



Analysis status of DCV

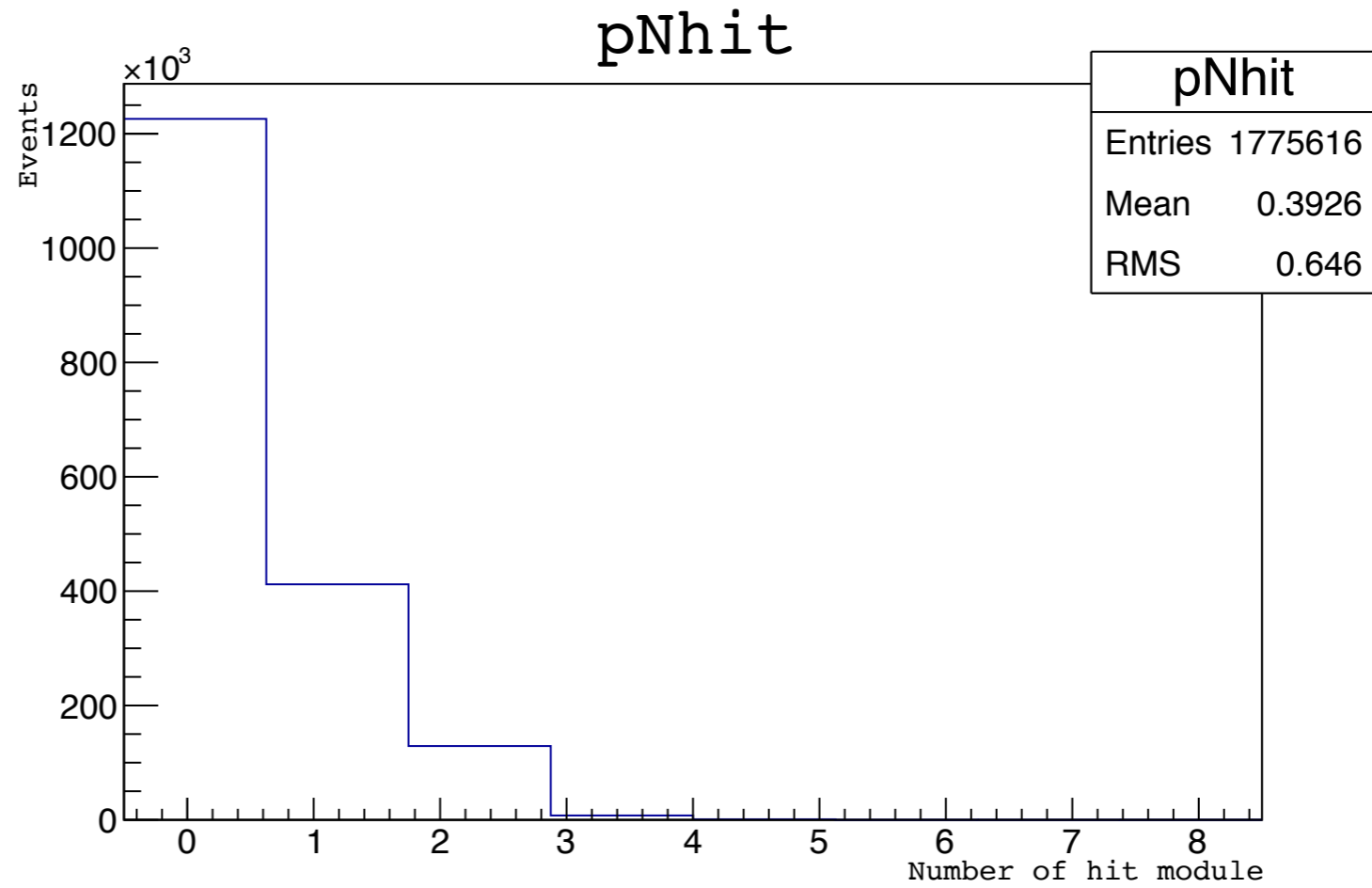
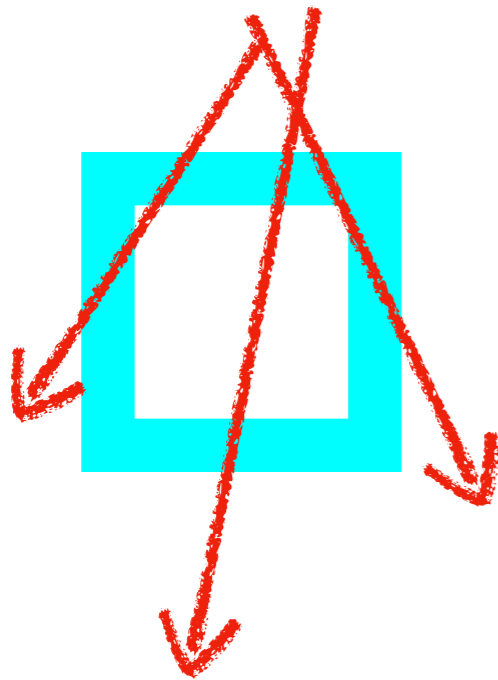
HongMin KIM (CBNU)

2019. 9. 2.

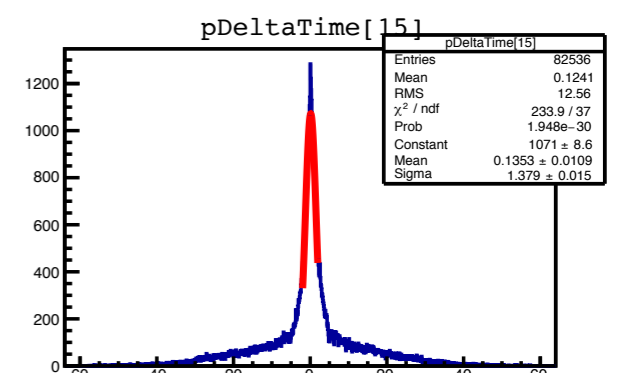
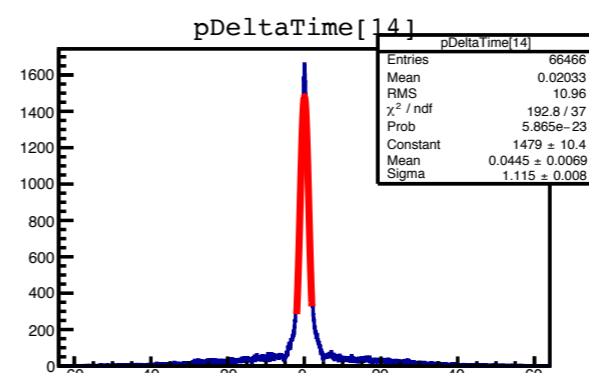
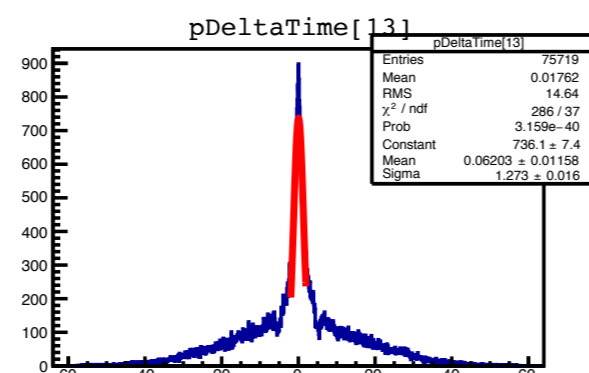
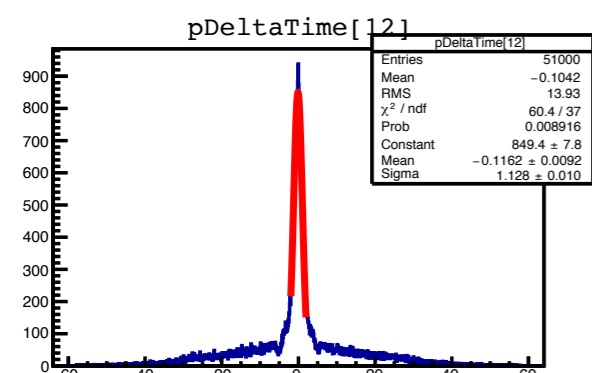
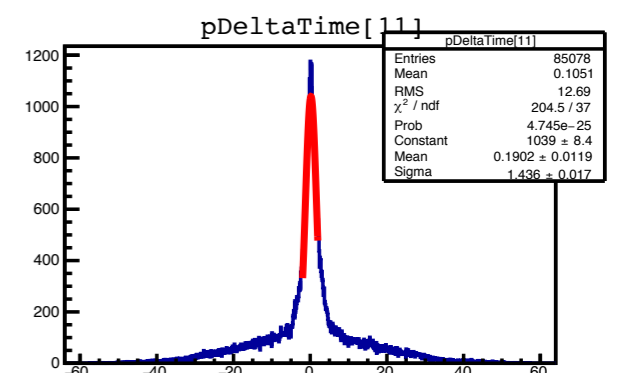
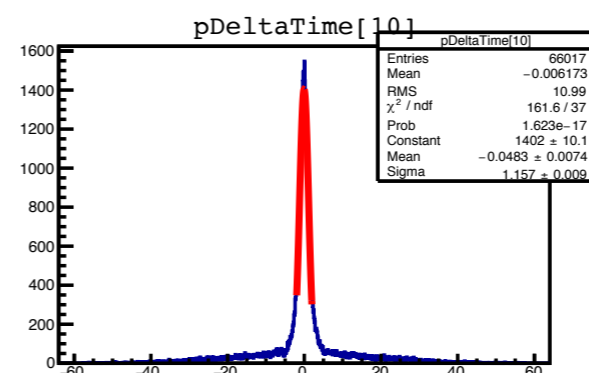
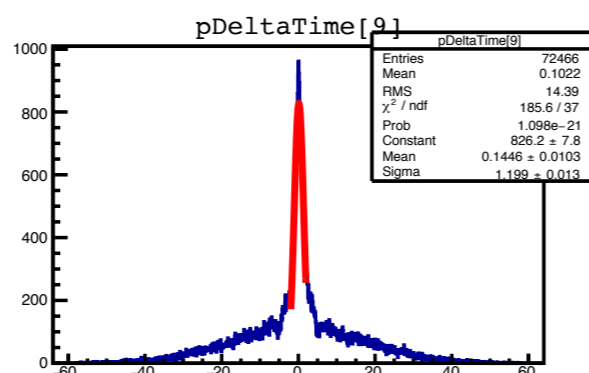
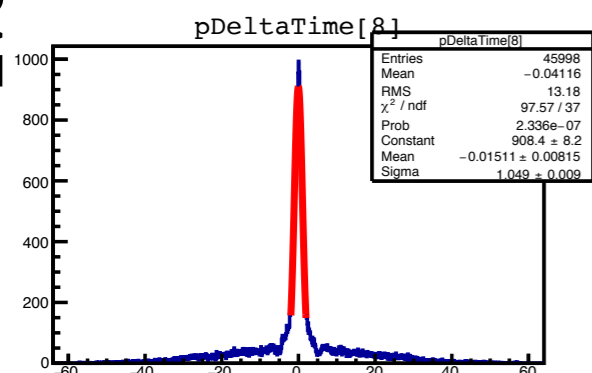
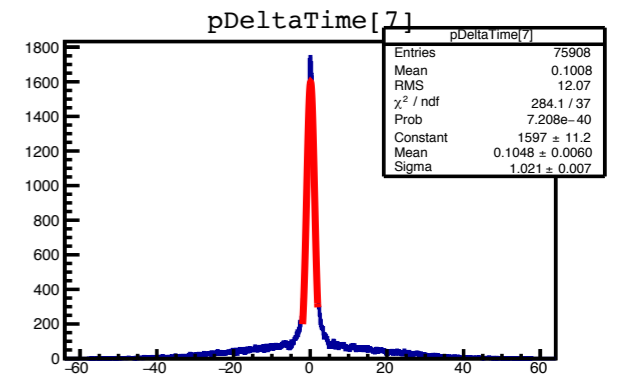
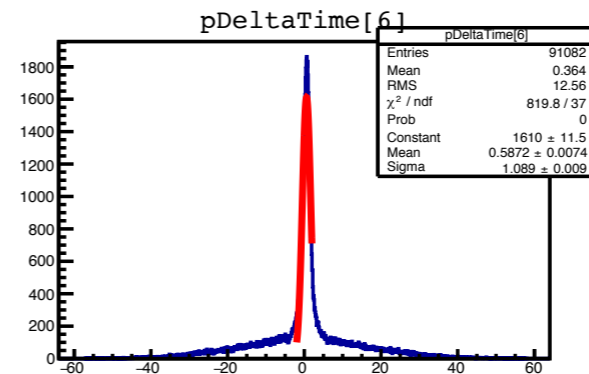
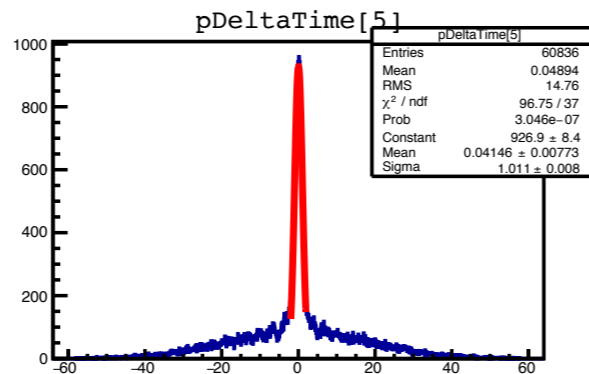
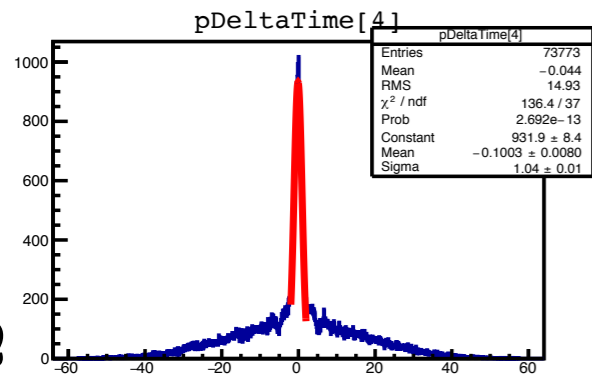
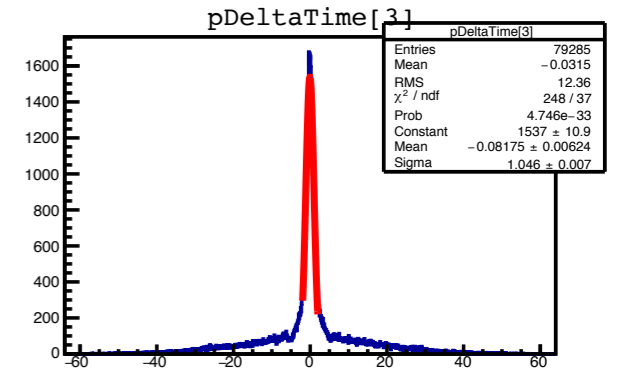
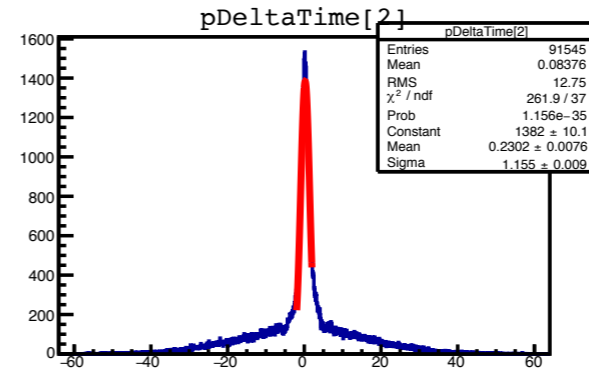
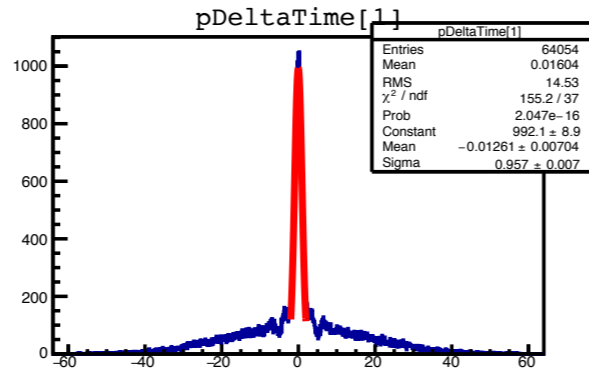
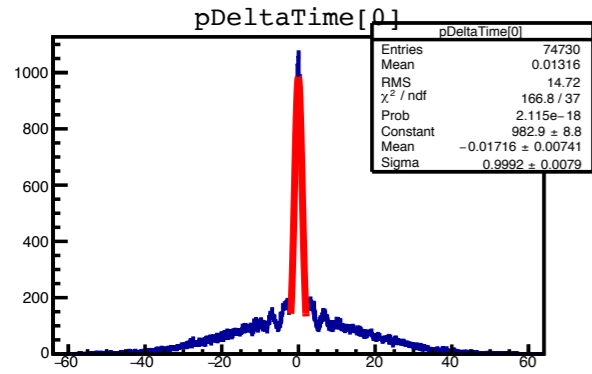
K-KOTO Offline Meeting @Korea University

DCV Self Trigger

Hit by Cosmic ray



DeltaTime



Time [s]

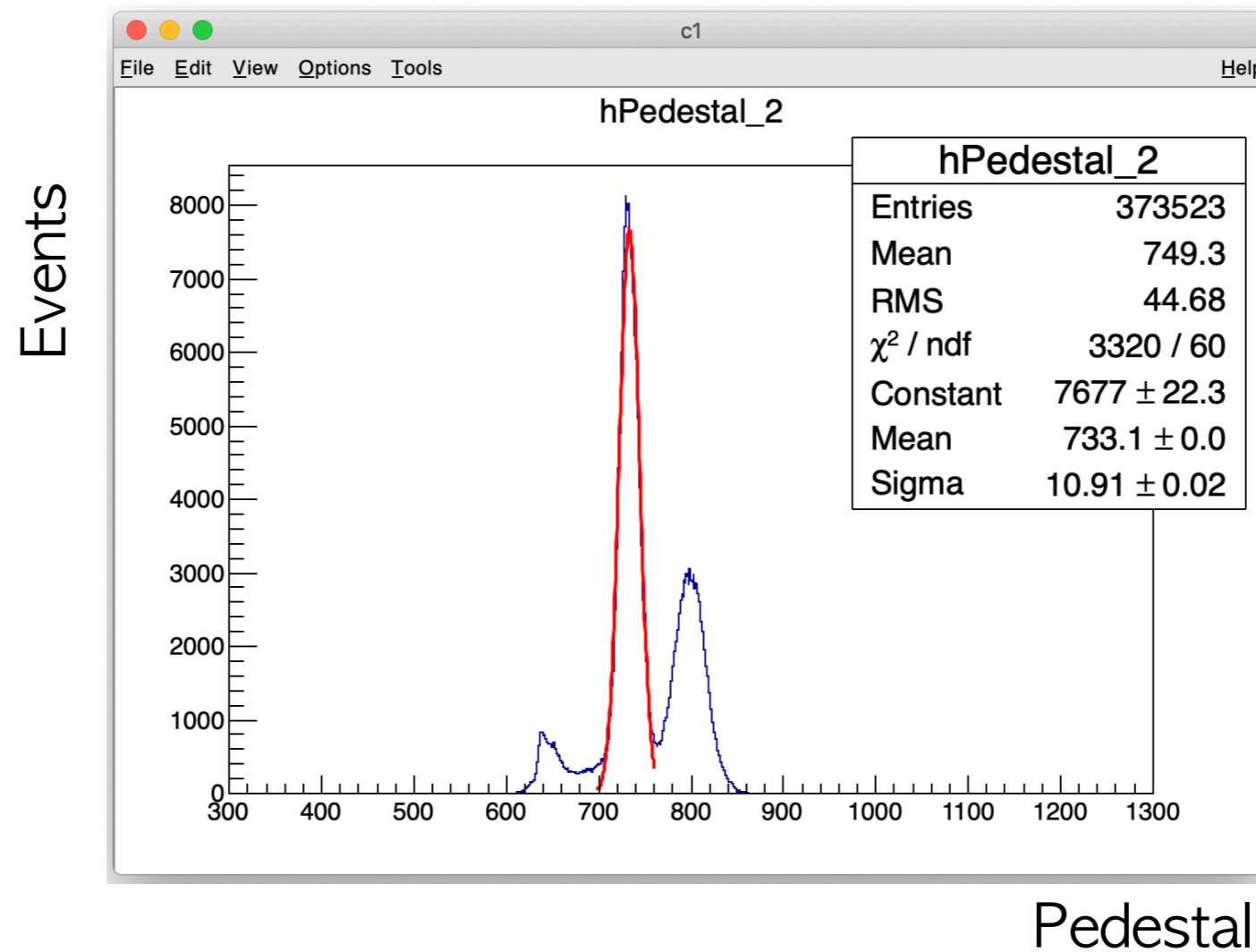
DeltaTime

```
if( Nhit == 2 ){  
    for(int ipair=0;ipair<16;ipair++){  
        if( DCVInitialPTime[2*ipair+1] == -9999 || DCVInitialPTime[2*ipair+0] == -9999 ) continue;  
  
        DCVDeltaTime[ipair] = 0;  
        DCVDeltaTime[ipair] = DCVInitialPTime[2*ipair+1] - DCVInitialPTime[2*ipair+0];  
        pDeltaTime[ipair]->Fill(DCVDeltaTime[ipair]);  
    }  
}
```

```
i : 0, DeltaTimeMean : -0.0171611  
i : 1, DeltaTimeMean : -0.0126134  
i : 2, DeltaTimeMean : 0.230214  
i : 3, DeltaTimeMean : -0.0817508  
i : 4, DeltaTimeMean : -0.100318  
i : 5, DeltaTimeMean : 0.0414555  
i : 6, DeltaTimeMean : 0.58716  
i : 7, DeltaTimeMean : 0.104752  
i : 8, DeltaTimeMean : -0.0151079  
i : 9, DeltaTimeMean : 0.14461  
i : 10, DeltaTimeMean : -0.0482981  
i : 11, DeltaTimeMean : 0.190183  
i : 12, DeltaTimeMean : -0.116161  
i : 13, DeltaTimeMean : 0.0620322  
i : 14, DeltaTimeMean : 0.0444973  
i : 15, DeltaTimeMean : 0.135257
```

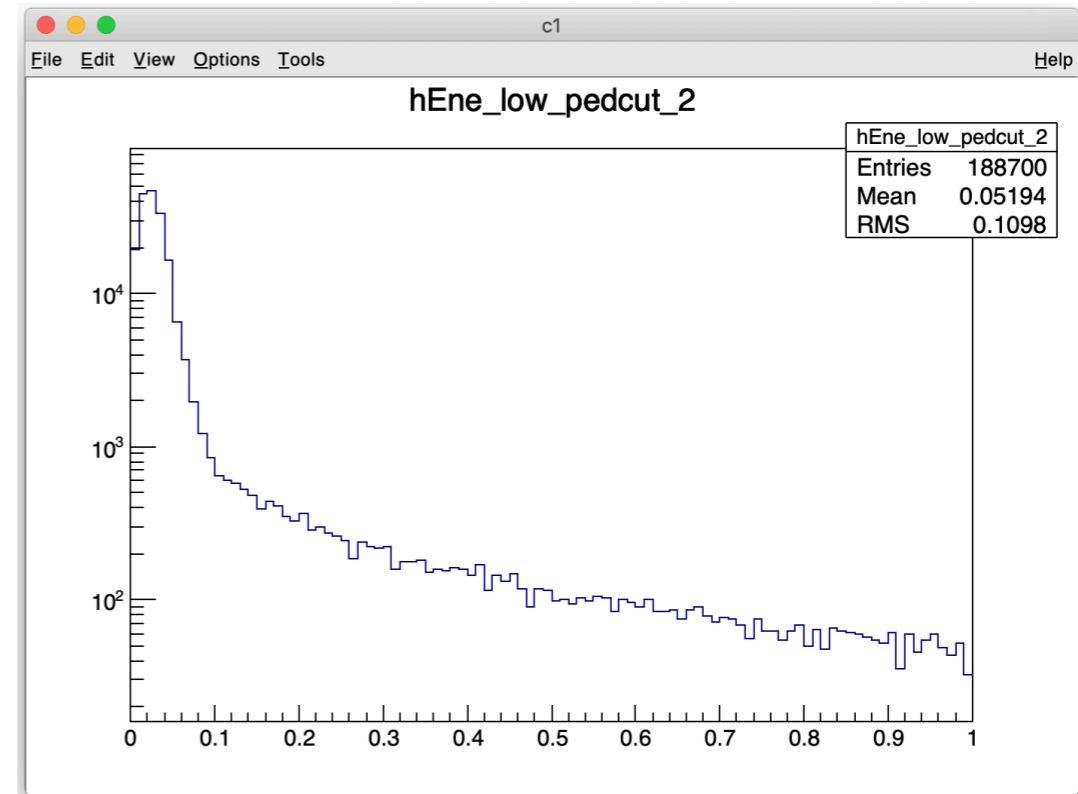
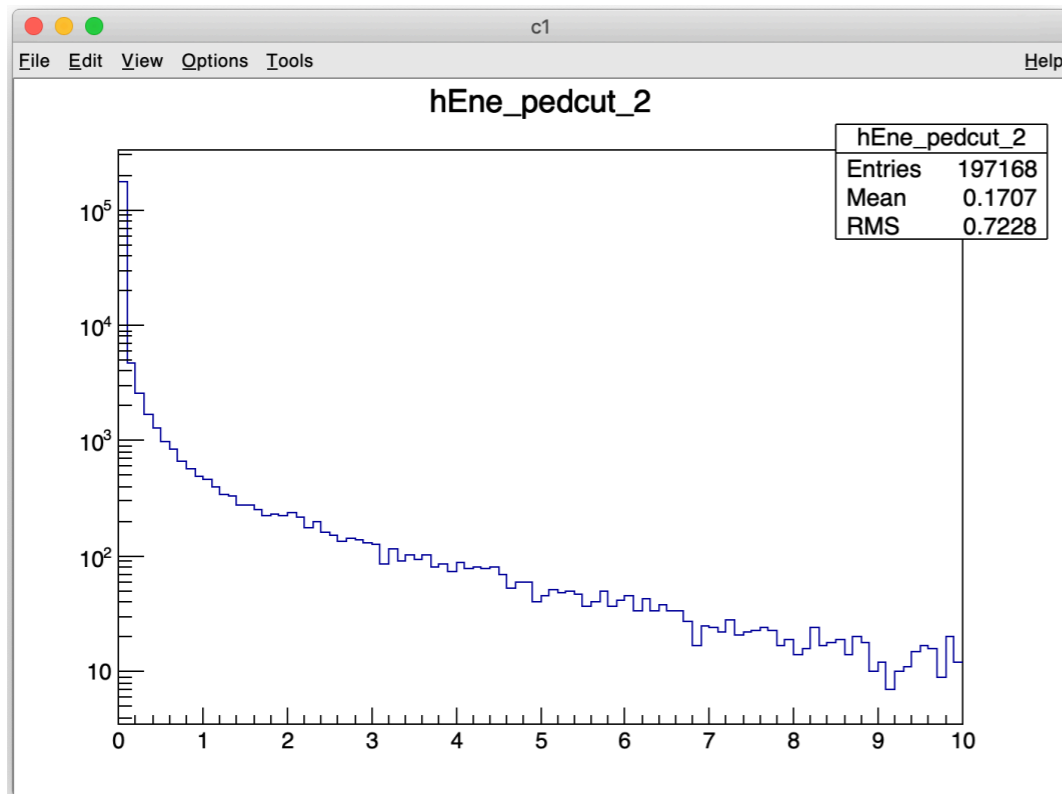
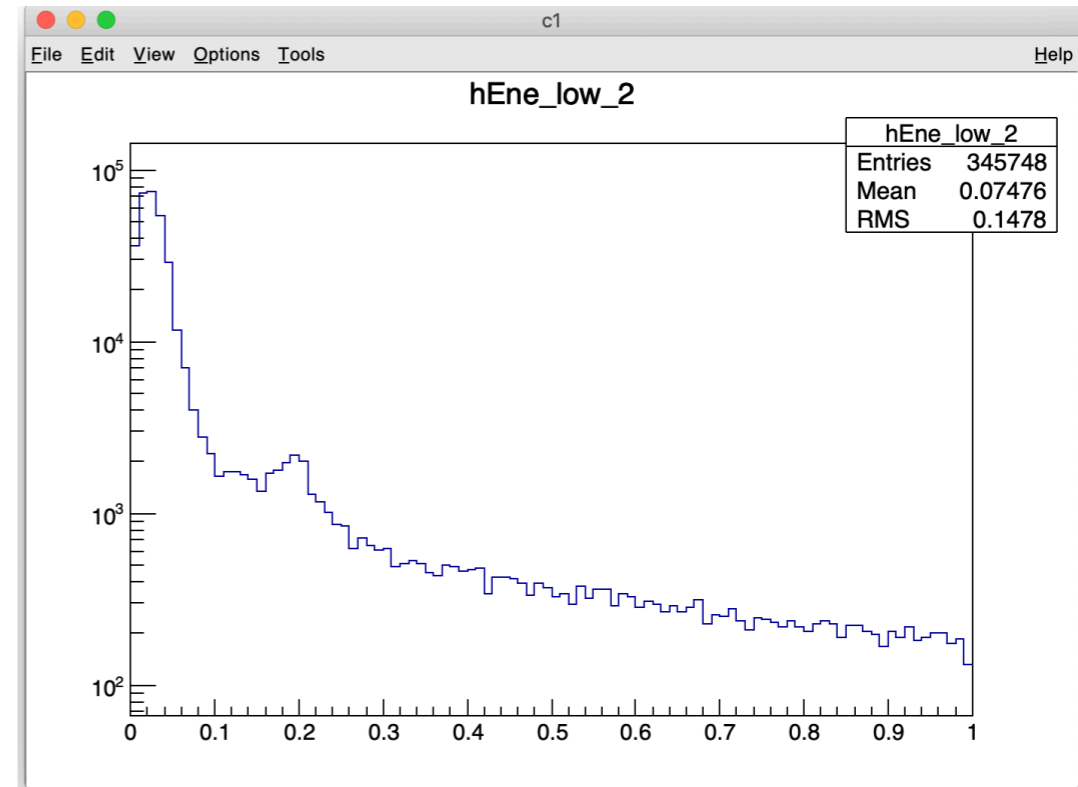
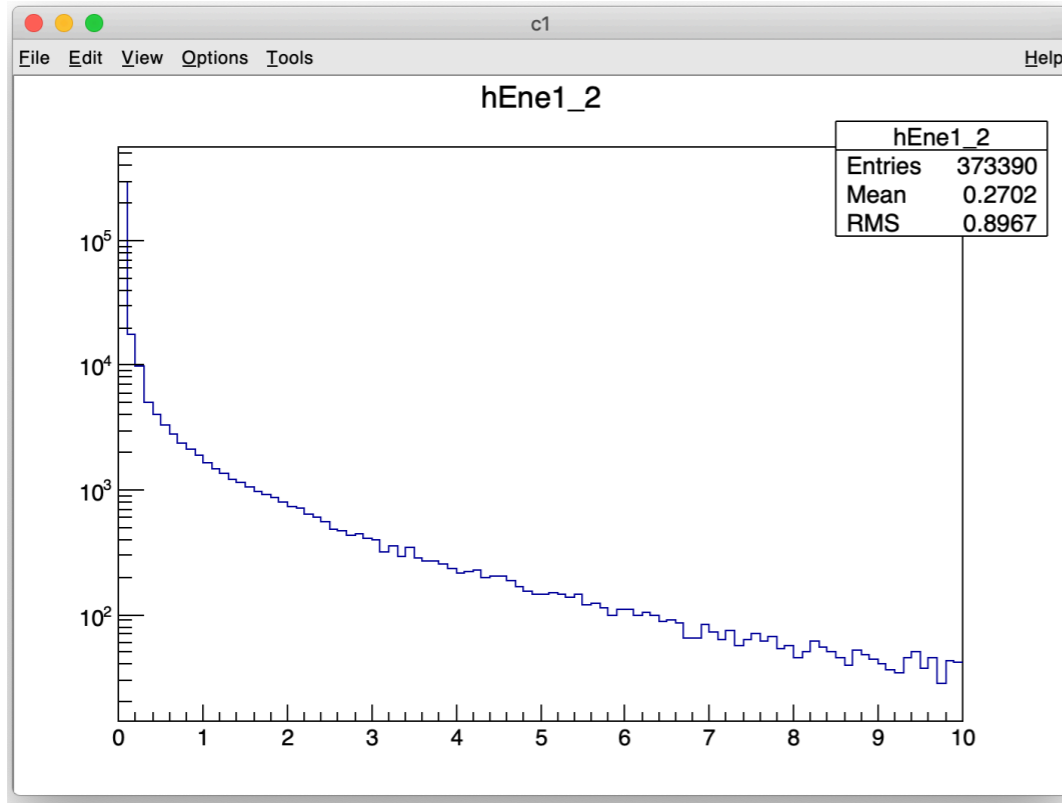
Pedestal Cut

Pedestal Distribution(Run30461, Ch. 2)



Set range from - 1 Sigma to +1 Sigma

Energy Distribution(Run30461, Ch.2)

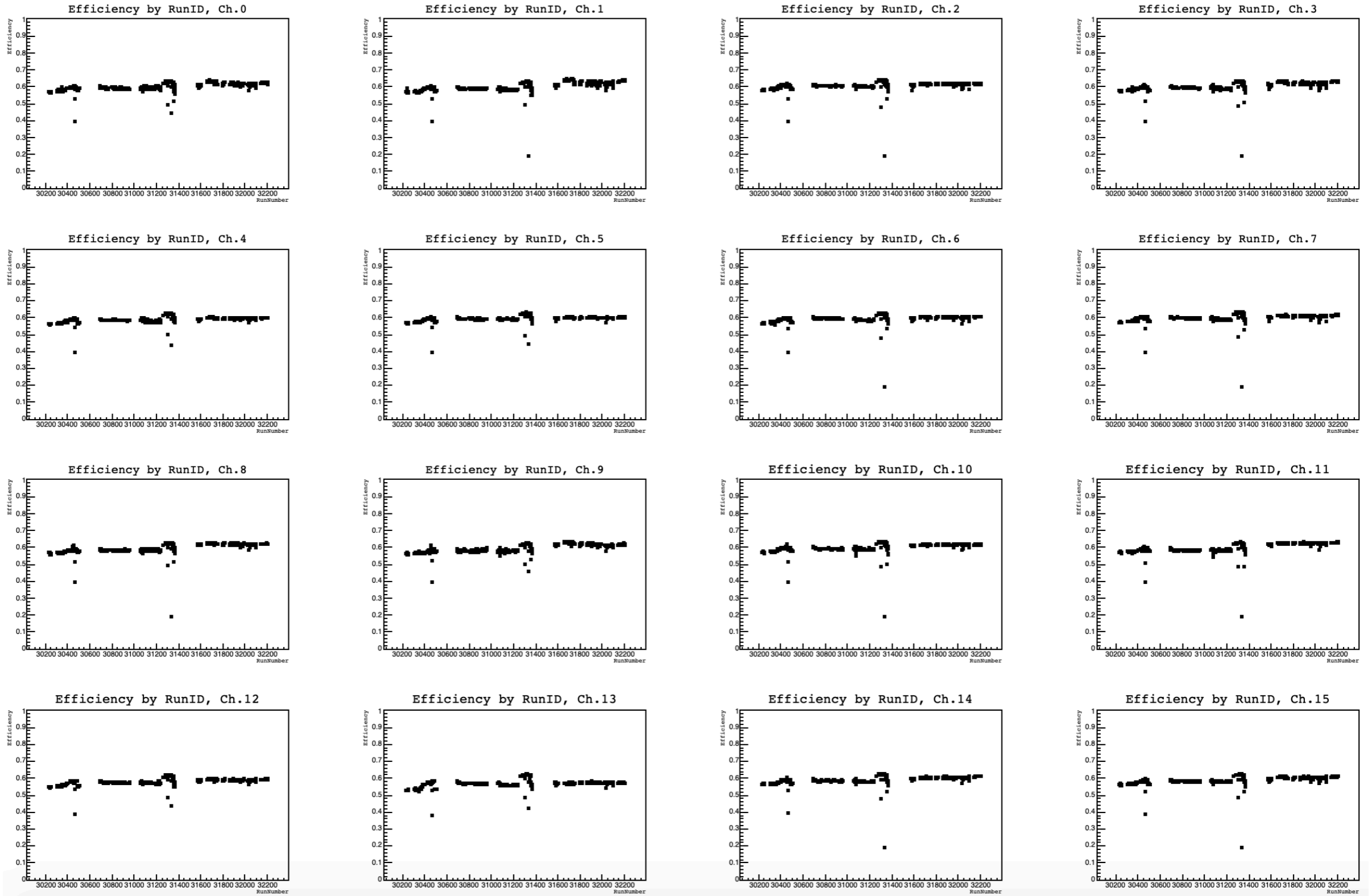


Efficiency = 52.8%

Efficiency = 54.6%

Pedestal cut efficiency for DCV1

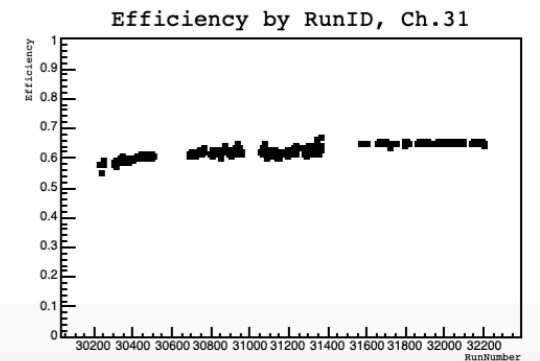
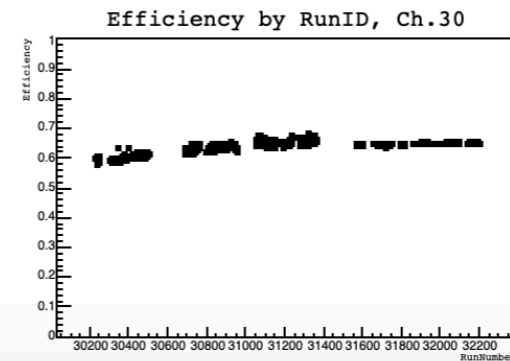
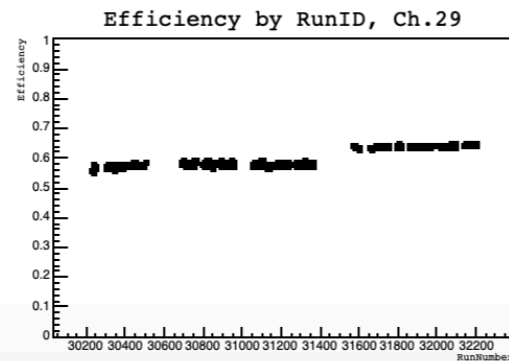
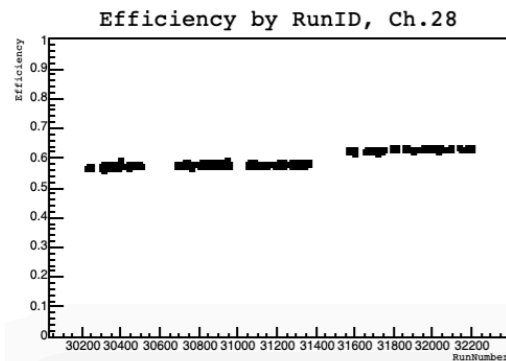
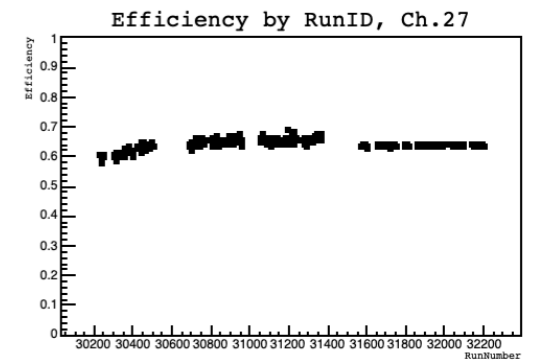
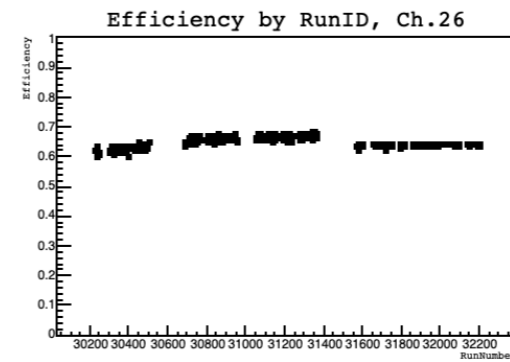
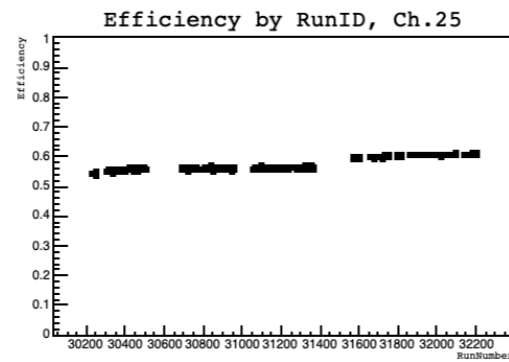
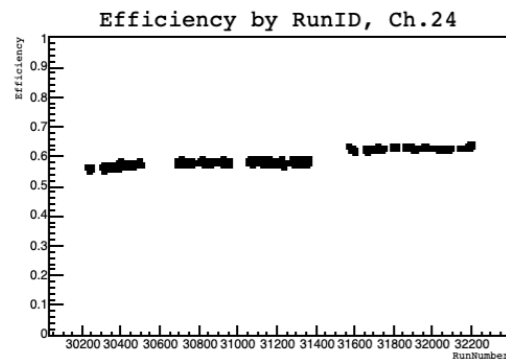
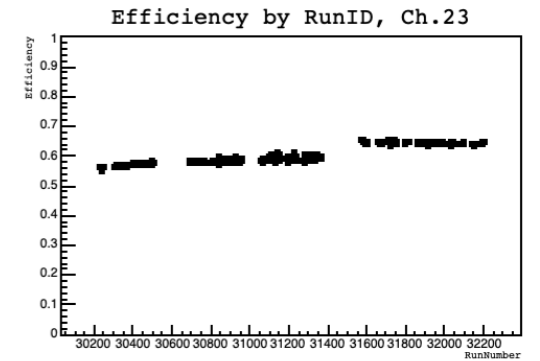
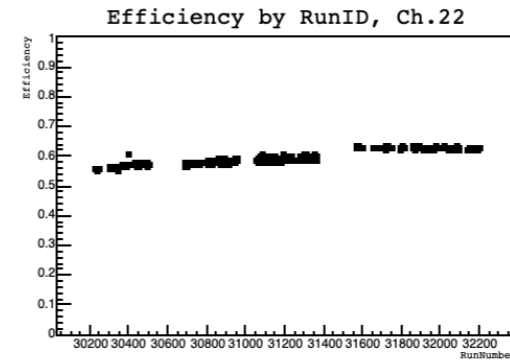
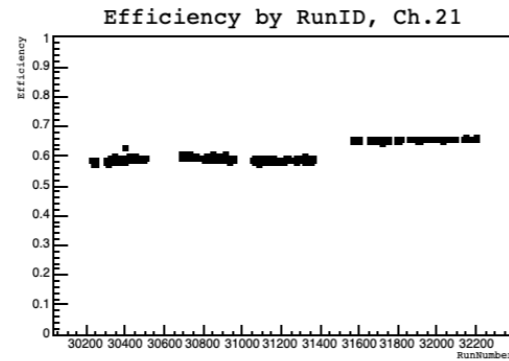
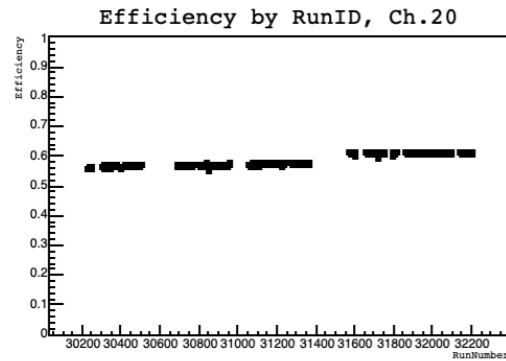
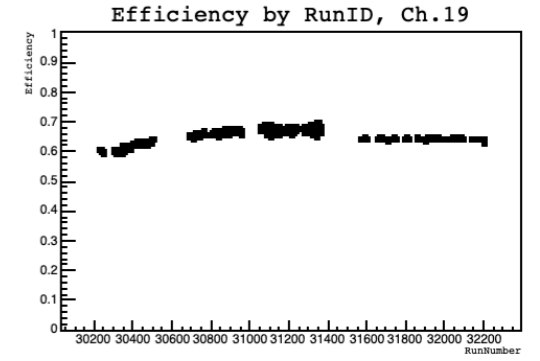
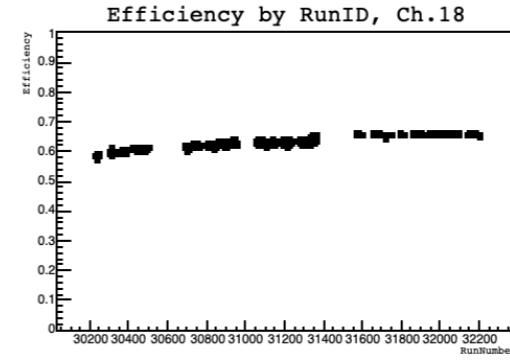
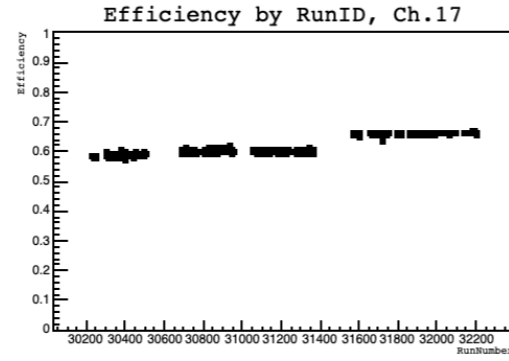
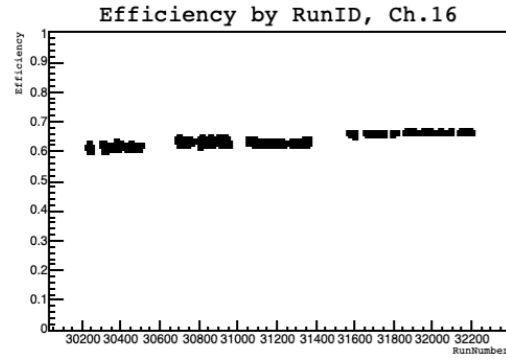
Efficiency



RunID

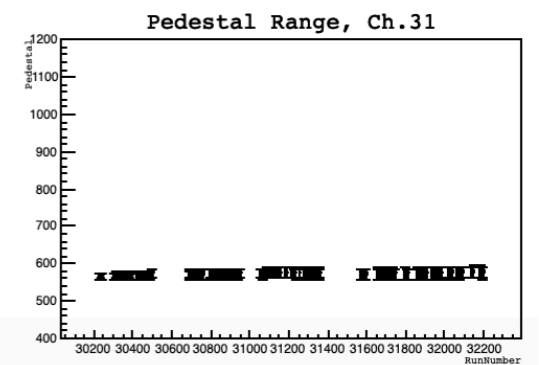
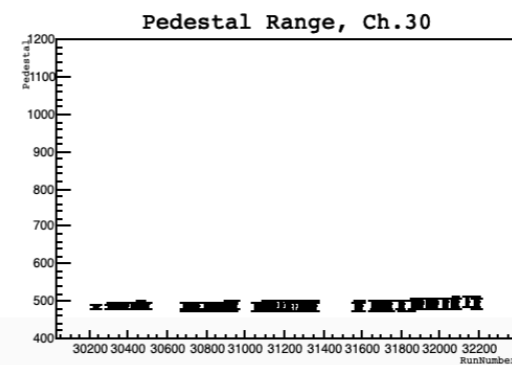
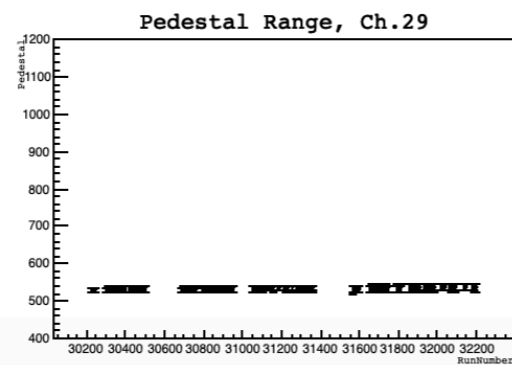
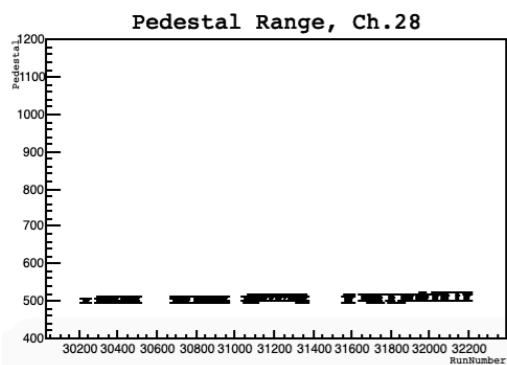
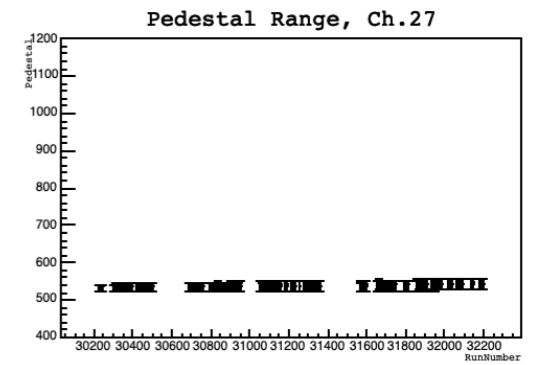
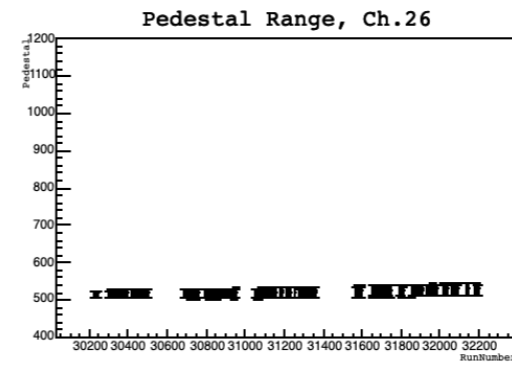
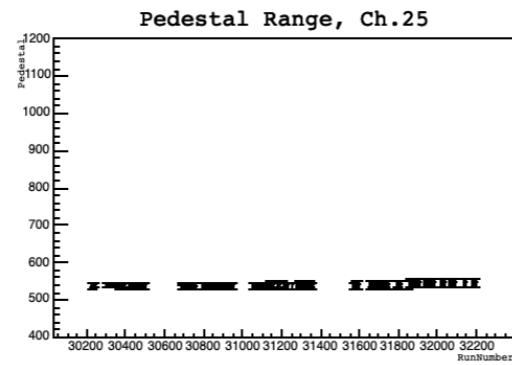
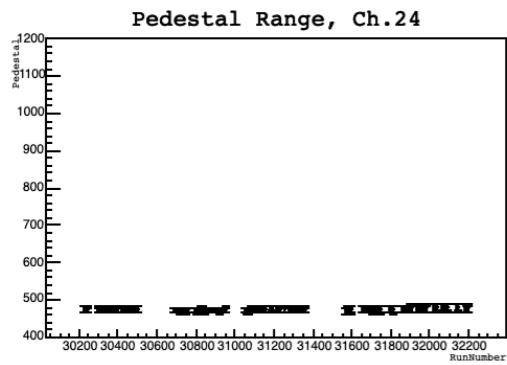
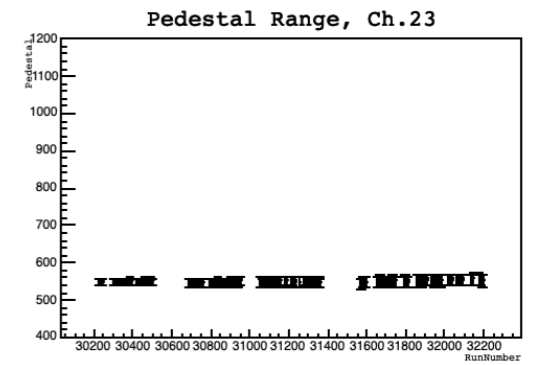
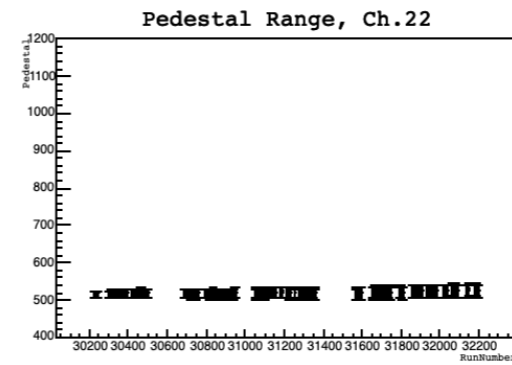
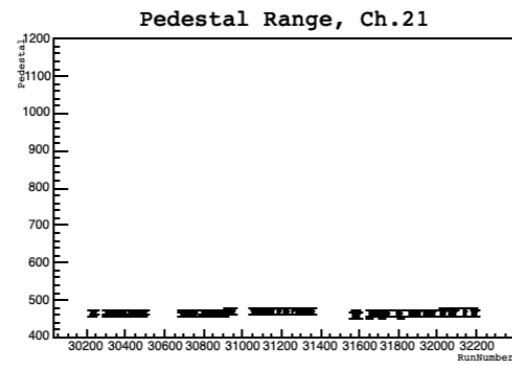
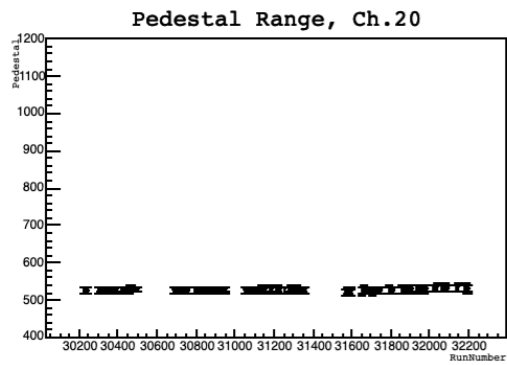
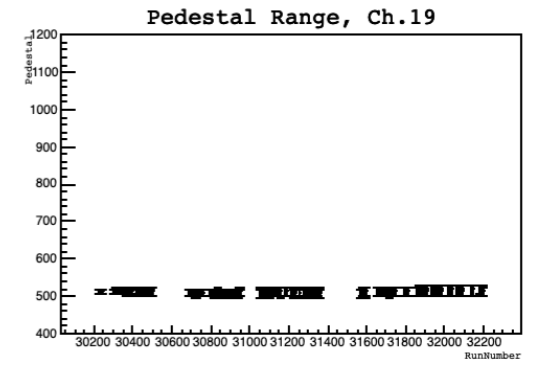
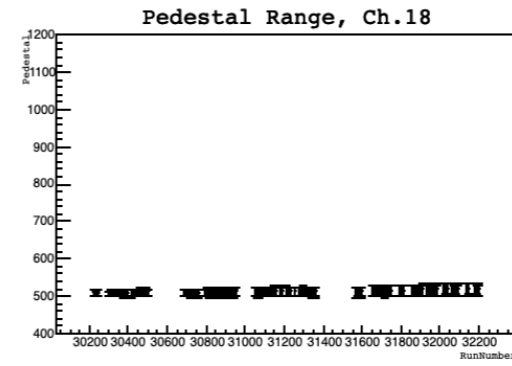
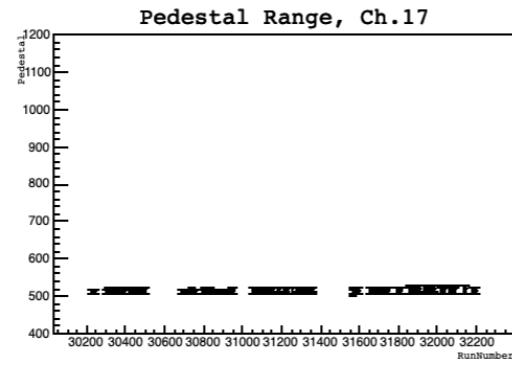
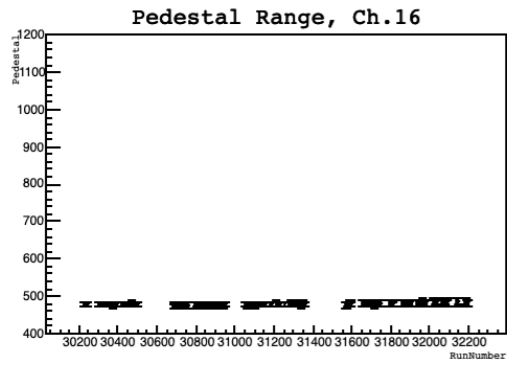
Pedestal cut efficiency for DCV2

Efficiency

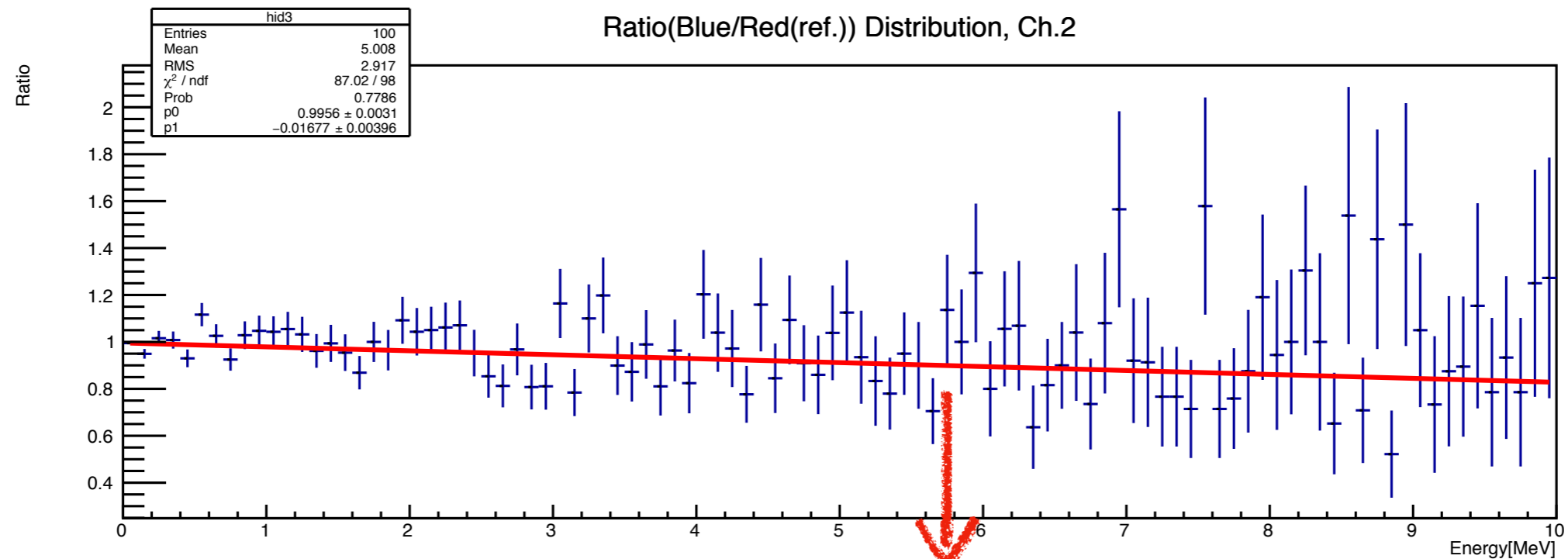
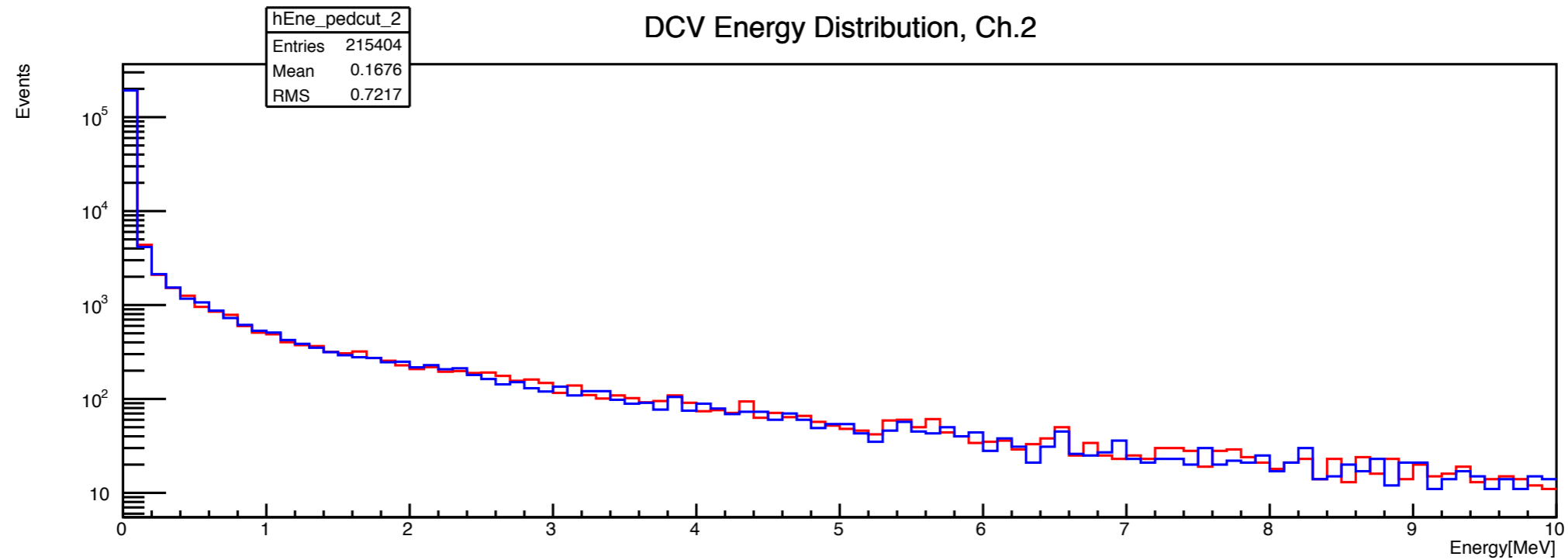


RunID

Pedestal Cut Range DCV2



DCV Energy Distribution(Ex Run30799)

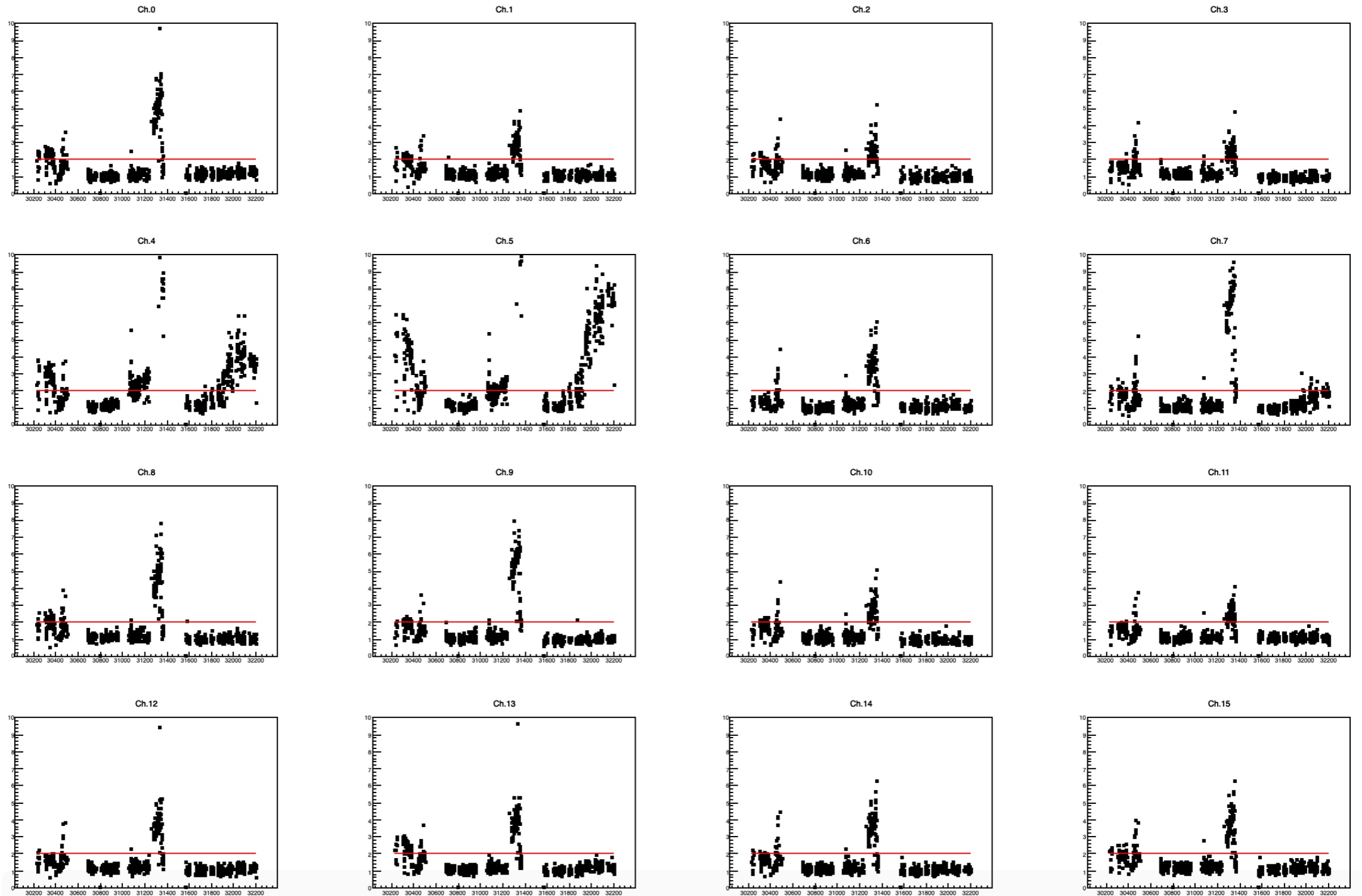


$a*x + b$

Chi Square for DCV1

Full Range Fitting

Chi Square

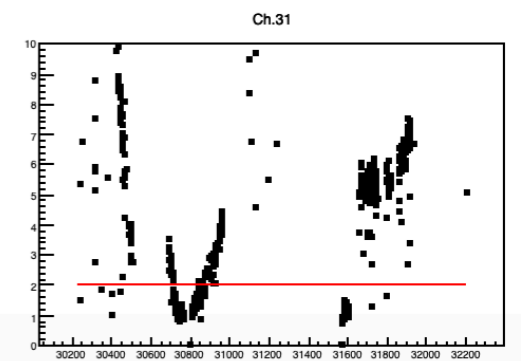
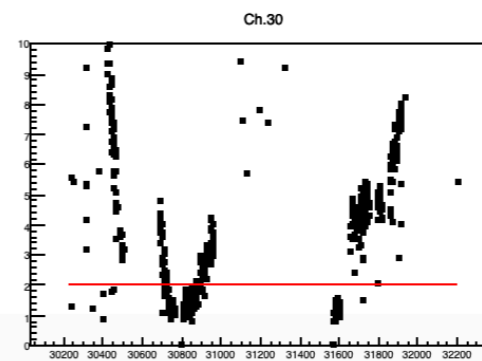
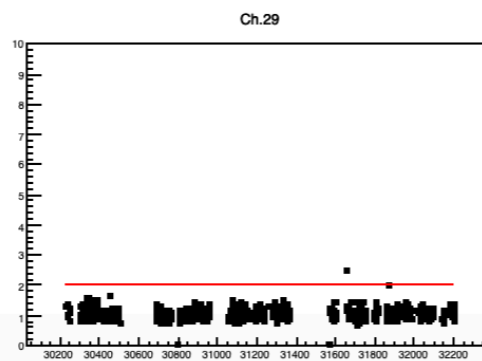
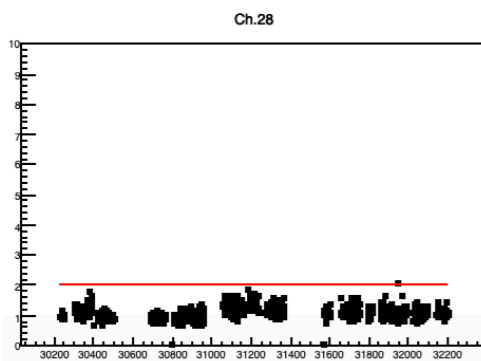
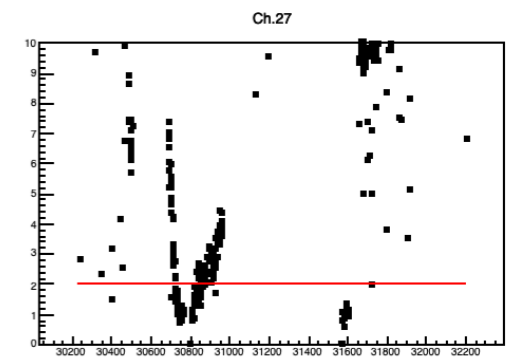
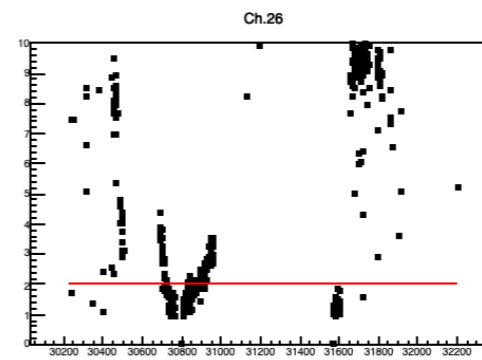
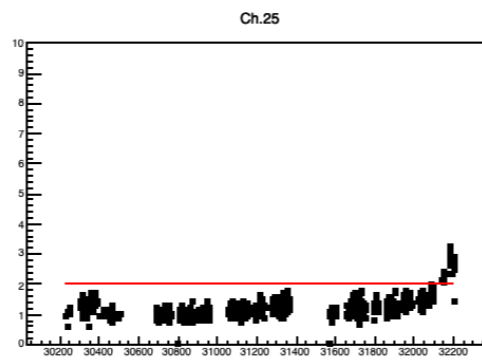
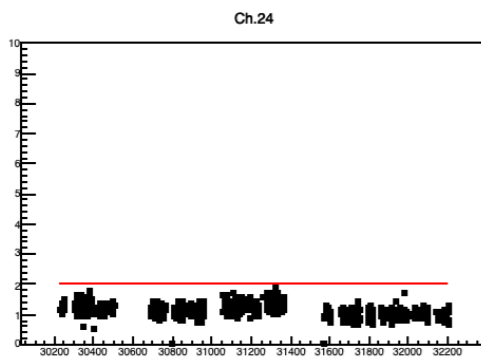
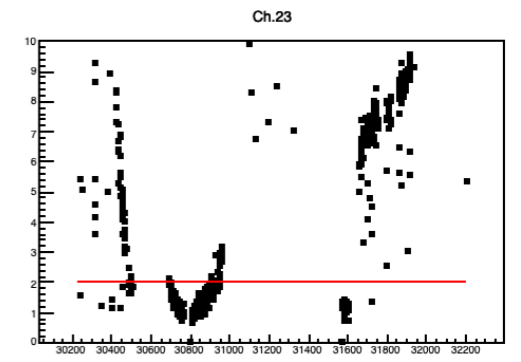
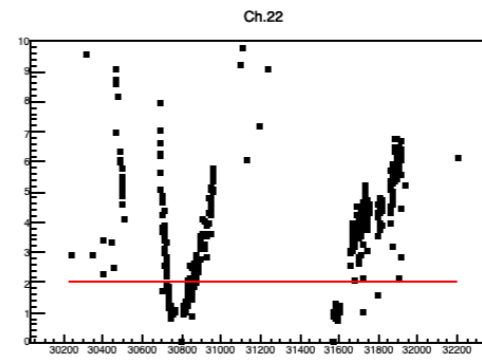
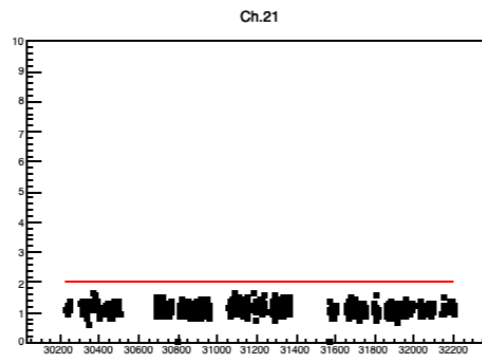
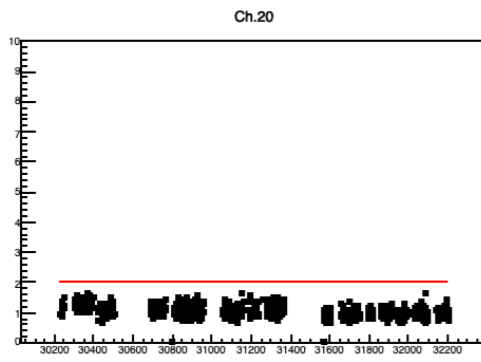
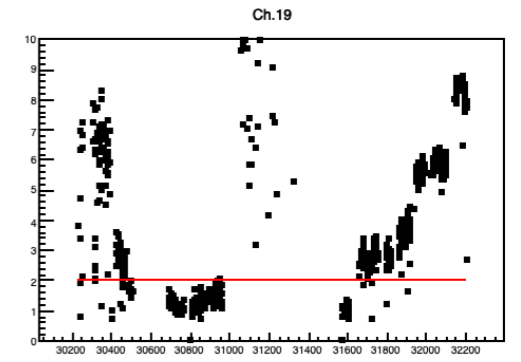
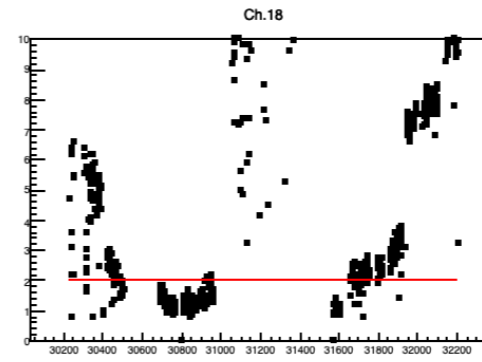
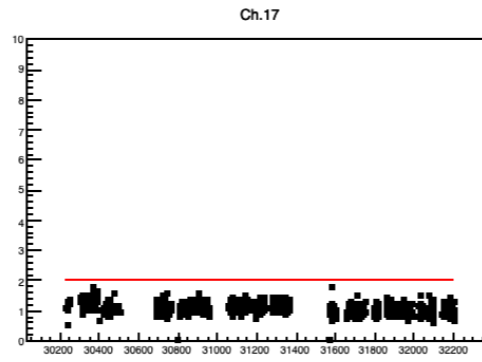
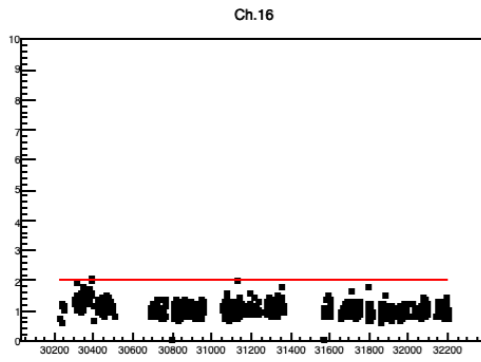


RunID

Chi Square for DCV2

Full Range Fitting

Chi Square

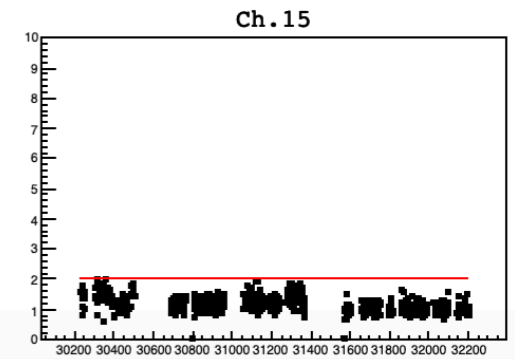
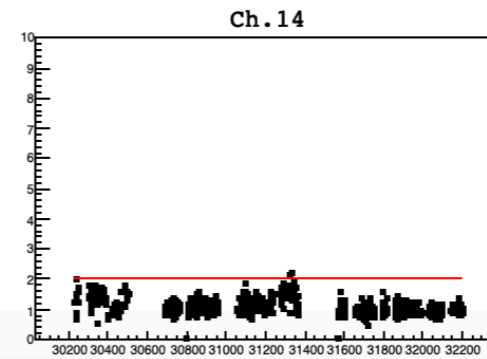
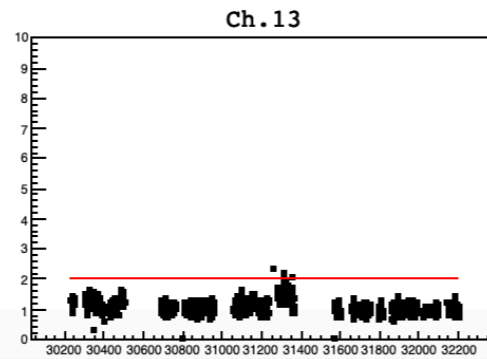
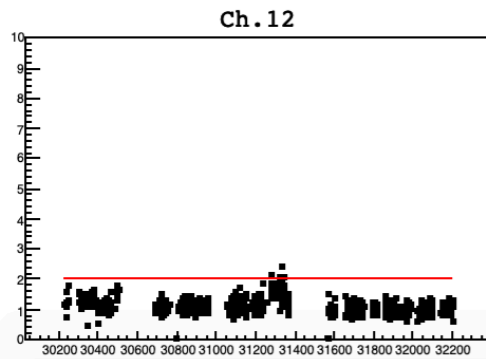
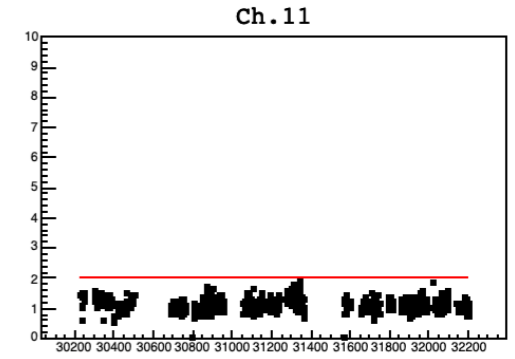
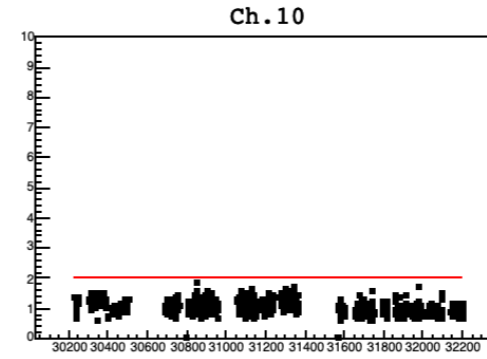
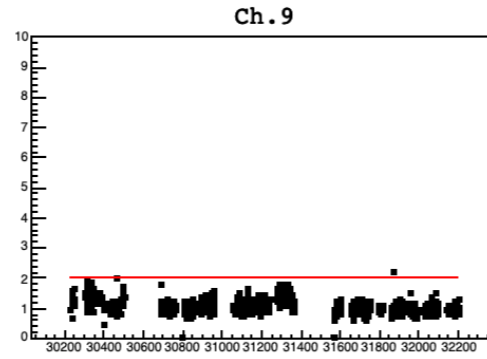
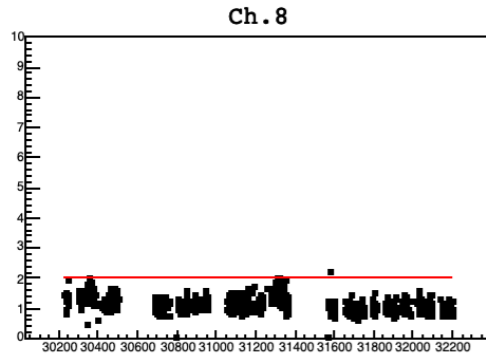
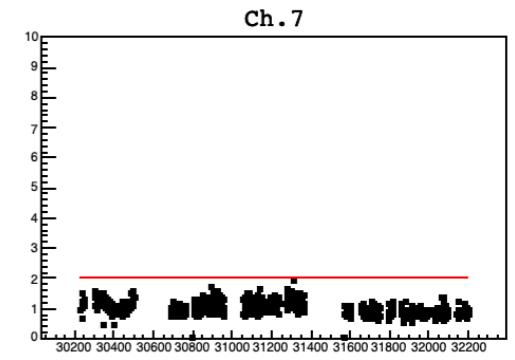
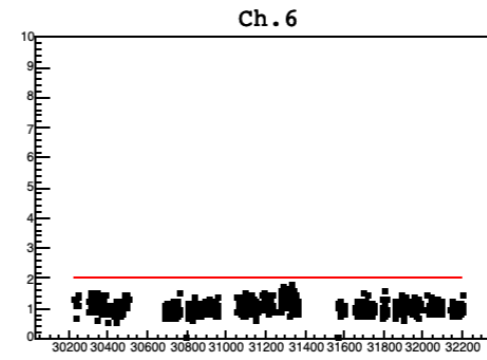
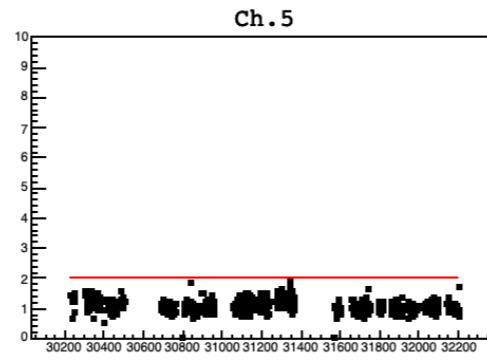
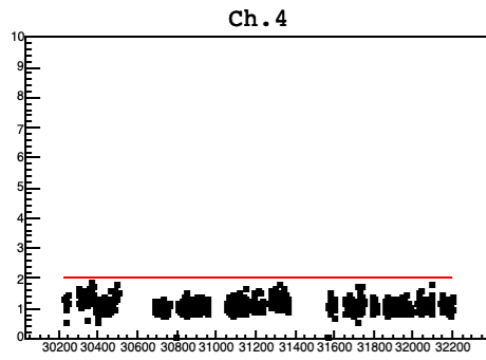
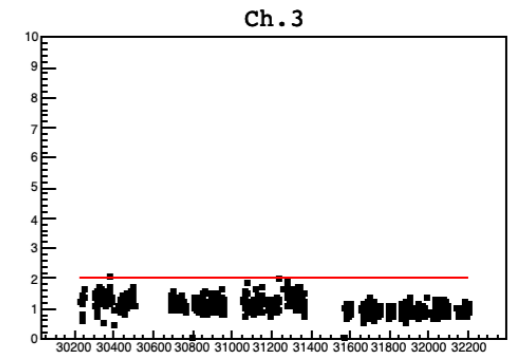
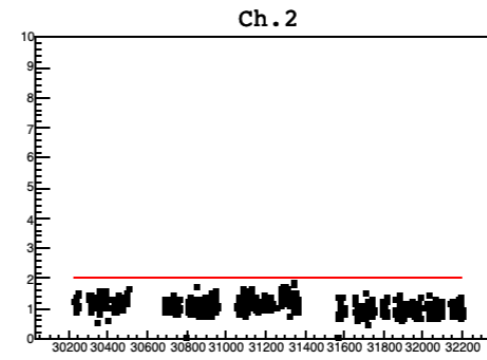
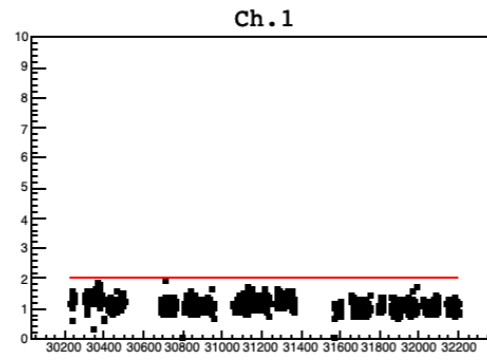
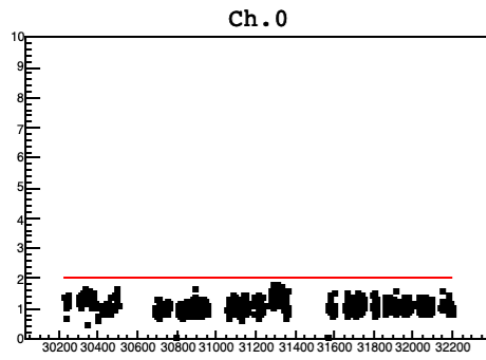


RunID

Chi Square for DCV1

Cut Range Fitting

Chi Square

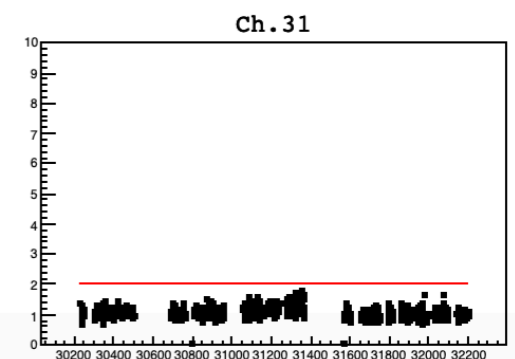
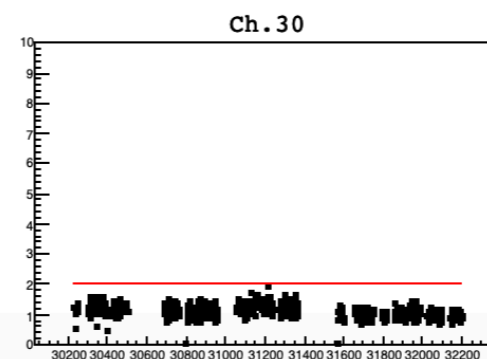
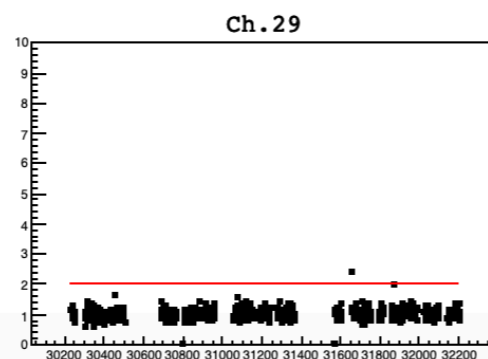
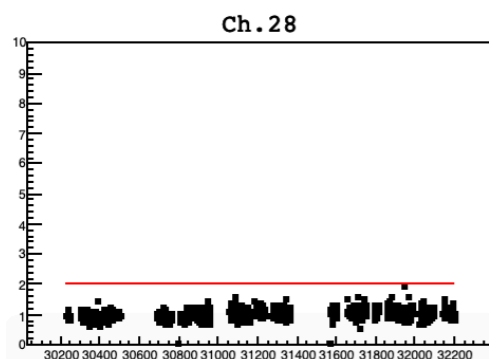
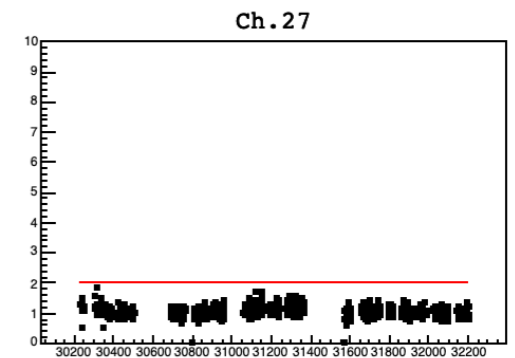
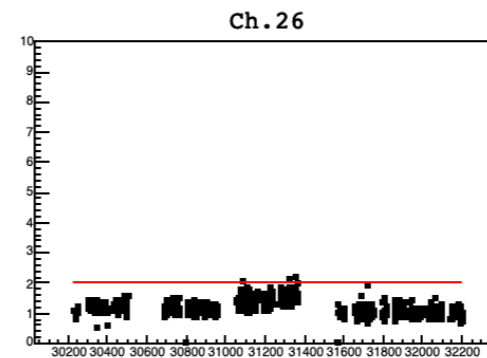
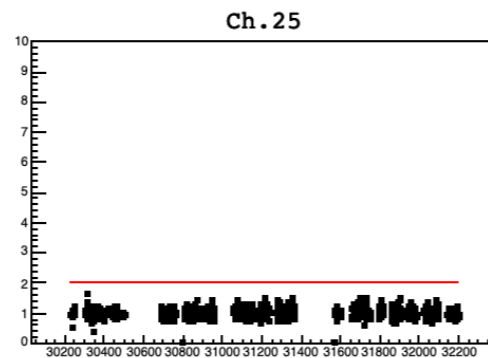
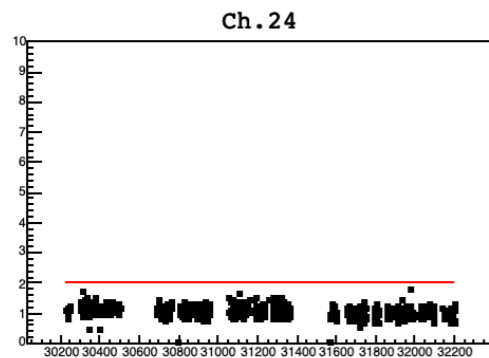
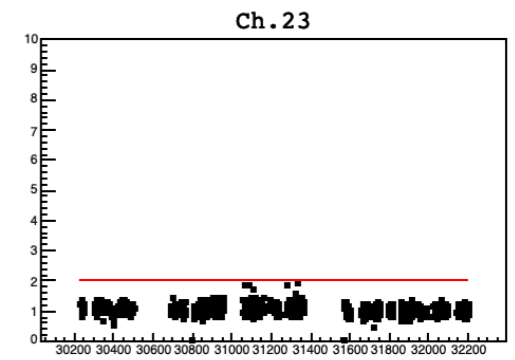
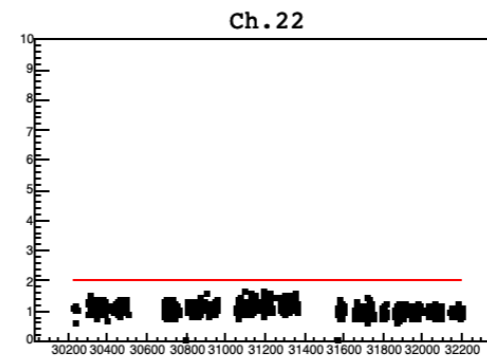
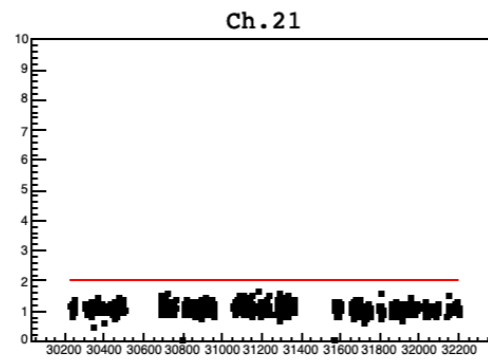
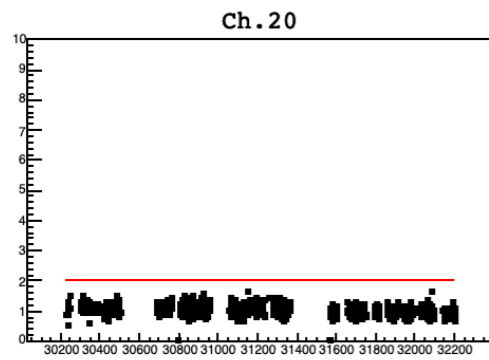
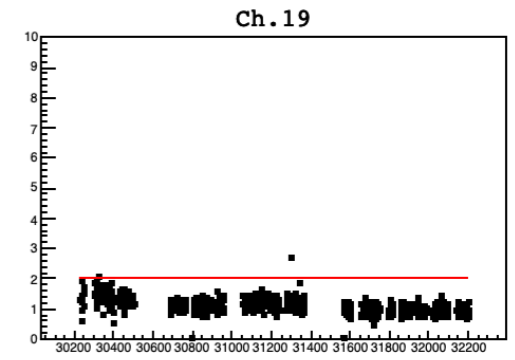
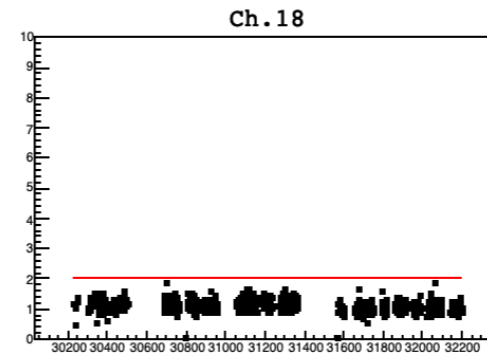
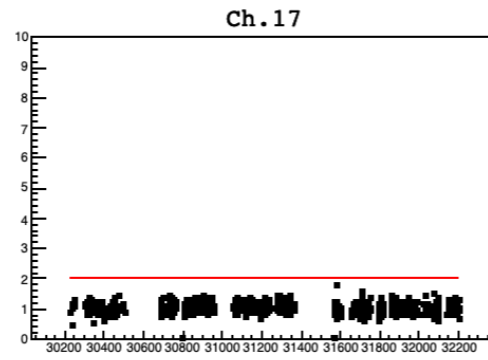
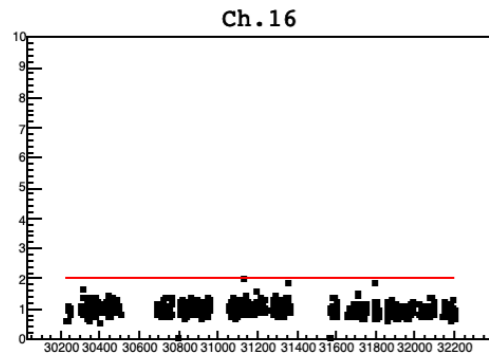


RunID

Chi Square for DCV2

Cut Range Fitting

Chi Square



Cosmic ray Simulation