# Pedestal Subtracted LR and UD Asymmetry

#### <u>Algorithm</u>

- All runs are separated into two sets '**a**' and '**b**' based on the spin flipper stated on the dropped pulses for any particular run.
- Pedestal was calculated from minimum of dropped pulse (tbin 37) for each 600 pulse sequence (Vince's approach for pedestal calculation).
- For each set, pedestal subtracted asymmetry was calculated considering pair of pulses.
- Asymmetry from set 'a' and 'b' are combined using,

$$\bar{A}_i = \frac{A_a^i + A_b^i}{2}$$
$$\Delta \bar{A}_i = \frac{\sqrt{\Delta A_a^{i\,2} + \Delta A_b^{i\,2}}}{2}$$

#### <u>Cut:</u>

- 30 pulses after any dropped pulse.
- The pulse before the dropped pulse.
- For any pulse tbin=7 to tbin=40 considered.
- Only 600 pulse sequences with no irregular dropped pulse in between considered.

### Left-Right Raw Asymmetry



### Left-Right Physics Asymmetry



4

## Up-Down Raw Asymmetry (80% data)



### Up-Down Raw Asymmetry (80% data)-Front Layers



Raw Asym

### Up-Down Physics Asymmetry (80% data)



7

## Up-Down Physics Asymmetry (80% data)-Front Layers

