CKF meeting

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Outline

After the F2F meeting in Pisa...

- Nils and me both gave presentation on the current state of affairs of our Kalman filters
- Just like Martin Heck suggested, I will switch to one-myon events and later upgrade to Y(4S) events
- He also gave me some interesting suggestions for the filter name ;-)

And now?

The current strategy is as follows:

- Switch to one-myon events
- Focus on one variable per filter step (1, 2, or 3)
- Filter 1: distance_xy (cut: 0.9 cm), as discussed at the F2F meeting
- Filter 2: mSoP_distance and same_hemisphere filter

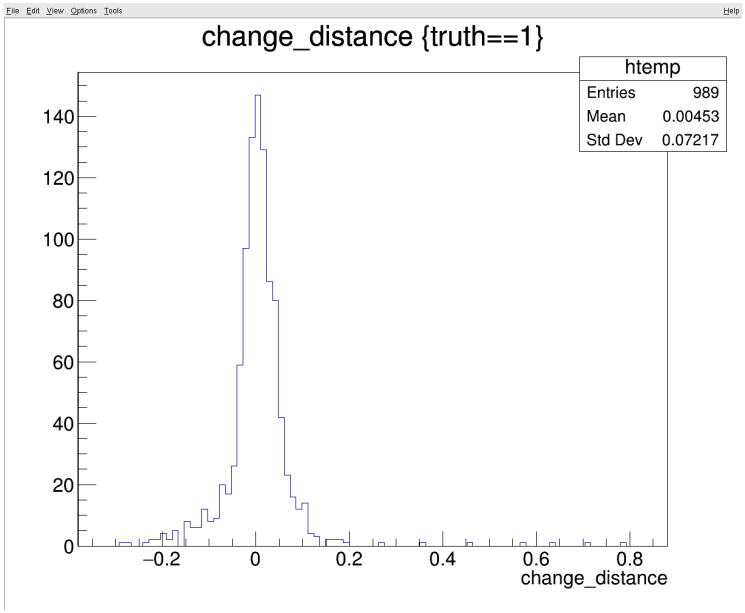
Idea for a new variable

- Idea for filter 3: distance_change! The basic idea is that by following 'a wrong route' we should get more and more distant from the Kalman extrapolation for the layers

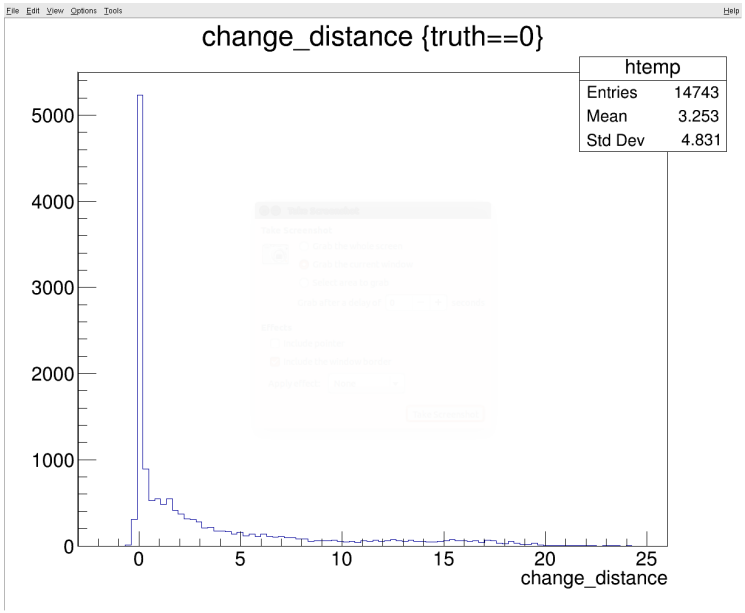
```
double change_distance =
distance.xy().norm()-parentdistance.xy().norm());
```

So, it's the distance of the current hit minus the parent hit distance. Currently, this is only implemented if the parent hit exists.

Idea for a new variable



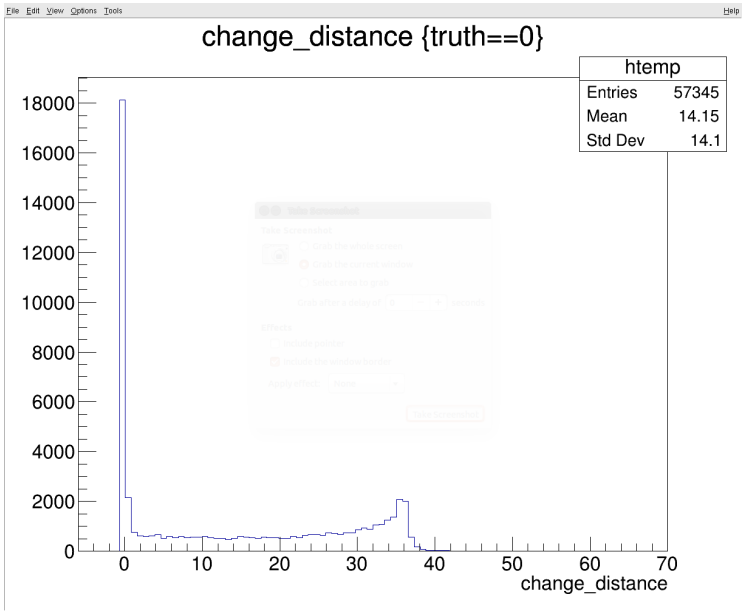
(a) truth==1



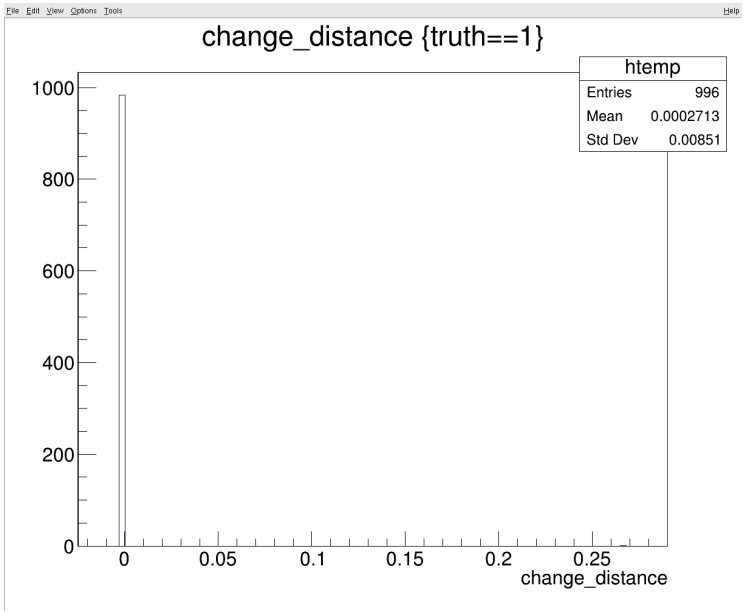
(b) truth==0

Figure: Layer 0 recording of change_distance

Idea for a new variable



(a) truth==1



(b) truth==0

Figure: Layer 10 recording of change_distance

Summary/To Do's/Questions for you

- Does it work for curlers?
- What if parent layers were missed? If the parent hit does not exist?