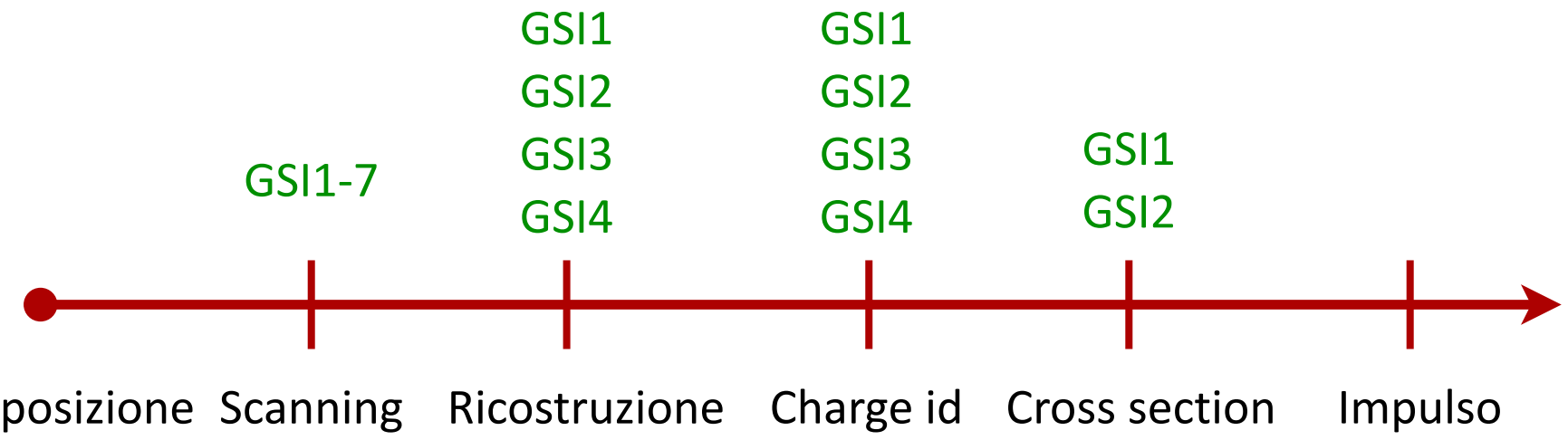
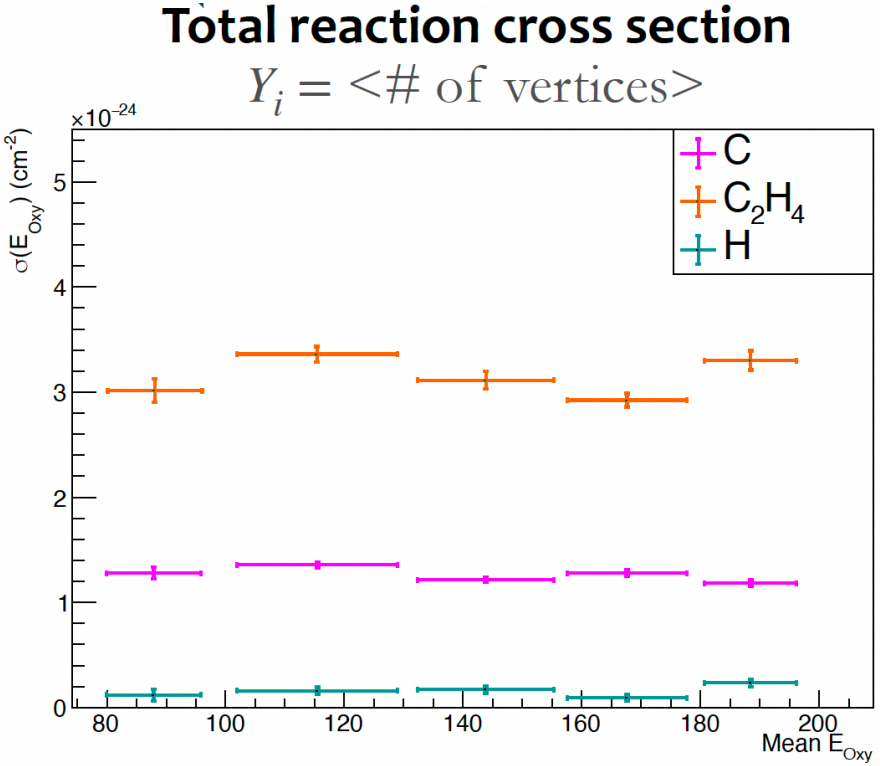
Napoli, 7/1/2025

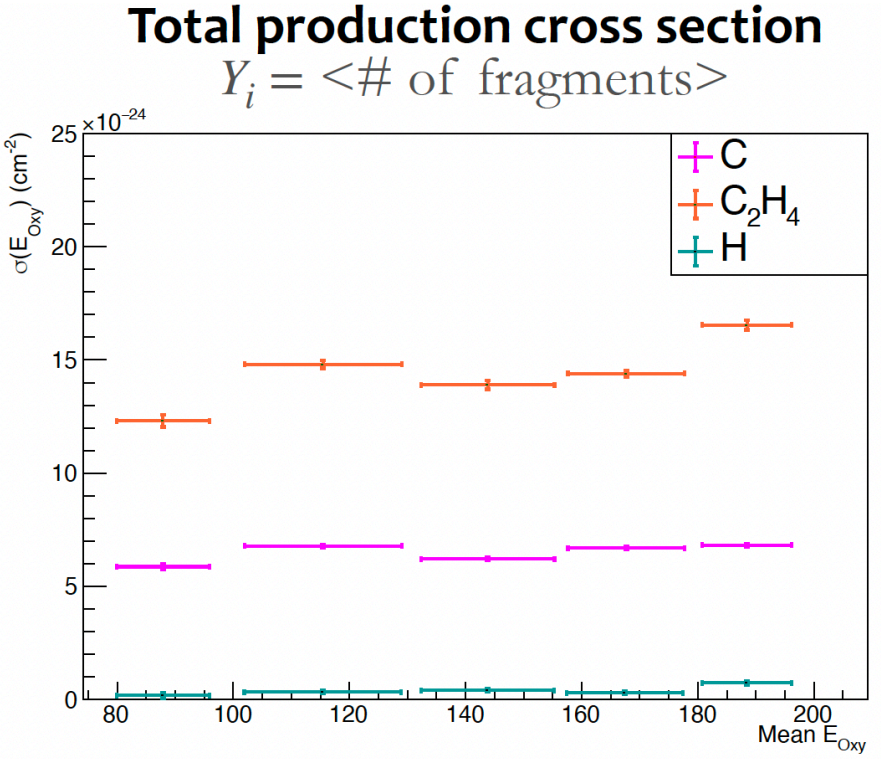
Prese dati

Beam	Facility / Year/*id*	Status
Oxygen @ 200 MeV/n	GSI 2019 *GSI1, GSI2*	CS almost completed
Oxygen @ 400 MeV/n	GSI 2019 *GSI3, GSI4*	Charge id completed
Carbon @ 700 MeV/n	GSI 2020 *GSI5, GSI6*	Scanning completed
Carbon @ 221 MeV/n	CNAO 2023 *GSI7*	Scanning completed

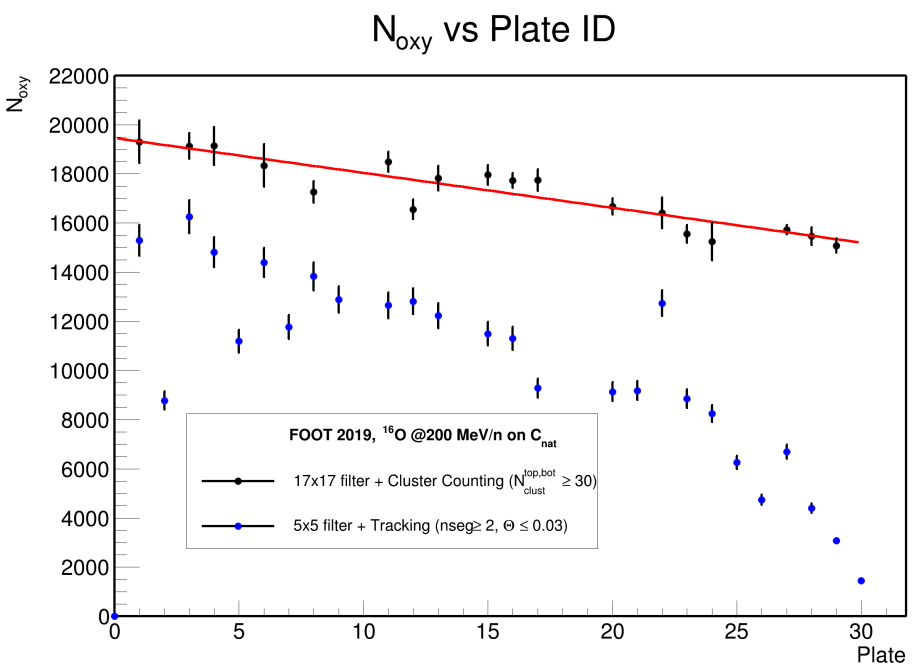


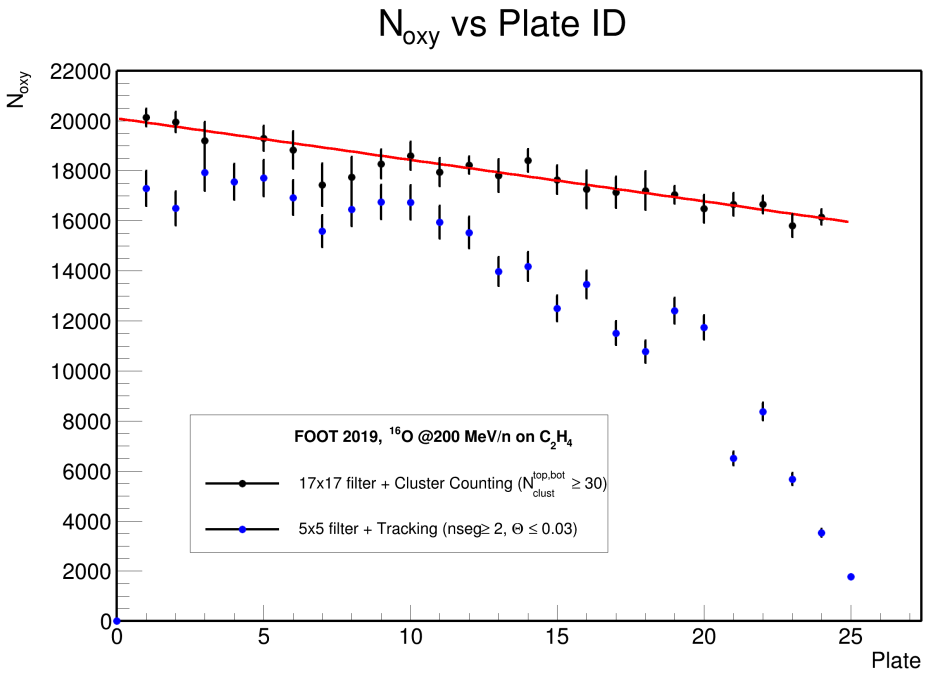
Integrated cross section ^{16}O(200 MeV) on C (GSI1) and C_2H_4 (GSI2)





Risultati recenti





GSI1

GSI2

Pubblicazioni

1) M.C. Montesi et al. (FOOT Coll.)
Ion charge separation with new generation of nuclear emulsion films
2019, Open Physics

2) G. Galati et al. (FOOT Coll.)
Charge identification of fragments with the emulsion spectrometer of the FOOT experiment
2021, Open Physics

3) G. Galati et al. (FOOT Coll.)
Charge identification of fragments produced in ^{16}O beam interactions at 200 MeV/n and 400 MeV/n on C and C_2H_4 targets

2024, Frontier Phyics

4)V. Boccia, A. Alexandrov, T. Asada, G.De Lellis, N. D'Ambrosio, G. Galati, A. Lauria, T. Maggipinto, M.C. Montesi, S. My, V. Tioukov
From dark matter searches to proton therapy: Measuring target fragmentation with nanometric nuclear emulsions
2024, NIM A

Draft:
^{16}O ions at 200~MeV nuclear reaction cross-section on carbon and polyethilene targets measured by a nuclear emulsion detector

Pubblicazioni

To be submitted on **Physical Review C** (2023 IF: 3.2)

I. **Introduction**

II. **II. Material and methods**

- A. Nuclear emulsion films
- B. The nuclear emulsions spectrometer
- C. Experimental set-up at GSI
- D. Charge identification
- E. Monte Carlo simulation
- F. Tracks and vertices reconstruction

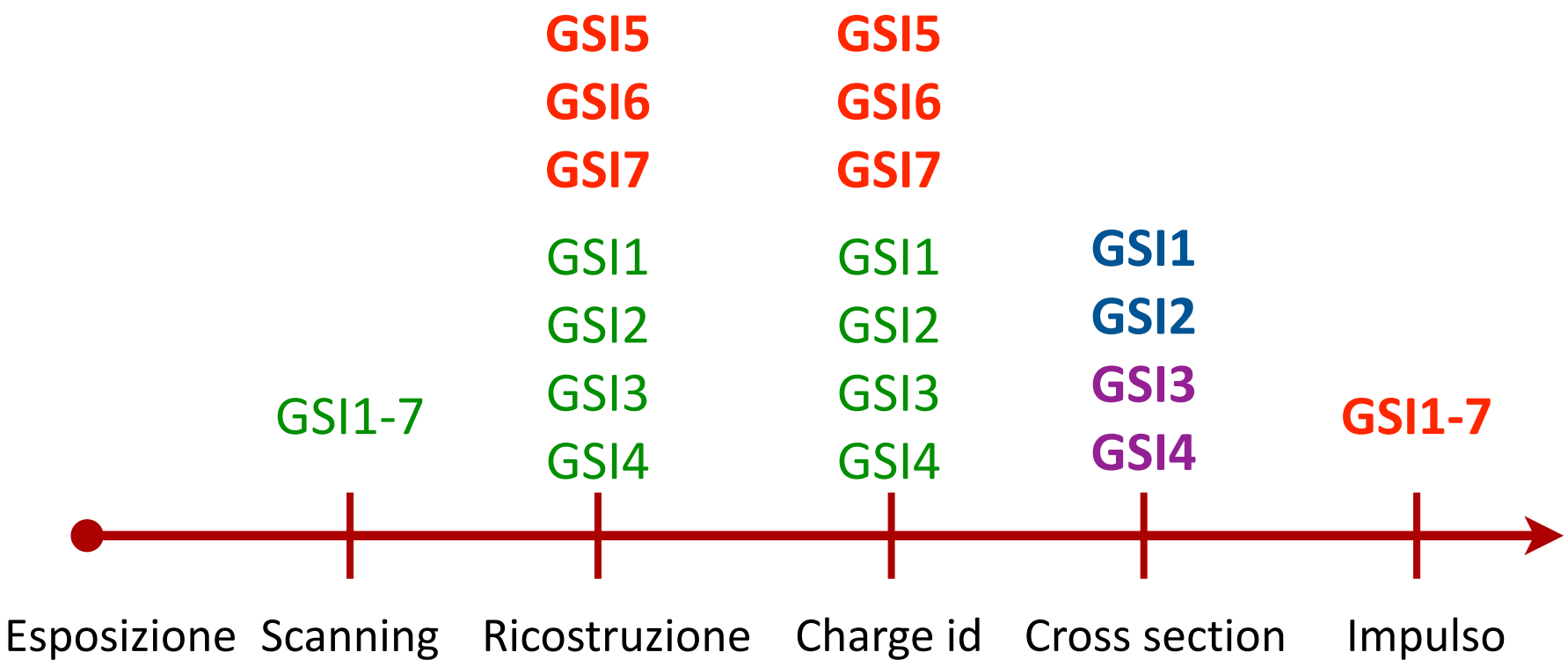
III.Data analysis

- A. *Yi* measurement
- B. N_{Bi} measurement
- C. ϵ_{reco_i} evaluation

IV.Results and discussion

V. Conclusion

Programmi futuri



breve termine
medio termine
lungo termine