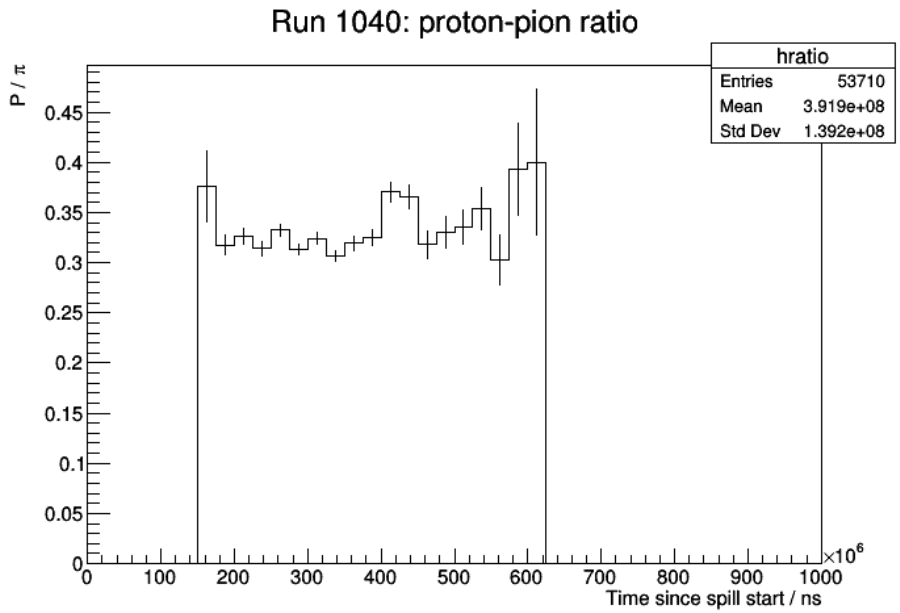
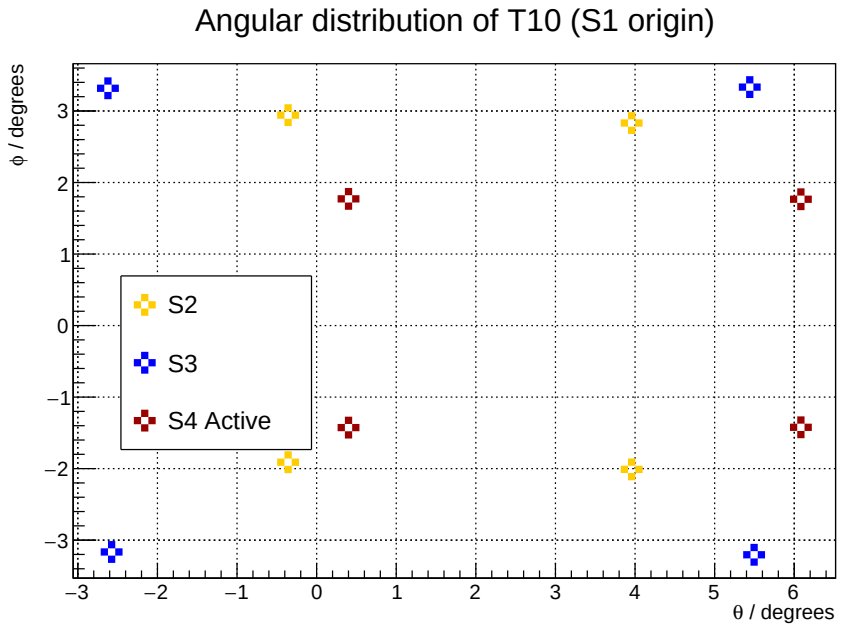
$S3$ dead time correction

- Currently, we are not sure of UToF ($S1, S2, S3$) deadtime – measurements of proton & MIP flux are incorrect
- Proton/MIP ratio is fairly constant across spill (see right) – ratio plots should be ok
- Would like to find a way to correct the absolute $S3$ flux plots



A possible solution



- Given previous slide, $S3$ fluxes should be correct up to a factor
- Need a signal present in UToF & DToF (negligible deadtime) data
- Use $S1 + S2$ coincidences
  - Were fed directly into DToF TDC – no $S4$ hit required and no UToF deadtime
  - Also have these in UToF data, in coincidence with $S3$ hits
  - $S2$ completely shadowed by $S3$ – no geometric effects (see above)

Results

- Here are number of $S1 + S2$ coincidences recorded in each filesystem for each number of blocks

N. blocks	DToF	UToF	Ratio
0	97,722	9,268	0.0948
1	259,579	36,707	0.1414
2	417,054	63,495	0.1522
3	396,519	64,264	0.1621
4	11,461,429	1,037,454	0.0905