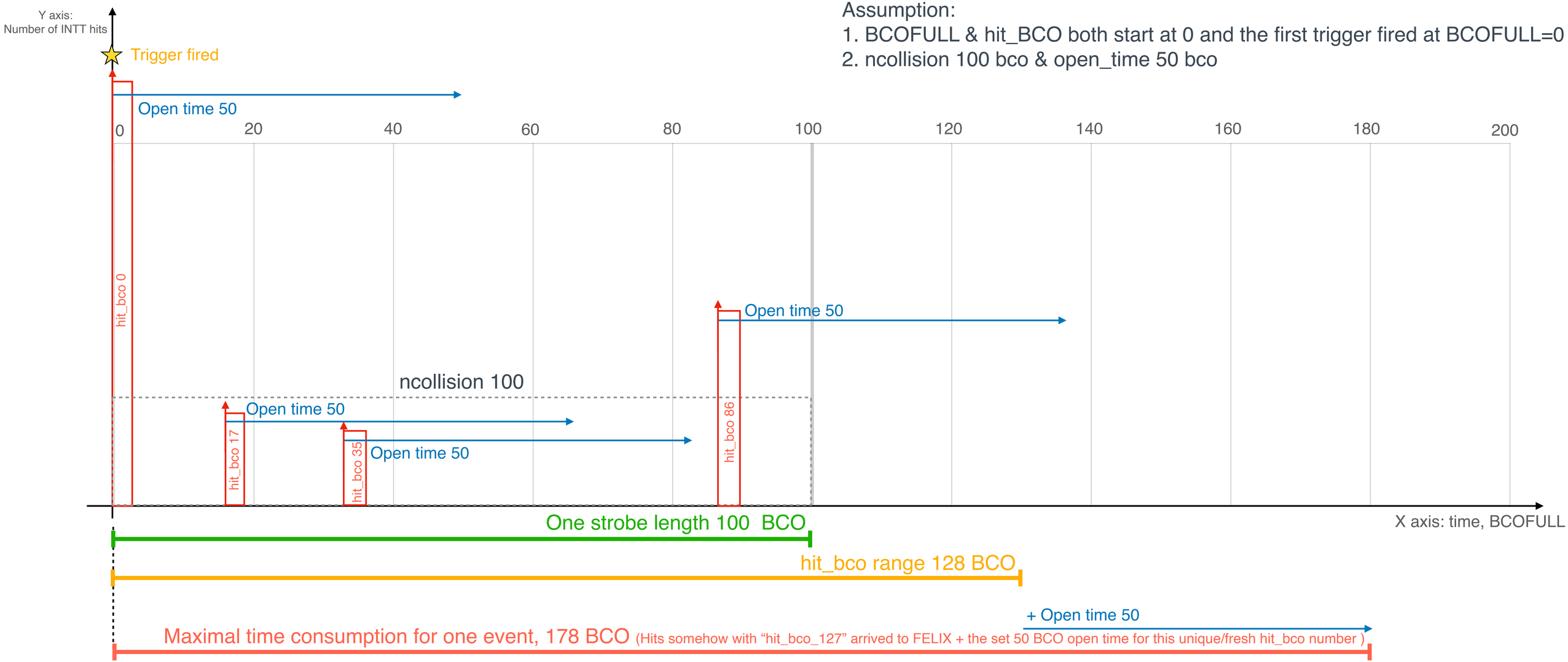
Note: the hit transmission from chip to ROC: 1 hit / 1 bco

In single event

Assumption:
1. BCOFULL & hit_BCO both start at 0 and the first trigger fired at BCOFULL=0
2. ncollision 100 bco & open_time 50 bco



- Question 1. (more like the confirmation): Does the logic of the open_time in the cartoon make sense? In the other words, is it the case that when the first hit with "hit_bco_A" arrives at FELIX, FELIX waits for the other hits with same "hit_bco_A" coming for "50 BCO", and if there is another hit with "hit_bco_B", the FELIX would open another "50 BCO" for the hits with "hit_bco_B" ?

- Follow up questions:
  - If the understanding above is correct, how can FELIX know the difference of hit_bco?
  - What will happen if one hit with "hit_bco_0" arrives at FELIX at the time of "60 BCO w.r.t hit_bco_0" but we still have "one" "open_time" available for the hits with "hit_bco_17"

Cheng-Wei Shih (NCU/RIKEN)

Note: the hit transmission from chip to ROC: 1 hit / 1 bco

In single event

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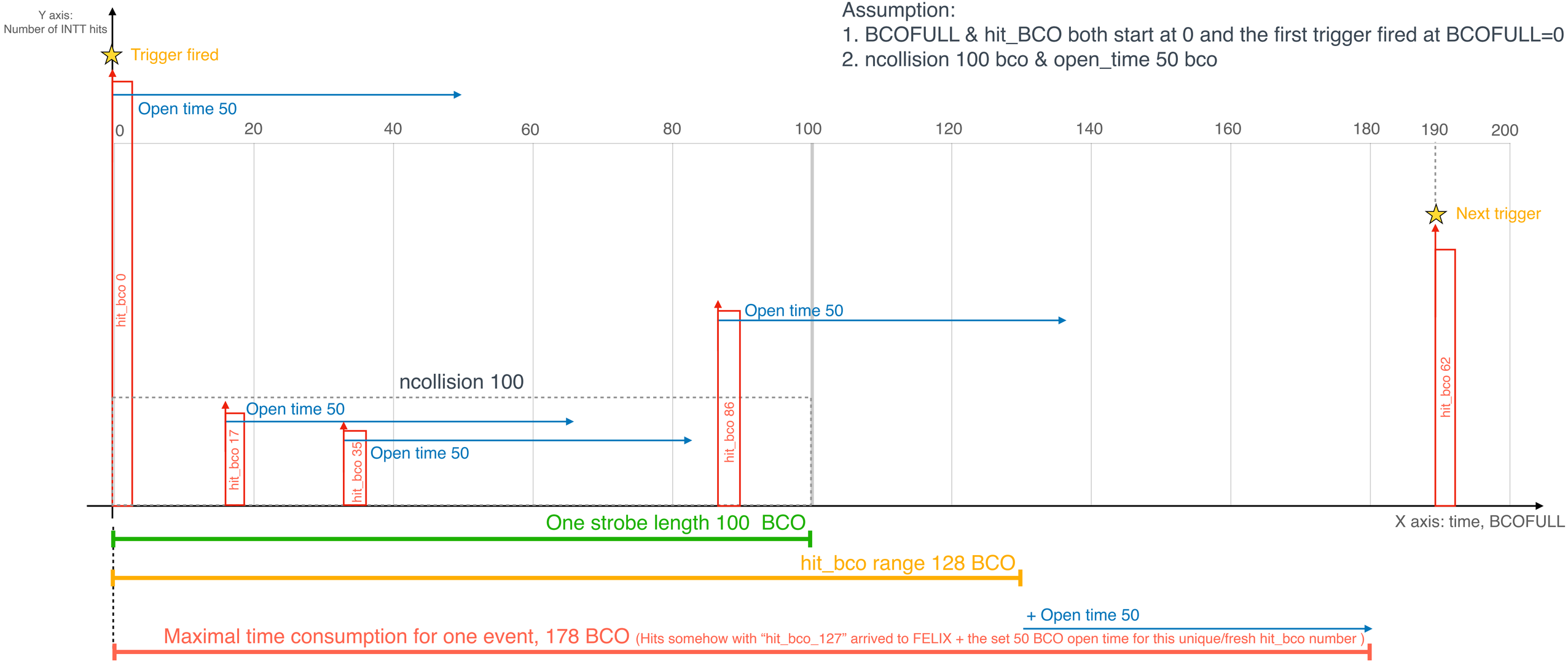
2. ncollision 100 bco & open_time 50 bco

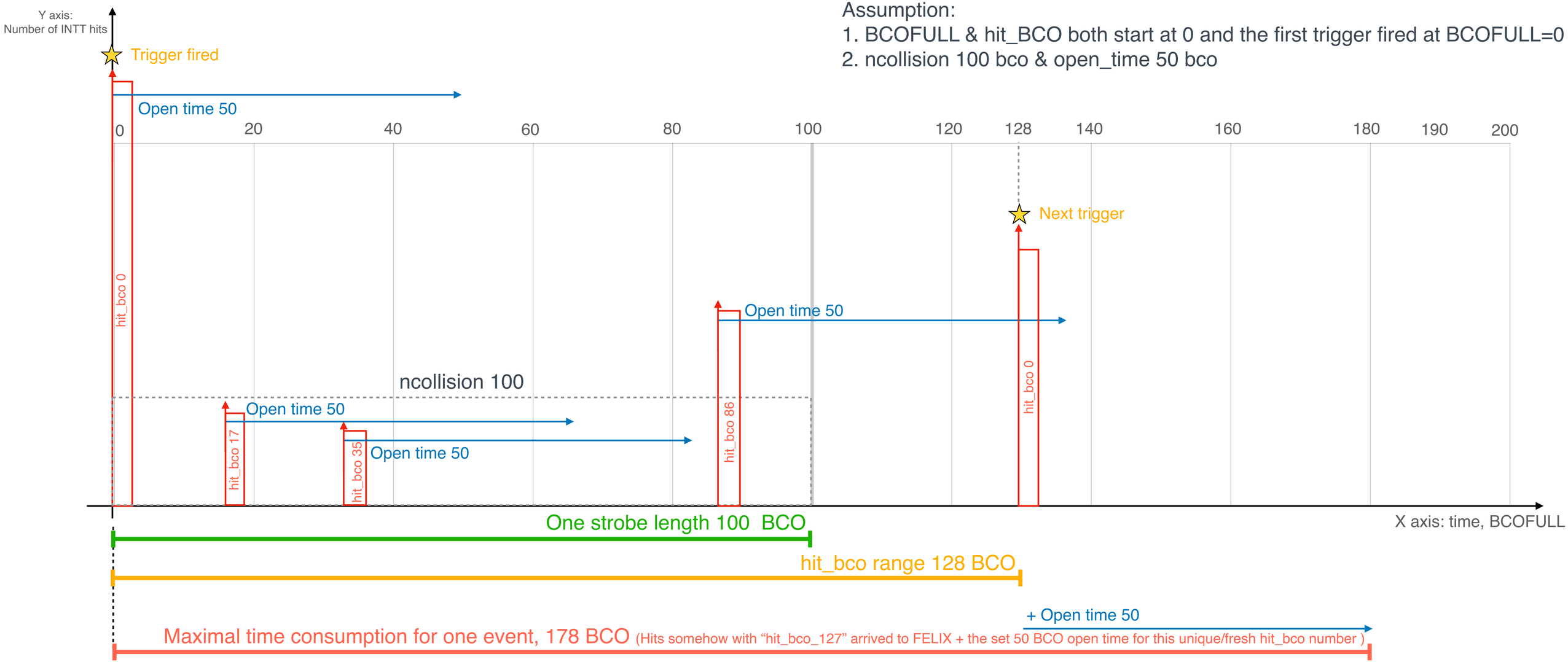


- Question 2.: As shown by cartoon, what if the “next trigger” is > 178 BCO away from the first trigger? (I assume this is the most safe case)

Note: the hit transmission from chip to ROC: 1 hit / 1 bco

In single event

Assumption:
1. BCOFULL & hit_BCO both start at 0 and the first trigger fired at BCOFULL=0
2. ncollision 100 bco & open_time 50 bco

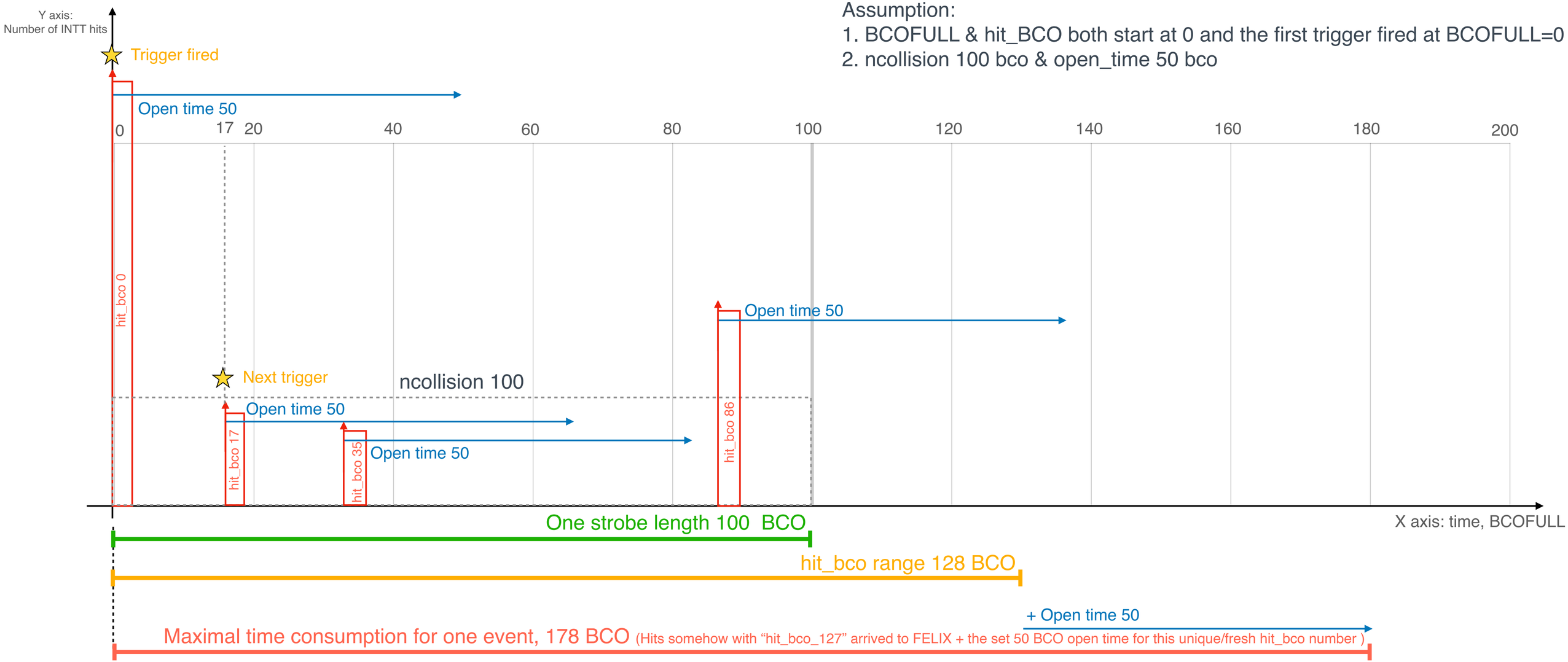


- Question 3.: As shown in cartoon, what if we have hit_bco_0 in “this_event", and the next trigger fired at “BCOFULL_128 (hit_bco_0, again)”. In addition, the FELIX is still taking the hits for hit_bco_86 for “this_event”. What will happen?

Note: the hit transmission from chip to ROC: 1 hit / 1 bco

In single event

Assumption:
1. BCOFULL & hit_BCO both start at 0 and the first trigger fired at BCOFULL=0
2. ncollision 100 bco & open_time 50 bco



- Question 3.: As shown in cartoon, what if we have “hit_bco_0” in “this_event”, the FELIX is taking the hits with “hit_bco_0”, but the next trigger happened within the “open-time”? what will happen?

- Additional questions
  - Would FELIX send the “Busy tag” to GL1(GTM?) to reject having the new trigger signal?
  - Does the GL1/GTM have such functionality to accept the “Busy signal” from the subsystems to stop sending the new trigger signal?
  - What is the unit of the open time ?