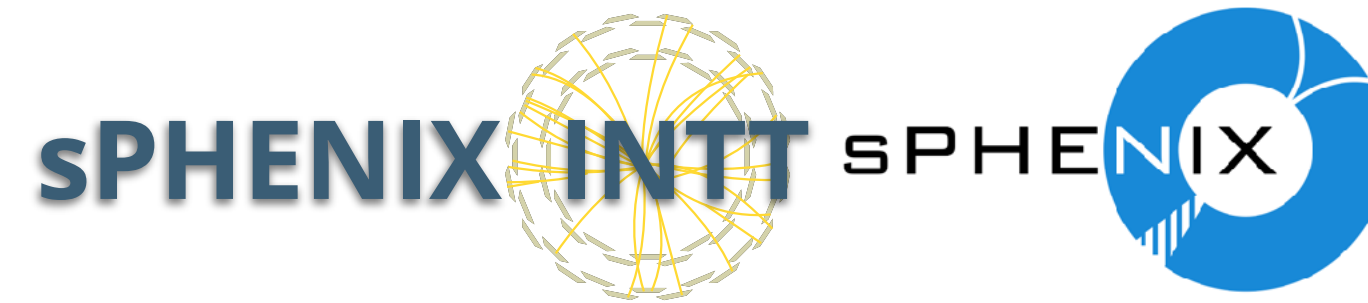# INTT - Mixed up event

Cheng-Wei Shih
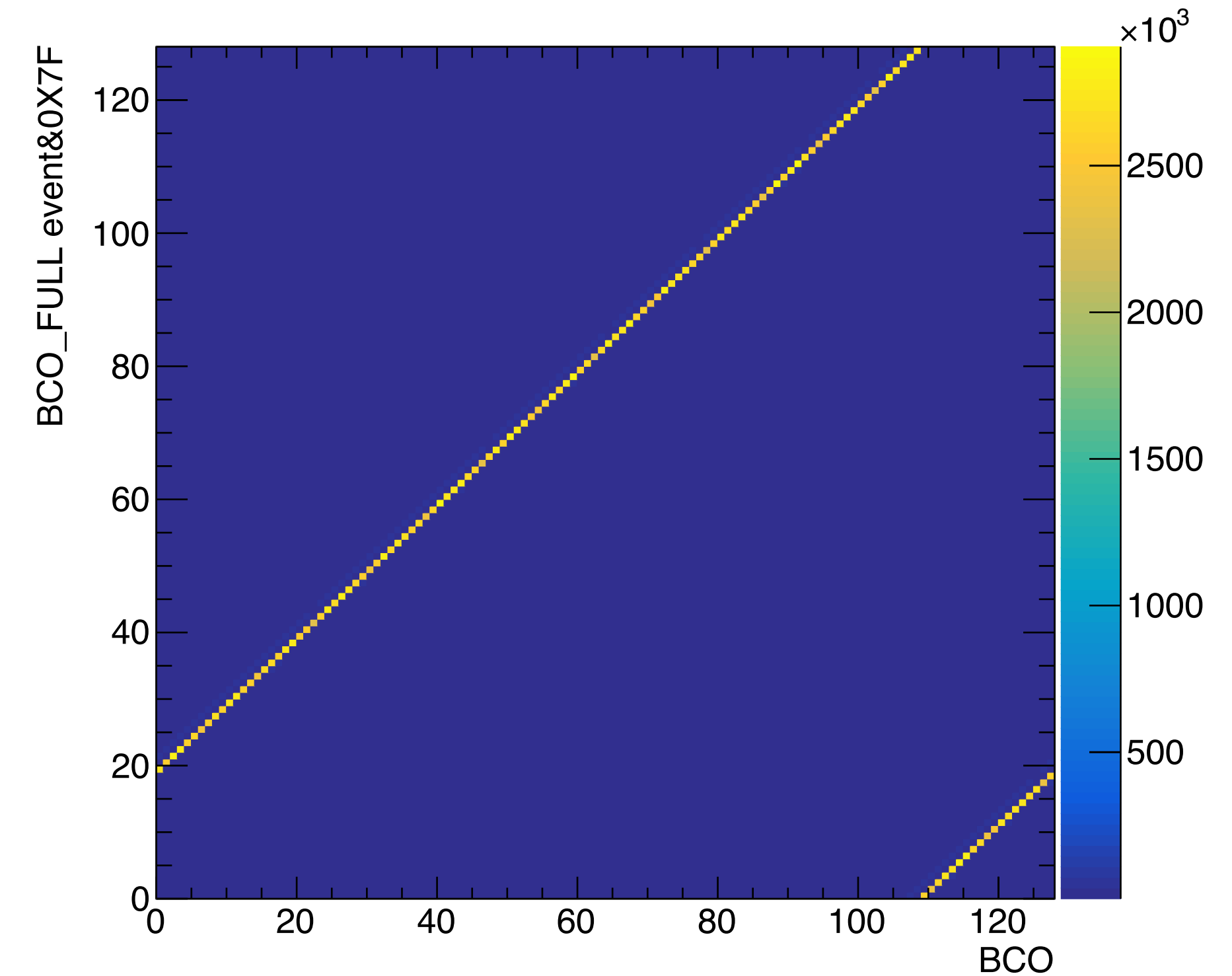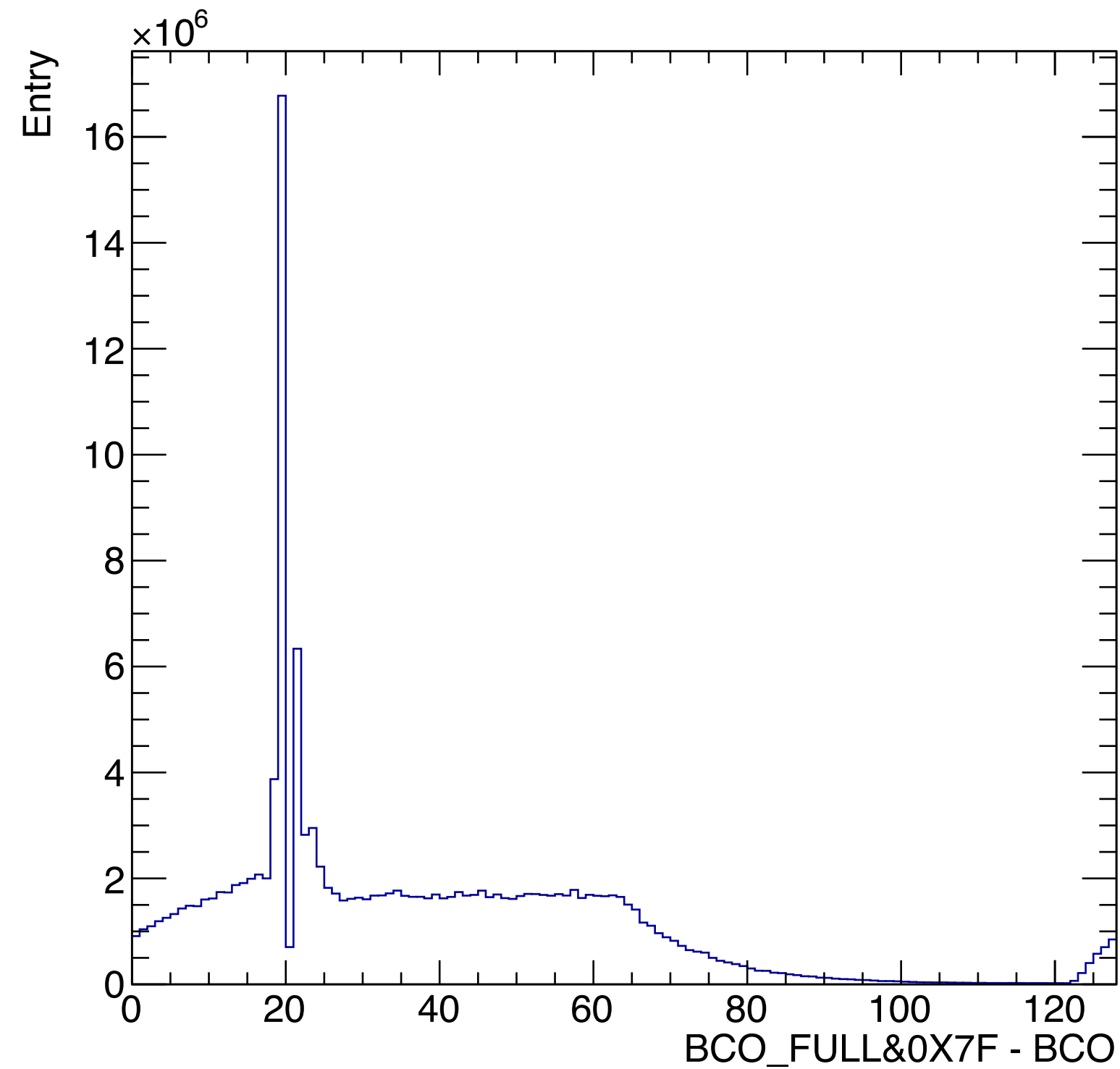
National Central University, Taiwan

sPHENIX INTT sPHENIX 國立中央大學 National Central University

Per event bco_diff distribution

File: beam_intt5-00020708-0000_event_base.root (clone hits are removed in first step)

Filled by each hit of each event in that Felix server
In this file, the spike is located at 19

Original thought: each event should have the spike at the same location as the rest of events, which represents the signal
The rest is just matter of the level of the background scattering around the spike (the grass)

Per event bco_diff distribution

File: beam_intt5-00020708-0000_event_base.root (clone hits are removed in first step)

Showing 4 events below as example
One spike at 19 is expected, at least, my thought
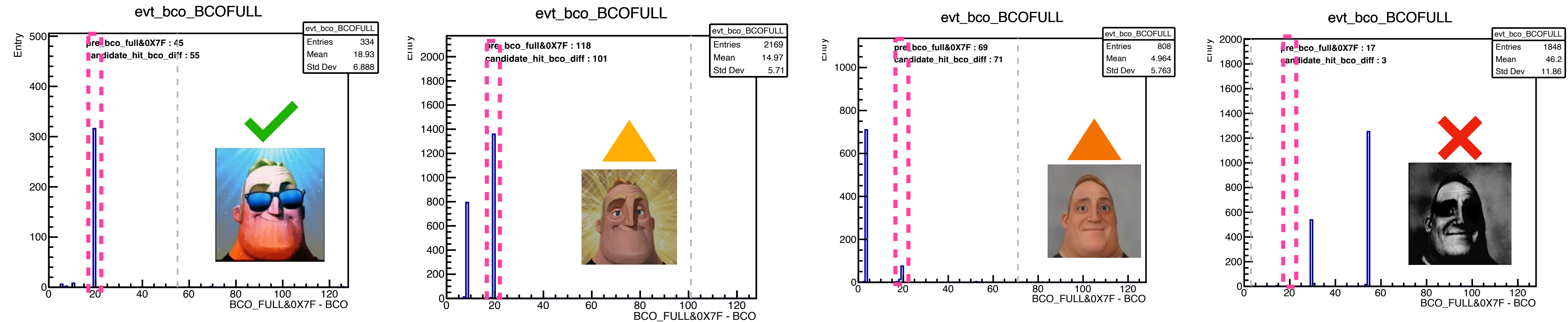

However, it is NOT the case

There are some events whose spikes are not in the expected location

The standing order of the INTT calibration (INTT bco_diff cut) in the offline analysis may have to be optimized (at least for the run23 analyses)
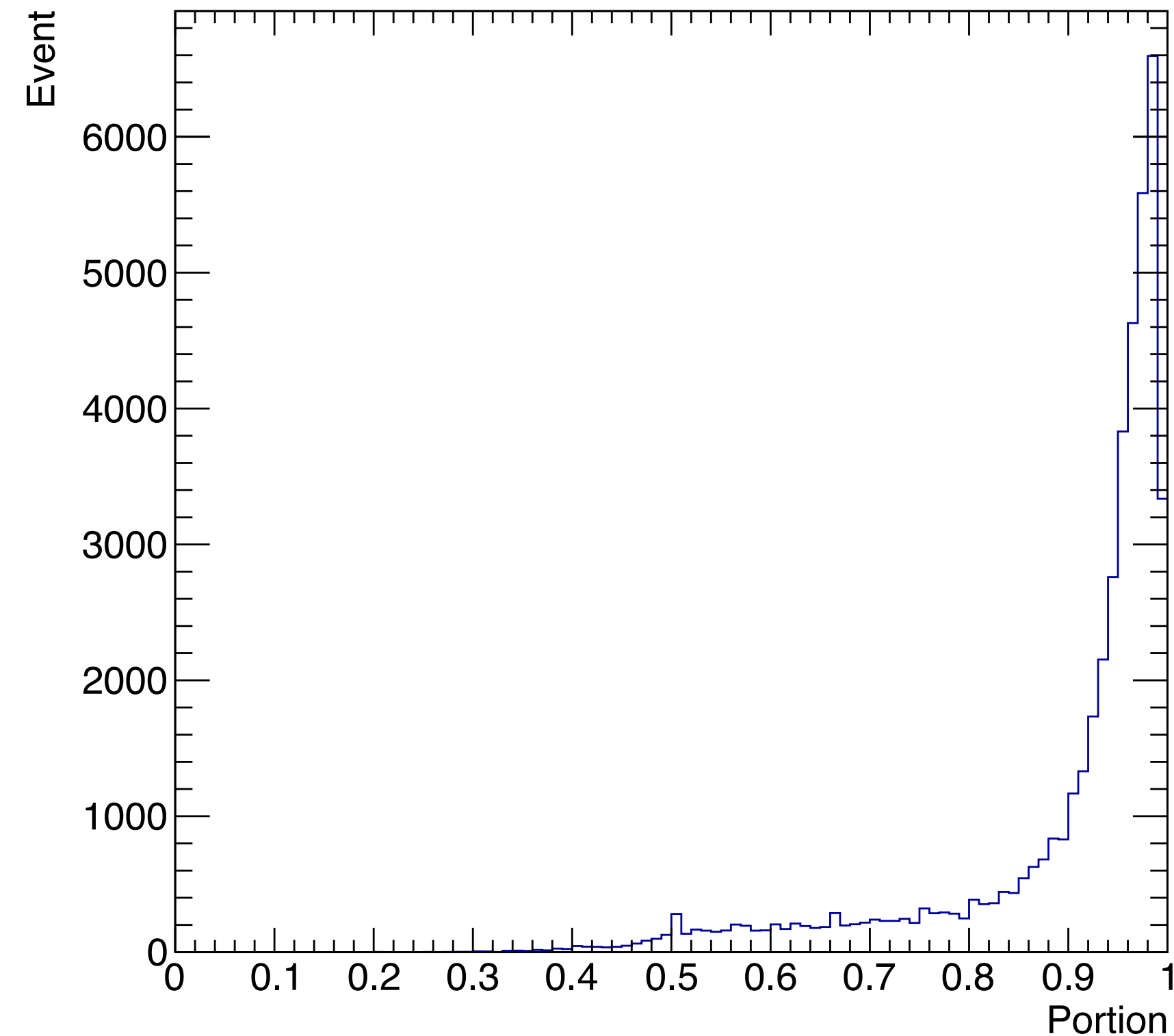
For example, The current scheme will discard most of the hits of the 🔺 event, but the event will still be kept, which could introduce the bias

Per event bco_diff distribution

File: beam_intt5-00020708-0000_event_base.root (clone hits are removed in first step)
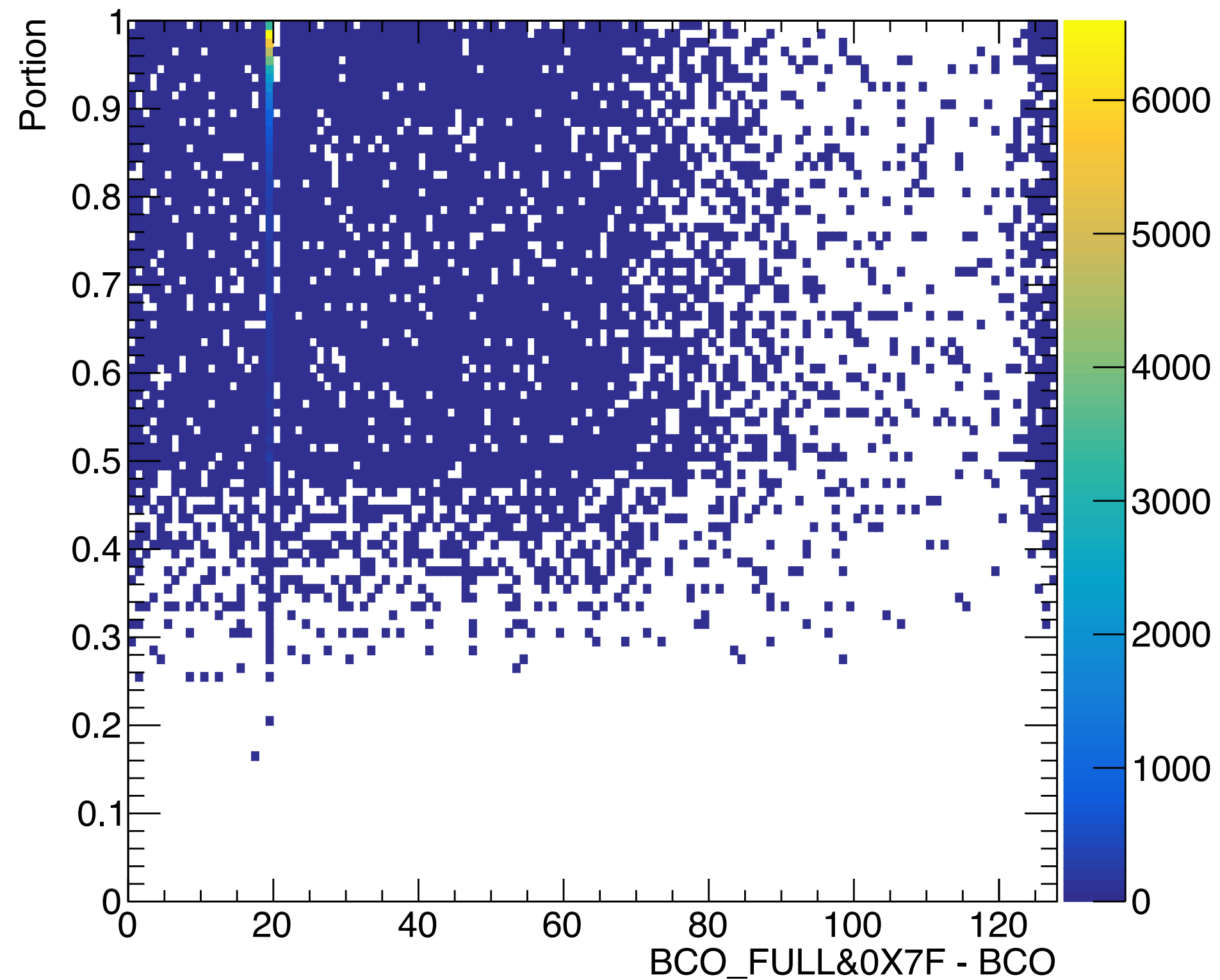
X axis: the Maximum bin
Y axis : Max bin content / total hits

Max bin content / total hits of the
events with the spikes located at 19

Back up