



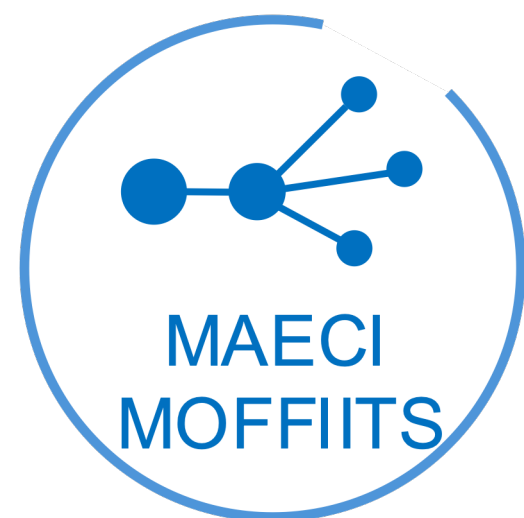
SAPIENZA  
UNIVERSITÀ DI ROMA



CENTRO RICERCHE  
ENRICO FERMI

# FOOT performance paper

Giacomo Traini, Giuliana Galati



- The idea is not new (proposed for the first time in 2024) , in the last months we resume working to define a possible skeleton
- Goals:
  - Have a reference paper for the (next) future (many) publications
  - Additional motivation to boost data analysis, and also a help in driving the job
  - Fulfil 2025 milestones (from Mauro's talk)

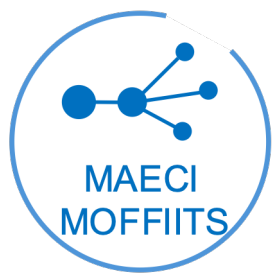
**How to do it?**

**Let's look at the LHC experiments\*...**



Giacomo Leopardi, died at 39





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## 11 Summary

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## Measuring the Impact of Nuclear Interaction in Particle Therapy and in Radio Protection in Space: the FOOT Experiment

*Giuseppe Battistoni<sup>1</sup>, Marco Toppi<sup>2,3\*</sup>, Vincenzo Patera<sup>3,4</sup> and The FOOT Collaboration*

### INTRODUCTION

### THE FOOT EXPERIMENT

The Upstream Region

The Magnetic Spectrometer

Interaction and Tracking Region

Fragment Identification Region

Trigger and Data Acquisition System

MC Simulation and Fragment Identification Performances

The Emulsion Spectrometer

### CONCLUSION

- FOOT motivations and goals
- Description of the apparatus (electronic setup/emulsions)
- Some detector performance (as known in 2021)
- Some MC performance

Taking into account of that, what could be the content of the new global paper?

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- Detector hw performance + DAQ:
  - ST, BM, TW, Calo have dedicated performance paper focused on FOOT
  - MSD, VTX: lot of work going on, knowledge of the detector response start to be quite robust
  - IT: lot of work by Chris but some obscure points
  - Emulsion: dedicated performance papers, lot of material

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- Descriptive part of the measurement strategy, including also logistic (installation, facilities) and beam features



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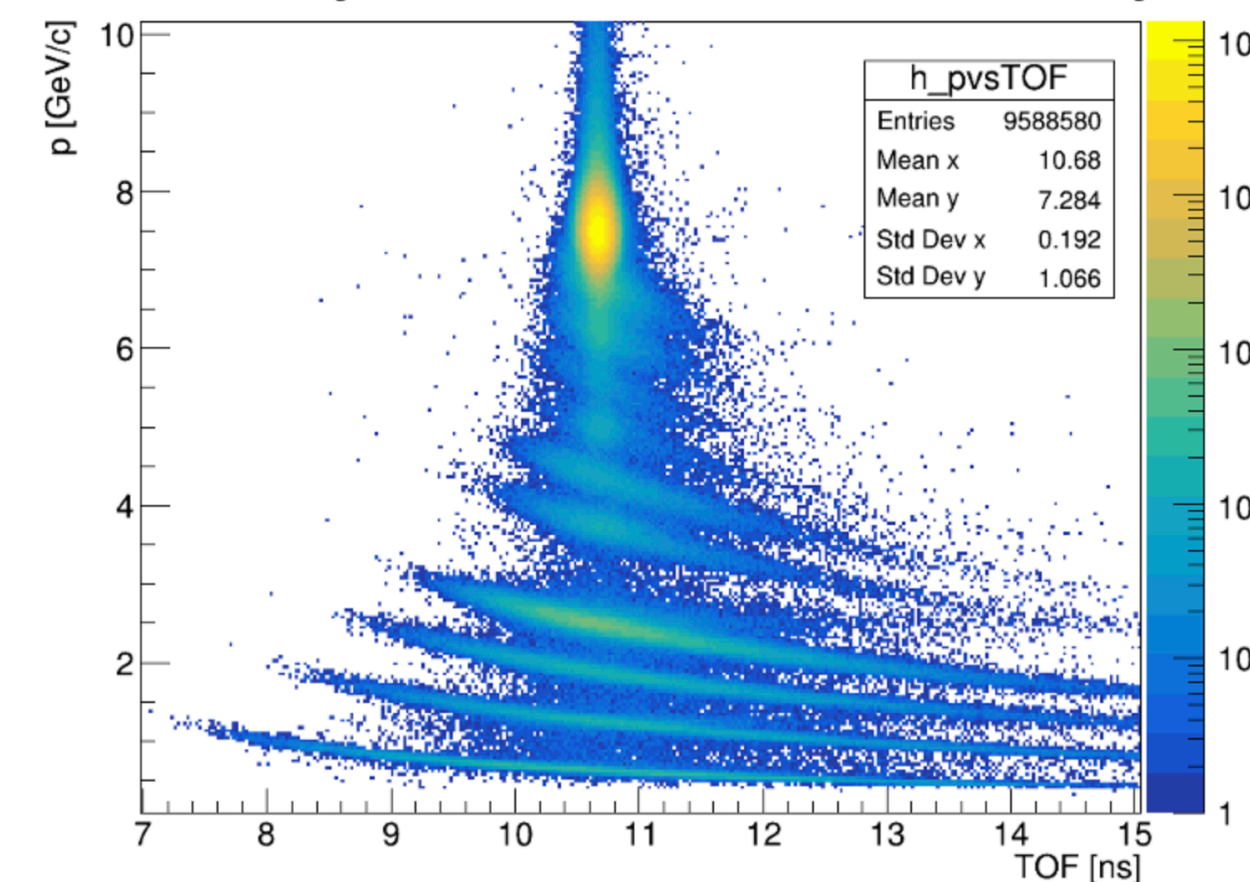
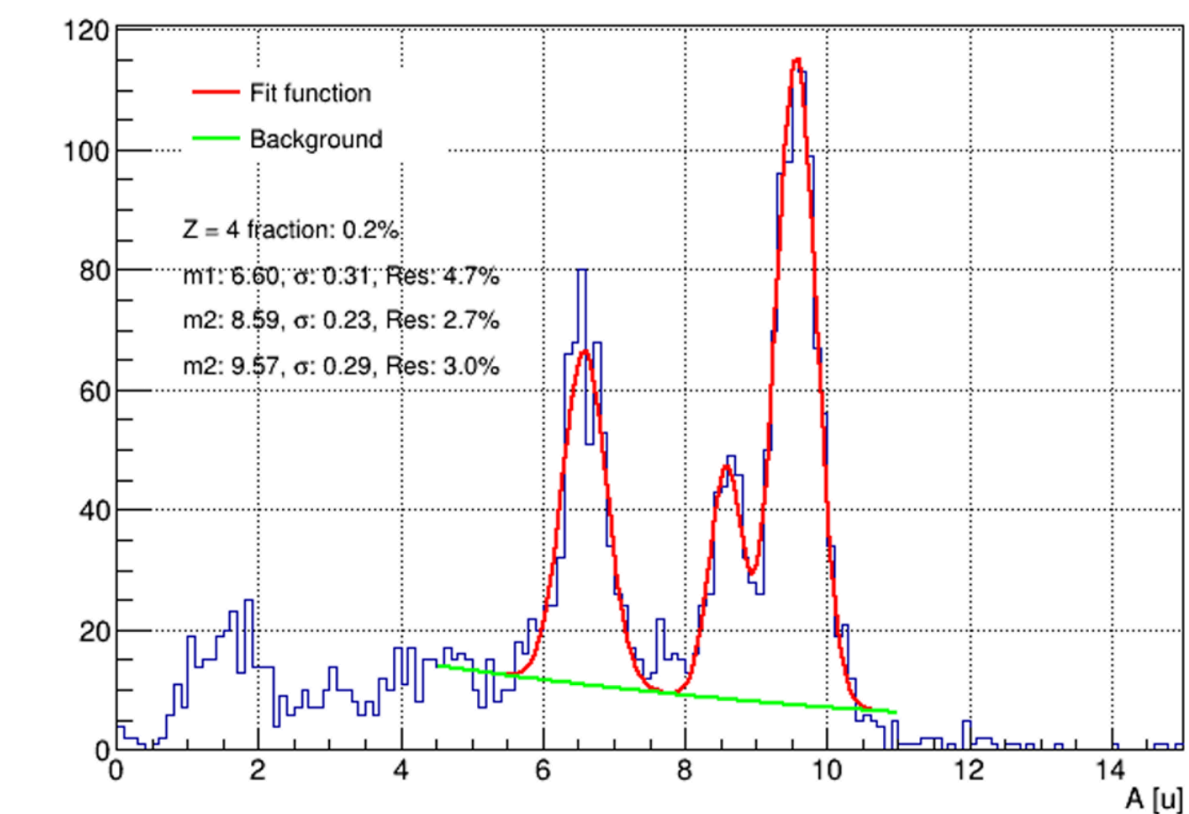
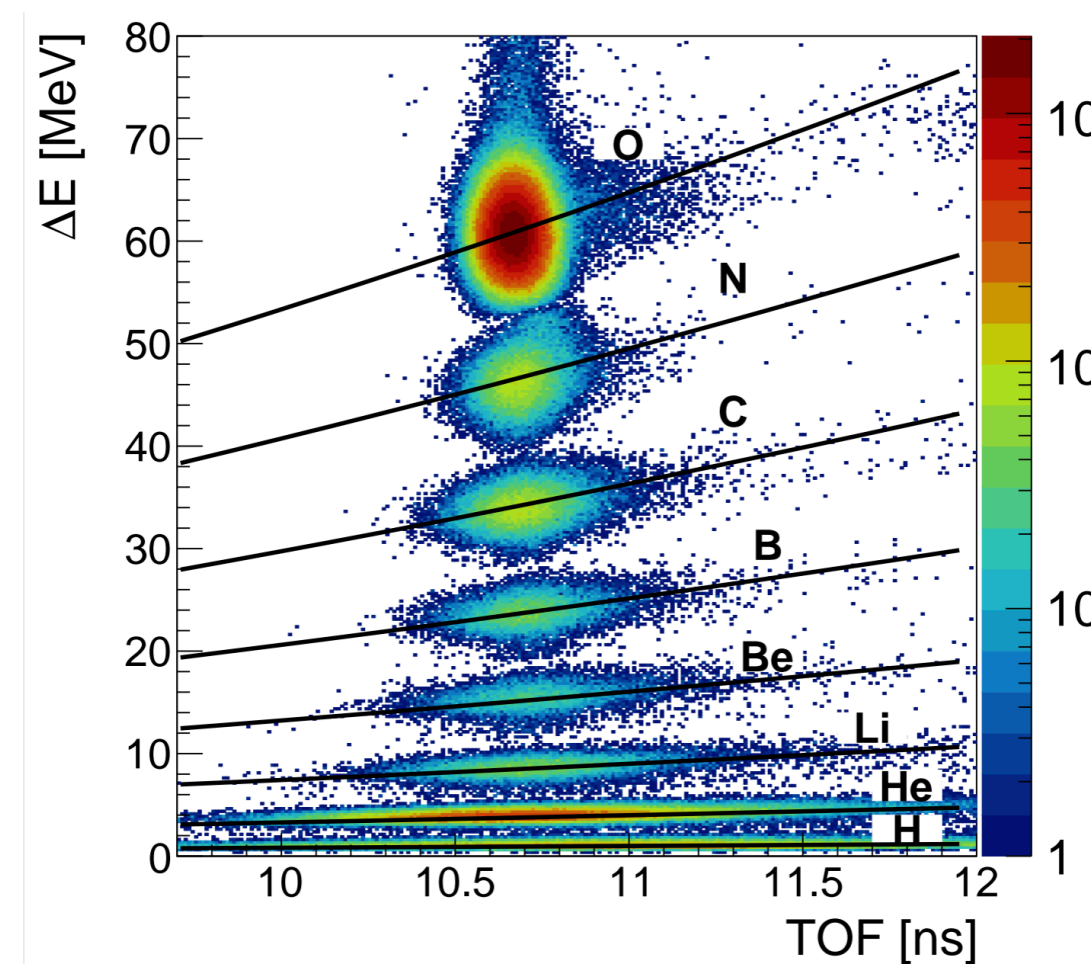
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Both electronic  
and emulsion  
setup

Reconstruction: lot of advancement  
shown during this meeting



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Which journal? JINST, NIMA...  
open to suggestions!



**Goal:** draft within the end of the year

To maximise the work efficiency we will ask in the next days at group responsables of identifying one or more “reference person” (detector or analisys experts) who will be in strict contact with me, Giuliana and Leonello (he has given his availability yesterday, thanks a lot)

Giacomo Leopardi, died at 39

