

GGI Workshop

Report of Contributions

Contribution ID: 1

Type: **not specified**

Muon Collider Overview

Monday, 30 June 2025 11:15 (1h 45m)

Presenter: SCHULTE, Daniel (CERN)

Contribution ID: 2

Type: **not specified**

Introduction to Accelerators

Monday, 30 June 2025 14:00 (1 hour)

Presenter: ROGERS, Chris

Contribution ID: 3

Type: **not specified**

Detector Challenges 1

Tuesday, 1 July 2025 09:30 (45 minutes)

Presenter: Prof. BLACK, Kevin (University of Wisconsin-Madison)

Contribution ID: 4

Type: **not specified**

Machine Detector Interface 1

Tuesday, 1 July 2025 10:15 (45 minutes)

Presenters: LECHNER, Anton (CERN); CALZOLARI, Daniele (Universita e INFN, Padova (IT))

Contribution ID: 5

Type: **not specified**

Detector Challenges 2

Tuesday, 1 July 2025 11:15 (45 minutes)

Presenter: Prof. BLACK, Kevin (University of Wisconsin-Madison)

Contribution ID: 6

Type: **not specified**

Luminosity

Tuesday, 1 July 2025 12:00 (45 minutes)

Presenter: SCHULTE, Daniel (CERN)

Contribution ID: 7

Type: **not specified**

Magnets

Tuesday, 1 July 2025 14:00 (1 hour)

Presenter: BOTTURA, Luca (CERN)

Contribution ID: 8

Type: **not specified**

Microscopic physics at the TeV scale

Wednesday, 2 July 2025 15:30 (1 hour)

Presenters: MURAYAMA, Hitoshi (University of Tsukuba); MURAYAMA, Hitoshi (University of California Berkeley (US)); MURAYAMA, Hitoshi

Contribution ID: 9

Type: **not specified**

tbb

Contribution ID: **10**

Type: **not specified**

RF

Wednesday, 2 July 2025 09:30 (45 minutes)

Presenter: SCHULTE, Daniel (CERN)

Contribution ID: 11

Type: **not specified**

Detector challenges for the next generation of particle colliders

Wednesday, 2 July 2025 10:15 (45 minutes)

Presenter: Prof. BLACK, Kevin (University of Wisconsin-Madison)

Contribution ID: **12**

Type: **not specified**

High field magnets

Wednesday, 2 July 2025 11:15 (45 minutes)

Presenter: BOTTURA, Luca (CERN)

Contribution ID: 13

Type: **not specified**

High field magnets

Wednesday, 2 July 2025 12:00 (45 minutes)

Presenter: BOTTURA, Luca (CERN)

Contribution ID: 14

Type: **not specified**

Machine Detector Interface 2

Wednesday, 2 July 2025 14:00 (1 hour)

Presenter: CALZOLARI, Daniele (Universita e INFN, Padova (IT))

Contribution ID: 15

Type: **not specified**

Microscopic physics at the TeV scale

Tuesday, 1 July 2025 15:30 (1 hour)

Presenters: MURAYAMA, Hitoshi (University of Tsukuba); MURAYAMA, Hitoshi (University of California Berkeley (US)); MURAYAMA, Hitoshi

Contribution ID: 16

Type: **not specified**

Challenges of SM and QFT at future colliders

Thursday, 3 July 2025 09:30 (45 minutes)

Presenter: PAGANI, Davide (INFN, Bologna (IT))

Contribution ID: 17

Type: **not specified**

Challenges of SM and QFT at future colliders

Thursday, 3 July 2025 10:15 (45 minutes)

Presenter: PAGANI, Davide (INFN, Bologna (IT))

Contribution ID: **18**

Type: **not specified**

(Theory of) Ionisation Cooling

Thursday, 3 July 2025 11:15 (45 minutes)

Presenter: ROGERS, Chris

Contribution ID: 19

Type: **not specified**

Microscopic physics at the TeV scale

Thursday, 3 July 2025 12:00 (45 minutes)

Presenters: MURAYAMA, Hitoshi (University of Tsukuba); MURAYAMA, Hitoshi (University of California Berkeley (US)); MURAYAMA, Hitoshi

Contribution ID: 20

Type: **not specified**

Microscopic physics at the TeV scale

Thursday, 3 July 2025 14:00 (1 hour)

Presenters: MURAYAMA, Hitoshi (University of Tsukuba); MURAYAMA, Hitoshi (University of California Berkeley (US)); MURAYAMA, Hitoshi

Contribution ID: 21

Type: **not specified**

Detector challenges for the next generation of particle colliders

Thursday, 3 July 2025 15:30 (1 hour)

Presenter: Prof. BLACK, Kevin (University of Wisconsin-Madison)

Contribution ID: 22

Type: **not specified**

Challenges of SM and QFT at future colliders

Friday, 4 July 2025 09:30 (45 minutes)

Presenter: PAGANI, Davide (INFN, Bologna (IT))

Contribution ID: 23

Type: **not specified**

Challenges of SM and QFT at future colliders

Friday, 4 July 2025 10:15 (45 minutes)

Presenter: PAGANI, Davide (INFN, Bologna (IT))

Contribution ID: 24

Type: **not specified**

(Theory of) Ionisation Cooling

Friday, 4 July 2025 11:15 (45 minutes)

Presenter: ROGERS, Chris

Contribution ID: 25

Type: **not specified**

Collective Effects

Friday, 4 July 2025 12:00 (45 minutes)

Presenter: METRAL, Elias (CERN)

Contribution ID: 26

Type: **not specified**

Collective Effects

Friday, 4 July 2025 14:00 (1 hour)

Presenter: METRAL, Elias (CERN)

Contribution ID: 27

Type: **not specified**

(Theory of) Ionisation Cooling

Friday, 4 July 2025 15:30 (1 hour)

Presenter: ROGERS, Chris

Contribution ID: **28**

Type: **not specified**

Questions

Tuesday, 1 July 2025 16:30 (1 hour)

Contribution ID: 29

Type: **not specified**

Questions

Thursday, 3 July 2025 16:30 (1 hour)

Contribution ID: **30**

Type: **not specified**

Apericena Dinner

Thursday, 3 July 2025 18:30 (1 hour)

Contribution ID: **31**

Type: **not specified**

Gong show

Monday, 7 July 2025 15:30 (1h 30m)

Contribution ID: **32**

Type: **not specified**

Geant/Fluka shop kick-off

Monday, 7 July 2025 17:00 (45 minutes)

Contribution ID: 33

Type: **not specified**

Precision phenomenology at colliders: what are the limits?

Tuesday, 8 July 2025 11:00 (1 hour)

Presenter: MELNIKOV, Kirill (KIT)

Contribution ID: 34

Type: **not specified**

Precision phenomenology at multi-TeV muon colliders

Tuesday, 8 July 2025 15:00 (1 hour)

Presenter: PAGANI, Davide (INFN, Bologna (IT))

Contribution ID: 35

Type: **not specified**

The neutrino content of the muon

Wednesday, 9 July 2025 11:00 (1 hour)

Presenters: GAROSI, Francesco (SISSA); GAROSI, Francesco

Contribution ID: 36

Type: **not specified**

Partons and muons

Thursday, 10 July 2025 11:00 (1 hour)

Presenter: RUIZ, Richard (Institute of Nuclear Physics (IFJ) PAN)

Contribution ID: 37

Type: **not specified**

New developments in the Whizard event generator or work in progress

Thursday, 10 July 2025 15:00 (1 hour)

Presenter: REUTER, Juergen (DESY Hamburg, Germany)

Contribution ID: 38

Type: **not specified**

Discussion: "muCol for precision: do we need it? can we attain it? only at low energy stages?"

Wednesday, 9 July 2025 15:00 (1h 30m)

Presenters: WULZER, Andrea (IFAE and ICREA – Barcelona, Spain); ROSSER, Benjamin John (University of Chicago (US)); NEUFFER, David; PESKIN, Michael

Contribution ID: 39

Type: **not specified**

Geant/Fluka shop intermediate meeting

Friday, 11 July 2025 09:00 (9 hours)

Presenters: CALZOLARI, Daniele (Universita e INFN, Padova (IT)); FRANCESCHINI, Roberto (Rome 3 U.)

Contribution ID: **40**

Type: **not specified**

Gong show

Monday, 14 July 2025 15:30 (30 minutes)

Contribution ID: 41

Type: **not specified**

Intro to BSM week

Monday, 14 July 2025 16:00 (44 minutes)

Presenter: MEADE, Patrick

Contribution ID: 42

Type: **not specified**

Muon collider probes of Majorana neutrino dipole moments and masses

Tuesday, 15 July 2025 11:00 (1 hour)

Presenters: VIGNAROLI, Natascia; VIGNAROLI, Natascia; VIGNAROLI, Natascia

Contribution ID: 43

Type: **not specified**

Registration for newcomers

Monday, 14 July 2025 09:00 (3 hours)

Contribution ID: 44

Type: **not specified**

Exploring the Flavor Symmetry Landscape

Tuesday, 15 July 2025 15:00 (1 hour)

Presenter: GLIOTI, Alfredo (IPhT)

Contribution ID: 45

Type: **not specified**

Z'boson mass reach and model discrimination at muon colliders

Wednesday, 16 July 2025 11:00 (1 hour)

Presenters: LOESCHNER, Maximilian; LOESCHNER, Maximilian (CERN)

Contribution ID: 46

Type: **not specified**

Electroweak scattering at the muon shot and the EWfit

Thursday, 17 July 2025 11:00 (1 hour)

Presenter: WANG, Xing (Università and INFN Roma Tre)

Contribution ID: 47

Type: **not specified**

Discussion on BSM at muCol: Keys to unlock BSM at muCol. Why 10 TeV? Energy or Precision for BSM? Neutrino and BSM?

Wednesday, 16 July 2025 15:00 (2 hours)

Presenters: WULZER, Andrea (IFAE and ICREA – Barcelona, Spain); QUIGG, Chris (Fermi National Accelerator Lab. (US)); PESKIN, Michael; KITANO, Ryuichiro

Contribution ID: 48

Type: **not specified**

Villa il Gioiello

Thursday, 17 July 2025 15:00 (1h 30m)

Contribution ID: 49

Type: **not specified**

Higgs-muon interactions at a multi-TeV muon collider

Friday, 18 July 2025 11:00 (1 hour)

Presenter: Dr MA, Yang (UCLouvain)

Contribution ID: 50

Type: **not specified**

Probing the Origin of Neutrino Mass at Future Muon Collider

Friday, 18 July 2025 15:00 (1 hour)

Presenter: DEV, Bhupal (Washington University in St. Louis)

Contribution ID: 51

Type: **not specified**

Introduction: What is the muon collider?

Monday, 21 July 2025 11:00 (1 hour)

Presenter: WULZER, Andrea (IFAE and ICREA – Barcelona, Spain)

Contribution ID: 52

Type: **not specified**

The importance of synergy

Monday, 21 July 2025 15:00 (1 hour)

Presenter: KITANO, Ryuichiro

Contribution ID: 53

Type: **not specified**

Lepton Flavor Violation

Tuesday, 22 July 2025 10:00 (1 hour)

Presenter: CALIBBI, Lorenzo (Nankai University)

Contribution ID: 54

Type: **not specified**

Muon cooling and experiments at PSI

Tuesday, 22 July 2025 11:00 (1 hour)

Presenter: PAPA, Angela

Contribution ID: 55

Type: **not specified**

Muon cooling demonstrator for the muon collider

Tuesday, 22 July 2025 14:30 (1 hour)

Presenter: NEUFFER, David

Contribution ID: 56

Type: **not specified**

MuTristan

Tuesday, 22 July 2025 15:30 (1 hour)

Presenter: MATSUDO, Ryutaro

Contribution ID: 57

Type: **not specified**

High-intensity experiments with kaons

Wednesday, 23 July 2025 15:00 (1 hour)

Presenters: MOULSON, Matthew David; MOULSON, Matthew (INFN e Laboratori Nazionali di Frascati (IT))

Contribution ID: 58

Type: **not specified**

Report from Fluka/Geant working group (remote)

Wednesday, 23 July 2025 16:00 (1 hour)

Contribution ID: 59

Type: **not specified**

Dark matter and leptons

Friday, 25 July 2025 11:00 (1 hour)

Presenters: OKAWA, Shohei (ICCUB, Universitat de Barcelona); OKAWA, Shohei (ICC, University of Barcelona); OKAWA, Shohei (ICCUB); Dr OKAWA, Shohei (University of Victoria); OKAWA, Shohei (KEK)

Contribution ID: **60**

Type: **not specified**

Dark sectors with TeV scale muon beams

Wednesday, 23 July 2025 10:00 (1 hour)

Presenters: TROJANOWSKI, Sebastian; TROJANOWSKI, Sebastian (National Centre for Nuclear Research, Poland); TROJANOWSKI, Sebastian

Contribution ID: **61**

Type: **not specified**

Discussion

Wednesday, 23 July 2025 17:00 (1 hour)

Contribution ID: **62**

Type: **not specified**

Discussion

Tuesday, 22 July 2025 16:30 (1 hour)

Contribution ID: 63

Type: **not specified**

The synergy between neutrinos and muon (collider) physics

Thursday, 24 July 2025 10:00 (1 hour)

Presenter: QUIGG, Chris (Fermi National Accelerator Lab. (US))

Contribution ID: 64

Type: **not specified**

DUNE+SAND

Thursday, 24 July 2025 11:00 (1 hour)

Presenter: STANCO, Luca (Universita e INFN, Padova (IT))

Contribution ID: 65

Type: **not specified**

Using neutrinos for PDFs at muon collider

Thursday, 24 July 2025 15:00 (1 hour)

Presenter: MORALES ALVARADO, Manuel

Contribution ID: 66

Type: **not specified**

Invisible jets from forward neutrinos

Wednesday, 23 July 2025 11:00 (1 hour)

Presenter: Dr REDIGOLO, Diego (CERN-INFN Florence)

Contribution ID: 67

Type: **not specified**

Discussion

Thursday, 24 July 2025 17:00 (1 hour)

Contribution ID: 68

Type: **not specified**

High-intensity experiments with kaons

Presenters: MOULSON, Matthew David; MOULSON, Matthew (INFN e Laboratori Nazionali di Frascati (IT))

Contribution ID: 69

Type: **not specified**

Neutrinos, their properties and muons

Thursday, 24 July 2025 16:00 (1 hour)

Presenters: VIGNAROLI, Natascia; VIGNAROLI, Natascia; VIGNAROLI, Natascia

Contribution ID: 70

Type: **not specified**

Ship, SND, and physics at high-intensity

Friday, 25 July 2025 10:00 (1 hour)

Presenter: MIKULENKO, Oleksii (Leiden University (NL))

Contribution ID: 71

Type: **not specified**

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Contribution ID: 72

Type: **not specified**

Discussion

Friday, 25 July 2025 12:00 (1 hour)

Contribution ID: 73

Type: **not specified**

TBC

Contribution ID: 74

Type: **not specified**

What do we learn from colliders?

Monday, 28 July 2025 15:00 (50 minutes)

Presenter: QUIGG, Chris (Fermi National Accelerator Lab. (US))

Contribution ID: 75

Type: **not specified**

Gongs

Monday, 21 July 2025 16:00 (1 hour)