Distribution of BDT-reconstructed Events

non-DC pixel

DC pixel

BDT score

Signal in pure DC pixel without shower

DC pixel intensity

Distribution of BDT-reconstructed Events, after Score and Signal cuts

non-DC pixel

DC pixel

BDT score

Distribution of QDC-reconstructed Events

QDC value
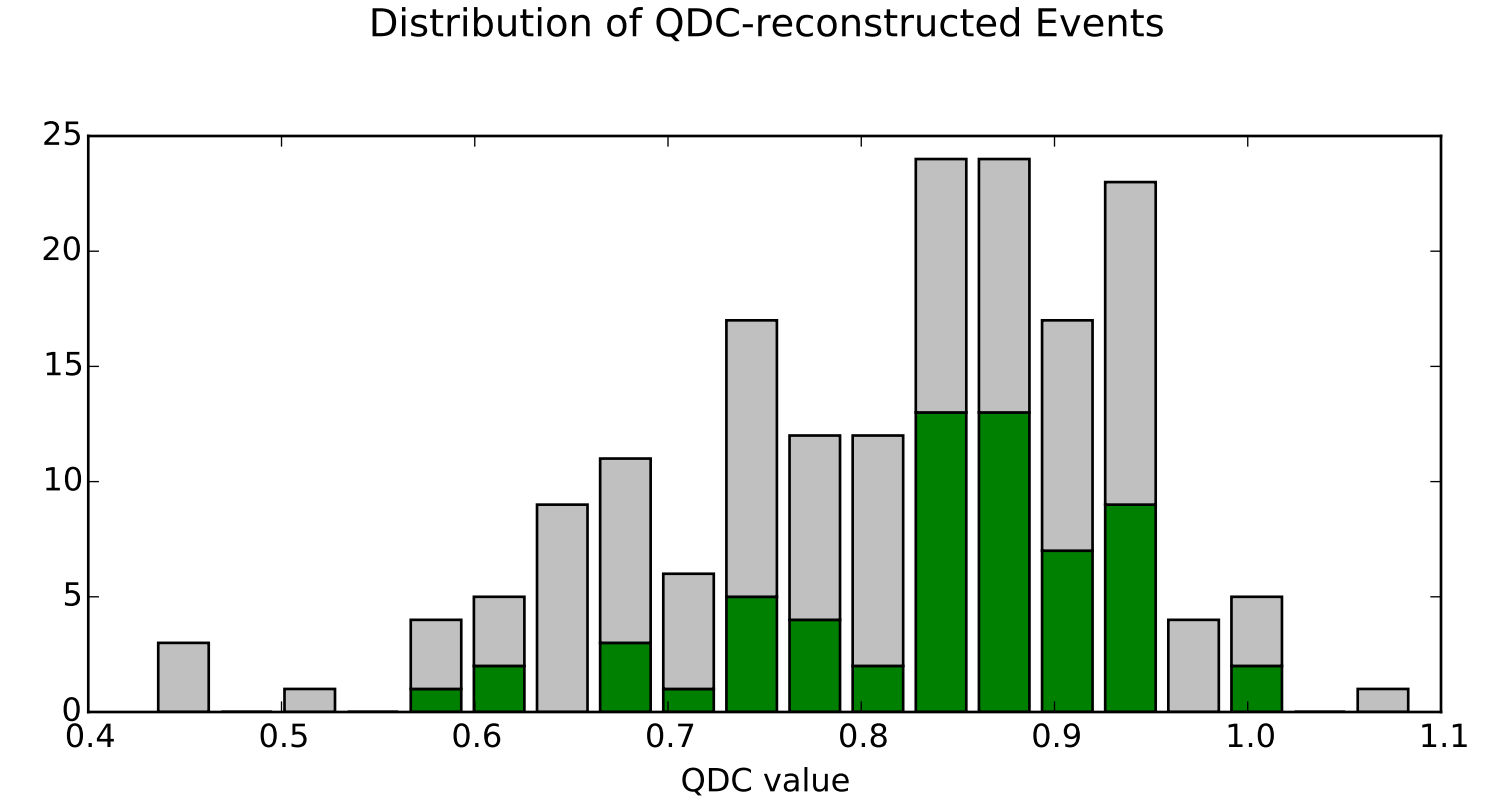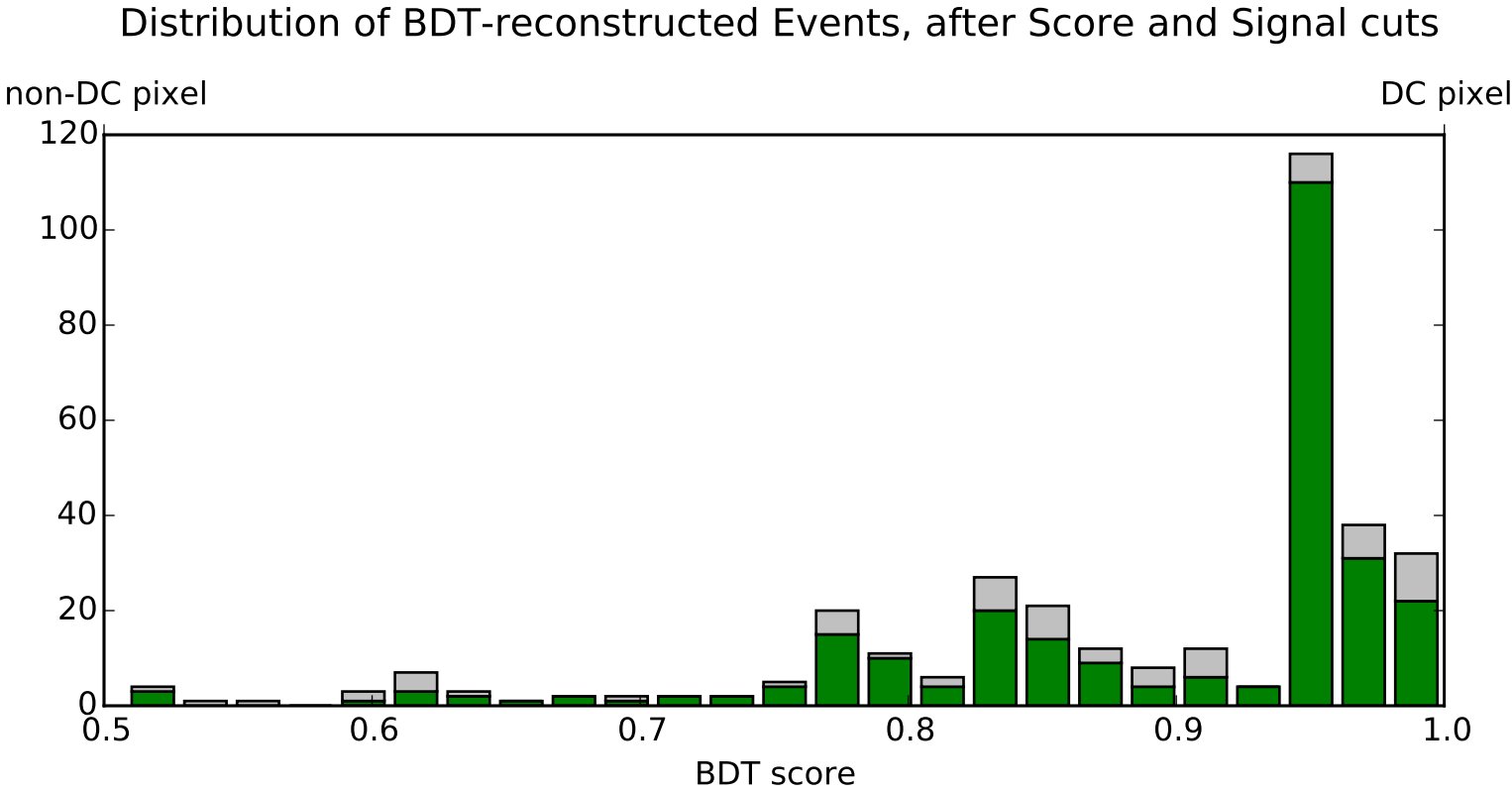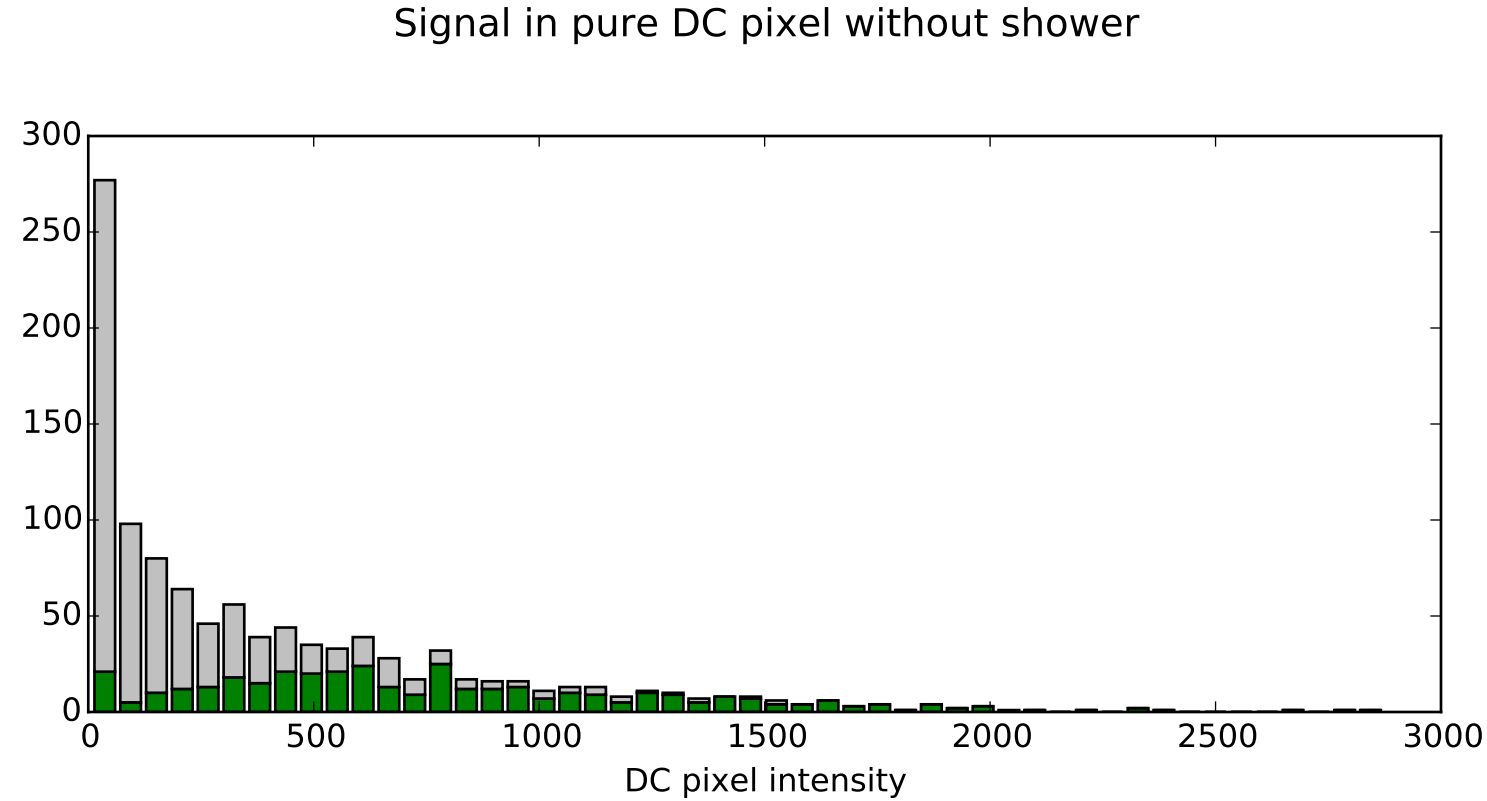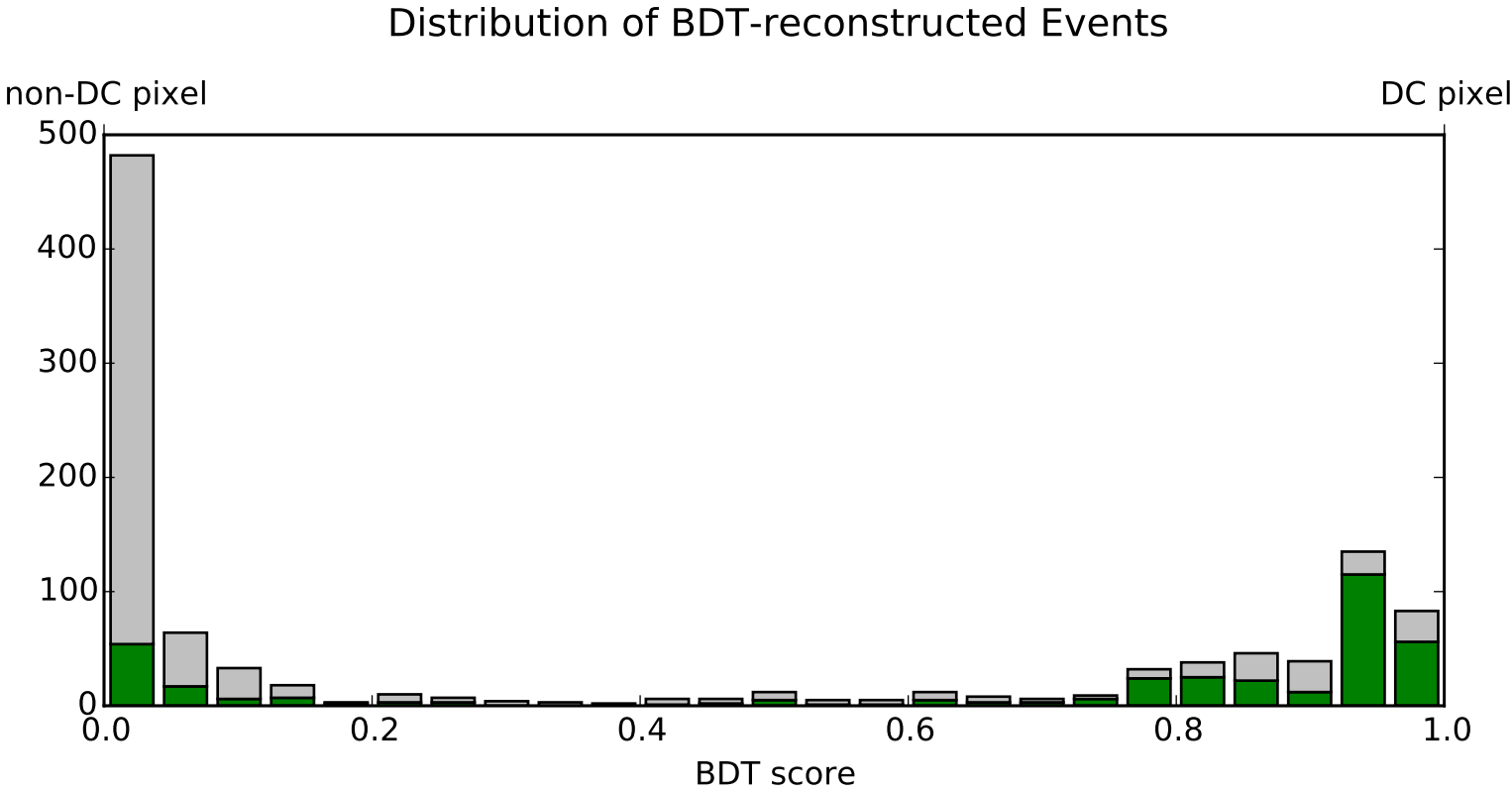
We have 1245 events. Of these, there are 1090 triggered images.
In total, 62 pixels are correctly identified using QDC method. Method Identified 5.7 % of all images.
In total, 373 pixels are correctly identified using BDT method. Method Identified 34.2 % of all images.

Our QDC cut requires QDC < 0.14 log(Itot / 161 cos(theta)), leaving 178 images.
 Of these, 62 are correctly identified images.
 Successful ID rate after cut is 34.8 %
Fraction of pixels correctly identified is 5.7 %
Fraction of pixels incorrectly identified is 10.6 %
Additionally requiring multiplicity > 3, we have 0 images .
 Of these, 0 are correctly identified images.

Our BDT cut requires Signal Probability > 0.5 , we have 422 images.
Of these, 275 are correctly identified images.
 Successful ID rate after cut is 65.2 %
Fraction of pixels correctly identified is 25.2 %
Fraction of pixels incorrectly identified is 13.5 %
Additionally requiring signal > 150 , we have 340 images.
Of these, 270 are correctly identified images.
 Successful ID rate after cut is 79.4 %
Fraction of pixels correctly identified is 24.8 %
Fraction of pixels incorrectly identified is 6.4 %
Additionally requiring multiplicity > 3, we have 288 images .
 Of these, 232 are correctly identified images.
 Successful ID rate after cut is 80.6 %
Fraction of pixels correctly identified is 21.3 %
Fraction of pixels incorrectly identified is 5.1 %

Distribution of BDT-reconstructed Events, after cuts

Candidate signal

Correct
Incorrect