

Studientage des Forschungsstudiengangs SS 2023

Wednesday 28 June 2023 - Thursday 29 June 2023

Physics Department FAU Erlangen-Nürnberg

Book of Abstracts

Contents

”Ultrastarke Licht-Materie-Kopplung an Dirac-Fermionen”	1
An algorithm to reduce the telescope pointing error in gamma ray detection	1
Cloud depletion in black hole binaries	1
Deep-strong multi-mode light-matter interaction of Landau-polaritons	1
Designing a Lithium Niobate Nanoresonator for Spontaneous Parametric Downconversion	1
Error mitigation for the quantum approximate optimization algorithm	1
Investigating three-body bound-states in the antiferromagnetic Heisenberg ladder using perturbation theory	1
Properties of electron states in corrals, depending on the wall’s density	1
Single scatterer approach in Cu-based circular quantum corrals: Comparison to experimen- tal STM data	2
Superconducting resonators in the 200Mhz regime	2
Superradiance of interacting Atoms from entangled states	2
Suppressing Qubit Cross-Talk Using the Quantum Zeno Effect	2
Surface energy and mass balance of Kersten Glacier on Mt. Kilimanjaro: COSIPY vs. pre- vious modeling	2
The Power of Measurement: quantum Zeno dynamics	2
Time-resolved Faraday ellipticity of excitons in WSe2 for tilted magnetic fields	2

Session 3 / 4

”Ultrastarke Licht-Materie-Kopplung an Dirac-Fermionen”

Parallel Sessions / 14

An algorithm to reduce the telescope pointing error in gamma ray detection

Session 5 (HF) / 5

Cloud depletion in black hole binaries

Session 1 (HE) / 1

Deep-strong multi-mode light-matter interaction of Landau-polaritons

(Bachelor)

Parallel Sessions / 9

Designing a Lithium Niobate Nanoresonator for Spontaneous Parametric Downconversion

Session 5 (HF) / 12

Error mitigation for the quantum approximate optimization algorithm

Parallel Sessions / 6

Investigating three-body bound-states in the antiferromagnetic Heisenberg ladder using perturbation theory

Parallel Sessions / 10

Properties of electron states in corrals, depending on the wall's density

Session 4 (HF) / 13

Single scatterer approach in Cu-based circular quantum corrals: Comparison to experimental STM data

Parallel Sessions / 7

Superconducting resonators in the 200Mhz regime

Session 4 (HF) / 3

Superradiance of interacting Atoms from entangled states

Session 5 (HF) / 11

Suppressing Qubit Cross-Talk Using the Quantum Zeno Effect

Session 4 (HF) / 2

Surface energy and mass balance of Kersten Glacier on Mt. Kili-manjaro: COSIPY vs. previous modeling

Session 1 (HE) / 15

The Power of Measurement: quantum Zeno dynamics

Parallel Sessions / 8

Time-resolved Faraday ellipticity of excitons in WSe₂ for tilted magnetic fields