

EXP1904: Reference reaction - Developing #437

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

Missing mass of ^9Li from ^3He registered in coincidence with ^8He

02/01/2020 02:19 AM - Vratislav Chudoba

Status:	Открыта	Start date:	02/01/2020
Priority:	Нормальный	Due date:	
Assignee:	Ivan Muzalevsky	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
Provide missing mass of ^9Li from ^3He registered in the side telescopes in coincidence with ^8He registered in the central telescope.			
Provide a selection of ^8He in the central telescope in a file (e.g. in pdf format) as an attachment to this issue.			
Missing mass of ^9Li should be shown inside the text of the comment.			

History

#1 - 02/02/2020 04:43 PM - Ivan Muzalevsky

- File *he8_ID.pdf* added
- File *he6_ID.pdf* added
- % Done changed from 0 to 50

#2 - 04/27/2020 07:56 PM - Ivan Muzalevsky

For the analysis, the parameters from the [issue 458](#) were used.

Identification

Realization of the identification of the ^8He in the central telescope is attached: *he8_ID.pdf*

Green dots - considered ^8He events,
Blue dots - coincidences with ^3He events from some side telescope
Red dots - coincidence of considered ^8He with ^3He events from some side telescope

Realization of the identification of the ^6He in the central telescope is attached: *he6_ID.pdf*

Green dots - considered ^6He events,
Blue dots - coincidences with ^3He events from some side telescope
Red dots - coincidence of considered ^6He with ^3He events from some side telescope

The presented identification realizations in the attached pdf files was performed with not full statistics, because the CsI amplification were changed during the experiment. And as far as we do not have CsI calibration parameters, I can't provide ID plot with full statistics. That is why, the amount of coincidences found in pdf files can be lower that in the MM histogram.

Missing-mass spectrum

At the following picture of the MM summerd from all 4 telescopes of the ^9Li reconstructed from ^3He is presented:

- Top left:
 - black line: all ^3He events from side telescopes
 - red line: ^3He events in coincidence with ^9Li events from central telescope
 - green line: ^3He events in coincidence with ^6He **OR** ^8He events from central telescope
- Top right: green spectra from the top left pic (MM spectra reconstructed from ^3He events in coincidence with ^6He **OR** ^8He events from central telescope)
- Bottom left: MM spectra reconstructed from ^3He events in coincidence with **^8He** events from central telescope
- Bottom right: MM spectra reconstructed from ^3He events in coincidence with **^6He** events from central telescope

mm_9li.png

#3 - 04/27/2020 07:56 PM - Ivan Muzalevsky

- File deleted (he8_ID.pdf)

#4 - 04/27/2020 07:56 PM - Ivan Muzalevsky

- File deleted (he6_ID.pdf)

#5 - 04/27/2020 08:32 PM - Ivan Muzalevsky

- File he6_ID.pdf added

- File he8_ID.pdf added

#6 - 04/27/2020 08:32 PM - Ivan Muzalevsky

- % Done changed from 50 to 100

Files

he6_ID.pdf	17.6 MB	04/27/2020	Ivan Muzalevsky
he8_ID.pdf	16.5 MB	04/27/2020	Ivan Muzalevsky