

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 ^3He 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 ^9Li 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 emission 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 ^9Li . 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 emission angle. 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* file

#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 emission in the reaction CMS. **Red line** corresponds to the ^9Li g.s. selection.

Middle figure - correlation of the ^3He emission angle in the reaction CMS with the missing mass of the ^9Li . 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 emission angle 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