

QUANTOP SPRING MEETING

Norrefjel, March 23 – 26, 2007

Friday, March 23th

Arrival at the hotel, late evening, light meal/snacks will be served

Saturday, March 24th

Breakfast 7:30 – 8:20

Session: Quantum Information Theory

8:20 – 8:50 Anders Sørensen, QUANTOP, Copenhagen: “Outlook: towards a scalable quantum computer”

8:50 – 9:10 Martin Sørensen, QUANTOP, Copenhagen: “3D model of light-atomic ensemble interaction”

9:10 – 9:30 Jonathan Bohr, QUANTOP, Copenhagen: “Quantum memories for quantum repeaters”

9:30 – 10:00 Christian Flindt, QUANTOP, Copenhagen: “A spin-photon entangling diode for long range entanglement generation”

Coffee break 10:00 – 10:30

Session: Solid State Quantum Technology

10:30 – 11:20 Stefan Kröll, Lund Institute of Technology

"Rare earth crystals as hardware for quantum computing and quantum state storage.

Session: Ultracold Atoms

11:20 – 11:50 Thomas Fernholz, QUANTOP, Copenhagen. “TBA”

Lunch 12:30

Session: Solid State Quantum Photonics

16:00 – 16:50 Peter Lodahl, Danish Technical University. “Solid state quantum photonics with photonic crystals”

Coffee break 16:50 - 17:20

Session: Quantum Gasses

17:20-18:10. M. Budde, QUANTOP, Aarhus. “ Quantum gasses group: review and outlook”

18:10- 18:40 Henrik K Andersen, QUANTOP, Aarhus. "Progress on the Aarhus BEC and optical lattice experiment"

18:40 – 19:10 Sune Mai, QUANTOP, Aarhus. "RF transfers in the linear and non-linear Zeeman-shift regime"

Dinner 19:30 – 20:30

Poster session: 20:30 – 21:30

Sunday, March 25th

Breakfast 7:30 – 8:30

Session: Light – Atoms Quantum Interface

8:30 – 9:00 Hanna Krauter, QUANTOP, Copenhagen. “Squeezing as a resource for high fidelity light-atom interface”

9:00 – 9:30 Patrick Windpassinger, QUANTOP, Copenhagen. "Quantum state measurements on cold Cs atoms"

9:30 – 10:00 Jonas Neergaard Nielsen, QUANTOP, Copenhagen. “Progress with the non-classical light source: high purity single photon source, etc”

Coffee break 10:00 – 10:30

Session: Molecular Monolayers

10:30 – 11:20 Manfred Buck, University of St Andrews. “Molecules, monolayers, and networks: routes to tailor interfaces and control the nanometer scale”

Session: Light – Atoms Quantum Interface

11:20 – 11:50 Andrew Hilliard, Christina Olausson, QUANTOP, Copenhagen. “First experiments with Rb BEC at NBI: trap characterization and superradiance”

Lunch 12:30

Session: Lundbeck Theory Center

16:00 – 16:30 Klaus Mølmer, Lundbeck Theory Center, Aarhus. "Presentation of the Lundbeck Center and a discussion of the Hanbury Brown and Twiss effect for atoms"

16:30 – 16:50 Ditte Møller. Lundbeck Theory Center, Aarhus. “Geometric phase gates based on stimulated Raman adiabatic passage in tripod systems.”

Coffee break 17:00 – 17:30

Session: Lundbeck Theory Center

17:30 – 18:00 Etienne Brion. Lundbeck Theory Center, Aarhus. "Universal quantum computation in a neutral atom Decoherence Free Subspace".

18:00 – 18:30 Antonio Negretti. Lundbeck Theory Center, Aarhus. “Quantum Light States Engineering via Quantum Feedback Control”

18:30 – 19:00 Rune Piil Hansen. Lundbeck Theory Center, Aarhus. “Repulsively bound atom pairs in optical lattices”

Dinner 19:30 – 20:30

After dinner talk (surprise).

Party, party...

Monday, March 26th

Breakfast 7:30 – 8:30

Session: Trapped and Cooled Ions

8:30 – 9:15 M. Drewsen, QUANTOP, Aarhus. “Ion Trap Group: review and outlook”

9:15 – 9:40 P. Sta anum, QUANTOP, Aarhus. “ Isotope effects in reactions between Mg+ and HD”

Coffee break 9:40 – 10:10

Session: Trapped and Cooled Ions

10:10 – 10:35 A. Dantan, QUANTOP, Aarhus. “Status of the Cavity QED experiment with large coulomb crystals”

10:35 – 11:00 R. Hendricks, QUANTOP, Aarhus. “Ablation loading of ion traps”

11:00 – 11:25 R. Hendricks, M. Drewsen, QUANTOP, Aarhus. "Forbidden" cooling of 40Ca+ ions.”

Session: Light – Atoms Quantum Interface

11:25 – 11:50 E. S. Polzik, J. Müller. QUANTOP, Copenhagen. ”Quantum Optics Lab: outlook”

Lunch 12:30

Departure