

DsToF analysis update

Seb Jones

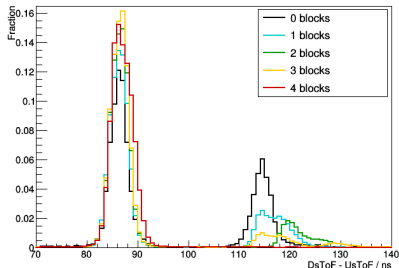
Department of Physics & Astronomy
University College London

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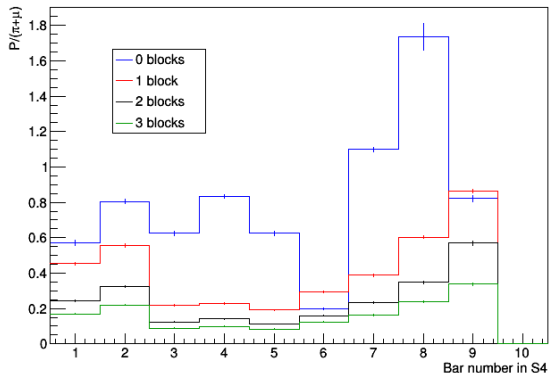
$P/(\pi + \mu)$ spatial distribution

- Looked at the spatial distribution of protons and π, μ across S4
- Did this for 0, 1, 2, 3 moderator blocks

DsToF - UsToF (for different moderator blocks)



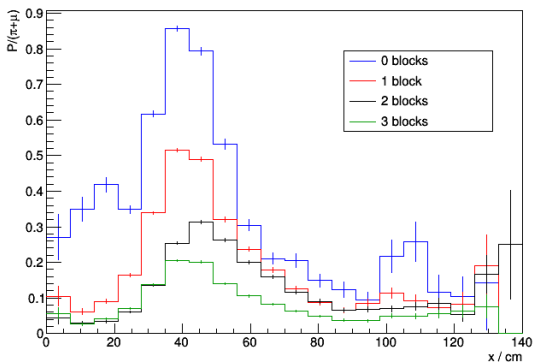
- **Note:** Slightly strange 2 peak structure in 1, 2, 3 block proton peak
 - Seems to be present across all the bars

Vertical $P/(\pi + \mu)$ distributionProton/ $(\pi + \mu)$ in S4

- Bar 10 is top, 1 is bottom
- Beam level is roughly around bars 4 and 5

Horizontal $P/(\pi + \mu)$ distribution

Proton/ $(\pi+\mu)$ in S4

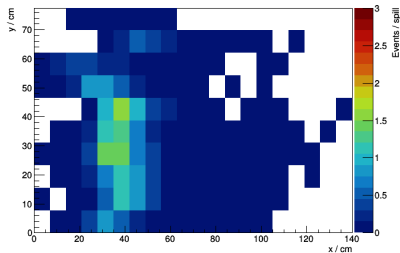


- For this plot, excluded bar 10 data due to unreliability
- Beam axis is in $-x$ direction
- **Next step:** In the process of doing an efficiency calculation to see how this changes results

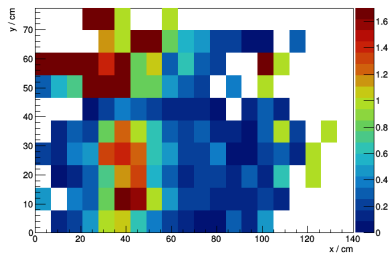
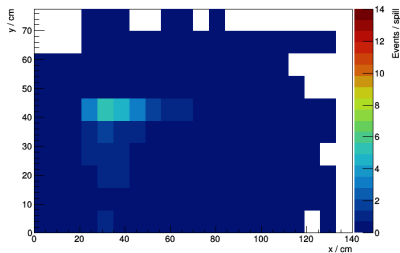
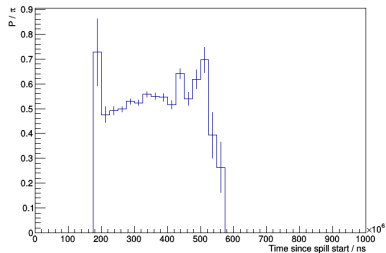
2D $P/(\pi + \mu)$ distributions

0 blocks

0 blocks, position of S4 proton hits

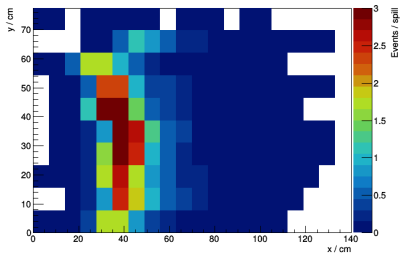


0 blocks, proton/pion ratio in S4

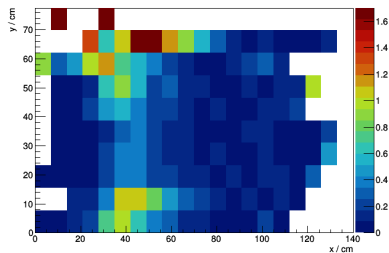
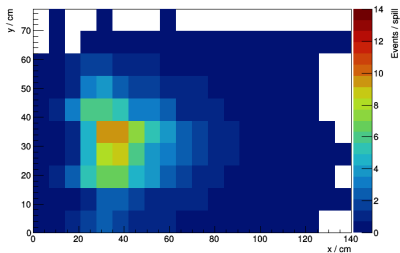
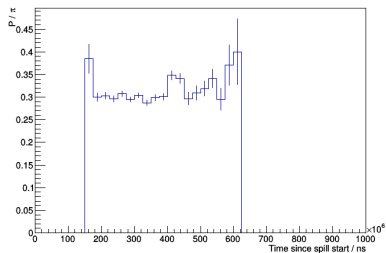
0 blocks, position of S4 π hits0 blocks: Proton/ $(\pi+\mu)$ 

1 blocks

1 blocks, position of S4 proton hits

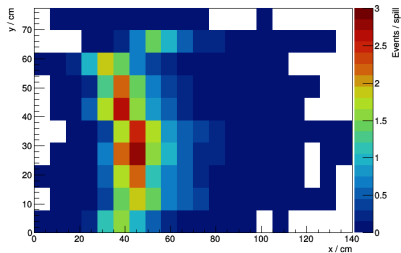


1 blocks, proton/pion ratio in S4

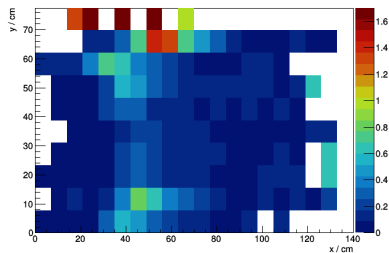
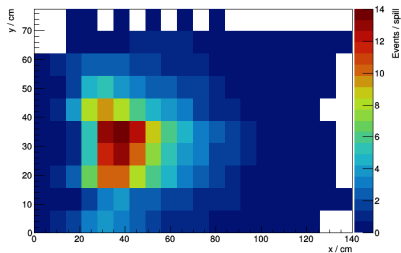
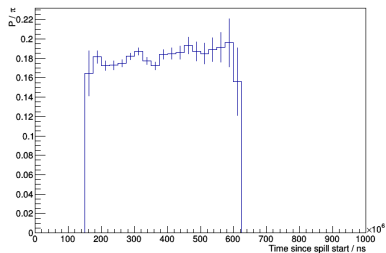
1 blocks, position of S4 π hits1 blocks: Proton/($\pi + \mu$)

2 blocks

2 blocks, position of S4 proton hits

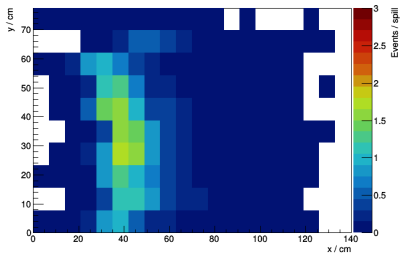


2 blocks, proton/pion ratio in S4

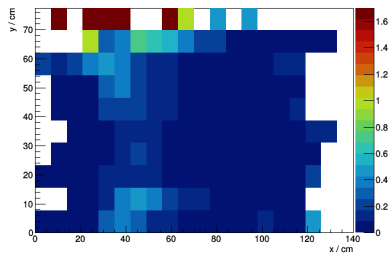
2 blocks, position of S4 π hits2 blocks: Proton/($\pi + \mu$)

3 blocks

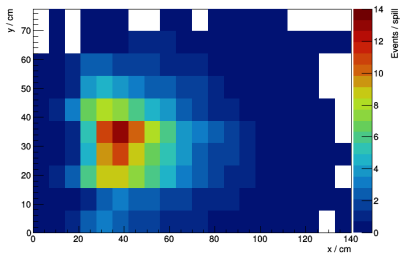
3 blocks, position of S4 proton hits



3 blocks, proton/pion ratio in S4



3 blocks, position of S4 π hits



3 blocks: Proton/ $(\pi + \mu)$

