

# E-CLOUD'18 (03-07 June 2018)

**Sunday, 3 June 2018**

**Monday, 4 June 2018**

- ECE on Beam Dynamics: observations and prediction (I)** - FRANK ZIMMERMANN (CERN)
- 08:30 E-cloud Effects in CERN accelerator Complex - Giovanni Rumolo (CERN)
- 09:00 Coupled-bunch instabilities and related effects due to electron cloud in SuperKEKB LER - MAKOTO TOBIYAMA (KEK Accelerator Laboratory)
- 09:30 E-cloud observations and simulation at J-PARC - kazuhito ohmi (KEK)
- 10:00 Positron vs electron Beam behavior at PETRA - Rainer Wanzenberg (DESY)
- 10:20 --- Coffee break ---
- ECE on Beam Dynamics: observations and prediction (II)** - Giovanni Iadarola (CERN)
- 10:50 Measurements and simulations of electron-cloud-induced tune shifts and emittance growth at CesrTA - Stephen Poprocki (Cornell University)
- 11:20 RHIC instabilities at transition crossing (su) - Xiaofeng Gu (Brookhaven National Lab)
- 11:50 Electron cloud challenges for future circular machines - Lotta Methner (EPFL)
- 12:20 Investigating the role of photoemission in the e-cloud formation at the LHC - Philipp Dijkstal (Paul Scherrer Institut)
- 12:40 E-cloud studies for FCC-hh - Daria Astapovych (TU Darmstadt)

**Tuesday, 5 June 2018**

- Surface properties, coating and experimental studies (I)** - Rosanna Larciprete (CNR-ISC/LNF-INFN)
- 08:30 SEY: what we know and what we still need to know - Mauro Taborelli (CERN)
- 09:00 SEY measurements of coated surfaces with different coating thickness - Eleonora Belli (CERN)
- 09:20 Characterisation of beam screens extracted from LHC magnets - Valentine Petit (CERN)
- 09:40 SEY studies at CSNS - Shenghua Liu (Institute of High Energy Physics, Chinese Academy of Sciences)
- 10:00 Stainless Steel SEY: A controversial story - Roberto Cimino (LNF)
- 10:10 SEY from noble metals - Luis Antonio Gonzalez Gomez (LNF)
- 10:20 SEY from the LASE surfaces with and without absorbed gases at cryogenic temperatures - Bhagat-Taaj Sian (STFC)
- 10:30 --- Coffee break ---
- Surface properties, coating and experimental studies (II)** - Mauro Taborelli (CERN)
- 11:00 A surface Science approach to SEY studies - Rosanna Larciprete (CNR-ISC/LNF-INFN)
- 11:20 Photo reflectivity and PEY of technical surfaces - Andrea Liedl (LNF)
- 11:40 Photons Interaction with technical surfaces - Marco Angelucci (LNF)
- 12:00 Low SEY surface modelling with VSim' Jonathan SMITH (Tech-X UK Ltd)
- 12:20 MC Simulation of SEY for Noble metals - Martina Azzolini (ECT\* -FBK-Universita' degli studi di Trento)
- 12:40 Low-secondary electron emission coatings for ESA's Galileo - ISABEL MONTERO (ICMM-CSIC)

**Wednesday, 6 June 2018**

- 09:00 **Simulations and diagnostics (I)** - James Crittenden (Cornell University) (until 10:30)
- 09:00 Progress with 3D modelling of beam dynamics in presence of electron cloud - Jean-Luc Vay (Berkeley Lab)
- 09:30 Post-e-cloud regime, challenges for multi-species simulations in beam dynamics - Lotta Methner (EPFL)
- 10:00 A global view on electron cloud instability simulations in the LHC and HL-LHC - Annalisa Romano (CERN)
- 10:30 --- Coffee break ---
- 11:00 **Simulations and diagnostics (II)** - MAKOTO TOBIYAMA (KEK Accelerator Laboratory) (until 13:00)
- 11:00 E-cloud challenges at SuperKEKB and future colliders - kazuhito ohmi (KEK)
- 11:30 Simulations of synchrotron-radiation-induced electron production in the CESR vacuum chamber wall - James Crittenden (Cornell University)
- 12:00 Secondary Emission Models in e-cloud buildup simulations: from the lab to the code - Luca Sabato (CERN)
- 12:20 Preliminary results obtained with the LHC Vacuum Pilot Sector - Elena Buratin (CERN)
- 12:40 DAFNE&ecloud: observations and prospective - Catia Milardi (LNF)

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18:15 Electron cloud effects (ECEs) in accelerators - FRANK ZIMMERMANN (CERN)  
19:00 Welcome party and dinner

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13:00 --- Lunch break ---  
**ECE effects on vacuum and heat load (I)** - Giovanni Rumolo (CERN)  
15:50 An overview on heat loads in the LHC - Giovanni Iadarola (CERN)  
16:20 Effect of synchrotron radiation and chamber properties on LHC electron-cloud heat load - Gerardo Guillermo (CERN (BE))  
16:40 Electron cloud build up in two-beam regions for HL-LHC, heat load and vacuum aspects - Annalisa Romano (CERN)  
17:00 Dynamic pressure related to electron cloud during Run2 machine operation in the LHC - Christina Yin Vallgren (CERN)  
17:20 How does a cryogenic system cope with e-cloud induced heat load? what can we learn from heat load measurements (including evolution, transients, etc)? - Benjamin Bradu (CERN)  
17:40 --- Coffee break ---  
**ECE Effects on Vacuum and heat load (II)** - Maria Rosaria Masullo (NA) (until 19:30) ()  
18:00 Impedance issues in ECE research - Benoit Salvant (CERN)  
18:30 Experimental challenge in linear and circular accelerators driven by impedance issues - Andrea Mostacci (Sapienza)  
18:50 SubTHz EM characterization of coated material - Vittorio Giorgio Vaccaro (NA)  
19:10 Instability caused by e-cloud in combined function magnets: the FERMILAB experience - Sergey Antipov (CERN)  
20:00 --- Dinner ---

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13:00 --- Lunch break ---  
**Multipactoring and related effects** Vincent Baglin (CERN)  
15:00 SEY properties in Plasma research, modelling and measurements Igor Kaganovich (PPPL)  
15:30 Recent advances on multipactor effect in satellites communications RF - Gimeno Martinez Benito (University of Valencia)  
15:50 SEY properties of dielectric materials, modelling and measurements - Mohamed Belhaj (ONERA)  
16:10 Experiments with stable confined electron columns - Katrin Isabell Thoma (Goethe Universität Frankfurt)  
16:30 Multipactoring in the RF structures - Nasrin Nasresfahani (CERN)  
16:50 --- Coffee break ---  
**Electron and photon interaction with low temperature surfaces** - Lotta Methner (EPFL)  
17:10 SR interaction with cryosorbed layers - Rémi Dupuy (LERMA (Sorbonne Université, Obs. Paris))  
17:40 SEY and other material properties studies at cryogenic temperatures - Luisa Spallino (LNF)  
18:00 Characterisation of technical surfaces at cryogenic temperature under electron bombardment - Bernard Henrist (CERN)  
18:20 Coldex: A tool to study cold surfaces in Accelerators - Vincent Baglin (CERN)  
19:00 Football match ECE Theory vs ECE Experiment ---  
20:30 --- Social dinner and dance ---

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13:00 --- Lunch break ---  
**Mitigation (I)** - kazuhito ohmi (KEK)  
15:50 ECE and its cures in the SuperKEKB positron ring - Yusuke Suetsugu (High Energy Accelerator Research Organization (KEK))  
16:20 SEY lowering with a-C coating in SPS and LHC - Pedro Costa Pinto (CERN)  
16:40 Laser Ablated Surface Engineering (LASE) for e-cloud mitigation: from discovery to machine application - reza valizadeh (ASTeC, STFC)  
17:00 Low SEY LASE and NEG coated surfaces and their surface resistance, vacuum properties and particulate generation' - Oleg Malyshev (STFC Daresbury Laboratory)  
17:20 --- Coffee break ---  
**Mitigation (II)** - Oleg Malyshev (STFC Daresbury Laboratory)  
17:40 SEY, pumping properties and surface resistance of new high electric conductivity NEG coating' - adrian hannah (STFC ASTeC)  
18:00 In-situ coating and scrubbing of long narrow beam pipes for eliminating electron clouds and reducing vacuum wall RF resistivity - Ady Hershcovitch (BNL)  
18:20 Intrabunch feedback system development at Dafne - Alessandro Drago (LNF)  
**Outlook and conclusion** - Andrea Ghigo (LNF)  
18:40 ECLLOUD18 Summary and Outlook - FRANK ZIMMERMANN (CERN)  
19:00 ECLLOUD18 Closing remarks - Roberto Cimino (LNF)  
20:00 --- Dinner ---