

The background is a gradient of dark blue and purple, speckled with white dots. On the left side, there are several concentric circles and a large circular scale with degree markings from 140 to 260. Some circles have arrows indicating a clockwise direction. The text '190218' is prominently displayed in white on the right side.

190218

BYUNGCHAN LEE

Inverse Interpolation using Bessel Function

- $\text{eps} = 0.001$: ps accuracy

```
const double eps = 0.001;
```

- Counter 1~100
 Use Bessel Formula

```
do {  
    counter++;  
    p_old = p_new;  
    p_new = (y - f_0 - d_2*p_old*(p_old - 1.0)/2.0  
            - d_3*p_old*(p_old - 1.0)*(p_old - 0.5)/6.0  
            - d_4*(p_old*p_old - 1.0)*p_old*(p_old - 2.0)/24.0)/d_1;  
    if (counter > 100) return 0;  
} while (abs(p_new - p_old) > eps);
```

```
for (int i = 0 ; i < n ; i++){  
    if ( abs(y - ys[i]) < dif ) {  
        ns = i; dif = abs(y - ys[i]); }  
  
    if (ns < 2 || n - ns <= 3)  
        return 0;
```

- Counter 0 or 101
 Use Linear Interpolation

```
t0[j] = CalcT0InvIntPol(data->Get(j));  
if (t0[j] == 0)  
t0[j] = CalcT0LinIntPol(data->Get(j));
```

DATA

1) 180518YT1314

- Event Number : 30,000
- 2 Bars / 4 Channels

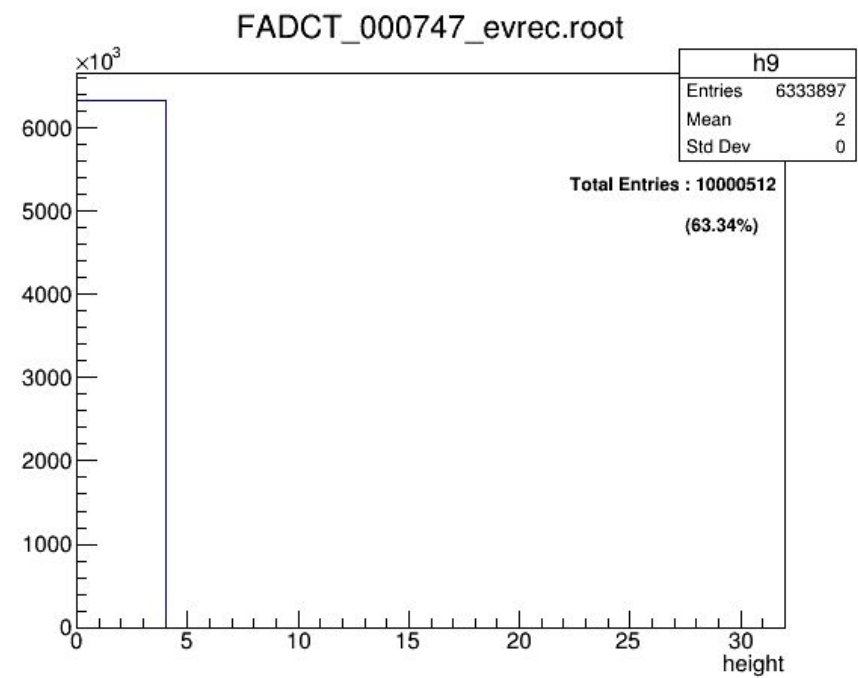
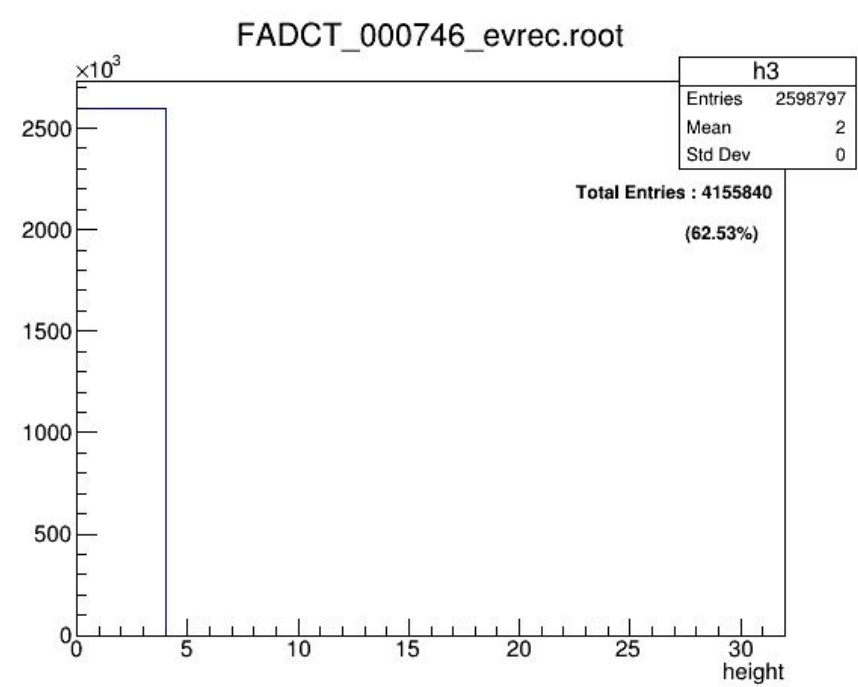
2) FADCT_000746

- Event Number : 86,580
- 24 Bars / 48 Channels

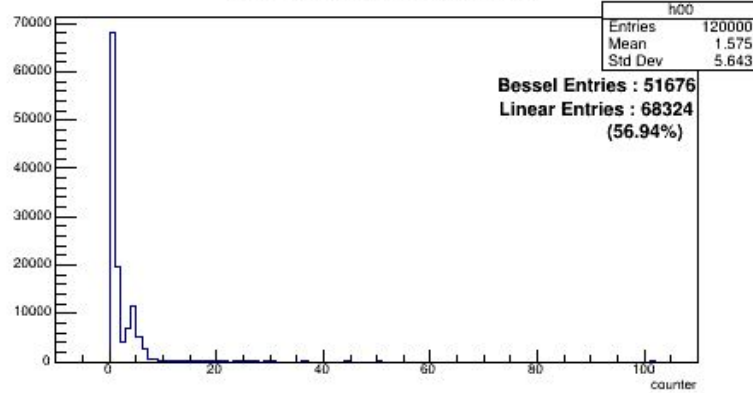
3) FADCT_000747

- Event Number : 208,344
- 24 Bars / 48 Channels

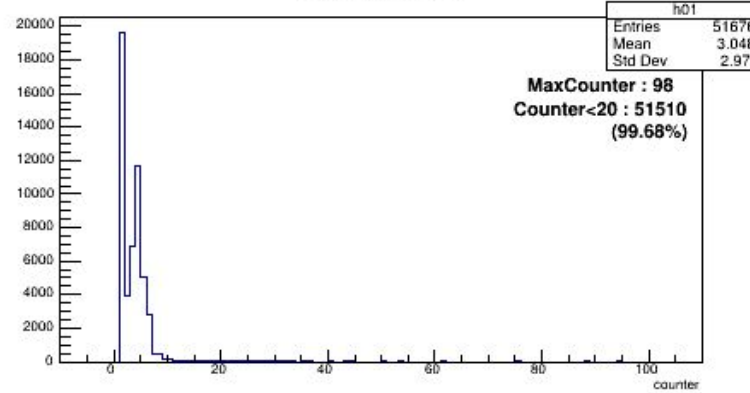
Threshold > 100 Count (1 Count ~0.66mV)



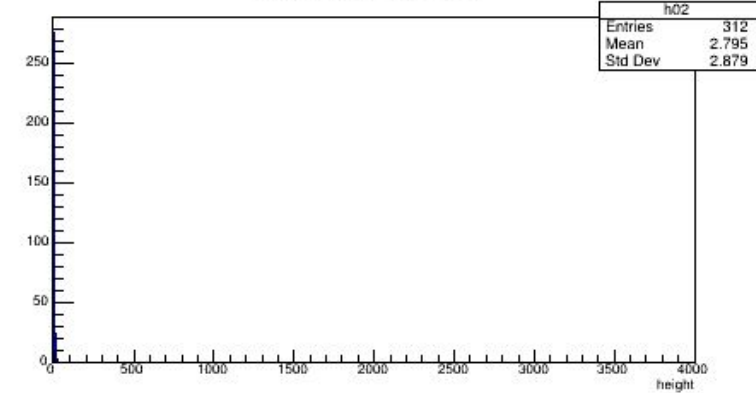
180518YT1314.root_evrec.root



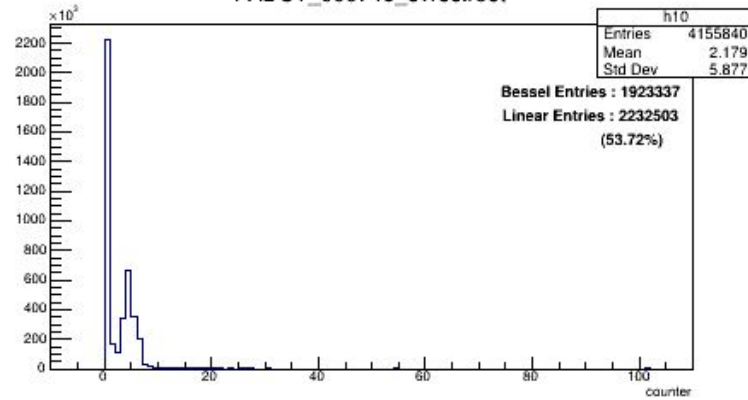
Counter (1~100)



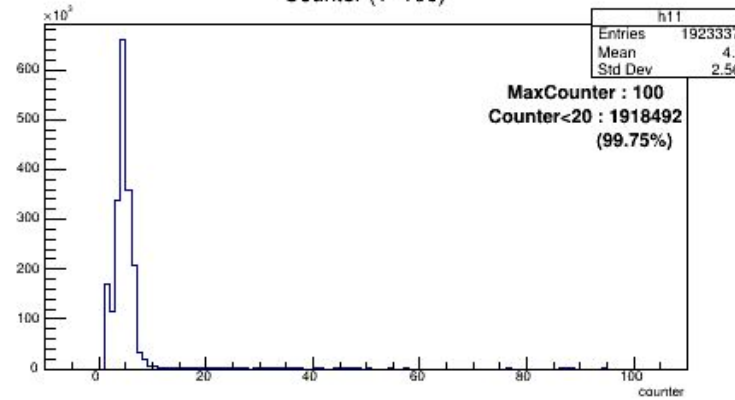
height (Counter = 101)



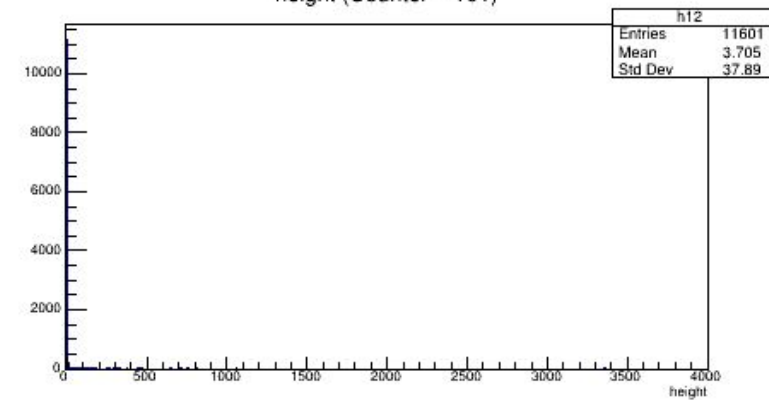
FADCT_000746_evrec.root



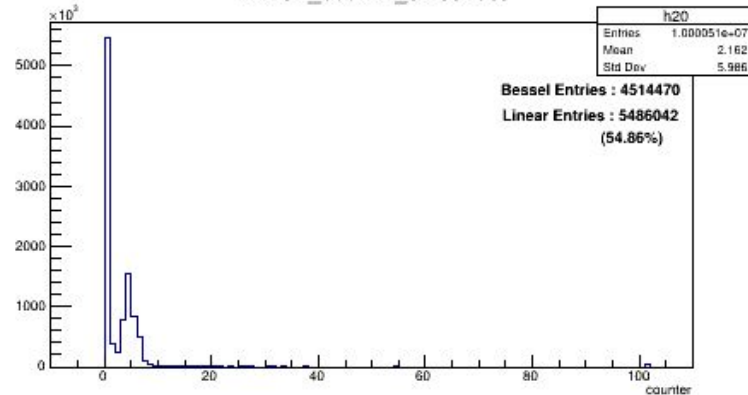
Counter (1~100)



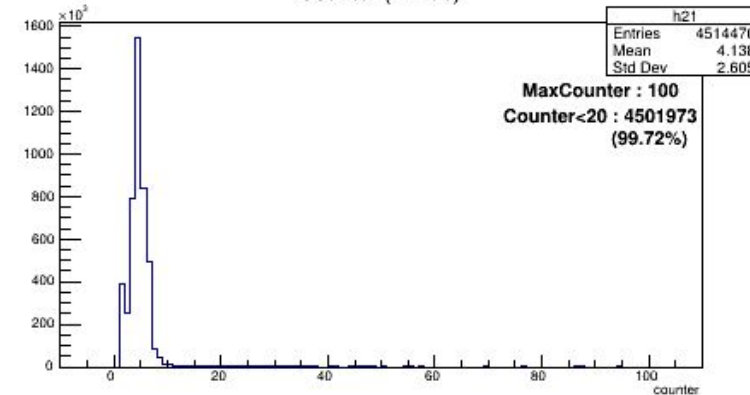
height (Counter = 101)



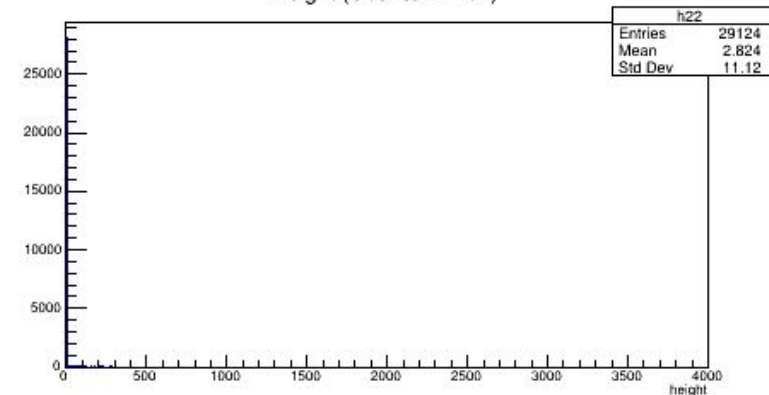
FADCT_000747_evrec.root



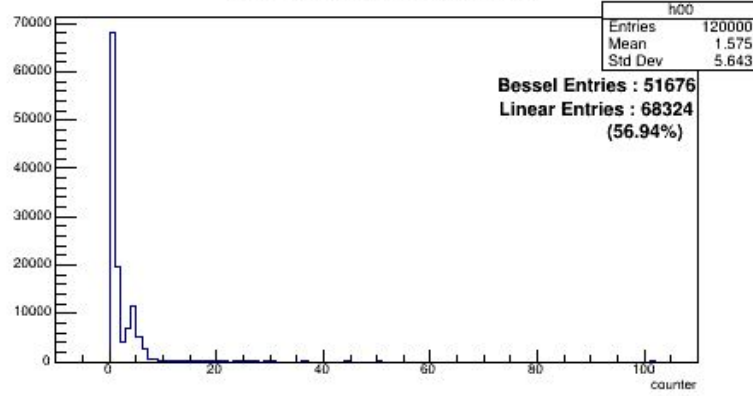
Counter (1~100)



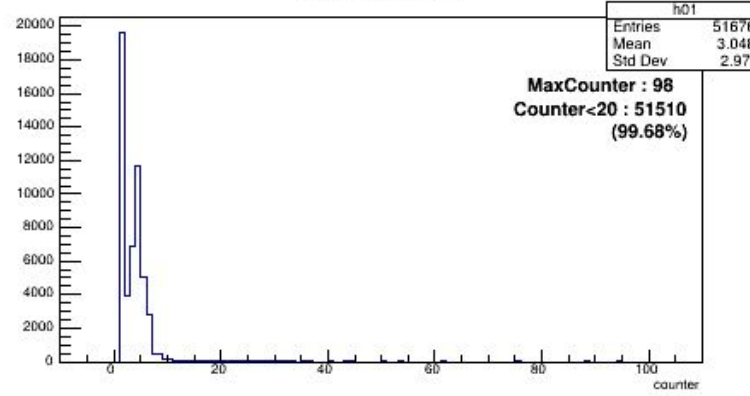
height (Counter = 101)



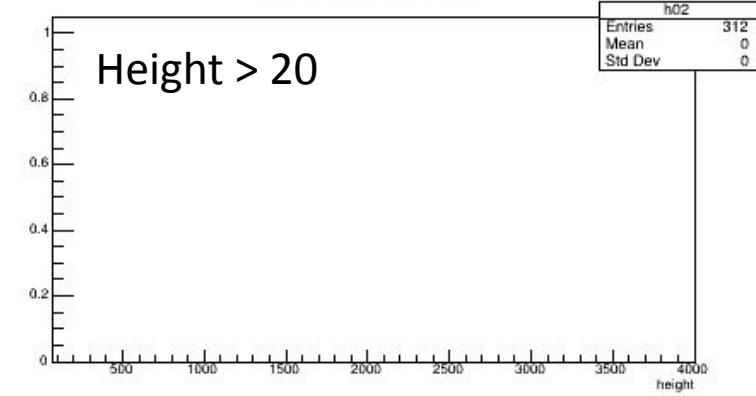
180518YT1314.root_evrec.root



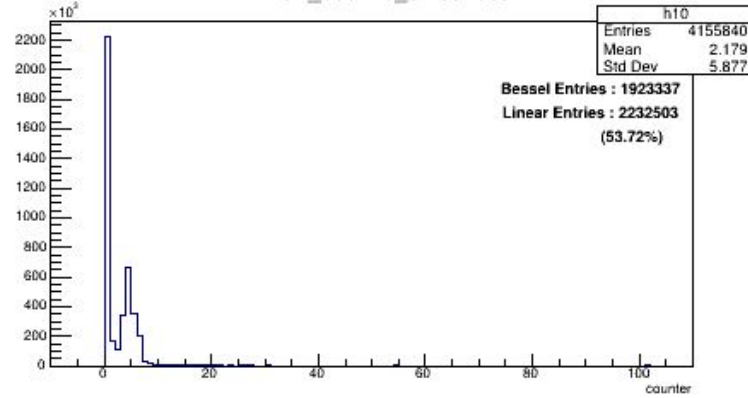
Counter (1~100)



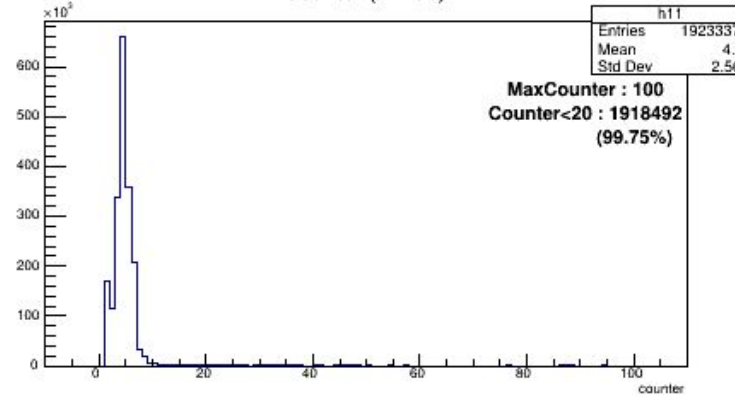
height (Counter = 101)



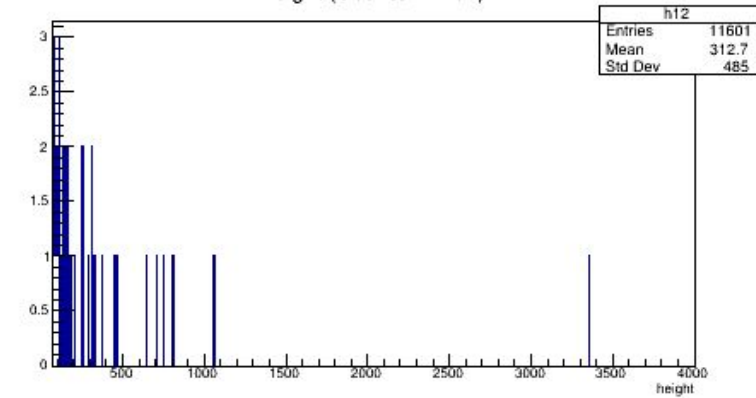
FADCT_000746_evrec.root



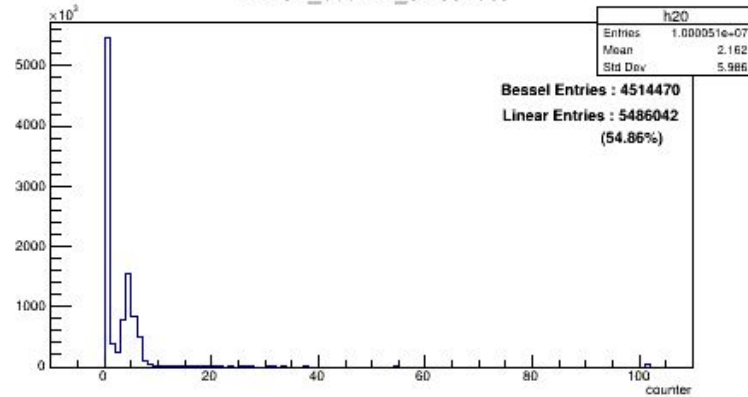
Counter (1~100)



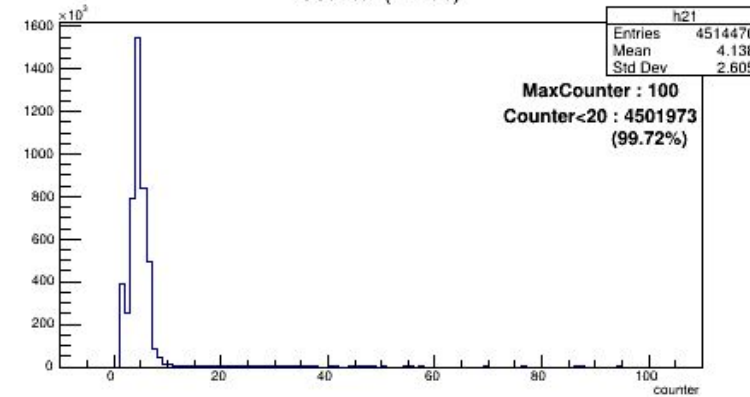
height (Counter = 101)



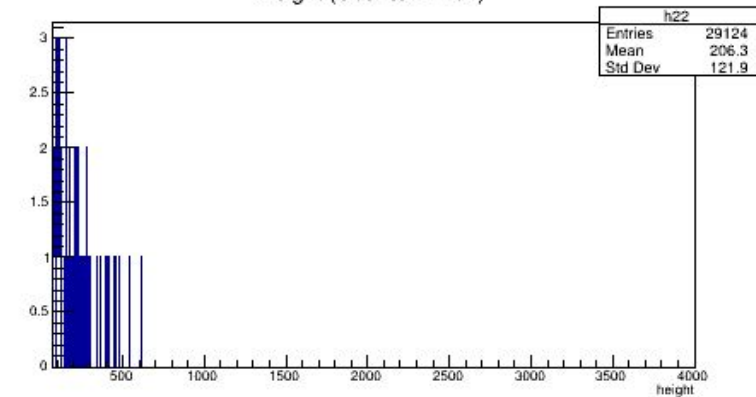
FADCT_000747_evrec.root



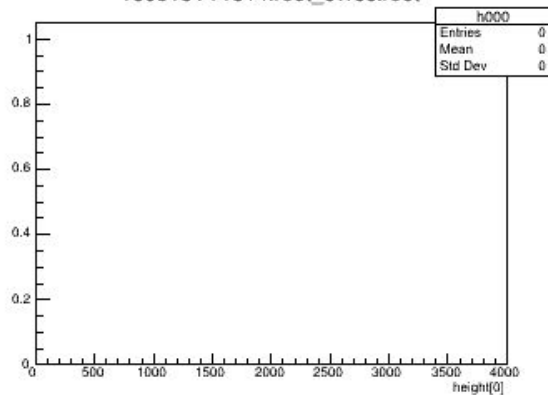
Counter (1~100)



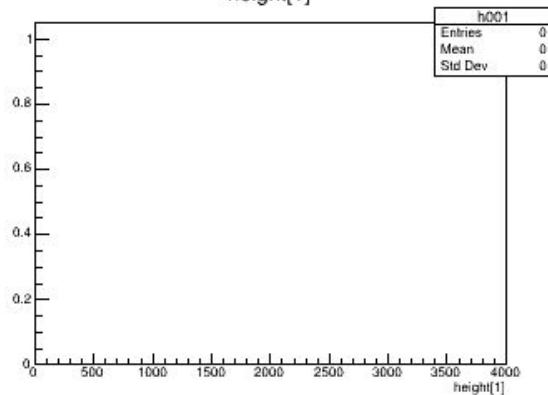
height (Counter = 101)



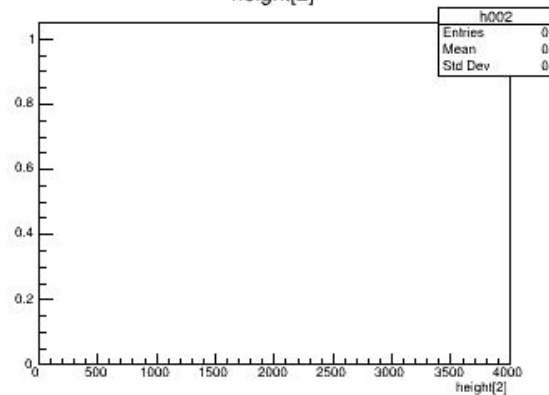
180518YT1314.root_evrec.root



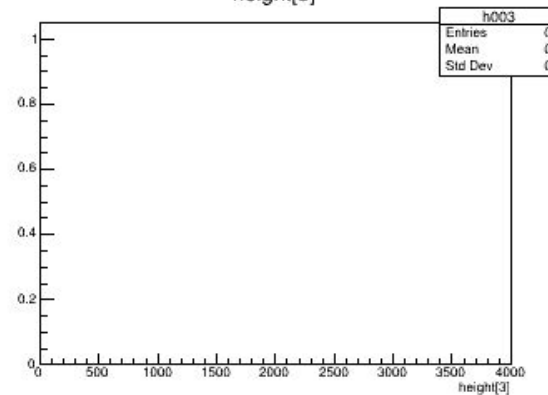
height[1]



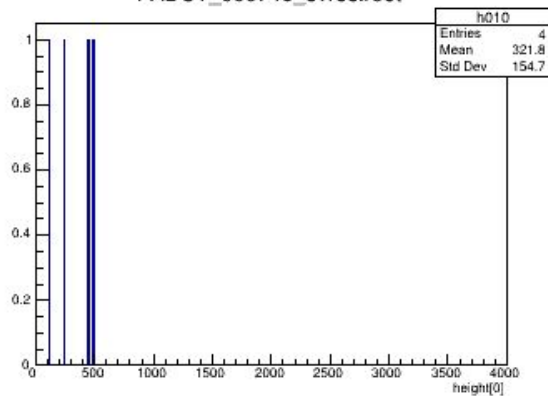
height[2]



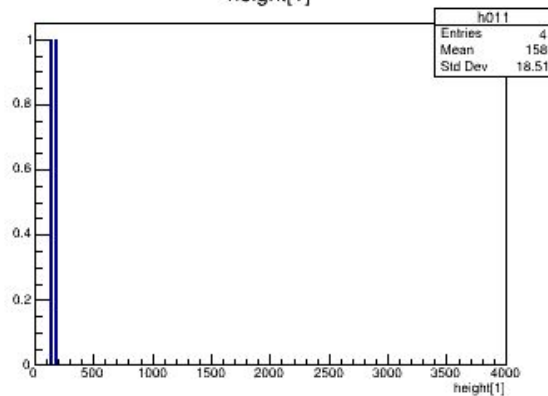
height[3]



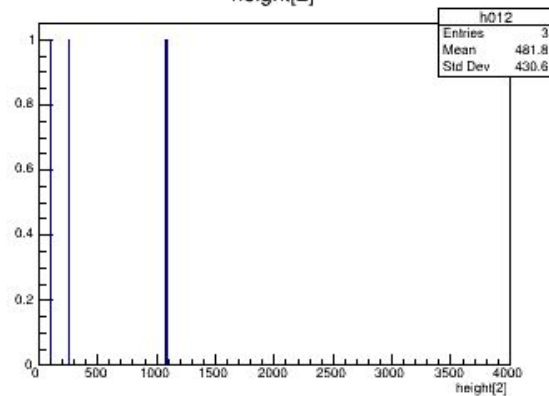
FADCT_000746_evrec.root



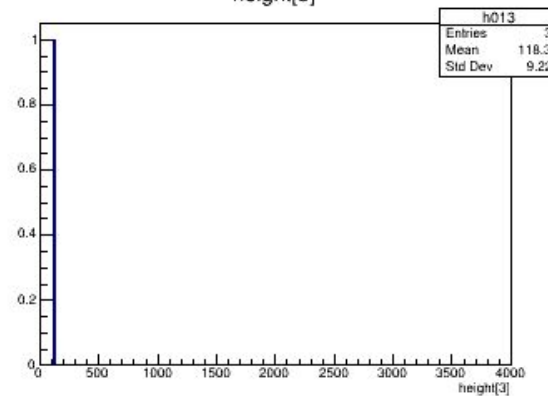
height[1]



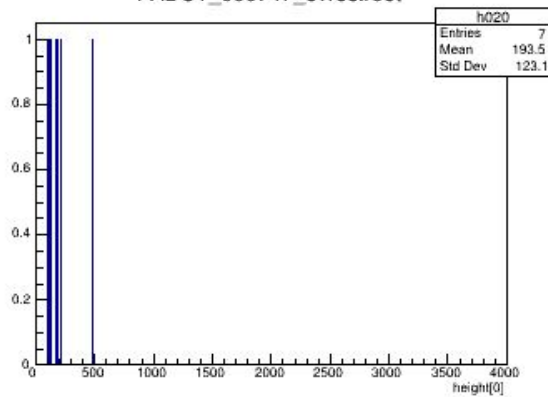
height[2]



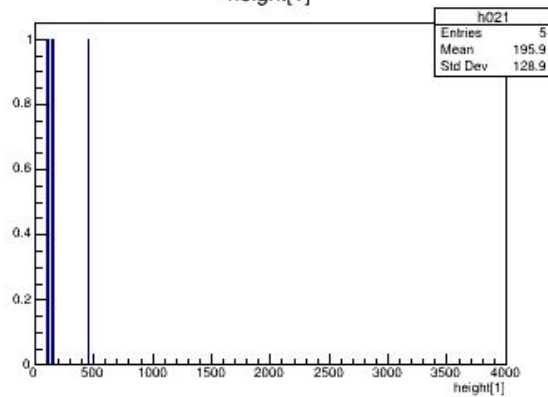
height[3]



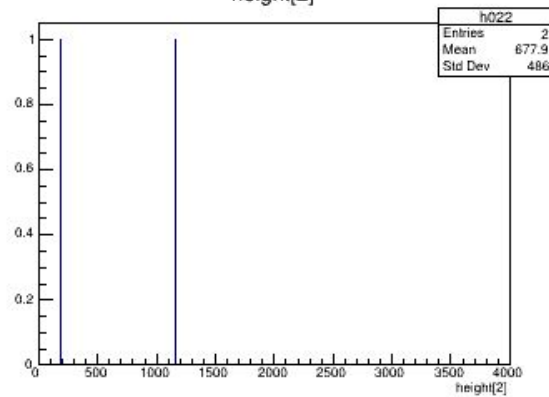
FADCT_000747_evrec.root



height[1]



height[2]



height[3]

