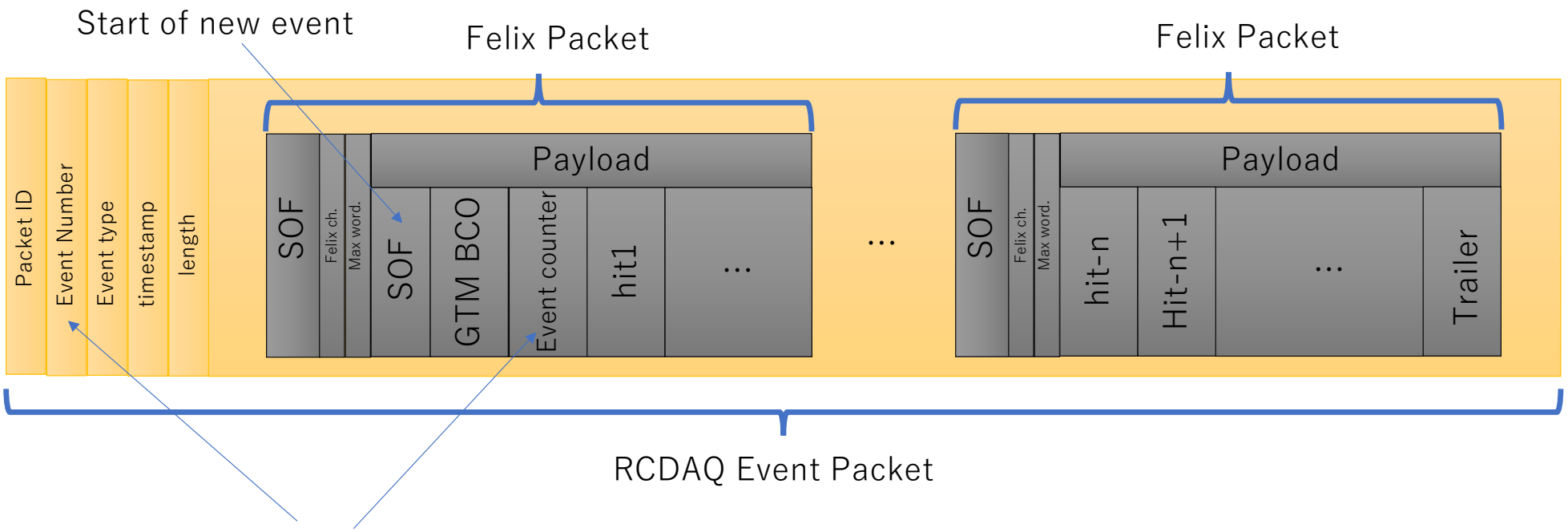
Packet Structure Update

RIKEN/RBRC

Itaru Nakagawa

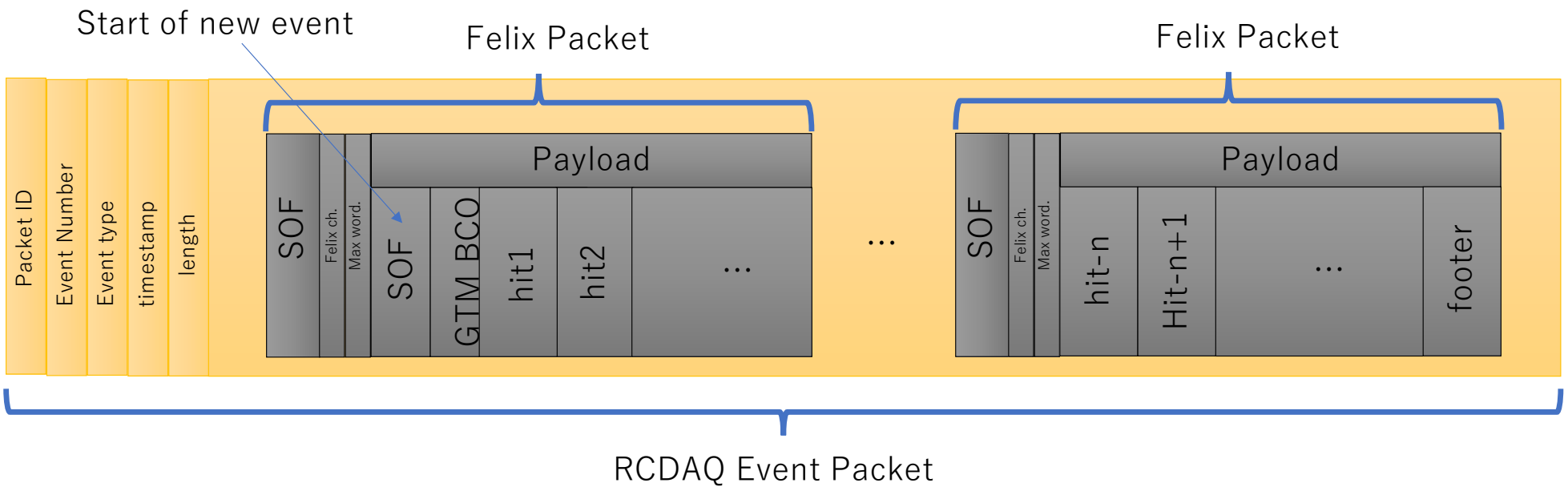
INTT Packet Structure



2 event counters. Which one is the source of evSeq in the decorder?

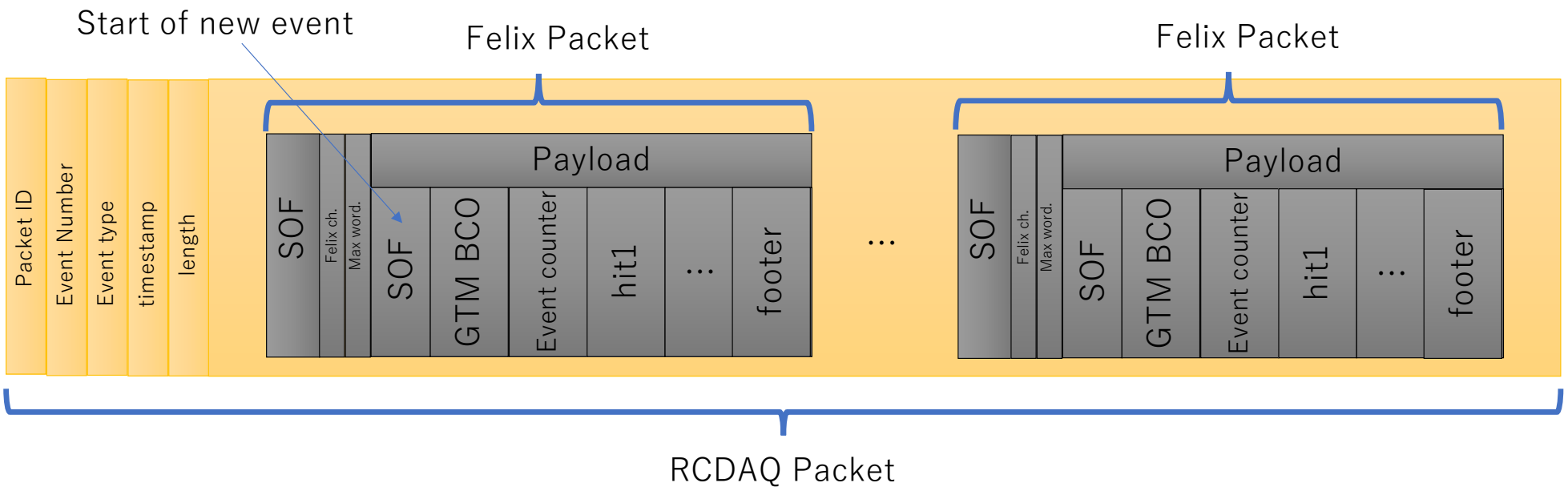
Slide from 230511_PacketStructure.pptx

INTT Packet Structure (~until 6/5)



Felix raw data and decorder were compatible back then. However, the “event frame” wasn’t defined as we desire since there was no event counter injected into the data stream. Thus presumably arbitrary ”event frame” incremented by the read request by rcdaq has been employed in this period. This probably broke the “one event should contain only one GTM_BCO principle.”

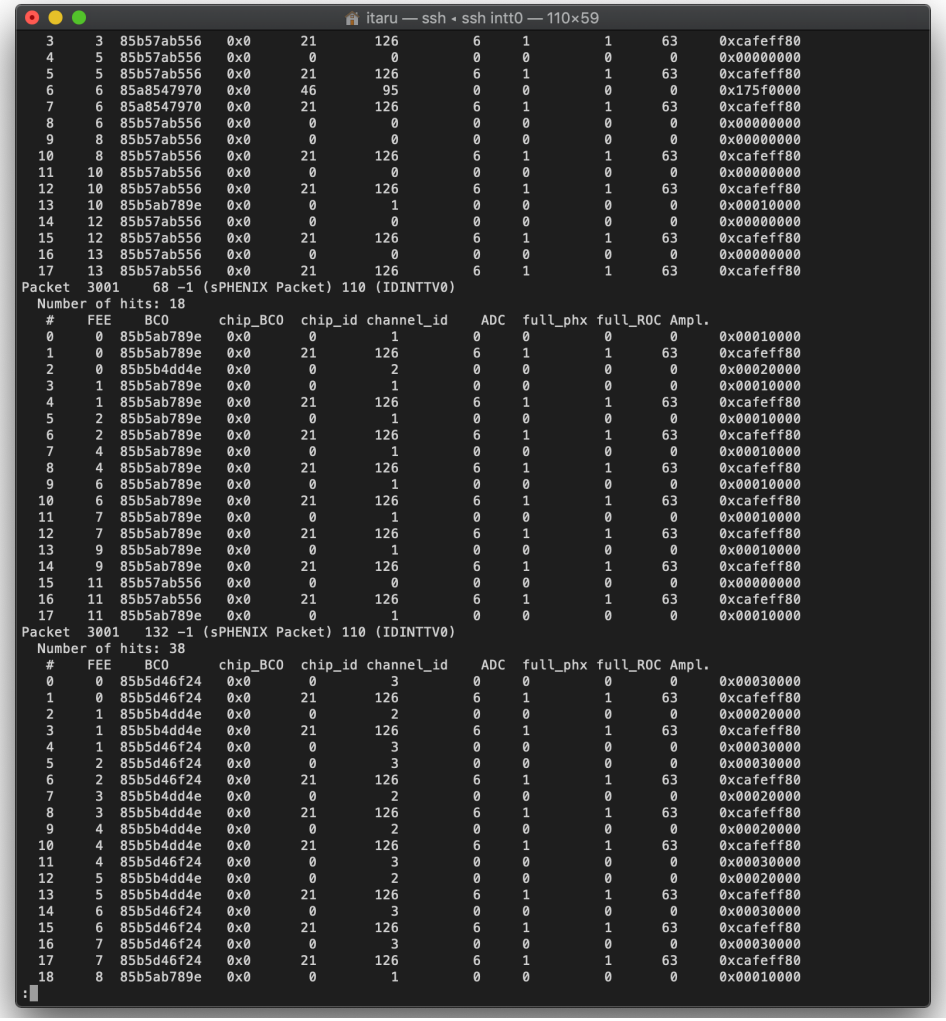
INTT Packet Structure (6/6 ~)



Raul likely updated firmware on June 5 which includes event counter and footer in the felix packet around the end of the day 6/5. Martin started updating decorder on 6/15 and hoping to complete this week (by 6/18). Until then, the event counter and footers were decorded as regular hits and they appear hits in the later slide “Decorded hits of event counter/footers”. Joseph was informed so he masked these hits for his output rootfiles and OnlineMonitor.

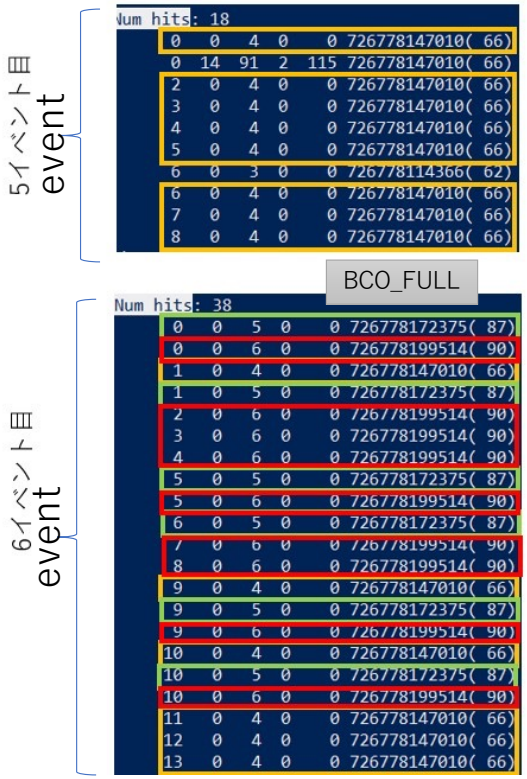
Decorded hits of event counter/footers

```
ddump -n 100 beam_intt0-00010530-0000.evt
```



These hits are not real hits.
They are fileted in Joseph's root files.

What we expect after the decorder upgrade?



Takashi's slide

前のイベントのBCO_FULLと同じ。
別ラダーのコピーヒット

前のイベントのBCO_FULLと同じ。
別ラダーのコピーヒット

別ラダーのコピーヒット

<- Contamination of different BCO_FULL hits in the given event observed in recent data is expected to be resolved by the real "event counter" based event frame after the decorder upgrade. At least Martin aimed to sort the hits based on the "one event should contain only one GTM_BCO principle."