



CSCTF Status

Anna Kropivnitskaya on behalf of CSCTF:

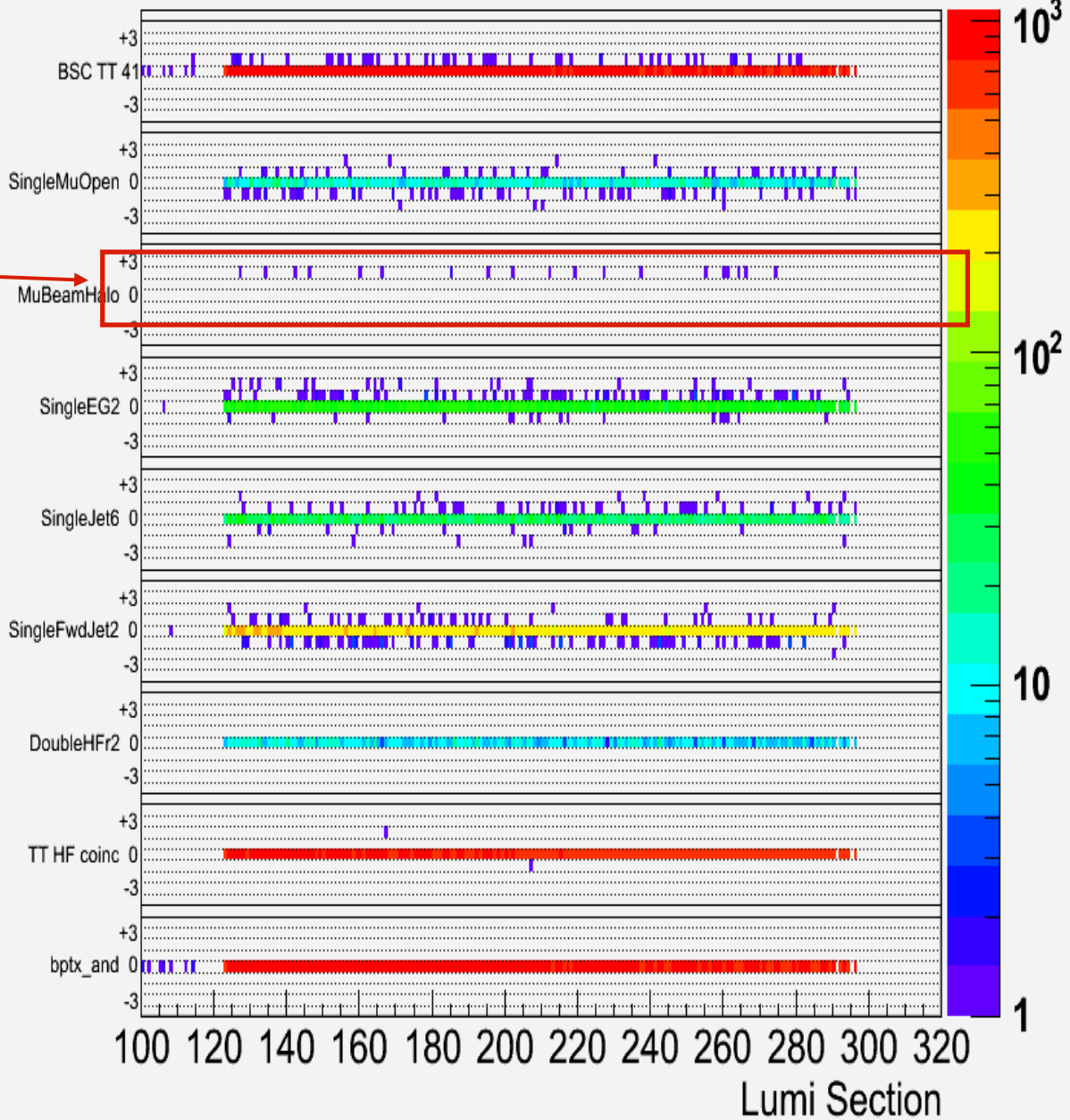
D. Acosta, E. Berry, I. Furic, J. Gartner, K. Kotov, G.P. Di Giovanni
A. Madorksy, M. Mateev, P. Padley, L. Redjimi, L. Uvarov

- Timing
- Collision Muons Candidates Triggered As Halo
- Double Triggering
- Conclusion

L1 Synchronization run 132440

H2blumi
Entries 466642

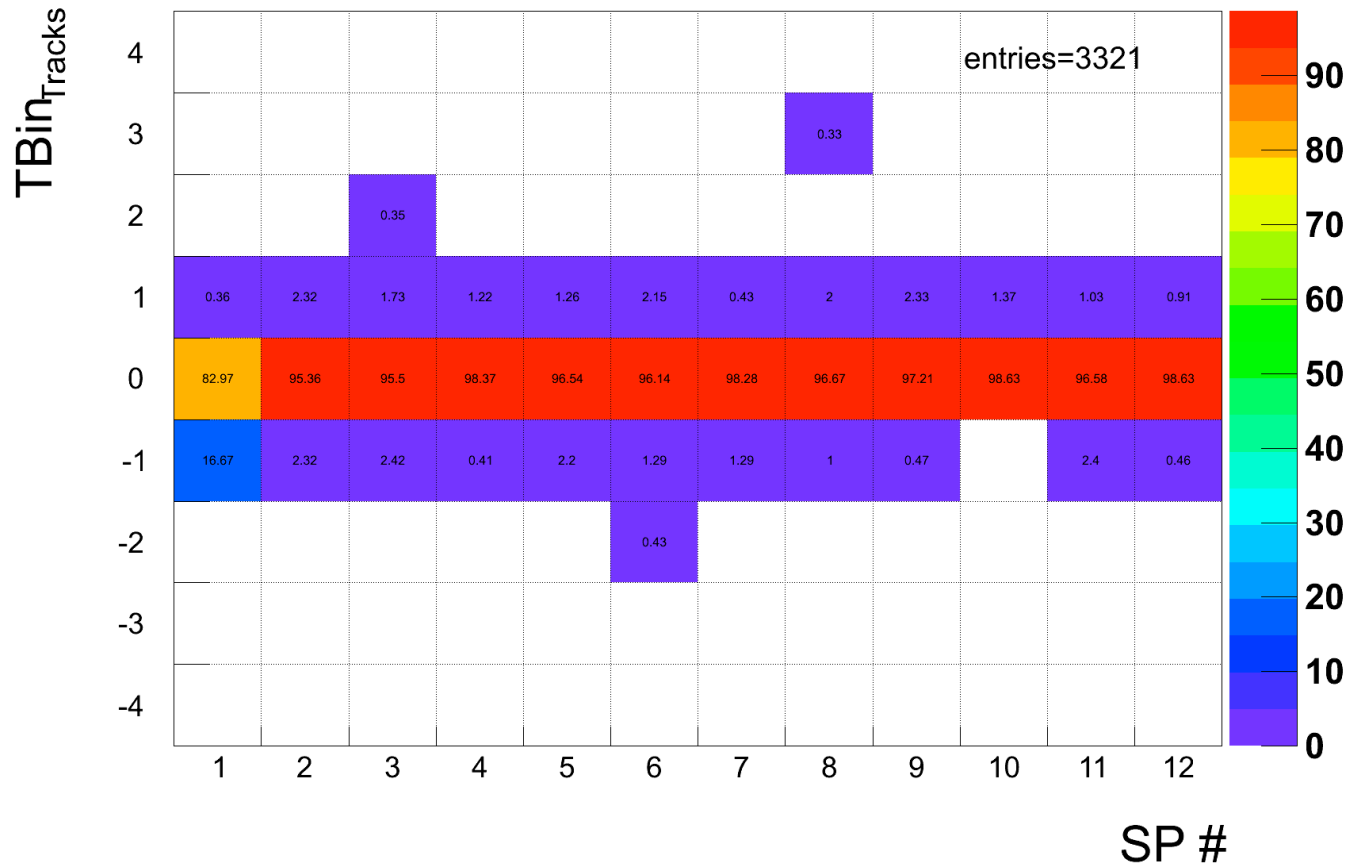
BX offset to Algo124



Where do these events come from?

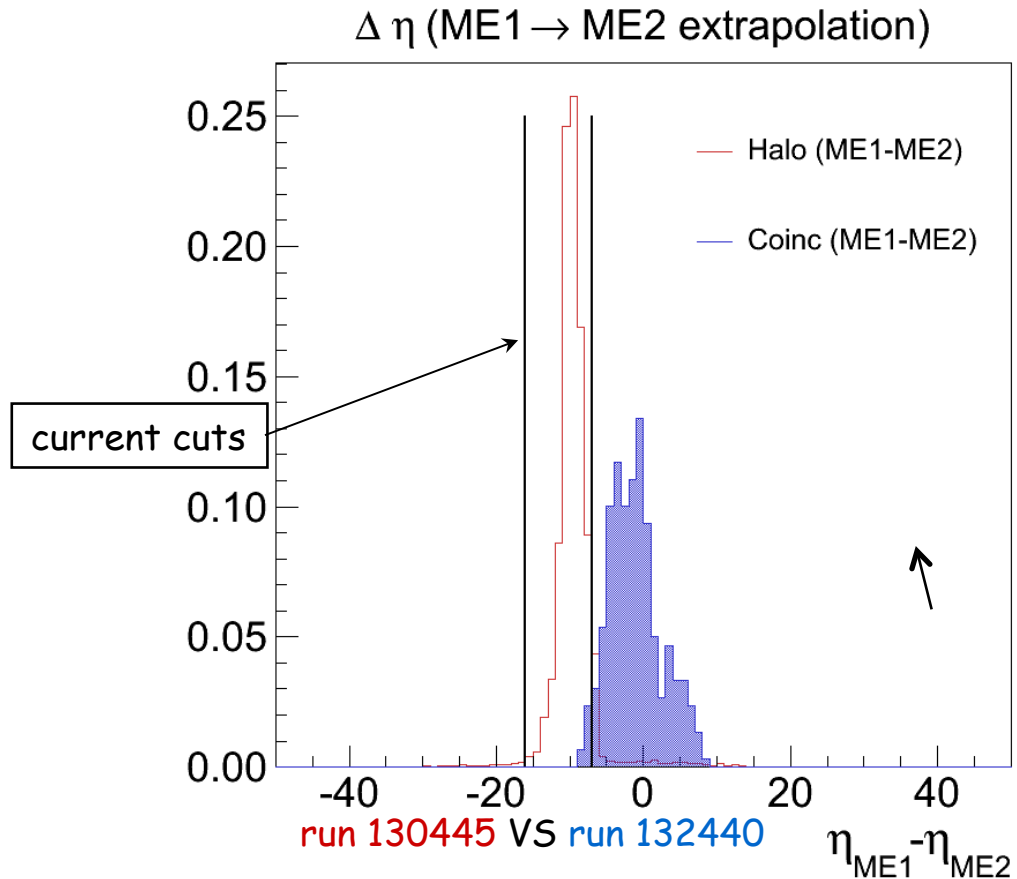
Timing

TBin_{Tracks} Vs SP run=132440



- All the SPs but SP1 have already a good timing: only ~2% prefiring
- SP1 is not good instead: too many entries in tbin=-1 ~16%
- Hope to see improvements after the timing scan analysis which should be finished by this week

Collision Muons Candidates Triggered As Halo



- Halo extrapolation cuts are currently wide open to increase acceptance \rightarrow useful for alignment and preliminary timing studies
- Some collision muons pass these cuts in ME1 \rightarrow ME2 extrapolation
- The halo is currently delayed 2 BXs, so these triggers are reported 2 BX later
- It is happening in $< 1\%$ of the cases (already not bad!)
- Can be further improved by changing the cuts

Double Triggering

- It affects only muon candidates which travel through the 4 stations
- The muon candidates get triggered as ME1-ME2-ME3-ME4 and ME1→ME4 extrapolations
- Currently it is happening for 40% of these candidates, which corresponds to 0.2% of the current total CSCTF triggers
- We still have very few muons crossing the 4 stations
- It is a problem which CSCTF wants to be proactive about
- It can be a nasty problem for the future data taking
- Short term plan: tune the selection parameters (change the mindphi to 720).
Quick and still clean solution
- Medium term plan: firmware update to better handle the ghost cancellation

Conclusion

- Waiting for timing scan at P5 to see improvement for SP1
- plan for the short term:
 - change the mindphi to 720
 - change the cuts for halo delta eta extrapolationthese could be done with creation of new keys
- Medium term plan:
 - firmware update to better handle the ghost cancellation for 4 Stations method

Backup slides