Subject: AGATA Crystal positions (Look-Up Table)
Posted by thuyuk on Mon, 16 Mar 2015 10:46:37 GMT

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Hi everybody,

I have some problems with the correction for the Doppler effect in my experiment. The target position was selected forward, and this makes the system very sensible for very small changes in the determination of the particle positions or the gamma positions.

I am comparing whether the crystal positions is calculated properly, because we know that there is a small rotation in the phi axis between the Legnaro and the GSI configurations of the AGATA detectors. The rotation from the original positions is 7.8 degrees in the Legnaro case, and 10 degrees in the GSI cases. I have two look-up tables in my hand, one is from the GammaWare software and the other is from the prespec analysis package. I see that the coordinates in the look-up table of the Gammware software are in agreement with the coordinates inside the femul software. But, the coordinates that the prespec software package uses are different.

I don't know if femul uses the original coordinates, or the coordinates that are already rotated 7.8 degrees for the Legnaro case. But, a rough calculation shows that the rotation is approximately 10 degrees between the two different look-up tables I possess.

Therefore, I was wondering if the rotation introduced in the coordinates of the prespec package is considered from the original positions of the detectors, or the Legnaro configuration. If, the person who performed the rotation considering that the coordinates are already for the original positions, but in fact they are for the Legnaro case, then the coordinates inside the prespec package should be corrected.

Maybe this issue addresses Michael. So, I would be grateful if you could inform me, Michael, regarding to the transformation you have done.

Thank you very much!
Tayfun