

Welcome and introduction

Welcome

Thanks for coming!

Covid-19 continues to makes life not so straightforward

Introduction

PAPERS

Papers

Title	Contact	Target date		Comments
		Preliminary	Final	
Measurement of multiple Coulomb scattering of muons in lithium hydride	J. Nugent	Jun18; CM51	Mar21	New MICE Note draft; draft of publication, to be circulated soon
Performance of the MICE diagnostic systems	P. Franchini	Feb19; CM53		Wise-people agreed that paper can be circulated today
Phase-space density/emittance evolution review paper				
Flip mode	P. Jurg	Jun-20		Preliminary results presented; wise persons appointed
Solenoid mode	T. Lord	Jun-20		Preliminary results presented; wise persons appointed
Phase-space density/KDE/6D-emittance evolution	C. Brown	TBD		Progress on analysis; thesis in preparation
Measurement of multiple Coulomb scattering of muons in LH2	G. Chatzitheodoridis/J. Nugent	TBD		Systematic analysis now underway
Field-on measurement of multiple Coulomb scattering	A. Young	TBD		Analysis underway

Introduction

nuSTORM & muon collider

Welcome to the Muon Collider Collaboration Website

WEDNESDAY

24 MAR/21

13:30

ENDS: Thu, 03/25/2021 - 19:30

Workshop on Muon Collider Testing Opportunities

Event

Workshop on Muon Collider Testing Opportunities

24-25 March 2021
GB timezone

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Timetable

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1st Day

12:00

Introduction	Mike Lamont
	12:30 - 12:40
Physics	Johannes Bernhard
	12:40 - 13:05
Nu-Storm as a Test Facility	Chris Rogers
	13:05 - 13:30
Facilities in Asia	Akira Sato
	13:30 - 13:55
Muon Cooling Experiment	Prof. Carlo Rubbia
	13:55 - 14:25
Coffee Break	
	14:25 - 14:45
US Facilities and Test Beams	Dr Mark Palmer
	14:45 - 15:10
ESS Upgrade Programme	Mohammad Eshraqi et al.
	15:10 - 15:35
LEMMA-TB: a CERN-NA experiment for the positron-driven muon collider	Marco Zanetti
	15:35 - 16:00
PSI Muon Facilities	Daniela Kiselev
	16:00 - 16:25
ISIS Muon Facilities	Adrian Hillier
	16:25 - 16:45
Discussion	
	16:45 - 17:15

Workshop on Muon Collider Testing Opportunities

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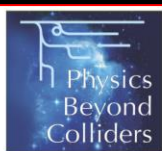
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Session legend

2nd Day

12:00

Cooling	Dr Dikrys Stratakis
	12:30 - 12:55
Targetry	Dr Marco Calviani
	12:55 - 13:20
Magnets	Soren Prestemon
	13:20 - 13:45
RF	Alexej Grudiev
	13:45 - 14:10
Outcome of nuStorm/EnuBET Discussion	Dr Anna Holin
	14:10 - 14:25
Coffee Break	
	14:25 - 14:40
Accelerator Physics in the Accelerator and Collider Complex	J. Scott Berg
	14:40 - 15:05
Past and Ongoing R&D Programmes (MICE, muCool etc...)	Daniel Kaplan
	15:05 - 15:30
MDI & Detector	Donatella Lucchesi
	15:30 - 15:55
Proton Facilities at CERN	Simone Gilardoni
	15:55 - 16:20
Opportunities for EU funding	Roy Aleksan
	16:20 - 16:40
Discussion	
	16:40 - 17:10
Summary	
	17:10 - 17:40



<https://pbc.web.cern.ch>

Organization PBC@work Resources Deliverables

Physics Beyond Colliders is an exploratory study aimed at exploiting the full scientific potential of CERN's accelerator complex and its scientific infrastructure through projects complementary to the LHC, HL-LHC and other possible future colliders. These projects would target fundamental physics questions that are similar in spirit to those addressed by high-energy colliders, but that require different types of beams and experiments. The mandate of the study team may be found [here](#).

The kick-off workshop held in September 2016 identified a number of areas of interest. Working groups have been set-up to pursue studies in these areas. See [organization](#) for a detailed breakdown of the current structure. The Physics Beyond Colliders study remains open to further ideas for new projects.

Should you wish to receive general announcements and occasional updates, please subscribe to the e-group PBC-info [here](#).

CERN-PBC-REPORT-2019-003

nuSTORM at CERN: Feasibility Study

Ahida, C.C. (CERN) ; Appleby, R. ; Bartmann, W. (CERN) ; Bauche, J. (CERN) ; Calviani, M. (CERN) ; Gall, J. (CERN) ; Gilardoni, S. (CERN) ; Goddard, B. (CERN) ; Hessler, C. (CERN) ; Huber, P. (Virginia Tech., Blacksburg) ; Efthymiopoulos, I. (CERN) ; Lagrange, J.B. (Rutherford) ; Lamont, M. (CERN) ; Long, K. (Rutherford ; Imperial Coll., London) ; Osborne, J.A. (CERN) ; Pasternak, I. (Imperial Coll., London ; Rutherford) ; Soler, F.J.P. (Glasgow U.) ; Tygier, S. (CERN) ; Velotti, F.M. (CERN)

2020. - 70 p.



Physics Beyond Colliders Annual Workshop

<https://indico.cern.ch/event/1002356/>

1-4 March 2021
Europe/Zurich timezone

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Contribution List

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PBC Home Page

Organisation

PBC.com@cern.ch

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Organising Committee:

Gianluigi Arduini, Joerg Jaeckel, Claude Vallée



Starts 1 Mar 2021, 13:30

Ends 4 Mar 2021, 18:00

Europe/Zurich



Gianluigi Arduini

Joerg Jaeckel

Claude Vallée



Registration

Registration for this event is currently open.

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Register now >

Pitch for nuSTORM/ENUBET:
nuSTORM:
Cross sections
BSM with nuSTORM
Demonstrator/accelerator
science test facility for mc

nuSTORM meeting organised as part of the iMC discussion of demonstrator facilities



Thursday 25 Mar 2021, 09:30 → 13:00 GB

Kenneth Richard Long (Imperial College (GB))

Description ZOOM room: <https://cern.zoom.us/j/68482035006?pwd=d3NPTUN6MndTbkFGYUMwTUhzbzdMUT09>

Following the successful presentation of the ENUBET/nuSTORM programme to the recent [Physics Beyond Colliders meeting](#), this nuSTORM meeting is being organised in conjunction with the ENUBET collaboration.

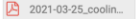
This nuSTORM meeting is held as part of a larger meeting organised by the international Muon Collider (iMC) collaboration and the MICE collaboration. The iMC collaboration meeting (the indico link is here: <https://indico.cern.ch/event/1016248/>) is focused on the discussion of demonstrator and R&D facilities needed to take the muon-collider programme forward.

The iMC meeting takes place in the (European) afternoons of the 24th and 25th of March 2021. The MICE meeting takes place on the afternoon of the 26th March.

The nuSTORM meeting for which the agenda is presented here takes place on the morning of the 25th March 2021.

Contact k.long@imperial.ac.uk

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09:30	→ 09:45	Introduction and goals for the meeting Speaker: Kenneth Richard Long (Imperial College (GB))	15m	
09:45	→ 10:05	Progress on the simulation of the nuSTORM neutrino flux Speaker: Paul Kyberd (Brunel University (GB))	20m	
10:05	→ 10:25	First study if neutrino flux at near detector hall Speaker: Dr Anna Holin (STFC RAL)	20m	
10:25	→ 10:45	nuSTORM in the service of 6D cooling demonstration Speaker: Chris Rogers (STFC) 	20m	
10:45	→ 11:00	Coffee Coffee break	15m	
11:00	→ 11:20	ENUBET, concept, status, and flux Speaker: Fabio Pupilli (Universita e INFN, Padova (IT))	20m	
11:20	→ 11:40	Pion transport from target to nuSTORM ring Speaker: Tiago Alves	20m	
11:40	→ 12:00	nuSTORM/ENUBET -- civil engineering considerations Speaker: Kincso Balazs (CERN)	20m	
12:00	→ 12:20	Target considerations: nuSTORM, ENUBET, and muon collider Speaker: Dr Marco Calviani (CERN)	20m	
12:20	→ 12:40	Discussion: the way forward Speaker: Kenneth Richard Long (Imperial College (GB))	20m	

Programme now to next ESPPU

- Imperative:
 - Arrive at next ESPPU with single ENUBET/nuSTORM programme:
 - Neutrino science; cross section and BSM
 - Muon collider demonstrator and test bed
 - Costed, with timeline, project planning, etc.
- Need to discuss how to get there:
 - Strengthen collaboration and collaborative working
 - How to deliver imperative defined above?
 - What would we do if there were modest, but significant, resources between now and next ESPPU:
 - E.g. Target complex to serve ENUBET, nuSTORM and iMC target studies?
- Issues:
 - Site, safety, technology, power consumption, ...



Welcome and introduction
AND NOW ...

[Overview](#)[Timetable](#)[Contribution List](#)[Participant List](#)[MICE Admin](#)[✉ miceadmin@stfc.ac.uk](mailto:miceadmin@stfc.ac.uk)[☎ +44 1235 445509](tel:+441235445509)

Timetable

< Fri 26/03 >

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13:00	Introduction <i>Zoom, Other Institutes</i>	<i>Kenneth Richard Long</i> 13:00 - 13:15
	Wedge Emittance Evolution <i>Zoom, Other Institutes</i>	<i>craig brown</i> 13:15 - 13:45
	System Performance Paper <i>Zoom, Other Institutes</i>	<i>Dr Paolo Franchini</i> 13:45 - 14:00
14:00	LH2 Scattering <i>Zoom, Other Institutes</i>	<i>Gavril Chatzitheodoridis</i> 14:00 - 14:30
	Field on scattering <i>Zoom, Other Institutes</i>	<i>Dr Alan Young</i> 14:30 - 15:00
15:00	Coffee <i>Zoom, Other Institutes</i>	15:00 - 15:30
	LIH Scattering <i>Zoom, Other Institutes</i>	<i>John Nugent</i> 15:30 - 16:15
16:00	Flip mode Emittance Evolution <i>Zoom, Other Institutes</i>	<i>Mr Paul Jurj</i> 16:15 - 16:45
	Solenoid Mode Emittance Evolution <i>Zoom, Other Institutes</i>	<i>Mr Tom Lord</i> 16:45 - 17:15
17:00	Discussion <i>Zoom, Other Institutes</i>	17:15 - 17:45
18:00		
19:00	Collaboration Board <i>Zoom, Other Institutes</i>	18:30 - 19:30

Over to you!