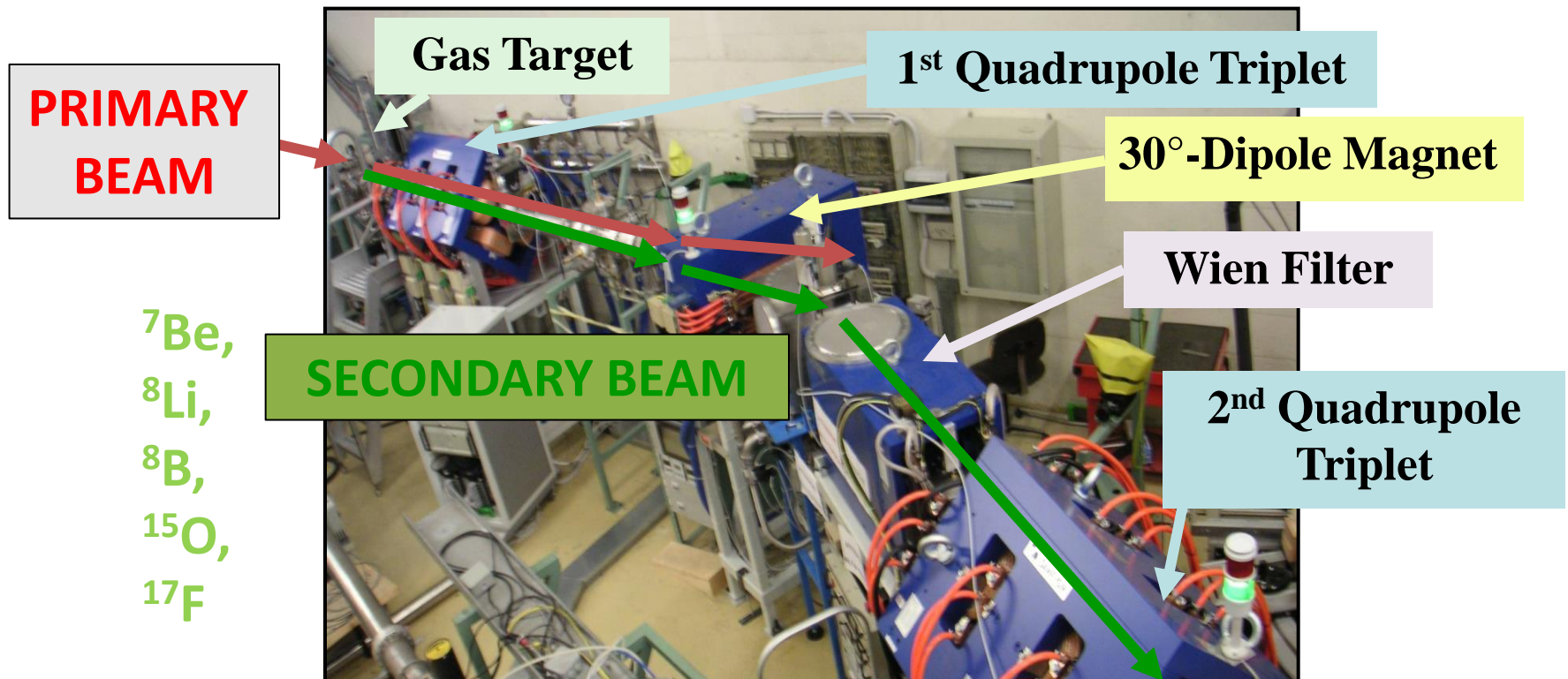


EXOTIC (7 ricercatori, 5.4 FTE)

NA (3.1 FTE) M. La Commara (0.8), G. La Rana (0.3),
C. Parascandolo (1.0), D. Pierroutsakou (1.0)

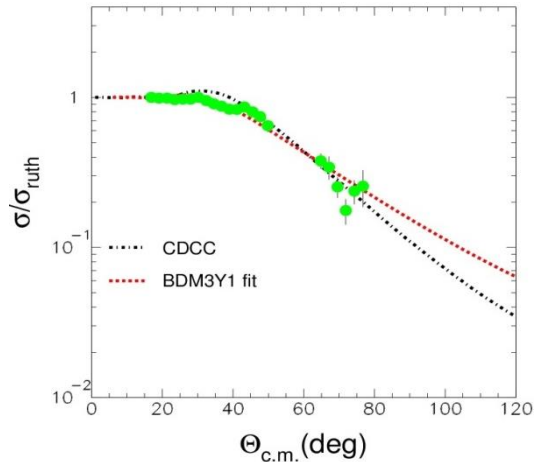
PD (2.3 FTE): M. Mazzocco (1.0), F. Soramel (0.5), *E. Strano (0.8)*

- 1) Reaction mechanisms and the structure of weakly bound stable and exotic nuclei and measurements of astrophysical interest with RIBs **(PD)**
- 2) Collective modes: Study of the pre-equilibrium dipole γ ray emission in dissipative heavy-ion reactions **(NA)**



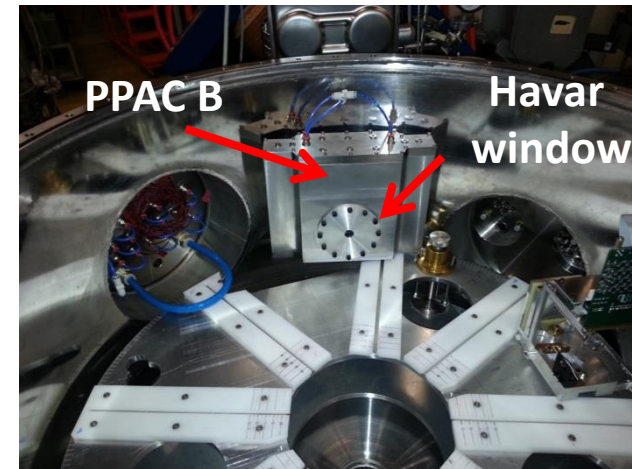
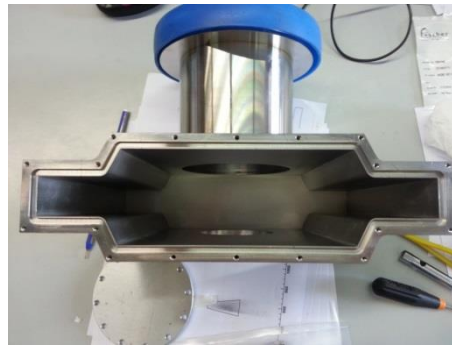
Experiments: July 2014 – June 2015

${}^7\text{Be}+{}^{28}\text{Si}$ @ 17.2 MeV (Oct. 2014)

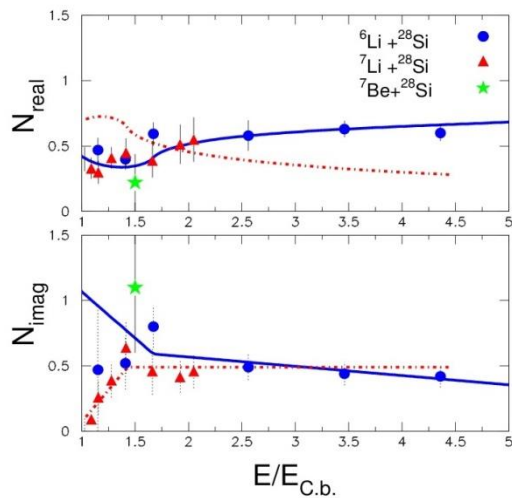


Quasi-Elastic Scattering

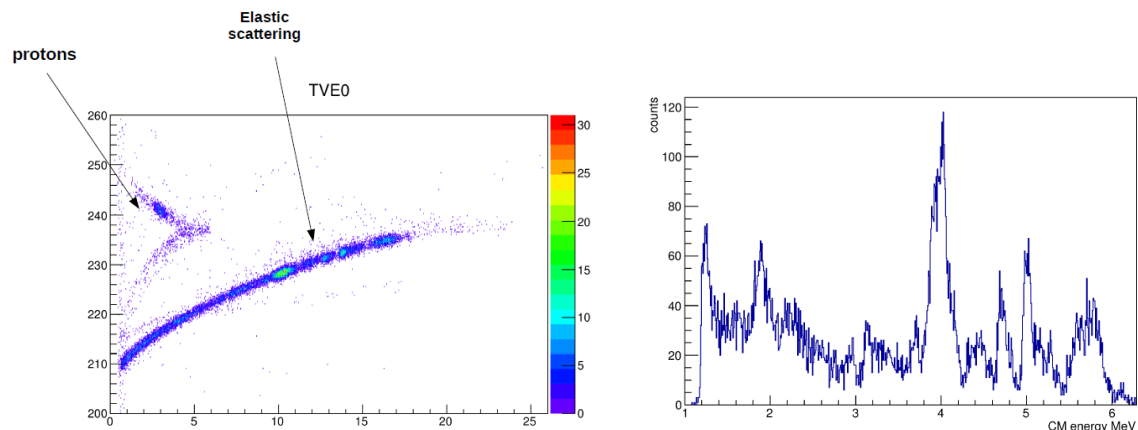
${}^{15}\text{O}+{}^4\text{He}$ @ 27.2 MeV (Feb. 2015)



Rearrangement of the EXOTIC final scattering chamber



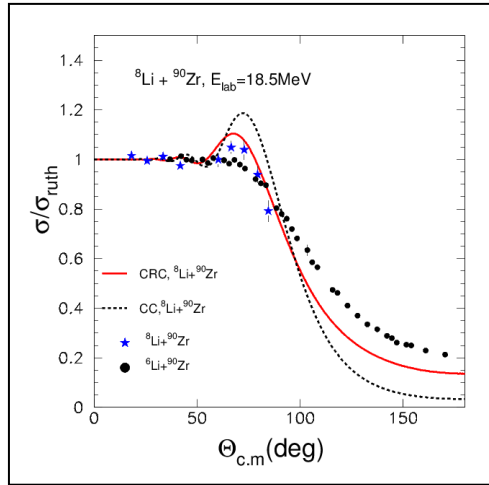
Threshold Anomaly



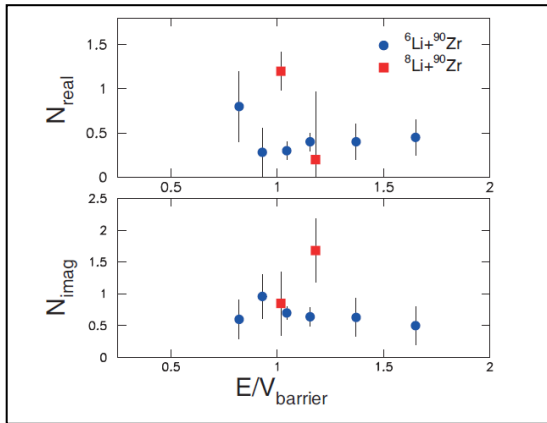
Cluster configurations in ${}^{19}\text{Ne}$ via resonant scattering

Data Analysis: July 2014 – June 2015

$^8\text{Li} + ^{90}\text{Zr}$ @ 20 MeV (Published)

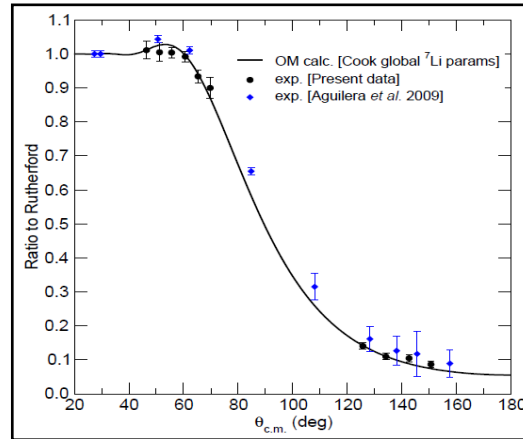


A. Pakou et al., PLB (submitted)

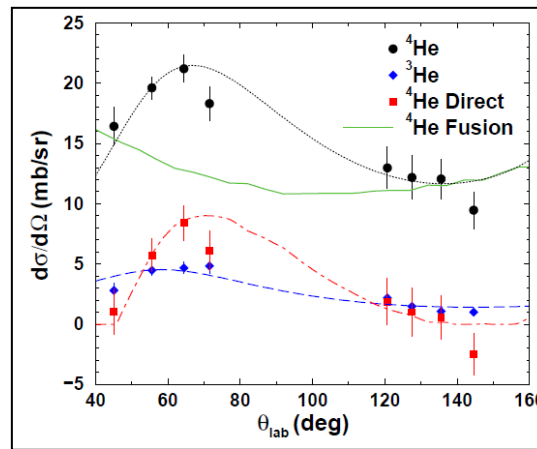


A. Pakou et al., EPJA 51, 55 (2015)

$^7\text{Be} + ^{58}\text{Ni}$ @ 22 MeV (to be submitted)

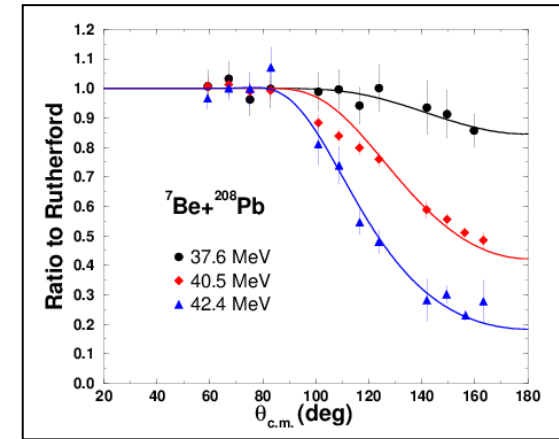


Quasi-Elastic Scattering

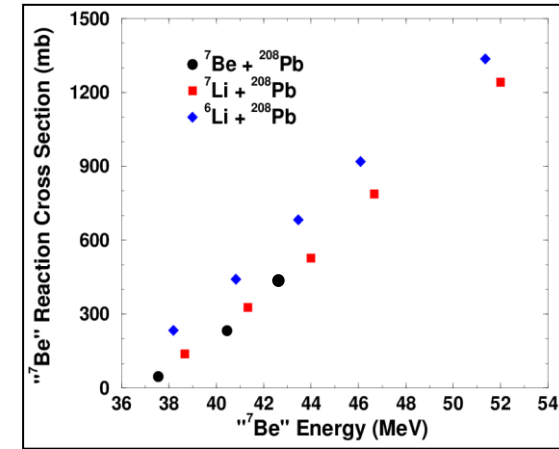


$^3,4\text{He}$ production

$^7\text{Be} + ^{208}\text{Pb}$ @ 40 MeV (Master Thesis)



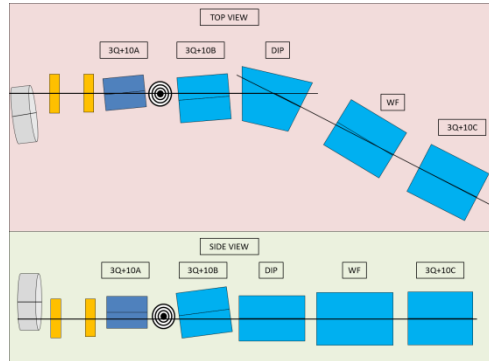
Quasi-Elastic Scattering



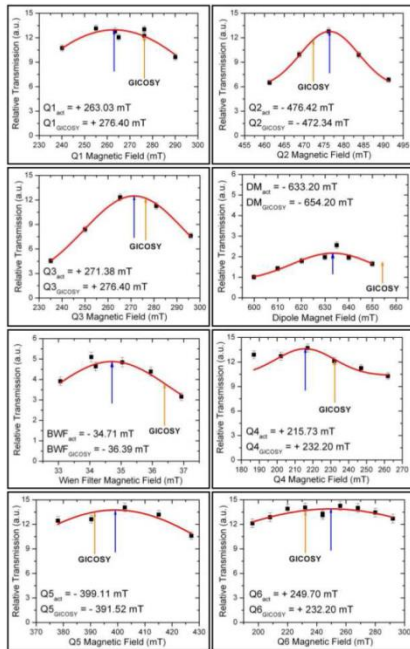
Reaction Cross Section

Activity: July 2015 – June 2016

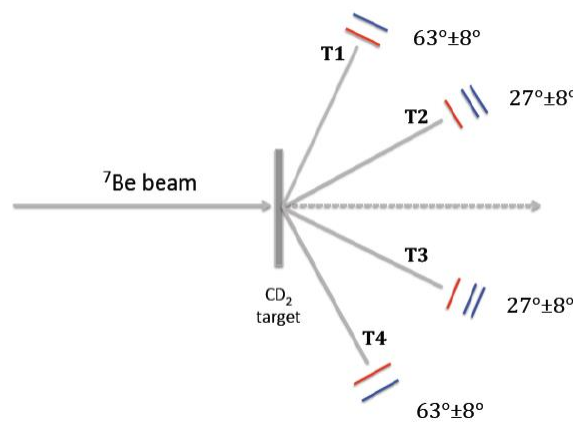
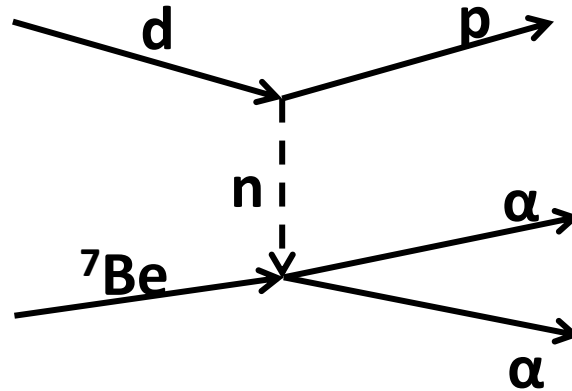
EXOTIC as Recoil Separator (PRISMA) July, 18-20



Laser-assisted Alignment

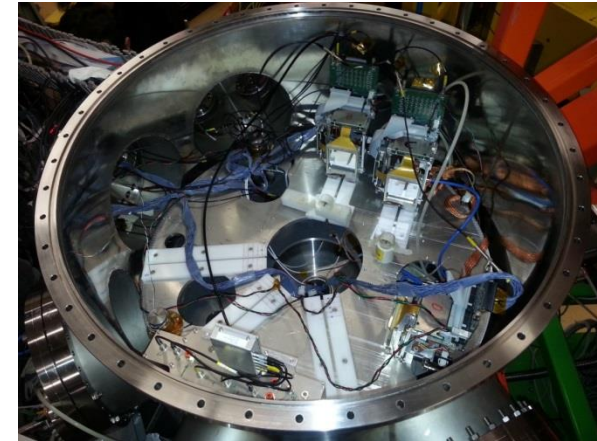


${}^7\text{Be} + n \rightarrow {}^4\text{He} + {}^4\text{He}$ (ASFIN+LUNA) 13 days, Oct. – Nov.



Reaction relevant for the
BBN nucleosynthesis and the
cosmological ${}^7\text{Li}$ problem

${}^{10}\text{C}$ Development (LNS-STREAM) 2 days, Oct. – Nov.



${}^{10}\text{C}$ secondary beam
development for future
cluster configuration studies
in ${}^{14}\text{O}$ (via resonant
scattering ${}^{10}\text{C} + {}^4\text{He}$)

Richieste finanziarie 2016: CA, Cons, T, M (preliminare)

Le richieste si riferiscono a EXOTIC Sez. Napoli e Sez. Padova

Richieste totali Missioni: 20 k€ Interno - 13 k€ Estero

Costruzione Apparati

10 k€ : Criogenia Linea EXOTIC

5 k€: Manutenzione Linea

12 k€: 4 MEGAMP for i QQQ2 (12 k€ anche nel 2017)

Consumo

7.5 k€ : 1 DSSD di 1.5 mm (lo stesso nel 2017)

6 k€: (elettronica per 8 schede di elettronica di basso rumore per i QQQ2 e materiale di laboratorio)

2 k€: isotopi

Manutenzione

2 k€

Trasporti

3 k€ (trasporto di materiale fragile)

Totale: 80.5 k€

Richieste ai Servizi della Sezione INFN di Padova

Laboratorio di Elettronica: 2 mesi/uomo (assistenza/manutenzione)

Officina Meccanica: 3 mesi/uomo (realizzazione e messa in opera piccole componenti)

Progettazione: 1 mese/uomo (ev. progettazione piccole componenti)