castellano, E. Chiadroni, A. Cianchi, S.B. Dabagov, M. Ferrario, F. Giorgianni, S. Lupi, A. Mostacci, M. Petrarca, R. Pompili - Near-Field Studies of Coherent Transition and Diffraction Radiation

PS3-28 B. Paroli, E. Chiadroni, M. Ferrario, A. Mostacci, V. Petrillo - Coherence properties and diagnostics of betatron radiation in Laser-Wakefield acceleration

PS3-29 V. Vysotskii, M. Vysotskyy, S. Bartalucci - Nuclear Fusion on Ordered Crystal Target with Participation of Monochromatic Beams of Light or Middle Isotopes

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20:00 **Social Dinner - Restaurant "Paolino"**

Friday, 10 **October -** ***Hotel La Residenza***

S6: ***Crystal Simulation Routines for Particle Accelerators: Comparison and Benchmarking with Experimental Data***
Session 6.1. Chair: F. Galluccio

9:00-9:30 **S. Redaelli**
Goals and Plans for Initial Crystal Collimation Tests at the LHC *(Invited)*

9:30-9:45 **R. Rossi**
Measurements of Coherent Interactions in Silicon Bent Crystals with 400 GeV Proton at CERN H8

9:50-10:05 **A. Taratin**
About Multiple Scattering of High Energy Protons in Crystal Deflectors

10:10-10:25 **E. Bagli**
A Model for the Interaction of High-Energy Particles in Straight and Bent Crystals Implemented in Geant4

10:30-10:45 **Ph. Schoofs**
Recent Advances in the FLUKA Event Generator for Crystal Channeling

10:50-11:05 **D. Mirarchi**
A Crystal Routine for Collimation Studies in Circular Proton Accelerators

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Coffee break (30 min)

S6: ***Crystal Simulation Routines for Particle Accelerators: Comparison and Benchmarking with Experimental Data***
Session 6.2 Chair: W. Scandale

11:30-11:45 **J. Zhang**
ICOSIM++: a Simulation Tool for Crystal aided Collimation Experiments

11:50-12:05 **Yu. Ivanov**
Quasi-mosaic Silicon Crystal Deflectors for LHC Beams (on behalf of UA9 Collaboration)

12:10-12:25 **A. Masi**
High Precision Piezo Goniometer for LHC Crystal Experiment

12:30-12:45 **A. Sytov**
CRYSTAL Simulation Code and New Coherent Effects in Bent Crystal at the LHC

12:50-13:05 **A. Babaev**
Deflection of Positively Charged Heavy Particles by the Crystal Miscut Surface

13:10-13:25 **D. De Salvador**
Development and Test of Germanium Bent Crystals for Channeling Applications

13:30-13:45 **V. Maisheev**
Focusing of High Energy Particles with the Help of Bent Single Crystal

13:50-14:15 **F. Galluccio**
Discussion on "Crystal Simulation Routines for Particle Accelerators: Comparison and Benchmarking with Experimental Data"

Closing
