

Silicon clustering algorithm

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Find live strips and cluster seeds

Units are ADC counts

Live strips

- Loop over strips in x and y boards
 - If (noise ≥ 3.5 AND $\langle \text{signal} \rangle \leq 40$ AND $\langle \text{signal} \rangle \neq 0$)
 - ➔ DEADSTRIP

Cluster seeds

- Loop over strips in x and y boards
 - If(LIVESTRIP AND pulse height/noise > 15 AND pulse height > 10)
 - ➔ CLUSTER SEED
 - Check distance between seeds ≤ 6 strips
 - ➔ CLUSTER SEED

Make clusters

- For events with 1 seed in each board (x and y)
- Loop over strips from seed-6 → seed+6 strips
 - If(pulse height/noise \geq 4.0 AND LIVESTRIP AND pulse height \geq 10.0)
 - Add strip into cluster
 - Calculate cluster signal, nStrips, noise and position (weighted by signal in each strip)