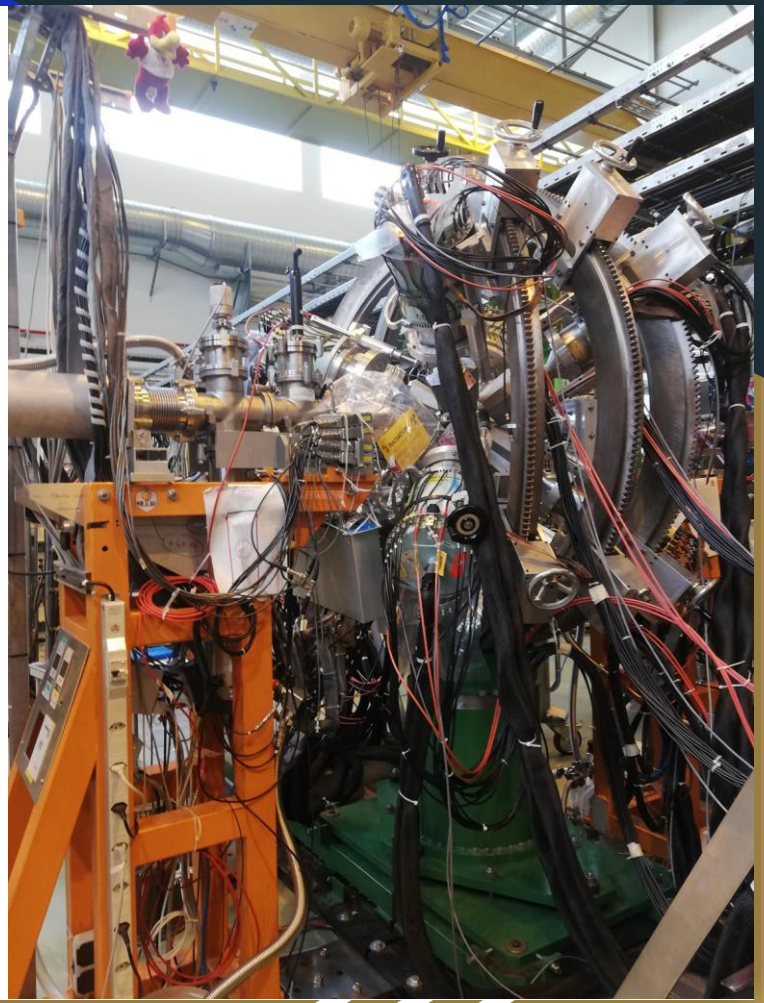
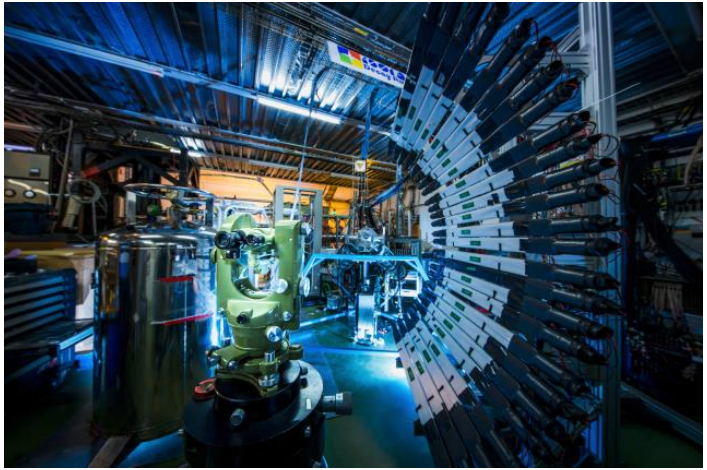
Miniball :)



ISOLDE

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Slovakia
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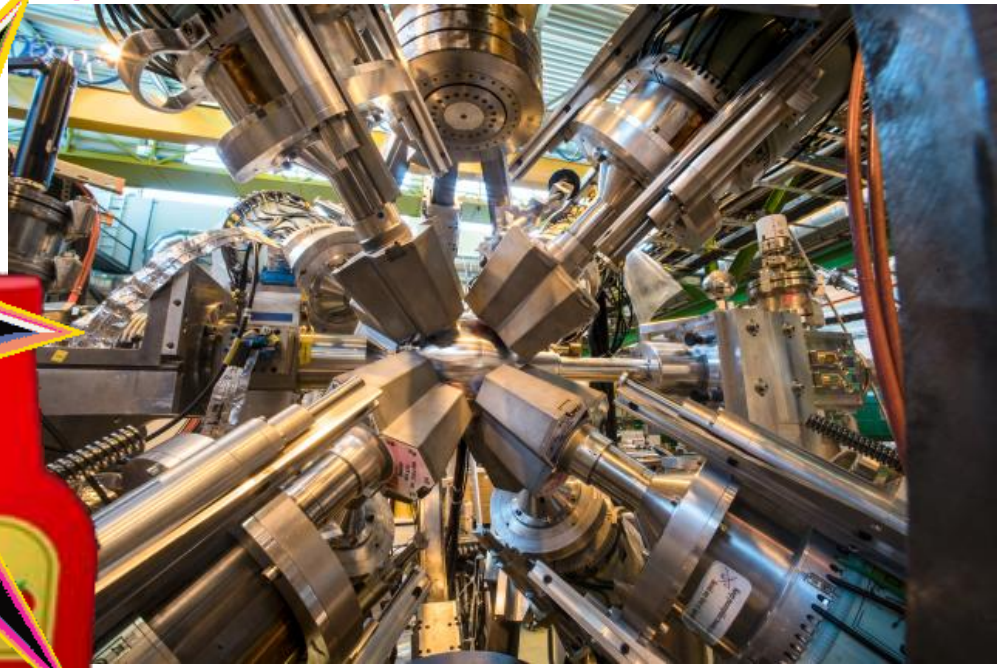
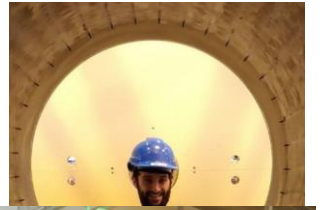
Poland
MEDICIS
RILIS
HRS
WITCH
LUCRECIA
VITO
REX-EBIS
RILIS
GPS
P+: 1.4 GeV
HIE-ISOLDE
SSP
SCATTERING EXPERIMENTS
ISS
MINIBALL
NICOLE
IDS
TRAVELLING SETUPS
ISOLTRAP
CRIS
COLLAPS

About Miniball!



Squad



Training and preparation?

Radiation Protection Awareness - ISOLDE Fundamentals

SIR - Safety Information Registration

Main Menu > Electrical Safety - Awareness > Electrical Safety - Awareness (Module 1)

INFO | SPEAKER TEXT

Search...

1. Electrical Safety - Awareness
2. Disclaimer
3. Objectives of the course
4. Instructions
5. List of Chapters
6. The electrical circuit
7. Sockets
8. Electrical equipment at CERN
9. Failures
10. Electrical shocks
11. Direct contact
12. Indirect contact
13. Electrical shocks: physiological effects
14. Burns
15. Appropriate behaviour

Electrical Safety - Awareness
Instructions

Please turn on the **sound**

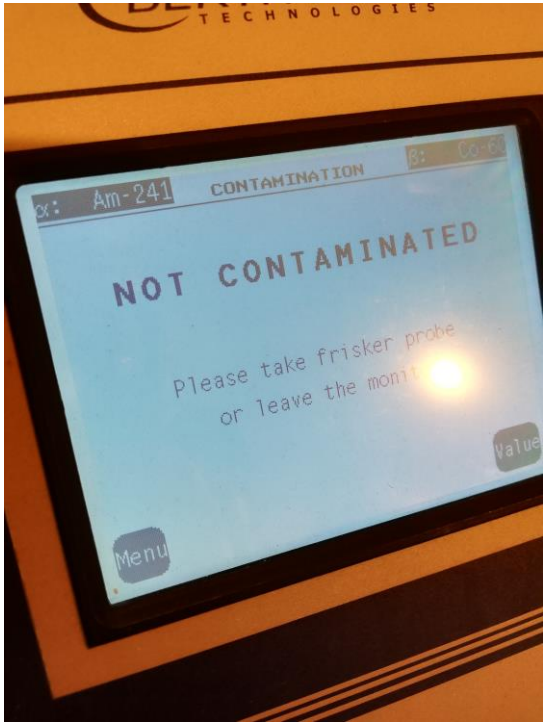
SIR - Safety Information Registration

Main Menu > Radiation Protection - Supervised Area > 1- Supervised Radiation areas - Introduction - Page 1/9

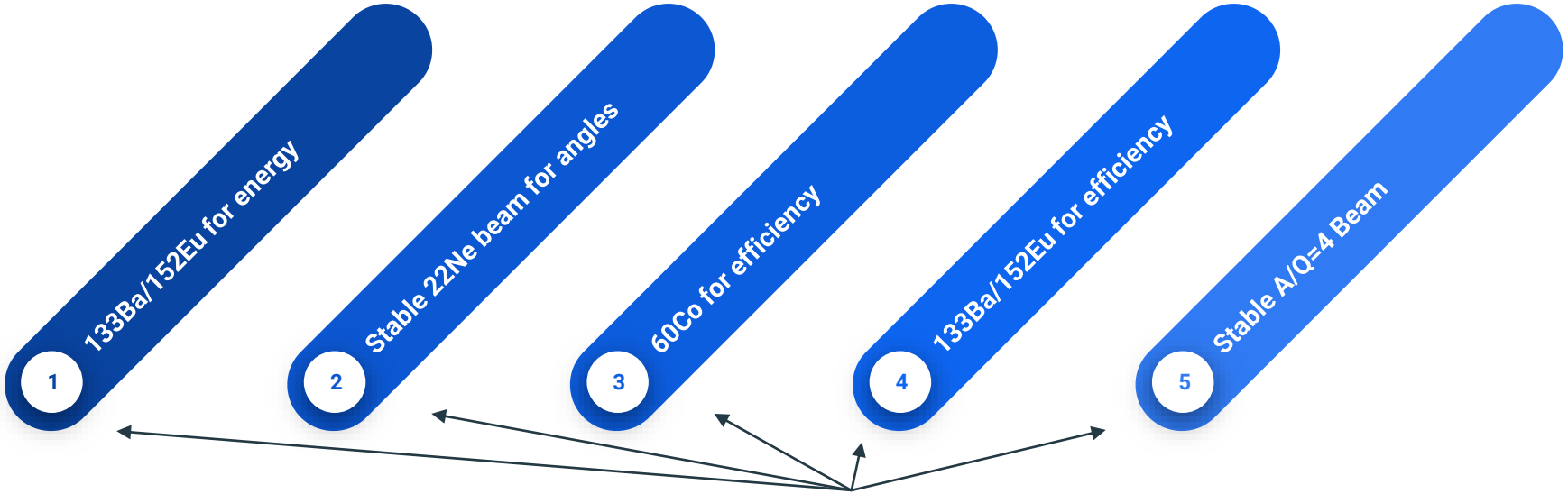
RP COURSE / SUPERVISED RADIATION AREAS - INTRODUCTION

You are going to follow the training module:
« Introduction to radiological risks in CERN Supervised Radiation Areas»
Passing the test that follows is necessary to work in a Supervised Radiation Area.


RADOS DBR-1
READER
LINN ENROTH
hp10 0.01 mS

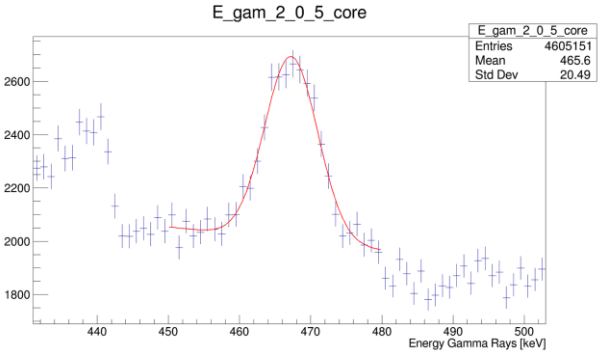

TECHNOLOGIES
Am-241
CONTAMINATION
NOT CONTAMINATED
Please take frisker probe
Value
Menu

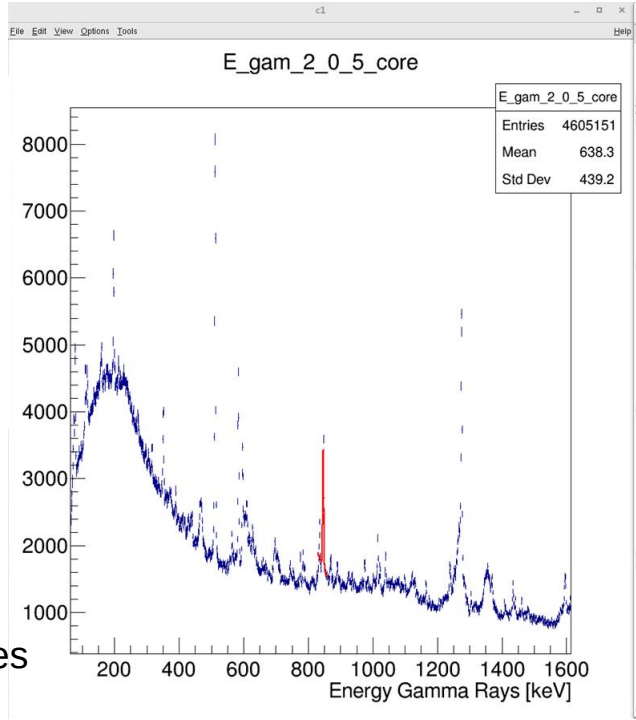
Tasks and work!

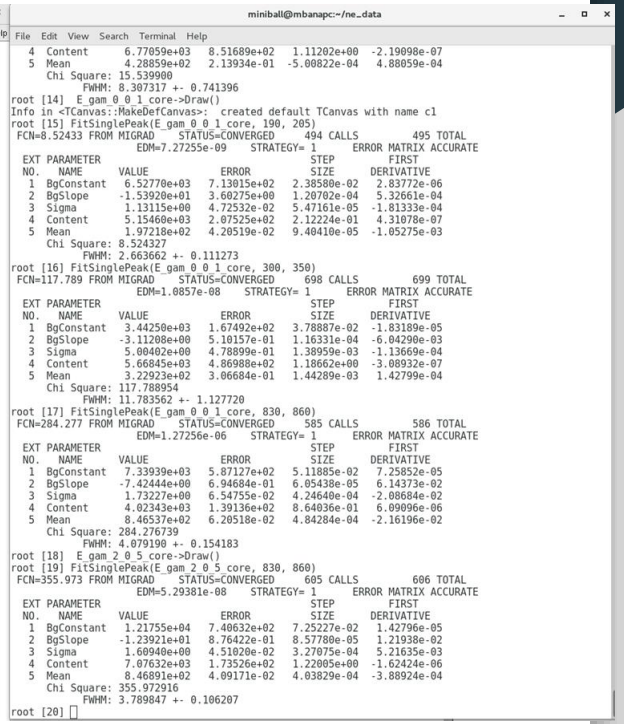


Setup of equipment → Calibrations → 96Kr experiment In July

Doppler analysis

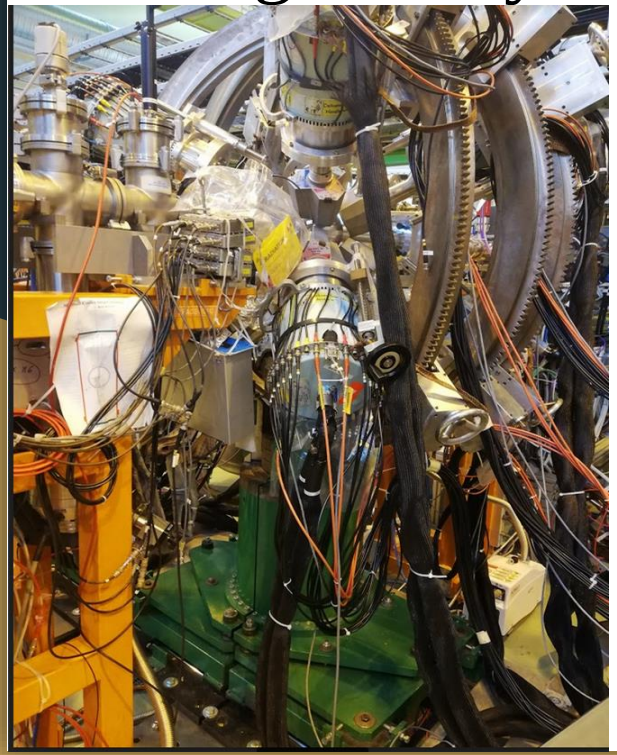






1. Draw graph of interest
2. Locate Doppler Shift
3. Fit peak(s)
4. Take note of important values
5. 8·3·6 = 144 graphs!

Angle analysis



E_{Lab} by

$$E_{DC} = \gamma E_{Lab}\left[1 - \beta\cos(\vartheta_\gamma)\right], \quad (4)$$

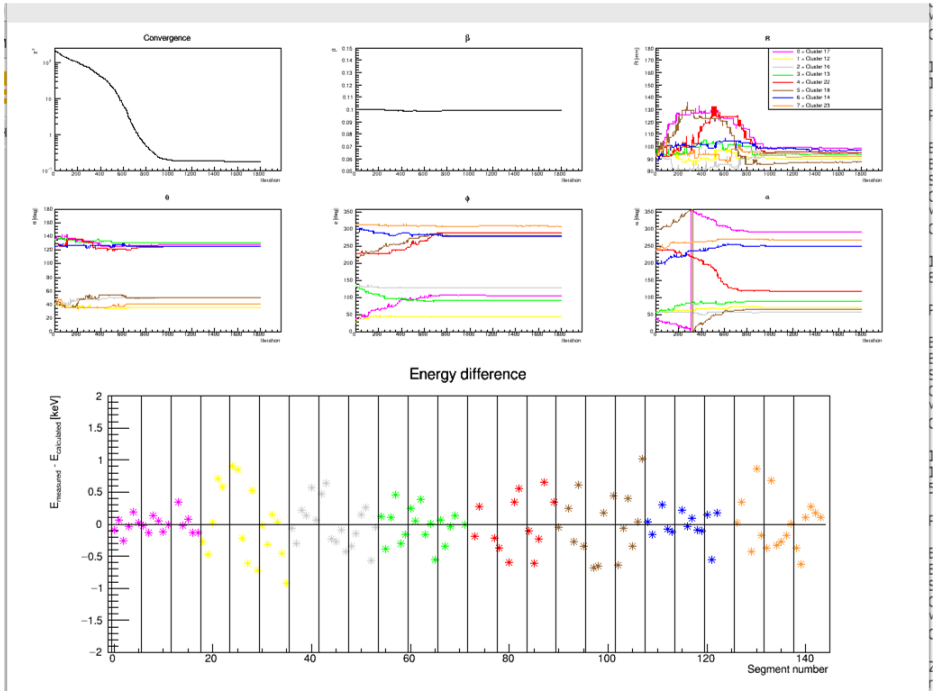
where $\gamma = 1/\sqrt{1-\beta^2}$, $\beta = v/c$ and ϑ_γ is related to the angles of the γ-ray $(\theta_\gamma, \phi_\gamma)$ and of the particle emitting the γ-ray (θ_p, ϕ_p) by

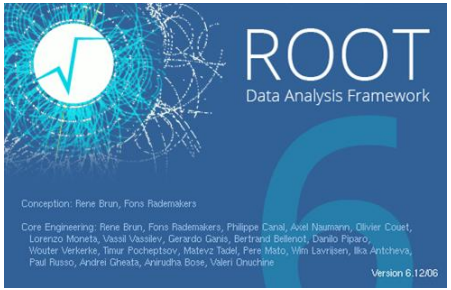
$$\cos(\vartheta_\gamma) = \sin(\theta_p)\sin(\theta_\gamma)\cos(\phi_p - \phi_\gamma) + \cos(\theta_p)\cos(\theta_\gamma). \quad (5)$$

Θ angle

ngl

Angle manipulation






```
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File  Edit  View  Search  Terminal  Help
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theta[6] =   125.36   phi[6] =   279.89   alpha[6] =   251.50   r[6] =    97.83
theta[7] =    40.89   phi[7] =   310.29   alpha[7] =   270.35   r[7] =    92.14
Chisqr = 0.185918 Beta =  0.09941 E =   101.26 MeV Iteration 1600
theta[0] =   127.70   phi[0] =   106.98   alpha[0] =   292.01   r[0] =    98.35
theta[1] =    35.79   phi[1] =    45.14   alpha[1] =    72.80   r[1] =    90.56
theta[2] =    50.19   phi[2] =   128.91   alpha[2] =    58.61   r[2] =    93.89
theta[3] =   130.83   phi[3] =    93.69   alpha[3] =    89.90   r[3] =    93.69
theta[4] =   124.93   phi[4] =   291.07   alpha[4] =   120.25   r[4] =    94.82
theta[5] =    50.34   phi[5] =   282.84   alpha[5] =    67.69   r[5] =    87.18
theta[6] =   125.36   phi[6] =   279.73   alpha[6] =   251.49   r[6] =    96.65
theta[7] =    40.89   phi[7] =   310.29   alpha[7] =   270.35   r[7] =    92.14
Chisqr = 0.185307 Beta =  0.09941 E =   101.26 MeV Iteration 1800
theta[0] =   127.76   phi[0] =   107.18   alpha[0] =   292.22   r[0] =    98.51
theta[1] =    35.79   phi[1] =    45.18   alpha[1] =    72.80   r[1] =    90.07
theta[2] =    50.19   phi[2] =   128.91   alpha[2] =    58.32   r[2] =    93.26
theta[3] =   130.83   phi[3] =    93.69   alpha[3] =    89.90   r[3] =    93.49
theta[4] =   124.93   phi[4] =   290.93   alpha[4] =   120.33   r[4] =    94.91
theta[5] =    50.34   phi[5] =   283.16   alpha[5] =    67.43   r[5] =    87.26
theta[6] =   125.36   phi[6] =   279.73   alpha[6] =   251.57   r[6] =    96.85
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theta[3] =   130.85   phi[3] =    92.62   alpha[3] =    89.14   r[3] =    92.94
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```
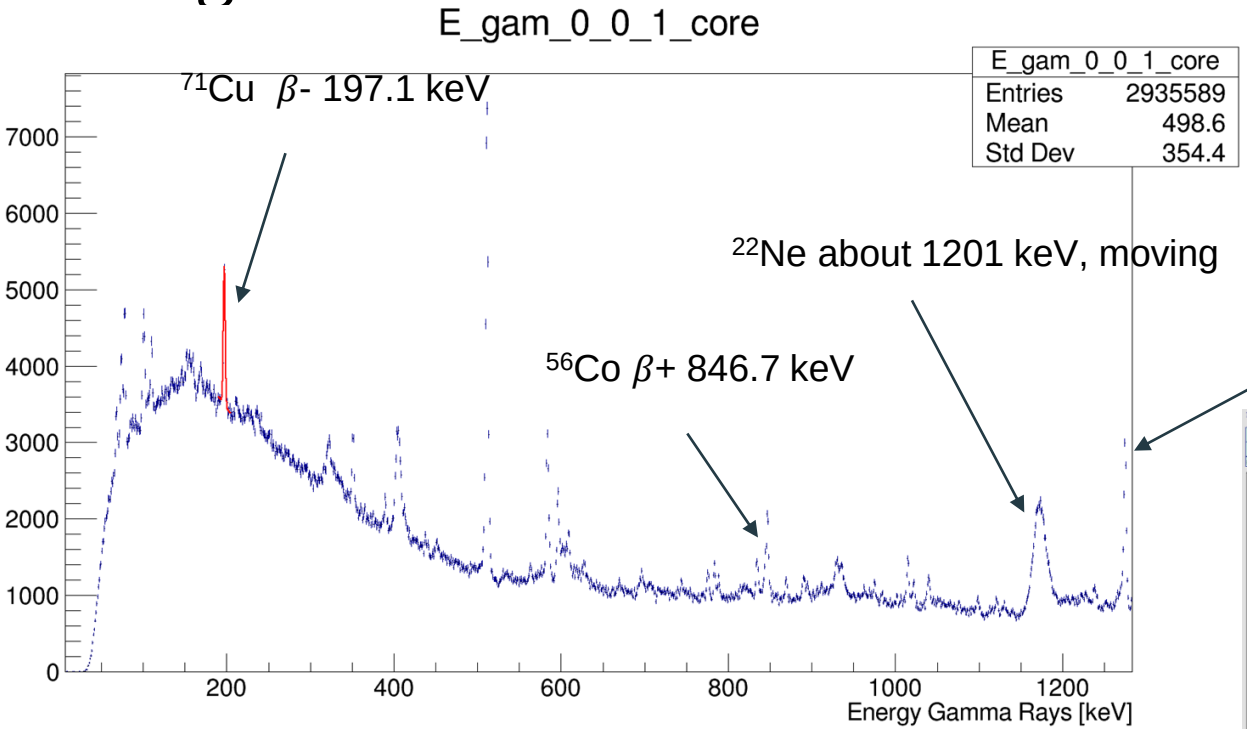
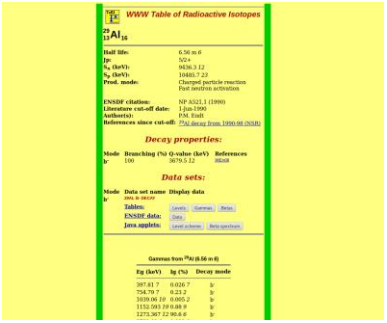
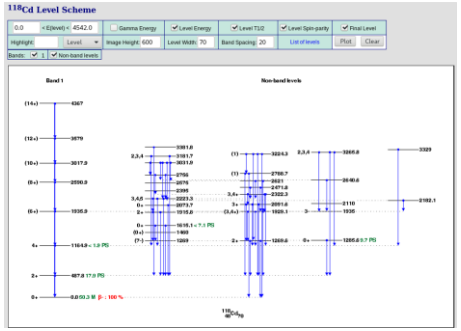
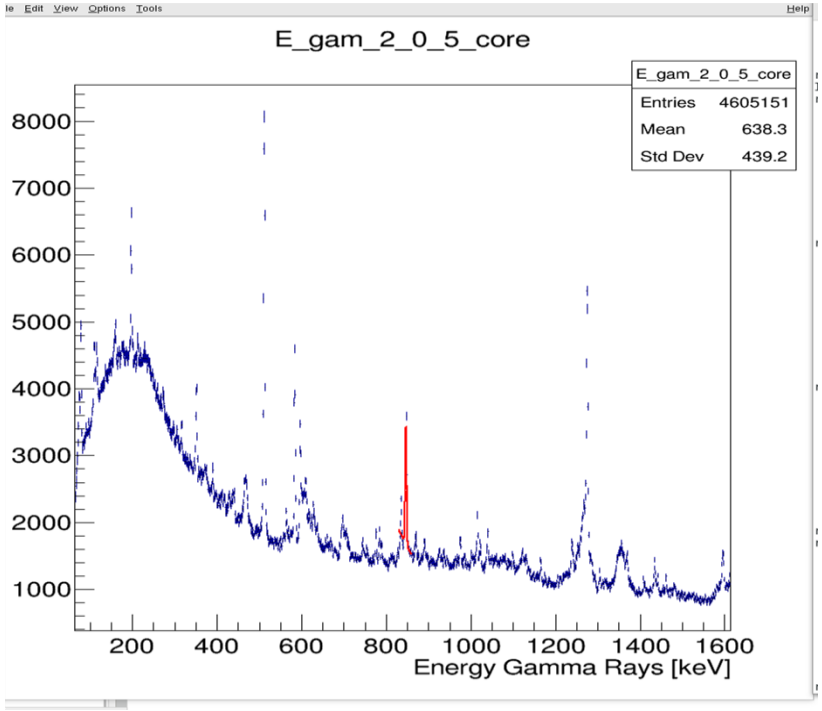

Background radiation detection!





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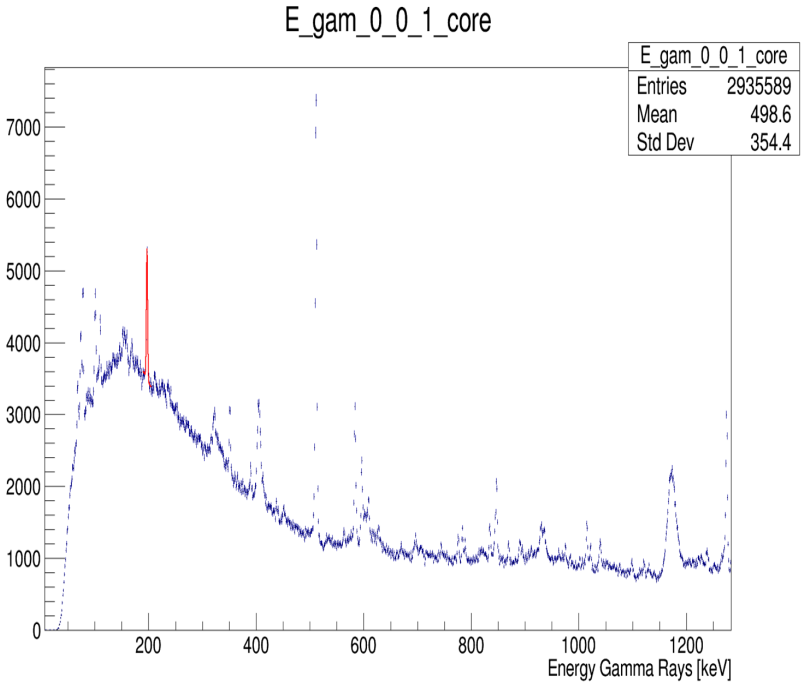
Std Dev 439.2
8000
7000
6000
5000
4000
3000
2000
1000
200 400 600 800 1000 1200 1400 1600
Energy Gamma Rays [keV]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Mean 498.6
Std Dev 354.4
7000
6000
5000
4000
3000
2000
1000
0
200 400 600 800 1000 1200
Energy Gamma Rays [keV]

Experience

```
miniball@mbanapc:~/ne_data/angles/GeneticPositionClusters
File  Edit  View  Search  Terminal  Help
theta[5] =    50.34   phi[5] =   282.84   alpha[5] =    67.56   r[5] =    87.18
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```

Thank you!