EXP1904: Reference reaction - Analyzing #469

Analyzing # 436 (Открыта): Reference reaction: Data analysis

Emission angle of 3He

05/28/2020 02:41 AM - Vratislav Chudoba

Status:	Открыта		**Start date:**	05/28/2020
Priority:	Нормальный		**Due date:**	
Assignee:	Ivan Muzalevsky		**% Done:**	50%
Category:			**Estimated time:**	0.00 hour
Target version:				

Description

Calculate an emission angle of ^{3}He in both laboratory and the reaction center of mass systems.

Provide the following histograms in the comment:

- 1D angular distribution;
- the dependency of emission angle on the ^{9}Li missing mass;

The values should be provided in the form of the text file (and optionally as root macro with the construction of histogram with very fine binning) in the attachment.

History

#1 - 05/28/2020 02:19 PM - Ivan Muzalevsky

- File he3_mm_9Ligs.txt added

- File he3_mm_full.txt added

- File he3_mm_canvas.C added

- % Done changed from 0 to 50

Laboratory system

he3_mm.png

Left figure -angle of the 3He emision with respect to the beam. **Red line** corresponds to the 9Li g.s. selection.

Middle figure - correlation of the 3He emission angle with the missing mass of the ^{9}Li. The numerical expression of this **black** histogram is written into the he3_mm_full.txt file

Red dots (middle figure) - corresponds to the 9Li g.s. selection. The numerical expression of this **red** histogram is written into the he3_mm_9Ligs.txt file

Right figure - 3He energy vs 3He emision amgle. The numerical expression of this **black** histogram is written into the he3_kin_full.txt file

Red dots corresponds to the 9Li g.s. selection. The numerical expression of this **red** histogram is written into the he3_kin_9Ligs.txt fil

#2 - 05/28/2020 06:43 PM - Ivan Muzalevsky

- File he3_kin_9Ligs.txt added

- File he3_kin_full.txt added

#3 - 05/29/2020 01:50 PM - Ivan Muzalevsky

- File CM_he3_mm_9Ligs.txt added

- File CM_he3_mm_full.txt added

- File CM_he3_kin_9Ligs.txt added

- File CM_he3_kin_full.txt added

Reaction CM system

c_he3_angles.png

Left figure -angle of the 3He emision in the reaction CMS. **Red line** corresponds to the 9Li g.s. selection.

Middle figure - correlation of the 3He emision angle in the reaction CMS with the missing mass of the ^{9}Li. The numerical expression of this **black** histogram is written into the CM_he3_mm_full.txt file

Red dots (middle figure) - corresponds to the 9Li g.s. selection. The numerical expression of this **red** histogram is written into the CM_he3_mm_9Ligs.txt file

Right figure - 3He energy vs 3He emision amgle in the reaction CMS. The numerical expression of this **black** histogram is written into the CM_he3_kin_full.txt file

Red dots corresponds to the 9Li g.s. selection. The numerical expression of this **red** histogram is written into the CM_he3_kin_9Ligs.txt

#4 - 05/29/2020 02:11 PM - Ivan Muzalevsky

- File c_he3_angles_CM.C added

Files

he3_mm_9Ligs.txt	28.1 KB	05/28/2020	Ivan Muzalevsky
he3_mm_full.txt	258 KB	05/28/2020	Ivan Muzalevsky
he3_mm_canvas.C	138 KB	05/28/2020	Ivan Muzalevsky
he3_kin_9Ligs.txt	26.4 KB	05/28/2020	Ivan Muzalevsky
he3_kin_full.txt	68.7 KB	05/28/2020	Ivan Muzalevsky
CM_he3_mm_9Ligs.txt	28.1 KB	05/29/2020	Ivan Muzalevsky
CM_he3_mm_full.txt	70.5 KB	05/29/2020	Ivan Muzalevsky
CM_he3_kin_9Ligs.txt	26.4 KB	05/29/2020	Ivan Muzalevsky
CM_he3_kin_full.txt	68.6 KB	05/29/2020	Ivan Muzalevsky
c_he3_angles_CM.C	262 KB	05/29/2020	Ivan Muzalevsky