

Analysis Plan during INTT workshop

Analysis topic

Detection efficiency of INTT with p+p using vertex

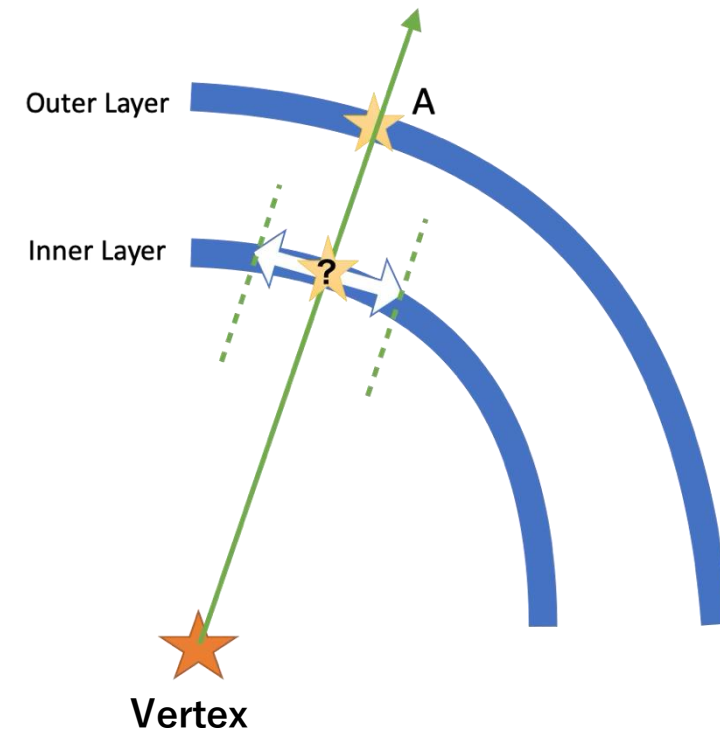
Goal for the workshop

- Estimating detection efficiency of INTT with vertex using simulation.
- Getting information about how to decide vertex position
- Establishing the method to connect the information between vertex and cluster

Method

1. Find the coordinates A of the cluster in the Outer Layer
2. Connect the collision point and A with the cluster and determine the range expected for the Inner cluster
3. If there are clusters within the expected range and if there are no clusters within the expected range, count the number of clusters in each case as N_{Yes} and N_{No} respectively.

$$\varepsilon = N_{yes}/(N_{yes} + N_{No})$$



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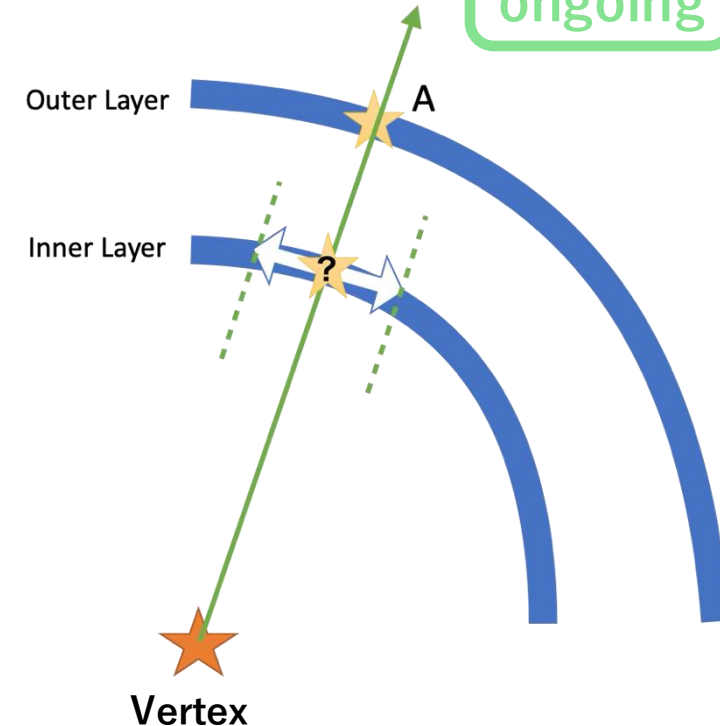
Goal for the workshop

- Estimating detection efficiency of INTT with vertex using simulation. **ongoing**
- Getting information about how to decide vertex position
- Establishing the method to connect the information between vertex and cluster **ongoing**

Method

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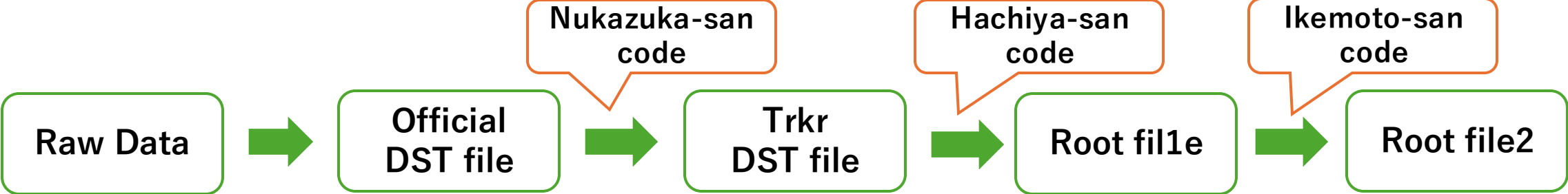
$$\varepsilon = N_{yes}/(N_{yes} + N_{No})$$



Connect the information between vertex and cluster

Prosedure (Decide z-Vertex)

- Cut events with two or fewer tracks
- Φ cut



- BCO peak filter
- Hot ch removal
- DAC conversion
- Clone-hit removal

TNtuple ntp_clus

nclus
 nclus2
 bco_full
 evt
 size
 adc
 X
 Y
 Z
 lay
 Lad
 Sen
 Lx
 Ly
 phisize
 zsize
 zv

Temp_tree_

evt_temp_
 d_phi_
 d_theta
 phi_in
 dca_x
 dca_y
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 .
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Next step

- Estimating detection efficiency of INTT with vertex using simulation.
- Establishing the method to connect two root file
- Getting information about how to decide vertex position