Channeling 2016: Advance Program

Sunday, 25 September

10:00-12:00 - Registration at the Reception of the Hotel Acquaviva del Garda

"CHANNELING PRIMER" at the "Palacreberg" Centre, Sirmione del Garda

14:00 - S. Dabagov, L. Palumbo, F. Zimmermann Opening

14:10 - Greetings by the Mayor of Comune di Sirmione del Garda

14:25 - F. Ferroni, Greetings by the President of INFN (Invited)

14:40 - F. Zimmermann, ... from LHC to FCC... (Invited)

15:10 - G. Dattoli, Undulator and Free Electron Laser Radiation for Fundamental Physics Research (Invited)

15:50 - J. Remillieux & S. Dabagov, Channeling of Beams and Radiations. 50..40..30 Years History (Invited)

16:20 - N. Kalashnikov, MEPhI: from University Basics to Advanced Technologies (Invited)

16:50 - S. Kuizheva Greetings by MSTU (Adygeya, RF)

18:00-19:00 - Welcome Party at the Platea "Palacreberg"
**Monday, 26 September - Hotel Acquaviva**

**S1: Channeling & Radiations in Crystals**

**Session 1.1** Chair: S. Dabagov

9:00-9:30 **V. Baryshevsky**

The phenomena of spin rotation and depolarization of high-energy particles in crystals at Hadron Collider (LHC) and Future Circular Collider (FCC) energies and the possibility to measure the anomalous magnetic moments of short-lived particles (charm and beauty baryons) and quadrupole moment of Omega-hyperon *(Invited)*

9:30-9:45 **X. Artru**

Correlations in thermal vibrations of crystal atoms. Effect on bremsstrahlung and dechanneling

9:45-10:00 **V. Tikhomirov**

Quantitative theory of channeling particle diffusion in transverse energy and direct evaluation of dechanneling length

10:00-10:15 **V. Berec**

Superposition of waves in interference field and channeling radiation

10:15-10:30 **S. Shulga**

Quantum and classical effects in scattering of fast electrons by the atomic planes of ultrathin crystal

10:30-10:45 **T. Tukhfatullin**

First observation of scattering of sub-GeV electrons in ultra-thin Si crystal at planar alignment and relevance to crystal-assisted rainbow scattering

10:45-11:00 **N. Maksyuta**

Channeling and quasi-characteristic radiation of the charged particles in the charged axes of the ionic crystals with a zinc blende structure

__________________________

Coffee break (20 min)

__________________________

**S1: Channeling & Radiations in Crystals**

**Session 1.2** Chair: F. Zimmermann

11:20-11:50 **A. Potylitsyn**

Effects of spatial coherency in coherent polarization radiation (transition radiation, Cherenkov radiation, parametric X-radiation) *(Invited)*

11:50-12:05 **B. Azadegan**

Non-dipolarity of channeling radiation at GeV beam energies
A. Lobko
On the influence of the PWO crystal structure on the CMS ECAL performance

P. Piot
Development of a compact laser-free accelerator-driven X-ray source based on channeling radiation

N. Kalashnikov
Stimulated resonance radiation of channeling particles

G. Vergunova
Model of the indirect compression of targets under conditions at an energy of 1.5 MJ

Lunch break (1 h 25 min)

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

D. Dauvergne
Proton and light ion deflection at medium energies with planar bent crystals (Invited)

S. Trofymenko
On the measurement of transition radiation characteristics in the pre-wave zone with the use of restricted parabolic mirror

E. Irribarra
Parametric X-ray radiation in the backward geometry under interaction of relativistic electrons with crystalline and polycrystalline structures

V. Syshchenko
Radiation of non-relativistic particle on a conducting sphere and a string of spheres

G. Naumenko
Cherenkov radiation from the target with predetermined dielectric properties produced using 3D-printer

S. Galyamin
Radiation from a wakefield dielectric structure with open end

A. Popova
Photoelectric polarization and quantum-chemical data about electrochemical films formed in perchlorate alcohol solutions

Coffee break (20 min)
S2: Channeling & Radiations in Various Fields
Session 2.2    Chair: N. Shulga

16:50-17:20  A. Tishchenko
Polarization radiation in periodic structures as instrument for hadrons identification in TeV energy range (Invited)

17:20-17:35  A. Saharian
Smith-Purcell radiation from a cylindrical grating

17:35-17:50  D. Sergeeva
Smith-Purcell radiation from 2D photon crystal

17:50-18:05  A. Kubankin
Parametric X-ray radiation in the backward geometry under interaction of relativistic electrons with crystals

18:05-18:20  A. Kotanjyan
Radiation from a charge rotating inside a cylindrical grating

18:20-18:35  E. Gurnevich
Cherenkov and parametric (quasi-Cherenkov) radiations produced by a relativistic charged particle moving through crystals built from metallic wires

PS: Poster Session
Session PS1    Chair: A. Liedl

PS1-01  S. Abdshasitov, O. Boganov, S. Dabagov, Yu. Pivovarov, T. Tukhfatullin - Angular momentum of radiation from relativistic electrons channeled in Si and W crystals

PS1-02  A. Babaev, A. Gogolev, A. Potylitsyn - Coherent parametric X-radiation: conditions of observation

PS1-03  E. Babakhanian - Above-barrier reflection and degenerate states of energy band spectrum at planar channeling of electrons and positrons in crystals

PS1-04  E. Bagli, V. Guidi, A. Mazzolari, L. Bandiera, G. Germogli, A. Sytov, D. De Salvador, N. Argiolas, M. Bazzan, A. Carnera, G. Maggioni, M. Prest, A. Berra, D. Bolognini, D. Liette, E. Vallazza - Experimental study of coherent interaction at high-energy in the presence of crystalline defects

PS1-05  Yu. Kunashenko - Coherent production of electron-positron pairs in channeled state by photon

PS1-06  V. Ganenko, D. Burdeyniy, V. Truten, N. Shulga, K. Fissum, J. Brudvik, K. Hansen, L. Isaksson, K. Livingston, M. Lundin, B. Nilsson, B. Schroder - Radiation spectra of electrons with the energy 200 MeV in diamond crystal at axial orientation
PS1-07  Y. Takabayashi, K. Korotchenko, Yu. Pivovarov, T. Tukhfatullin - Angular distributions of parametric X-ray radiation from a diamond crystal

PS1-08  L. Gevorgian - Undulator radiation and energy losses of a channeled positron in the crystalline wiggler

PS1-09  N. Kalashnikov, A. Olchak - Axial channeling at low energies: the two-dimensional atom with customizable potential

PS1-10  D. Badreeva, N. Kalashnikov - Raman scattering of photons by the channeling electrons

PS1-11  V. Ambartsumov, N. Kalashnikov - Induced resonance evolution of the channeling electron beam

PS1-12  N. Kalashnikov, A. Olchak - Axial channeling at low energies: thin structure of quantum states and electromagnetic radiation

PS1-13  N. Kalashnikov, A. Olchak - Resonance interaction of laser radiation with thin structure of axial channeling particles energy levels

PS1-14  Yu. Eykhorn, S. Dabagov, K. Korotchenko - PXR: estimations for the maxima intensity and temperature dependence

PS1-15  S. Dabagov, K. Korotchenko - Z-dependence of PXR for light and heavy ions


PS1-17  I. Feranchuk, N. San, A. Lobko - Quantum effects for particles channeling in a bent crystal

PS1-18  N. Maksyuta, V. Vysotskii, S. Dabagov - The formation of protonium atoms at channeling of antiprotons in a hydride Lithium crystal

PS1-19  I. Kirillin, N. Shul'ga, L. Bandiera, V. Guidi, A. Mazzolari - Influence of incoherent scattering on stochastic deflection of high-energy negative particle beams in bent crystals

PS1-20  I. Kirillin, N. Shul'ga - Dependence of probability of close collisions of high-energy charged particles in a bent crystal from the orientation of the crystal

PS1-21  A. Bagulya, O. Dalkarov, M. Negodaev, Yu. Pivovarov, A. Rusetskii, T. Tukhfatullin - Orientation effect in d(d,n)3He reaction initiated by 20 keV deuterons at channeling in textured CVD – diamond target

PS1-22  T. Tukhfatullin, Yu. Pivovarov, G. Dudkin, S. Kuznetsov, Yu. Eikhorn - Flux peaking of 7-12 keV deuterons at channelling in TiD2 crystal and enhancement of neutrons yield in d(d,n)3He reaction

PS1-23  A. Rasulov - Developing parallel application on a cluster of personal computers


PS1-26 A. Sabirov - Quantum dynamics of positrons in the channeling in carbon nanotubes

PS1-27 O. Bogdanov, S. Dabagov, Yu. Pivovarov - Specific features of photonuclear reactions yield induced by channeling radiation from relativistic electrons
Tuesday, 27 September - Hotel Acquaviva

S2: Channeling & Radiations in Various Fields
Session 2.3 Chair: H. Backe

9:00-9:30 P. Piot
Plans for X- and γ-ray production at the Fermilab Accelerator Technology & Science Facility (Invited)

9:30-9:45 X. Artru
Derivation of the classical radiation amplitude from stimulated emission

9:45-10:00 M. Bondarenco
Types of interference in highly non-dipole radiation spectra

10:00-10:15 A. Hartin
Towards detection of strong field, Volkov resonances in electron-laser interactions

10:15-10:30 V. Katkov
Polarization tensor of a photon in an electric field

10:30-10:45 E. Bulyak
Kinetics of relativistic electrons passing through quasi-periodic fields

10:45-11:00 A. Babaev
Muon beam channeling in laser standing wave

Coffee break (20 min)

S3: X-Rays/Neutrons/Atoms/Ions Channeling
Session 3.1 Chair: E. Frolov

11:20-11:50 K. Tsuji
XRF imaging based on polycapillary optics (Invited)

11:50-12:05 D. Hampai
2D-3D μXRF elemental mapping reconstruction on archeological samples

12:05-12:20 A. Shchagin
X-ray radiation for beam diagnostics

12:20-12:35 A. Marcelli
Focusing properties of X-ray radiation channeling at the exit of a MCP

12:35-12:50 M. Brenekamp
Characterization of non-gaussian beam profiles of polycapillary lenses
12:50-13:05  **Y. Hayakawa**  
Simultaneous K-edge subtraction tomography for Strontium tracer using parametric X-ray radiation

---

Lunch break (1 h 25 min)

---

**S1: Channeling & Radiations in Crystals**  
Session 1.3  
Chair: R. Chehab

14:30-15:00  **M. Breese**  
A review of transmission channeling experiments using focused MeV protons through thin crystals *(Invited)*

15:00-15:15  **K. Gevorgyan**  
X-rays monochromatic radiation of the bunch of positrons channeled in nanotubes

15:15-15:30  **S. Blazhevich**  
Diffracted transition radiation of a beam of relativistic electrons in a thin single-crystal plate

15:30-15:45  **I. Vnukov**  
Ratio of the contributions real and virtual photons diffraction in thin perfect crystals. Comparison of calculation and experiment

15:45-16:00  **R. Nazhmudinov**  
Evolution of the Landau spectral peak produced by 50 GeV protons in Si detector with smoothly variable thickness

16:00-16:15  **G. Filippov**  
Spontaneous breaking of symmetry in problem of spatial localization of particle moving in a solid

16:15-16:30  **M. Barabanov**  
Perspective study of charmonium, exotics and baryons with charm and strangeness *(cancelled)*

---

Coffee break (20 min)

---

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

16:50-17:20  **N. Shulga**  
Coherent processes and channeling at high energy in thin crystals *(Invited)*
17:20-17:35 V. Guidi
Observation of independence of the nuclear de-channeling length on the particle charge sign

17:35-17:50 R. Chehab
Optimization of an hybrid positron source using channeling

17:50-18:05 A. Shchagin
Textured polycrystal for increasing of positrons production

18:05-18:20 Yu. Eykhorn
Depth oscillations of electronuclear reactions initiated by relativistic planar channelled electrons: quantum versus classical calculations

18:20-18:35 E. Mazur
Manifestation of the band structure in the photon emission spectrum of the fast above-barrier oriented particle

PS: Poster Session
Session PS2 Chair: L. Marchitto

PS2-01 S. Anishchenko, V. Baryshevsky - Statistical fluctuations of radiation in quasi-Cherenkov generators

PS2-02 V. Bleko, A. Konkov, V. Soboleva, G. Naumenko - Application of dielectric fibers for the electron beam diagnostic

PS2-03 D. Danilova, A. Tishchenko, M. Strikhanov - Effects of correlation in transition radiation of super-short electron bunches

PS2-04 S. Galyamin, A. Tyukhtin, E. Belonogaya - Dielectric concentrator for cherenkov radiation: sensitivity and field near the focus

PS2-05 S. Galyamin, A. Peshkov, A. Tyukhtin - Radiation of a moving charge at the interface between vacuum and chiral isotropic medium

PS2-06 H. Gevorgyan, L. Gevorgian - The coherent radiation characteristics of microbunched electron bunch formed in the stack of two plates

PS2-07 S. Uglov, A. Kubankin, A. Vukolov - Angular distributions and spectra of VUV radiation generated by 5.7 MeV electrons in multilayer

PS2-08 V. Malyshevsky - Transition radiation of multicharged ions in a thin plate


PS2-10 S. Blazhevich, R. Zagorodnyuk, S. Nemtsev, A. Noskov - Coherent X-ray radiation generated by divergent beam of relativistic electrons in composite structure "amorphous layer - vacuum - single crystal"
PS2-11 A. Ponomarenko, A. Tishchenko, M. Strikhanov - THz polarization radiation from electrons passing corrugated dielectrical tube under noncentral propagation

PS2-12 A. Potylitsyn, G. Kube - Coherent transition radiation from a train of tilted “pancake-like” ultrashort electron bunches

PS2-13 L. Gevorgian, A. Shamamian - The optimal model of crystalline undulator with intervals

PS2-14 A. Shchagin - Quantum expression for frequency of coherent radiation of charged particle moving through a periodic medium

PS2-15 A. Shchagin - Charge-exchange radiation

PS2-16 S. Boichenko, V. Tlyachev - Angular distribution of the radiation of an electron moving along the arc of a circle

PS2-17 S. Trofymenko, N. Shul'ga - The influence of transition radiation upon electron-positron pair ionization loss

PS2-18 Yu. Goponov, M.A. Sidnin, K. Sumitani, Y. Takabayashi, I. Vmukov - About possibility of high energy electron beam parameters estimation by means of radiation from periodical structures

PS2-19 V. Vysotskii, A. Kornilova, A. Vasilenko - The prediction, observation and study of long-distant undamped thermal waves generated in pulse radiative processes

PS2-20 V. Baryshevsky, A. Gurinovich, E. Gurnevich, P. Molchanov - VFEL-based THz radiation sources with resonators formed by metallic wires

PS2-21 V. Ivanyan, R. Avagyan, R. Avetisyan, I. Kerobyan - GEANT4 Simulations of the Low Energy Neutron Beam Formation

PS2-22 G. Filippov, I. Lysova - Polarization and radiation generated by moving charge in dielectric tube

PS2-23 V. Kocharyan, A. Kiziridi, A. Movsisyan - Dynamical diffraction of thermal neutrons under influence of temperature gradient


PS2-25 A. Aramyan, Art. Mkrtchyan, L. Grigoryan, H. Khachatryan, S. Bilen, M. Parrot, A. Sargsyan - Shock wave induced MHz “glow” of atmosphere

PS2-26 A. Dik, S. Dabagov, E. Frolov - Cooling of ultrarelativistic $\beta$ and $\mu$ particles in laser channels

PS2-27 A. Baryshnikov, S. Dabagov - Simulation of X-rays passing through the capillary structure

PS2-28 S. Abdrashitov, O. Bogdanov, S. Dabagov, Yu. Pivovarov, T. Tukhfatullin - Total yield and spectra of positrons produced by channeling radiation from 0.1–1.5 GeV electrons
Wednesday,
28 September - Hotel Acquaviva

S4: Charged Beams Shaping. Crystal Collimation
Session 4.1 Chair: W. Scandale

9:00-9:30 U. Wienands
Channeling of electrons and positrons at SLAC (Invited)

9:30-9:45 Yu. Chesnokov
Study of crystal extraction of circulating beam from the U-70 at injection energy

9:45-10:00 L. Bandiera
Relaxation of axially 400 GeV/c protons to planar channeling in a bent crystal

10:00-10:15 V. Maisheev
New beam optics on the basis of bent single crystals

10:15-10:30 E. Tsyganov
Cold nuclear fusion development

10:30-10:45 S. Bartalucci
Polarized fuel for controlled thermonuclear fusion

10:45-11:00 M. Negodaev
The interaction of the ion and X-ray beams with energies less than 30 keV with deuterated crystal structures

Coffee break (20 min)

S4: Charged Beams Shaping. Crystal Collimation
Session 4.2 Chair: G. Cavoto

11:20-11:50 W. Scandale
Observation of channeling for 6500 GeV/c protons in the crystal assisted collimation setup for LHC (Invited)

11:50-12:05 A. Kovalenko
Crystal assisted extraction of proton beam from the new FCC injector synchrotron installed within the SPS tunnel (cancelled)

12:05-12:20 A. Mazzolari
Bent crystals for beam extraction from the LHC

12:20-12:35 A. Taratin
Measurements of multiple scattering of high energy protons in bent silicon crystals
12:35-12:50 **D. De Salvador**  
Steering efficiency and dechanneling of a Sub-GeV electron beam as a function of curvature and energy

12:50-13:05 **G. Germogli**  
State-of-the-art bent silicon crystals for high-energy charged particle beam collimation

---

Excursion

---
W1 mini-workshop: *Simulation Techniques for Particle Dynamics in Ordered Structures*  
Session W1.1 Chair: V. Guidi

9:00-9:30 **V. Solovyov**  
Simulation of channeling and radiation of ultra-relativistic projectiles in linear, bent and periodically bent crystals by means of MBN Explorer *(Invited)*

9:30-9:45 **L. Bandiera**  
A method for calculation of emitted radiation in straight and bent crystals based on the Baier-Katkov quasiclassical formula

9:45-10:00 **T. Tukhfatullin**  
BCM-2.0 – the new version of computer code “Basic Channelling with Mathematica©”

10:00-10:15 **E. Frolov**  
Influence of space charge effect on dynamics of charged particles trapped in laser channels

10:15-10:30 **T. Vaughan**  
Electromagnetic simulations of a metamaterial target for applications in particle accelerators

10:30-10:45 **D. Sorokin**  
Modeling of the channeling effect for deuterons in a TiD2 crystal

10:45-11:00 **A. Savchenko**  
Geant4 simulations of the full-size calorimeter for muon G-2 experiment

Coffee break (20 min)

W1 mini-workshop: *Simulation Techniques for Particle Dynamics in Ordered Structures*  
Session W1.1 Chair: M. Breese

11:20-11:50 **M. Asai, E. Bagli**  
The GECO project *(Invited)*

11:50-12:05 **A. Sytov**  
Ab-initio Monte Carlo simulations of relativistic particle scattering and radiation in oriented crystals

12:05-12:20 **S. Sarros**  
Channeling of protons in radially compressed chiral carbon nanotubes
12:20-12:35 **J. Fernandez**  
The X-ray characteristic line in the framework of the Boltzmann transport equation

12:35-12:50 **L. Marchitto**  
Quantitative measurements of fuel spatial densities from GDI sprays through optical and x-ray based techniques

12:50-13:05 **G. Paternò**  
A collimation system for ELI-NP gamma beam system. Design and simulation of performance

---

Lunch break (1 h 25 min)

---

**S5: Novel sources: FEL/Laser/Plasma Channels**  
Session 5.1 Chair: L. Serafini

14:30-15:00 **V. Petrillo**  
Advanced topics in the physics of Compton back-scattering *(Invited)*

15:00-15:30 **F. Zomer**  
The ThomX X-ray source *(Invited)*

15:30-15:45 **F. Lindner**  
Swift ion bunch acceleration by high power laser pulses

15:45-16:00 **D. Giulietti**  
Laser-plasma energetic particle production for aneutronic nuclear fusion experiments

16:00-16:15 **M. Galimberti**  
Short pulse diagnostics improvements in the Vulcan laser system

16:15-16:30 **V. Zvorykin**  
Nonlinear optics of the UV TW laser beam

---

Coffee break (20 min)

---

**S5: Novel sources: FEL/Laser/Plasma Channels**  
Session 5.2 Chair: D. Giulietti

16:50-17:20 **M. Ferrario**  
SPARC LAB recent results and future perspectives *(Invited)*

17:20-17:35 **C. Vaccarezza**  
The SPARC LAB Thomson source upgrade
17:35-17:50 **T. Takahashi**
Development of optical resonant cavities for laser-Compton scattering

17:50-18:05 **I. Drebot**
Observation of elastic photon-photon scattering events using collider based on Compton gamma sources

18:05-18:20 **V. Shpakov**
Plasma-discharge undulator

18:20-18:35 **A. Curcio**
Betatron radiation from electrons accelerated in laser-produced plasma channels

---

**PS: Poster Session**

**Session PS3**

**Chair: D. Hampai**

PS3-01 Yu. Cherepennikov, I. Miloichikova, D. Hampai, S. Dabagov, A. Gogoleva - The polycapillary optics application for double diffraction line intensity increase

PS3-02 E. Dik, S. Dabagov - On charged particles propagation through capillaries

PS3-03 A. Stepanov, G. Filippov - Channeling of low energy atomic particles in carbon nanotubes with heterostructures

PS3-04 M. Iliescu, C. Curceanu - X-ray optics for exotic atoms experiments

PS3-05 V. Kocharyan - Hard X-rays with controlled parameters

PS3-06 E. Kurnikov, S. Dabagov - Computer simulations of particle beams motion into capillaries

PS3-07 A. Liedl, S. Dabagov, D. Hampai, C. Polese - On transverse X beam profile transmitted by polycapillary semi lens

PS3-08 A. Mazzolari, V. Bellucci, R. Camattari, P. Cardarelli, G. Di Domenico, M. Gambaccini, V. Guidi, M. Marziani, G. Paternò, A. Taibi, G. Baldazzi, N. Lanconelli, M. Morigi, E. Peccenini, R. Spighi - LAUe-PEaek Radiotherapy (LAUPER)

PS3-09 S. Stuchebrov, I. Miloichikova, Yu. Cherepennikov, O. Bender, D. Hampai c, S. Dabagov - X-ray investigation of the needle cellular structure by polycapillary optics and lithium fluoride detectors

PS3-10 E. Bagli, V. Guidi, A. Mazzolari - Measurements of the high-efficiency deflection of 400 GeV/c protons due to channeling along the <110> axis of a bent silicon crystal

PS3-11 O. Fomin, A. Stocchi - Crystal parameters optimization for enhancement of deflection efficiency of fast charged particles

PS3-12 V. Vorobev, A. Tyukhtin, S. Galyamin - Non-divergent surface waves from charged particle bunch moving along semi-infinite wire planar structure

PS3-13 G. Kovalev - Spiral scattering of relativistic particles in a bent crystal
PS3-14 G. Kovalev - Dynamics of the relativistic particles and conformal mapping of the crystal
PS3-15 G. Kovalev - High energy microbeams and focusing limits of channeling particles
PS3-16 K. Vokhmyanina, A. Kaplin, A. Kubankin, V. Sotnikova, T. Nikulicheva, A. Chepurnov - Some features of grazing interaction of 10 keV electrons with dielectric surfaces
PS3-17 V. Maishee - Quantitative theory of dechanneling in bent and straight single crystals
PS3-18 A. Sytov, V. Guidi, V. Tikhomirov, E. Bagli, L. Bandiera, G. Germogli, A. Mazzolari - Quasichanneling oscillations in the deflection angle distribution in a bent crystal
PS3-19 A. Sytov, A. Lobko, V. Tikhomirov - Double crystal-based collimation system for high-energy accelerators
PS3-20 C. Curatolo, F. Broggi, L. Serafini - Hadron Photon Colliders as photo-cathode sources of low emittance muon beams
PS3-21 M. Galimberti, D. Shepherd, B. Parry, C. Hernandez-Gomez - Fast beam pointing stabilization for high power laser system
PS3-22 F. Nguyen, G. Dattoli - A proposal for Axion-like particle search with free electron lasers
PS3-24 V. Vysotsky, M. Vysotsky - Features of Cherenkov radiation at channeling
PS3-25 V. Soboleva, G. Naumenko, V. Bleko, A. Potylitsyn - Coherent radiation of relativistic electrons in metamaterials based on the SRR/wire-grid unit cell in millimeter wavelength range
PS3-26 K. Kruchinin, A. Aryshev, M. Bergamaschi, P. Karataev, R. Kieffer, T. Lefevre, S. Mazzoni, N. Terunuma - Micron scale electron beam size measurements using optical transition radiation

20:00 Social Dinner - Restaurant "Abbraccio"
**Friday, 30 September - Hotel Acquaviva**

**W2 mini-workshop: AGTaX: Advanced Generation of THz and X-ray beams /8th edition/**

**Session W2.1. Chair: A. Tishchenko**

9:00-9:30 **A. Aryshev**  
Advanced Generation of THz and X-ray beams using compact electron accelerator *(Invited)*

9:30-9:45 **H. Harrison**  
Polarization of Smith-Purcell radiation and its application to longitudinal beam diagnostics

9:45-10:00 **A. Lancaster**  
Preliminary results for Smith-Purcell radiation from a skewed planar grating using the surface current model

10:00-10:15 **K. Lekomtsev**  
Experimental Investigations of THz radiation from composite corrugated capillary with reflector

10:15-10:30 **M. Shevelev**  
Influence of a space charge effect in a femtosecond electron beam on coherent transition radiation spectrum

10:30-10:45 **A. Aryshev**  
Experimental study of coherent Smith-Purcell radiation monochromaticity

10:45-11:00 **G. Naumenko**  
Coherent grating transition radiation in sub-THz wavelength range

**Coffee break (20 min)**

**W2 mini-workshop: AGTaX: Advanced Generation of THz and X-ray beams /8th edition/**

**Session W2.2. Chair: I. Konoplev**

11:20-11:50 **A. Phelps**  
Periodic structures manufactured by 3D printing for electron beam excitation of coherent sub-Terahertz radiation *(Invited)*

11:50-12:05 **L. Yan**  
Tunable high-peak-current electron bunch train production and its application in THz radiation
12:05-12:20 Y. Du
Recently research progress on Thomson scattering X-ray source at Tsinghua University

12:20-12:35 P. Karataev
Investigation of super-radiant Smith-Purcell radiation from double grating and DC beam

12:35-13:05 **Channeling 2016: Closing**

Lunch break (1 h 25 min)

**W2 mini-workshop: AGTaX: Advanced Generation of THz and X-ray beams**

/8th edition/

Session W2.3. Chair: W. Wagner

14:30-15:00 S. Ghosh
Status of the development of Delhi Light Source (DLS) at IUAC *(Invited)*

15:00-15:15 I. Konoplev
Concept of tuneable, high power source of coherent THz radiation

15:15-15:30 A. Potylitsyn
Angular distribution of coherent Cherenkov radiation from a tilted bunch passing through a slit in target

15:30-15:45 **T. Lefevre**
Cherenkov diffraction radiation from long dielectric material: an intense source of photons in the NIR-THz range

15:45-16:00 A. Tishchenko
Smith-Purcell radiation from a ribbon beam as effective THz source

16:00-16:15 R. Kieffer
Optical diffraction radiation experiment at KEK-ATF2

16:15-16:30 N. Kudryashov
Generation of plasmons with quantum charged fast oriented particle

Coffee break (20 min)

**W2 mini-workshop: AGTaX: Advanced Generation of THz and X-ray beams**

/8th edition/

Session W2.4. Chair: A. Aryshev

16:50-18:00 AGTaX Announcements, Discussions, Closing