





MAIA + 10 TeV Studies

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Congrats all on the ESPPU Submissions!

United States (US) Muon Collider Community White Paper for the European Strategy for Particle Physics Update

Abstract:

This document is being submitted to the 2024-2026 European Strategy for Particle Physics Update (ESPPU) process on behalf of the US Muon Collider community, with its preparation coordinated by the interim US Muon Collider Coordination Group. The US Muon Collider Community comprises a few hundred American scientists. The purpose of the document is to inform ESPPU about the US plans for Muon Collider research and development (R&D), explain how these efforts align with the broader international R&D initiatives, and present the US community vision for the future realization of this transformative project.

You can still sign up to be an author on the IMCC's submission here: https://indico.cern.ch/event/1513450/

MAIA Publication Action Items

Item	Responsible	Figures	Status	Next Target
BIB plots (distributions)	Daniele	1, 2	Done! In ESPPU and MAIA	-
BIB plots (occupancies)	Fede	5, 6, 7, 8	Occupancy vs layer done! In ESPPU Occupancy vs Z, R some adaptation for MAIA	Fix occ vs R,Z
ECAL thresholds	Fede + Rose	9	Done!	
Track performance	Jan	10, 11, 12, 13, 14, 15	Done! In ESPPU	
Photon performance	Rose	17, 18, 19	Done! In ESPPU and MAIA	-
Neutron performance	Elise + Rose	21, 22, 23 (new fits)	Resolutions much worse than earlier lattice	
Pion reco (TBD)	Greg + Ethan		Investigating pion reco	

Upcoming Events + Other Items

• Meetings + Conferences

- IMCC Annual Meeting May 12-16 DESY [Indico] → Abstracts are being accepted (rolling)!
- Muon Collider School Aug 3-6 UChicago
- US Muon Collider Workshop Aug 7-8 UChicago
- Lepton-Photon Aug 25-29 Wisconsin [Indico] \rightarrow Call for abstracts

• MAIA + 10 TeV Wishlist:

<u>https://docs.google.com/document/d/1m4xQih6VO7Tcwv8bkGjpmDQ0R2HwqGDqn3gKRQ-5pk8/edit</u>
<u>?tab=t.0#heading=h.b9dujz8sjaop</u>