

Muons @ NuFact 2020

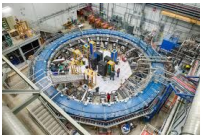
ν & μ

WG4:

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Johannes Gutenberg University Mainz
Yuki Fujii
Monash University
Yuri Oksuzian
Argonne National Laboratory

- A neutrino factory is muon factory is a muon factory
- Non collider Beyond SM searches
- Lepton flavour physics
- A unique get together for the muon physics community, beyond CLFV
- (to be found out at NuFact)

Muons in 2020



FNAL g-2 first result expected



The big muon CLFV experiments are under construction (MEGII, COMET, Mu2e, Mu3e)

PAUL SCHERRER INSTITUT



NuFact 2020 takes place in Europe

WG4 plenary talk proposals

We propose 3 plenary muon talk

1. First g-2 result: request speaker to the g-2 spokesperson
Mark Lancaster (mark.lancaster@manchester.ac.uk)
Chris Polly (polly@fnal.gov)
2. Theory talk: Lepton flavour $\leftrightarrow \nu \leftrightarrow \mu \leftrightarrow$ BSM searches
Cedric Weiland (cew64@pitt.edu)
3. Muon CLFV searches experimental talk (we have a shortlist)
Craig Dukes (Mu2e, craigdukes@virginia.edu)
Gavin Hesketh (Mu3e, gavin.hesketh@ucl.ac.uk)
Giovanni Tassielli (Junior MEGII & Mu2e, giovanni.tassielli@le.infn.it)
Giovanni Signorelli (Senior MEG & MEGII, giovanni.tassielli@le.infn.it)
Stefano Miscetti (Mu2e, Stefano.Miscetti@Inf.infn.it)

Parallel session status

5 WG4 Sessions + 1 WG4-WG3 sessions + 1 WG4-WG6 session

No brainer, send out invitations ASAP

muon cLFV

Mu3e Status
MEGII Status
Mu2e Status
Mu2e II or CLFV future ideas
COMET
DeeMe first data

Lepton universality

LHCb
Atlas
CMS
B factory?
NA62, lepton number violating K+ decays
KOTO, experiment, K0 to pi nu nu

g-2 / edm

g-2 analysis
muon EDM @ PSI
g-2 at J-PARC
g-2 SM
g-2 EDM

Muonic Atoms

MUSE (proton size)
HyperMu (proton axial radius)
muX (APV and nuclear radii)
Proton size (got solved in 2019)
MuMass
MuSEUM

Other, spontaneous abstract submissions

MuSun
Muon capture strength for double beta decay
Muon to electron and 2 gammas in MEG
theory ?

Some more homework

e.g. next weeks PSI Users meeting

Action points

- Send out invitations
- Who did we forget?
- Other comments?
- Ask for posters on g-2 analysis, DAQ, beam development,

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Muon beam facilities (joined WG3)

MuCool, cold muon at PSI
HiMB @ PSI
Muonium Source @ PSI
MICE / high brightness muon beam
Muon acceleration (J-PARC and/or LEMMA or else?)
Mu2e Target
MUSIC

Detector development

Si HV-MAPS
COMET & Mu2e Straw tubes
MIDAS DAQ?

Action points

- WG3: do we need to discuss, or should we send out invitations?
- WG1: Just started discussion
- Who did we forget?