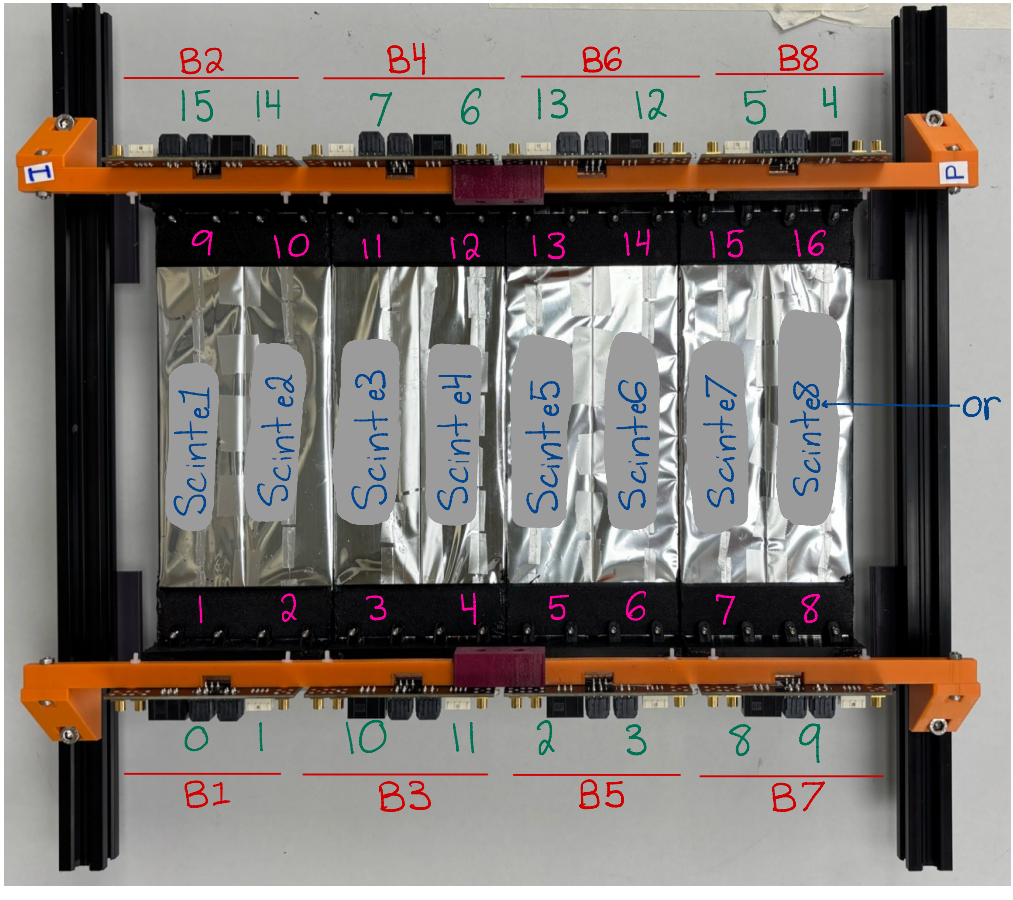
TDC Channel Mapping

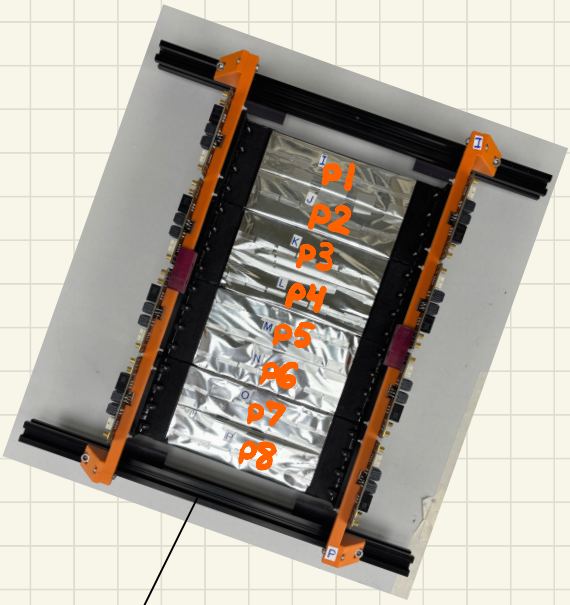


- Channel numbers as we see them in Root (add 16 to every pink number for the positron arm), e.g. width 9

- TDC channel assigments

- Board numbers

Scintillators are grouped by electron and positron arms. So we have,

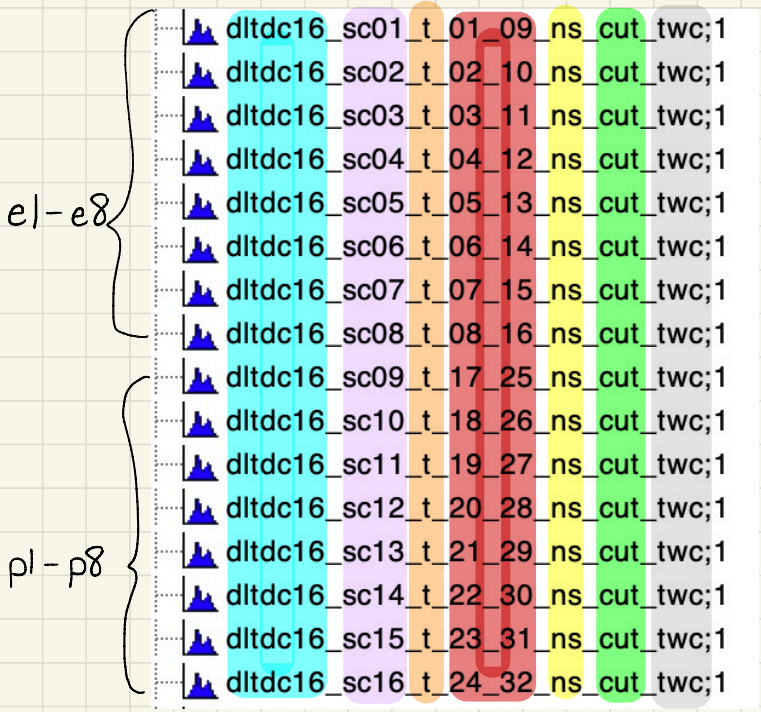


Target Chamber

Each e# and p# scintillator has two ends, as shown on the last page where they are labelled in pink. They follow the convention of (for eX) X, X+8. These tell you the channels we are reading the data out from. Since 1-8 and 1+8 to 8+8 are already taken, the channels for the positron arm are numbered (for scintillator pY) Y+16, Y+24.

The last numbering only shows up when making/titling root plots. We don't talk about scintillators this way. It's numbering all scintillators 1-16. Scintillators 1-8 are e1-e8, and scintillators 9-16 are p1-8. If talking about something in reference to a single end of a scintillator like width 9 (w9), that will always be one end of scintillator e1. Numbers 9-16 only refer to the positron arm when talking about a whole scintillator. This system is confusing so stick with e1-e8 and p1-p8 instead of scintillator 1-16 whenever possible.

So when reading a root plot name.



Using the analysis module for 16 scintillators
Looking at scintillator X
Time difference plot
Scintillator ends we are taking the time difference of (ex. time difference along scintillator 1 AKA e1, $t_{ch9} - t_{ch1}$)
Units for time differences
With a noise cut (event with width < 20 ns removed)
Time walk corrected