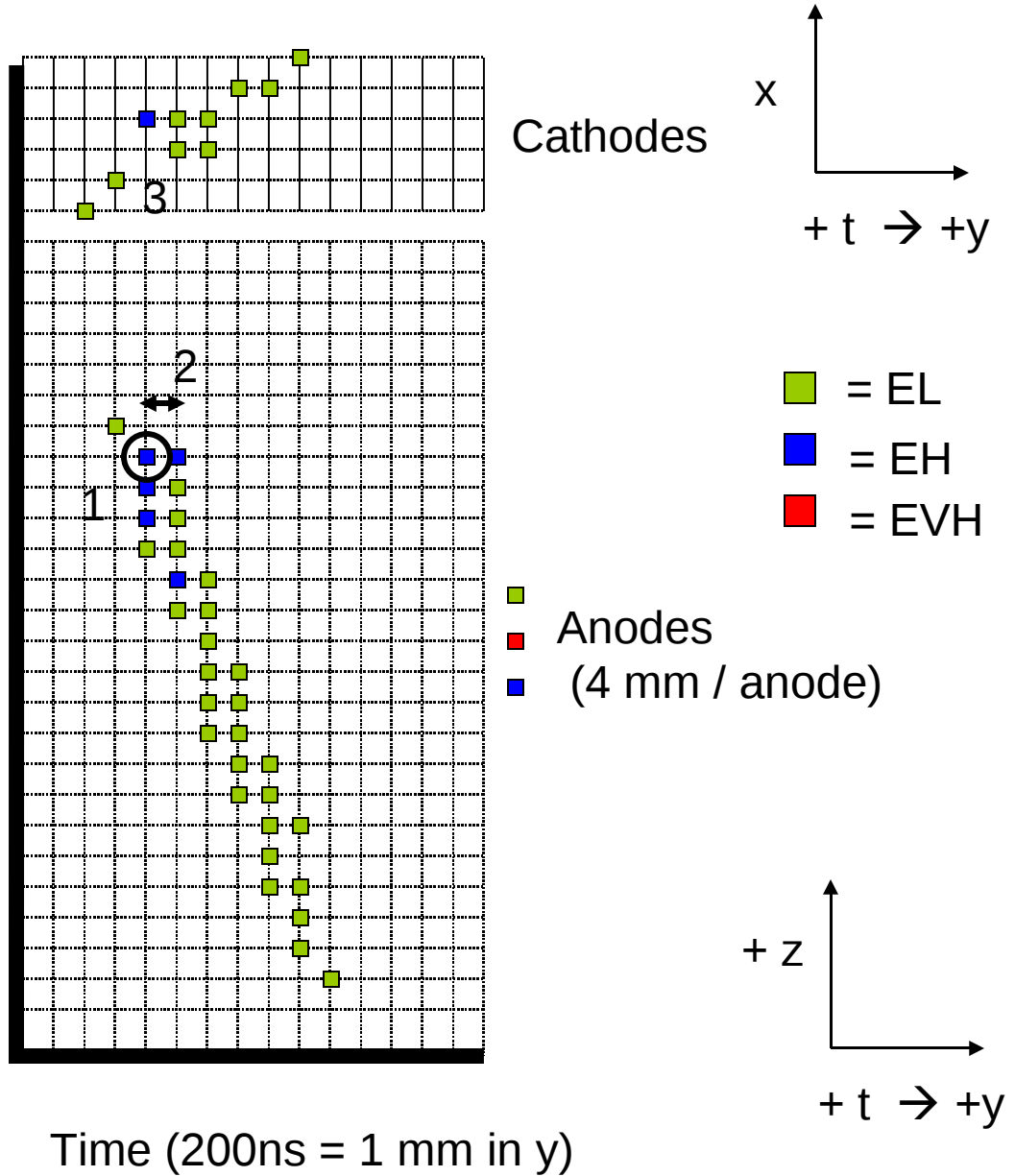
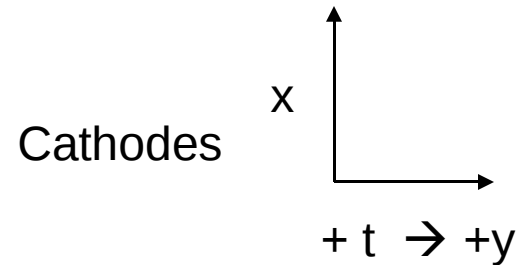


# Various Strip definitions

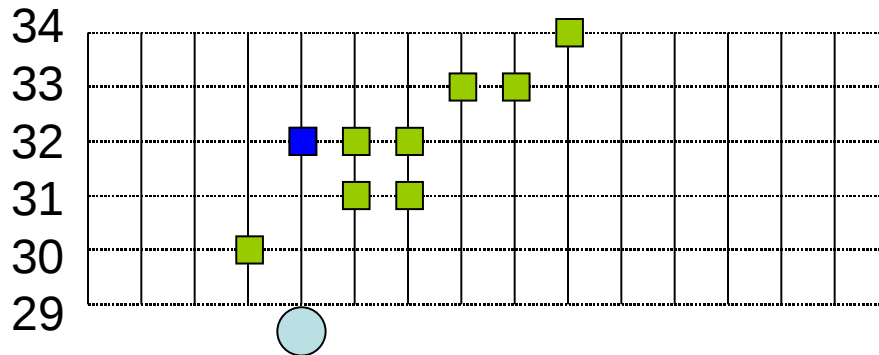
- 1) Identify Stop Pixel (as before)
- 2) Search from stop slice outward for strip position
- 3) Track extent of strips over search region



# Strip Snapshot



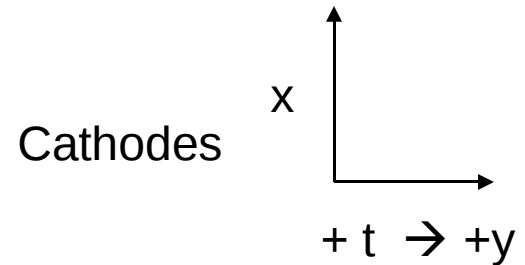
Example Strip Number



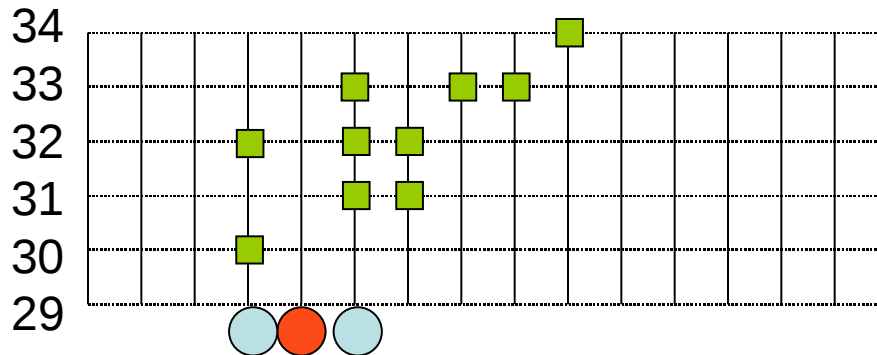
- 1) Use the green thresholds
- 2) Start with stop time. If strips exist, find average strip (in this case strip=32)
- 3) Record the min and max strip on that time slice (in this case  $x_{\min} = 32$ ,  $x_{\max} = 32$ )

Time (200ns = 1 mm in y)

# Strip Snapshot



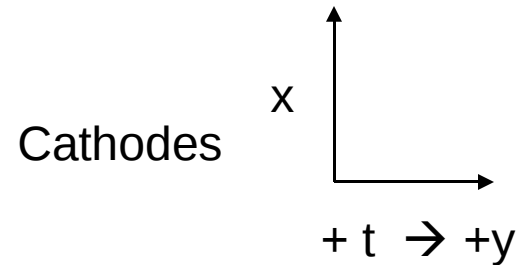
Example Strip Number



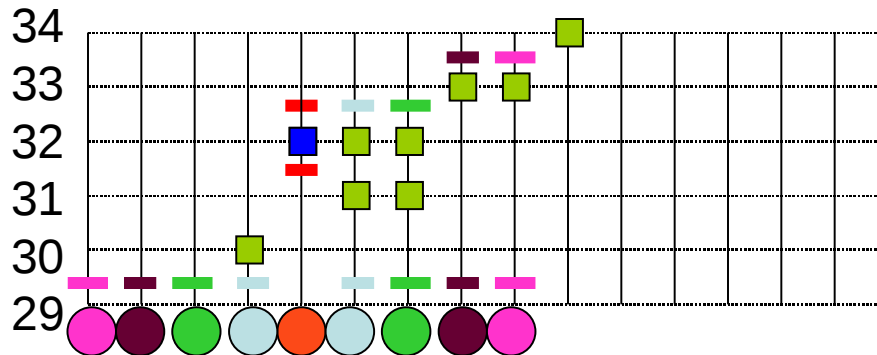
- 1) If no pixels exist on stop time, then search  $t-1, t+1$ .
- 2) In this case, hits exist on  $t=t-1$ , so the stop strip is computed .  $X = (30+32)/2 = 31$
- 3) The extent looks at both  $t-1$  and  $t+1$  equally, so this event has  $x_{min}=30$  and  $x_{max} = 33$

Time (200ns = 1 mm in y)

# Strip Snapshot



Example Strip Number

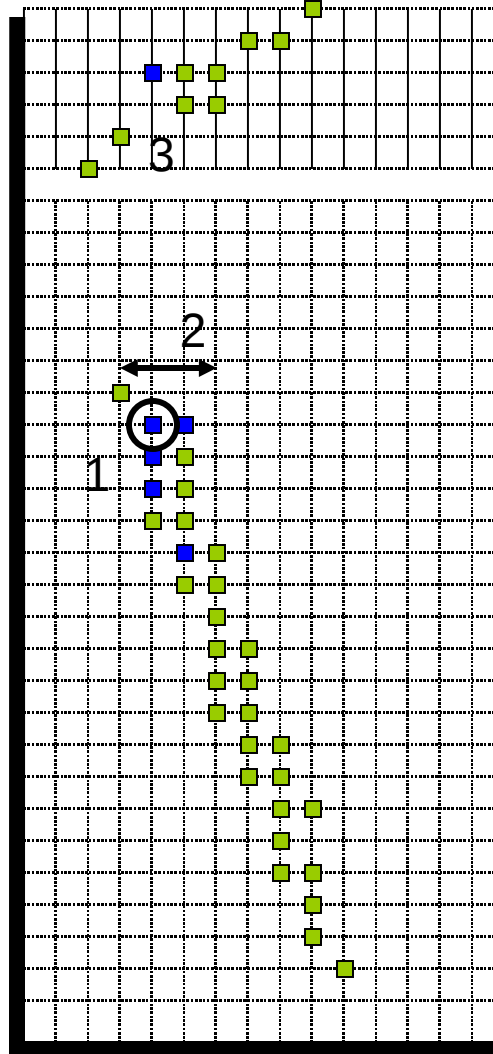


- 1) Expand the time region and track the extent in strip space.
- 2)  $x[0] = 32, x[1] = 32, x[2]=32, x[3] = 32, x[4] = 32$
- 3)  $\min[0]=32, \min[1]=30, \min[2]=30, \min[3]=30, \min[4]=30$
- 4)  $\max[0]=32, \max[1]=32, \max[2]=32, \max[3]=33, \max[4]=33$
- 5) Fiducial requirements can then be defined if we required strip coincidence with +/- n time slices of the stop time, where n can be 0 to 4

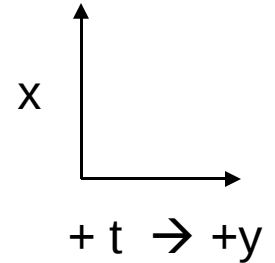
Time (200ns = 1 mm in y)

# Alternatives

## 4) Check extent

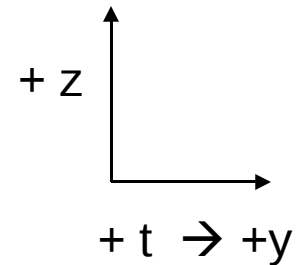


Cathodes



- = EL
- = EH
- = EVH

- Anodes
- (4 mm / anode)



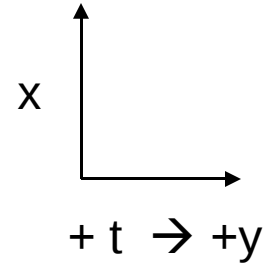
Time (200ns = 1 mm in y)

- 1) The Bragg island is found the same way but is constrained to the time extent of the Bragg island, +/- 1
- 2) A single value for the min/max and strip location are recorded for that range

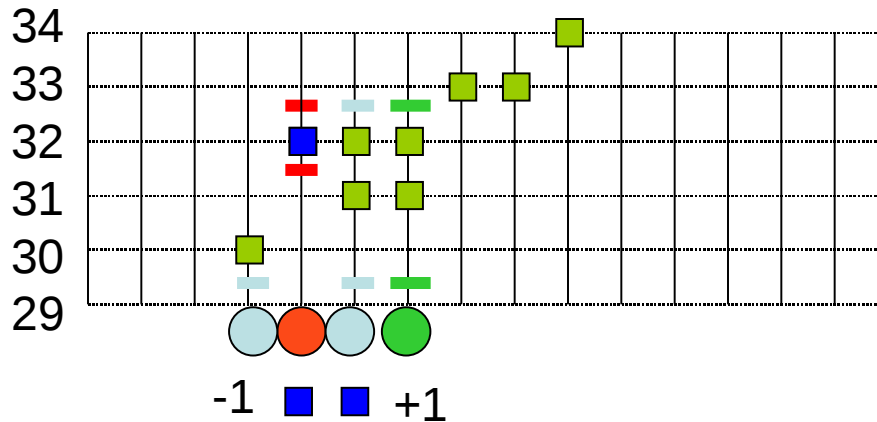
# Strip Snapshot



Cathodes



Example Strip Number

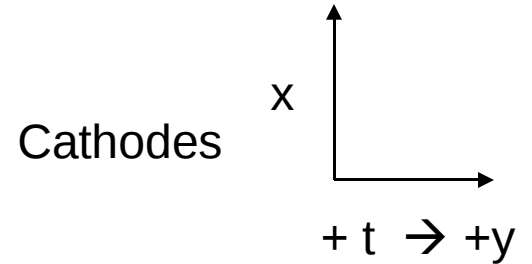
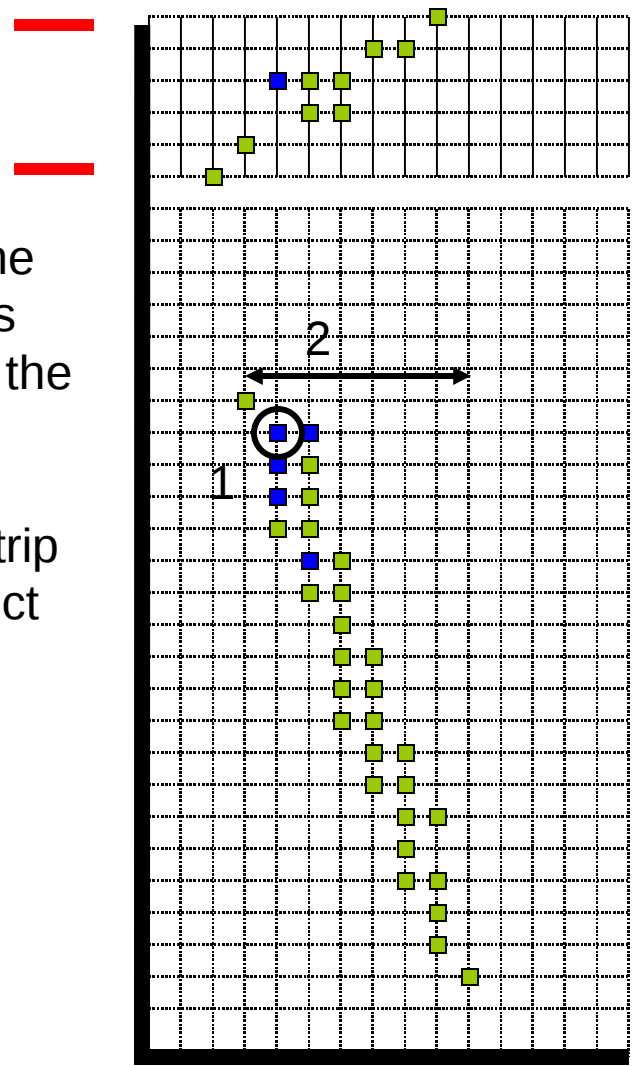


- 1) Bragg Island is 2 pixels wide, so the search range starts at the stop time slice
- 2) Then -1,+1 are searched
- 3) -2 is not in the Bragg time +/-1 range, so it is skipped and +2 is searched
- 4)  $x = 32$ ,  $x_{min} = 30$ ,  $x_{max} = 32$

Time (200ns = 1 mm in y)

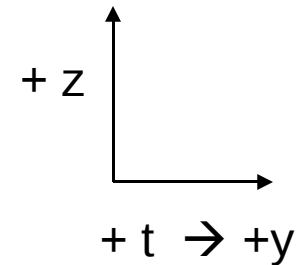
# Alternatives

- 1) The alternate strip definition uses the same algorithm, but searches over the time extent of the entire EL anode island
- 2) It also extends the boundaries if any EL strip islands partially intersect the anode time extent.



- = EL
- = EH
- = EVH

- Anodes
- (4 mm / anode)



Time (200ns = 1 mm in y)