Dear Mr. Kresan,

This happens for nearly all events. The tracker identified either 0 or 1 track (and 1/10000 events: 2 tracks). The zeros are understandable, since not every Ca48 reacts in the target. Then it is bend away.

I re-calculated the cuts for this specific case. I also use different cuts for different number of hits in the VETO. I use the 0p cuts if no VETO fired, the 1p cuts if exactly one bar of the VETO fired (TOF<NeuLAND), and so on.
The cuts might not be completely ideal (as they would be with your method 1), but they do look quite OK to me.

If I understand both you and the code correct, then you first mark & sort the clusters based on whether they can come from elastic scattering or not. Then from the sorted & marked clusters, you simply take the starting positions as the neuthits, but only those that have not been used yet, pass the energy threshold & pass the beta test, correct? And if the elastic scattering test provides you with less marked clusters then nNeut, then you cannot reconstrcut nNeut tracks. This is the 20%-30% MisID that you were talking about. Am I correct?

But if so, then how relevant is this beta test? In my case most particles are from background, not from the target, so their beta will not be close to the beam.

What I also do not understand is, why does the code (line 509) read:
if(TMath::Abs(beta-beamBeta) > (0.05*600./beamEnergy) && ic > 0) {
I would expect the beta-test to be a '<', not '>'.
And if I would have the beta's for my specific case to be for example between (from your suggestion 2) 0.7 and 0.75, then how would this translate in a better beta cut?

Christiaan.

File Attachments
1) NeutronCalibration_0p.png, downloaded 174 times
2) NeutronCalibration_1p.png, downloaded 165 times
3) NeutronCalibration_2p.png, downloaded 187 times
4) NeutronCalibration_3p.png, downloaded 187 times
5) NeutronCalibration_4p.png, downloaded 160 times