Winter school on Physics with Trapped Charged Particles

ÉCOLE DE PHYSIQUE
des HOUCHES

Monday 9 January 2012 - Friday 20 January 2012

Ecole de Physique des Houches

Scientific Programme

The school will cover physics with trapped charged particles, including physics of trapped charged particles. Lectures will cover basic trap physics in Penning traps, Paul traps etc., collective behavior and plasmas, as well as applications for fundamental physics, precision spectroscopy, quantum information, frequency standards, antimatter, and recent developments.

Scheduled Talks :

Anderegg, François

"Modes in non-neutral plasmas"

"Internal Transport"

Roos, Christian :

"Quantum Information Processing in ion traps"

"Multifaceted entanglement"

Blaum, Klaus :

"QED tests with highly charged ions"

"Precision mass measurements"

Bollinger, John :

"Penning Traps and strong correlations"

"Rotating wall and centrifugal separation"

Crespo, José :

"Non-destructive diagnostics"

"Highly charged ions in traps"

Curell, Fred :

"Electron Beam Ion Traps (EBIT)"

"Electron Beam Ion Source (EBIS)"

Drewsen, Michael :

"Coulomb Crystals"

"Quantum optics with ion crystals"

Dubin, Dan :

"Single particle dynamics. Basic equilibria."

"External transport"

Fajans, Joel :

"Autoresonance"

"2D Fluid Motion"

Galiana, José Luis Verdú :

"Novel trap designs"

"Circuit QED"

Herfurth, Frank :

"Traps for radioactive ions"

"Ion Bunching"

Knoop, Martina :

"Destructive diagnostics"

"Laser-based diagnostics"

Madsen, Niels :

"Antihydrogen Trapping"

Margolis Helen :

"Atomic clocks in ion traps"

Mehlstaeubler, Tanja :

"Microtraps and QIP"

"Thorium Spectroscopy"

Odom, Brian :

"Dynamics in Paul traps"

"The g-2 experiment"

Pedersen, Thomas Sunn :

"Magnetically Confined Particles"

"Toroids"

Robicheaux, Francis :

"Recombination in Traps"

"Combined Traps (Neutral + Charged)"

Schmidt, Piet O. :

"Quantum logic spectroscopy"

"Fundamental Constants"

Segal, Daniel M. :

"Cooling Techniques"

"Axialization"

Surko, Cliff :

"Positron sources, accumulators and plasmas"

"Tailoring plasmas and beams"

Papash, Alexander :

"Storage Rings"

"Beam Dynamics"

Wester, Roland :

"Multipolar RF traps"

"Trapped Molecules"

Wunderlich, Christoff :

"Cooling Techniques II"

"Quantum Simulations"

Programme Overview