

# Time-of-flight update

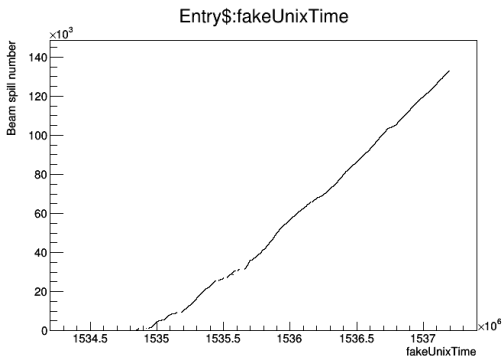
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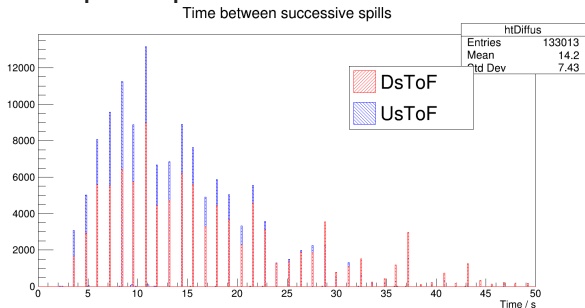
November 22, 2018

## UsToF overlap

- Previously: We observed overlap in timestamps of UsToF files
- Seems to have largely been resolved with reprocessing of files
- We now have desired monotonically increasing function



## Comparison of spill separation



- Wanted to compare time between successive spills in UsToF & DsToF files – should look basically the same
- There are many more UsToF spills than DsToF (133014 vs 106418)
- Need to figure out if there are conditions that lead to this (near file start/end)
- Is this dead time in the DsToF or 'fake' spills in the UsToF?

# Spill separation

- Upper: For each DsToF spill find closest UsToF beam signal
  - Basically every spill seems to be matched
  - If spills are separated by  $>2s$  we will be ok
- Lower: For each UsToF spill find closest DsToF beam signal
  - Similar but greater number of unmatched hits
  - Need zoomed out 2D plot to determine if there is a pattern to where these unmatched hits are

