EINLADUNG
ZUM PHYSikalischen Kolloquium
AM MONTAG, 19. NOVEMBER 2012 UM 17.15 UHR
HS 46/270

ES SPRICHT: Prof. Dr. Jürgen Eschner
Universität des Saarlandes

Thema:

“Controlled single ion - single photon interactions”

I present various experimental implementations of controlled emission and absorption of single photons by single ions. In one experiment, an ion emits single-mode coupled, bandwidth-tunable single photons [1] at high rate, which are absorbed by another ion at ~1m distance. Emission in the sender ion is continuous or triggered; absorption in the receiver is signaled by a quantum jump. In another experiment, a single ion interacts with single photons from a SPDC photon pair source; here, absorption is heralded by the photon’s entangled partner [2]. Absorption and detection in different polarization bases reveals the entanglement of the photons [3]; this is required for photon-to-atom entanglement transfer.


Der Gast wird betreut von Herrn Prof. Ott.

GÄSTE SIND HERZLICH WILLKOMMEN.
KAFFEEAUSSCHANK AB 17.00 UHR


DIE DOZENTEN DES FACHBEREICHS