Zkušenosti z účasti na mezinárodních konferencích CEWQO’13 and ICSSUR’13

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KONFERENCE

CEWQO'13

Název konference: Central European Workshop on Quantum Optics 2013
Datum konání: 16.6. - 20. 6. 2013
Místo: Stockholm, Sweden

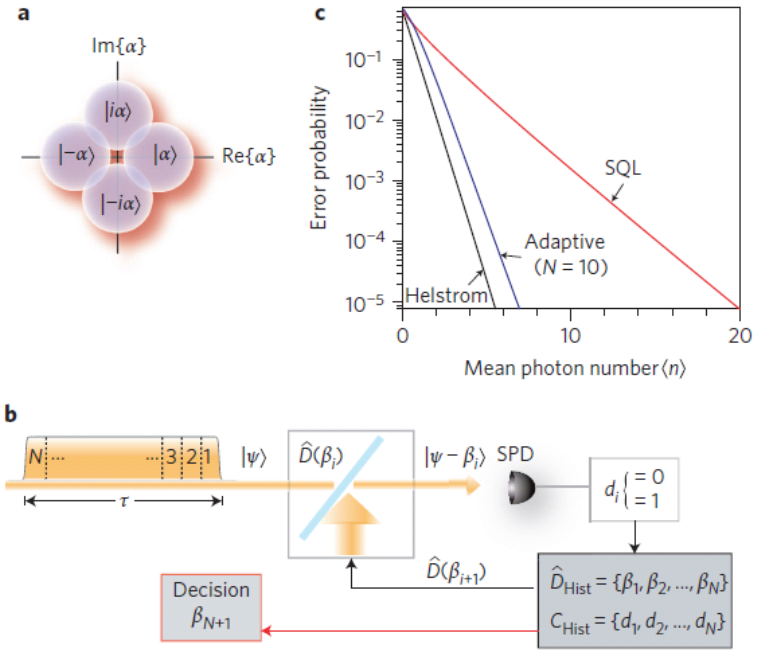
Počet účastníků: >167
Počet přednášek: 28 zvaných a 96 ostatních
Počet posterů: 43

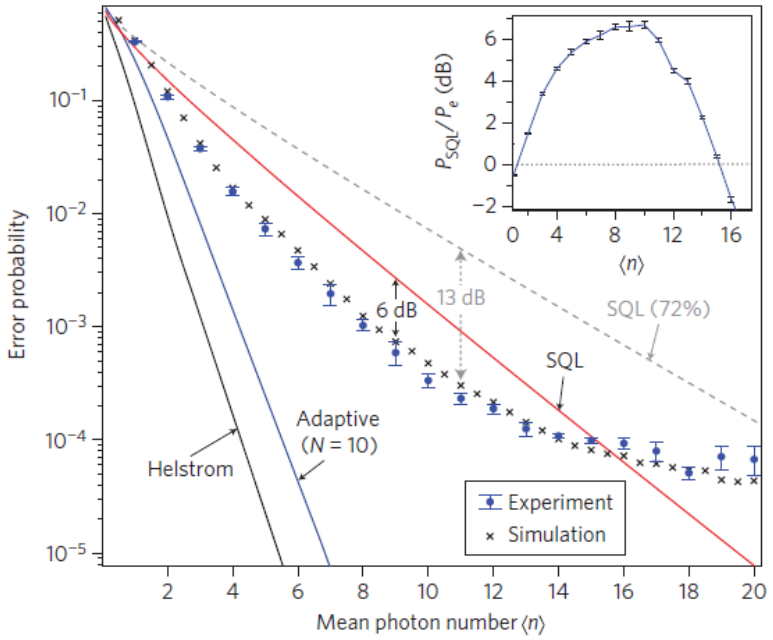
ICSSUR'13

Název konference: International Conference on Squeezed States and Uncertainty Relations (ICSSUR)
Datum konání: 24-28 June 2013
Místo: Nuremberg, Germany
Počet účastníků: 168
Plenární přednášky: 6
Zvané přednášky: 35
Ostatní přednášky: 48
Počet posterů: 79

Zajímavé příspěvky na konferenci CEWQO'13

J. Fan: Discrimination of non-orthogonal coherent states



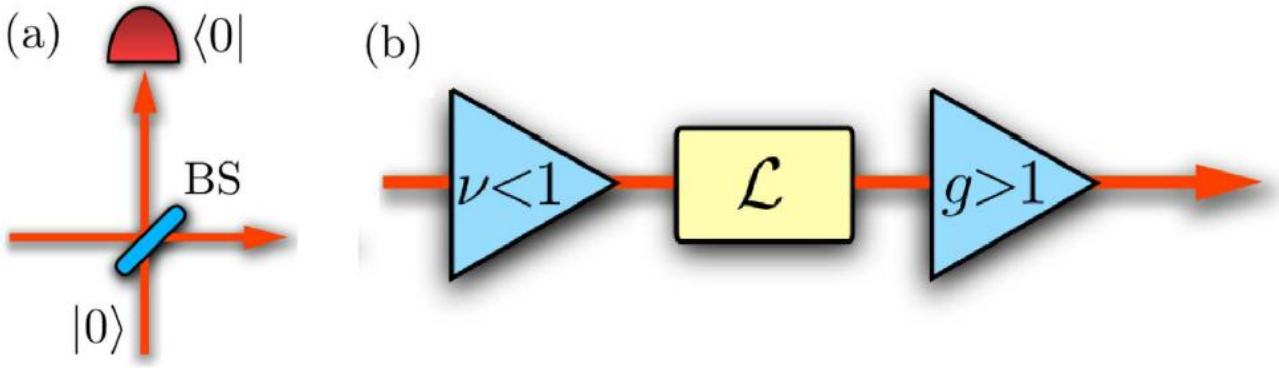


- Quantum detector based on photon counting and feedback strategy
- quantum receiver that unconditionally discriminates four nonorthogonal coherent states with error probabilities below the standard quantum limit.
- receiver achieves error rates four times lower than is possible with any ideal conventional receiver with perfect detection efficiency.

F. E. Becerra, J. Fan, G. Baumgartner, J. Goldhar, J. T. Kosloski & A. Migdall, Nature Photonics, Nature Photonics 7, 147–152 (2013)

Zajímavé příspěvky na konferenci CEWQO'13

N. Cerf: Heralded noiseless amplification and attenuation in quantum optical communication



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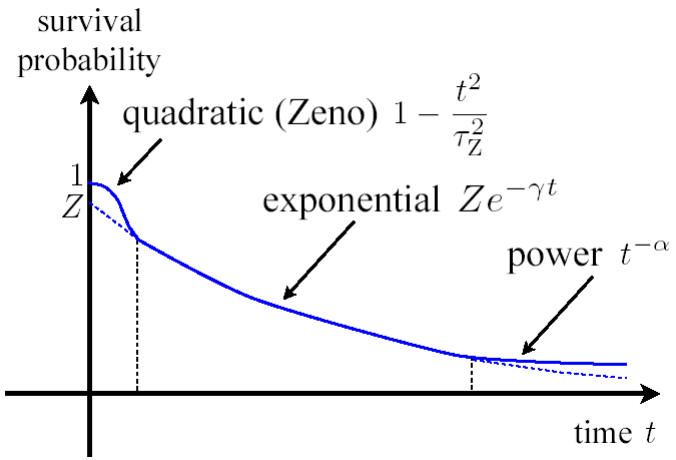
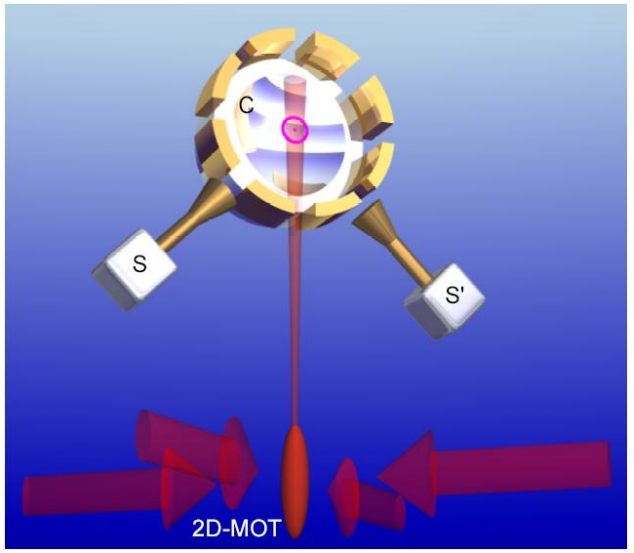
Zajímavé příspěvky na konferenci ICSSUR'13
Quantum Zeno Dynamics of a Field in a Cavity

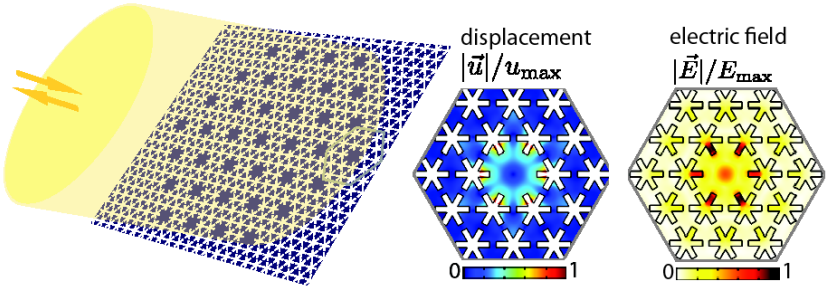


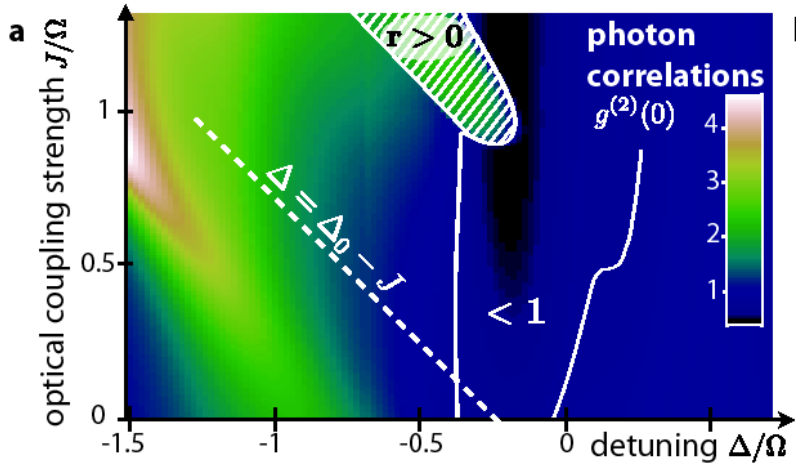


- quantum Zeno dynamics that takes place when a field stored in a cavity undergoes frequent interactions with atoms
- repeated measurements or unitary operations performed on the atoms probing the field state confine the evolution to tailored subspaces of the total Hilbert space
- confinement leads to non-trivial field evolutions and to the generation of interesting non-classical states, including mesoscopic field state superpositions

J.M. Raimond, P. Facchi, B. Peaudecerf, S. Pascazio, C. Sayrin,
I. Dotsenko, S. Gleyzes, M. Brune, and S. Haroche, Phys. Rev. A 86, 032120 (2012)

Zajímavé příspěvky na konferenci ICSSUR'13
Quantum dynamics in Optomechanical Arrays





- nonlinear driven dissipative quantum dynamics of an array of optomechanical systems
- localized mechanical mode interacts with a laser-driven cavity mode via radiation pressure, and both photons and phonons can hop between neighboring sites
- competition between coherent interaction and dissipation gives rise to a rich phase diagram characterizing the optical and mechanical many-body states

Max Ludwig, Florian Marquardt, Phys. Rev. Lett. 111, 073603 (2013).