Imperial College London

Science & Technology Facilities Council

Welcome and introduction

K. Long, 22 October, 2020

Welcome

Thanks for coming!

Covid-19 continues to makes life not so straightforward

Introduction

PAPERS

Papers

		03-Sep-20	v23	
Title	**Contact**	**Target date**		**Comments**
		Preliminary	**Final**	
Measurement of multiple Coulomb scattering of muons in lithium hydride	J. Nugent	Jun18; CM51	Apr19	New MICE Note draft; working towards first draft of publciation
Performance of the MICE diagnostic systems	P. Franchini	Feb19; CM53		Wise-people recommended working towards draft of publication
Phase-space density/emittance evolution review paper				
Flip mode	P. Jurg	TBD		Preliminary results to conferences this summer
Solenoid mode	T. Lord	TBD		Preliminary results to conferences this summer
Phase-space density/KDE/6D-emittance evolution	C. Brown	TBD		Progress on applying analysis to data
Measurement of multiple Coulomb scattering of muons in LH2	G. Chatzitheodoridis/J. Nugent	TBD		Awaits completion of LiH paper
Field-on measurement of multiple Coulomb scattering	A. Young	TBD		Analysis underway
LH Scattering	G. Chatzitheodoridis	TBD		Analysis underway

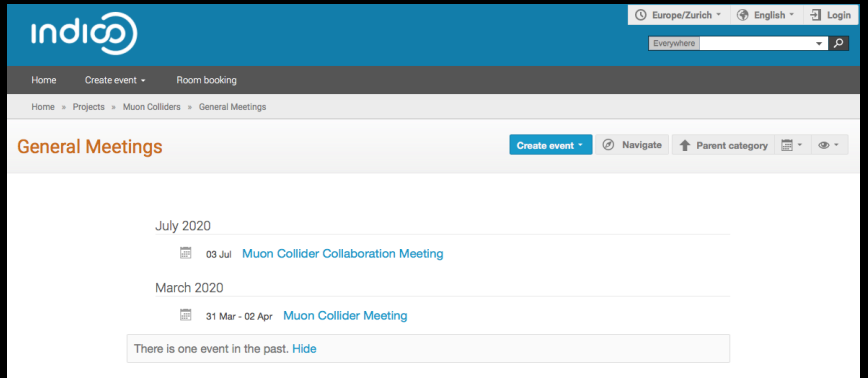
Introduction

nuSTORM & muon collider

Muon collider

- Developing initiative:
  - Leads: Nadia Pastrone and Daniel Schulte
- Cooling/front-end – Chris Rogers

- Need to produce document for PPAP



nuSTORM

nuSTORM -- discussion meeting

Friday 23 Oct 2020, 13:30 → 16:30 Europe/London

Description Meeting to follow up on the meeting held on the 18th August 2020. The discussion will focus on the programme to which we should aspire in the context of the development of the nuSTORM programme, the development of the international Muon Collider collaboration, the evolving Snowmass process, and the developments in the CERN member states in response to the ESPPU. The discussion will be organised in three sections:

- Physics: neutrino cross section and beyond the Standard Model;
- Detector: for neutrino cross section programme and sterile, BSM searches; and
- Accelerator: development of nuSTORM and exploitation of nuSTORM as muon collider R&D platform and demonstrator.

The report on the nuSTORM feasibility study carried out as part of the Physics Beyond Colliders programme has been updated to include a revision of the ring design and the corrected collaboration list submitted that was prepared alongside the Snowmass submission.

CERN-PBC-REPORT...

13:30 → 13:45 **Introduction**

Introduction

13:30 **Welcome, introduction and aims** 10m

Speaker: Kenneth Richard Long (Imperial College (GB))

13:45 → 14:30 **Physics: nuSTORM physics programme: neutrino cross sections and BSM searches**

Neutrino cross section and BSM physics

Convener: Silvia Pascoli (University of Durham (GB))

14:30 → 15:15 **Detectors: Detectors for neutrino cross section measurements and BSM searches**

Conveners: Prof. Jonathan Link (Virginia Tech), Neil McCauley (University of Liverpool), Steven Boyd (University of Warwick)

15:15 → 16:00 **Accelerator: Accelerator: development of nuSTORM accelerator facility and its exploitation as muon collider test bed and technology demonstrator**

Conveners: Chris Rogers (STFC), Jaroslaw Pasternak (Imperial College, London), Jonathan Gall (CERN)

16:00 → 16:30 **Closing discussion**

Closing discussion

Need build on PBC activity

Welcome and introduction

AND NOW …

Thu 22/10 | Fri 23/10 | All days

Print | PDF | Full screen | Detailed view | Filter

Thu 22/10

13:00
- **Introduction** — *Kenneth Richard Long* — Zoom, Other Institutes — 13:00 - 13:15
- **From Analyses to Papers** — *Chris Rogers* — Zoom, Other Institutes — 13:15 - 13:30
- **System Performance Paper** — *Dr Paolo Franchini* — Zoom, Other Institutes — 13:30 - 13:45
- **LiH Scattering** — *John Nugent* — Zoom, Other Institutes — 13:45 - 14:15

14:00
- **Flip mode Emittance Evolution** — *Mr Paul Jurj* — Zoom, Other Institutes — 14:15 - 15:00

15:00
- **Coffee** — Zoom, Other Institutes — 15:00 - 15:30
- **Wedge Emittance Evolution** — *craig brown* — Zoom, Other Institutes — 15:30 - 16:10

16:00
- **LH2 Scattering** — *Gavriil Chatzitheodoridis* — Zoom, Other Institutes — 16:10 - 16:50
- **Solenoid Mode Emittance Evolution** — *Mr Tom Lord* — Zoom, Other Institutes — 16:50 - 17:30

17:00
- **Field on scattering** — *Dr Alan Young* — Zoom, Other Institutes — 17:30 - 18:00

18:00

19:00
- **Collaboration Board** — Zoom, Other Institutes — 18:30 - 19:30

Fri 23/10

12:00
- **Discussion and Summaries** — *Paul Kyberd* — Zoom, Other Institutes — 12:00 - 13:00

13:00

Over to you!