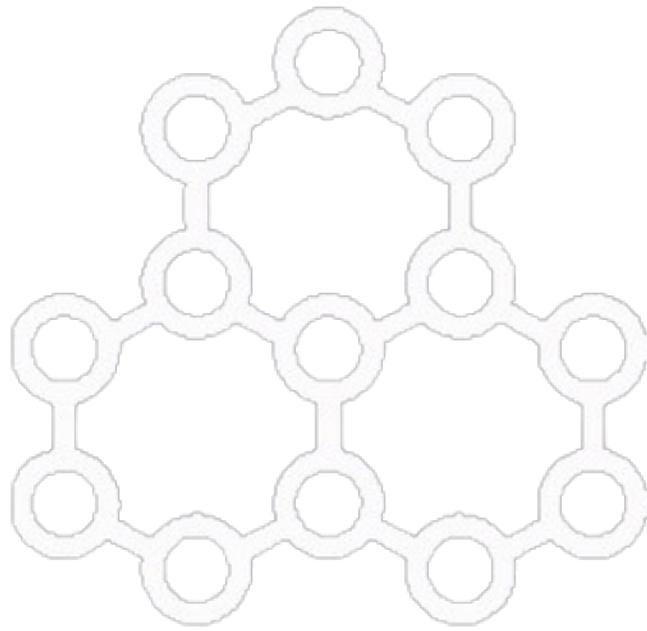


PTOLEMY Collaboration Meeting

Monday, 13 May 2024 - Wednesday, 15 May 2024

Pollica Physics Centre



PTOLEMY

Book of Abstracts

Contents

Welcome	1
The PTOLEMY project	1
Studies of ExB drift at Princeton University	1
Update on RF detection R&D @ Princeton	1
RF measurement @ LNGS	1
Electron kinematic analysis in electron trap setup	1
Report on analog and digital electronic development @ NIKHEF	1
Preliminary studies on calibration methods of the PTOLEMY filter	1
Determination of the decay rate and sensitivity to condensed matter parameters	1
Sensitivity studies to the neutrino mass	2
Status of the T-loading chamber in Rome	2
Tritium handling	2
Report on demonstrator magnet construction	2
CVD growth and AFM measurements	2
Stability of hydrogenated graphene and hard x-ray photoemission on nanoporous graphene	2
Status of the T-loading chamber in Rome	2
Test with TES electron	2
Stability of hydrogenated graphene and diamond measurements on nanoporous graphene	3
Simulation of the whole PTOLEMY detector	3
Determination of the decay rate and sensitivity to condensed matter parameters	3
X-ray Absorption spectroscopy: possible information on the CNT orientation	3
CNT hydrogenation	3
CNT hydrogenation	3

Work Function of carbon nanotubes	3
Electron kinematic analysis in electron trap setup	4
Quantum limited readout for detector arrays and antennas	4
Sensitivity studies for the neutrino mass	4
Ideas for the neutrino mass with PTOLEMY	4
Report on demonstrator magnet construction	4
Introduction to the work @ INRiM	4
Introduction to TES	4
Quantum limited readout for detector arrays and antennas	4
Work function and reflectivity measurements on TES sample	4

1

Welcome

Talks / 2

The PTOLEMY project

Talks / 3

Studies of ExB drift at Princeton University

Talks / 4

Update on RF detection R&D @ Princeton

Talks / 5

RF measurement @ LNGS

Talks / 6

Electron kinematic analysis in electron trap setup

Talks / 7

Report on analog and digital electronic development @ NIKHEF

Talks / 8

Preliminary studies on calibration methods of the PTOLEMY filter

Talks / 9

Determination of the decay rate and sensitivity to condensed matter parameters

Talks / 10

Sensitivity studies to the neutrino mass

Talks / 11

Status of the T-loading chamber in Rome

Talks / 12

Tritium handling

Talks / 13

Report on demonstrator magnet construction

Talks / 14

CVD growth and AFM measurements

Talks / 15

Stability of hydrogenated graphene and hard x-ray photoemission on nanoporous graphene

Talks / 16

Status of the T-loading chamber in Rome

Talks / 17

Test with TES electron

Talks / 18

Stability of hydrogenated graphene and diamond measurements on nanoporous graphene

Talks / 19

Simulation of the whole PTOLEMY detector

Talks / 20

Determination of the decay rate and sensitivity to condensed matter parameters

Talks / 21

X-ray Absorption spectroscopy: possible information on the CNT orientation

Talks / 22

CNT hydrogenation

Talks / 23

CNT hydrogenation

Talks / 24

Work Function of carbon nanotubes

Talks / 25

Electron kinematic analysis in electron trap setup

Talks / 26

Quantum limited readout for detector arrays and antennas

Talks / 27

Sensitivity studies for the neutrino mass

Talks / 28

Ideas for the neutrino mass with PTOLEMY

Talks / 29

Report on demonstrator magnet construction

Talks / 30

Introduction to the work @ INRiM

Talks / 31

Introduction to TES

Talks / 32

Quantum limited readout for detector arrays and antennas

Talks / 33

Work function and reflectivity measurements on TES sample