

EXP2003: Express analysis - Analyzing #457

Attempt for relative calibration of side telescope

04/01/2020 02:44 AM - Vratislav Chudoba

Status:	Открыта	Start date:	04/01/2020
Priority:	Нормальный	Due date:	
Assignee:	Vratislav Chudoba	% Done:	90%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
Side silicon telescope intended for registration of ^3He was not fully calibrated before the beginning of the beam session.			
Provide information on the attempt to obtain an enhanced dE-E identification plot for this telescope.			
Related issues:			
Related to Analyzing #453: ID plot for side telescope			Открыта 04/01/2020

History

#1 - 04/04/2020 11:33 PM - Vratislav Chudoba

- Related to Analyzing #453: ID plot for side telescope added

#2 - 04/05/2020 12:02 AM - Vratislav Chudoba

We checked if the double dE-E line on ID plot reported in [task 453](#) was not caused by issues related to calibration. We consider the calibration parameters for the first layer as good enough for purposes of express-analysis. We checked the influence of different amplification coefficients by individual projections for particular Y-strips to the overall dE-E plot for all strips. We do not see any significant shifts caused by the lack of the calibration of Y-strips which may pronounce a double-line in Z=3 region.

dE-E_stripsCheck.png

Check of the relative position of dE-E hyperbolae for different Y-strips. **Black dots** - identification plots for all strips. This graph is the same on all panels and data are identical to those reported in [task 453](#). **Red dots** - identification plot for a particular strip. We observe that ^4He and ^8He locus almost keep its position independently on Y-strip number.

An attempt to find some relative calibration parameters for Y-strips was unsuccessful. The amplification coefficients are so near to each other that we did not find any possibility to enhance an overall identification plot. It is demonstrated below on the first 8 Y-strips.

dE-E_calibrationAttepmnt.png

Demonstration of possible preliminary calibration. Colored histogram - ID plot for particular Y-strips whereas the dE was taken from any X-strip. The red markers represent points on ^8He hyperbola and are the same for all strips. The position of the hyperbola is almost the same for all strips, the penetration of ^8He is pronounced not enough to make any corrections for Y-strips calibration parameters.

#3 - 04/05/2020 01:43 AM - Vratislav Chudoba

- % Done changed from 0 to 90