Signal in pure DC pixel without shower

Distribution of QDC-reconstructed Events

Distribution of BDT-reconstructed Events

Distribution of BDT-reconstructed Events, after cuts

Distribution of BDT-reconstructed Events, after cuts

We define a target pixel as one in which the DC pixel has a shower-free intensity of 150 or more.
Of 392 identified pixels, we have 228 target pixels, which we would hope to identify.
In total, 57 pixels are correctly identified using QDC method. Method Identified 25.0 % of target events.
In total, 227 pixels are correctly identified using BDT method. Method Identified 99.6 % of target events.

Our QDC cut requires QDC > 1.3 . We have 39 events passing this cut.
 Of these, 26 are correctly identified events.
 Successful ID rate after cut is 66.7 % Fraction of target pixels correctly identified is 11.4 %

Our alt QDC cut requires QDC > 1.3 .
 We have 11 events passing this cut. Of these, 11 are correctly identified events.
 Successful ID rate after cut is 100.0 % Fraction of target pixels correctly identified is 4.8 %

Our BDT cut requires Signal Probability > 0.5 .
 We have 189 events passing this cut. Of these, 152 are correctly identified events.
 Successful ID rate after cut is 80.4 % Fraction of target pixels correctly identified is 66.7 %

We check for an event that has Signal Probability > 0.5 and signal > 200 .
 We have 158 events passing this cut. Of these, 133 are correctly identified events.
 Successful ID rate after cut is 84.2 % Fraction of target pixels correctly identified is 58.3 %