DOPED GLASS SMALL RPC STUDY

Analysis Method

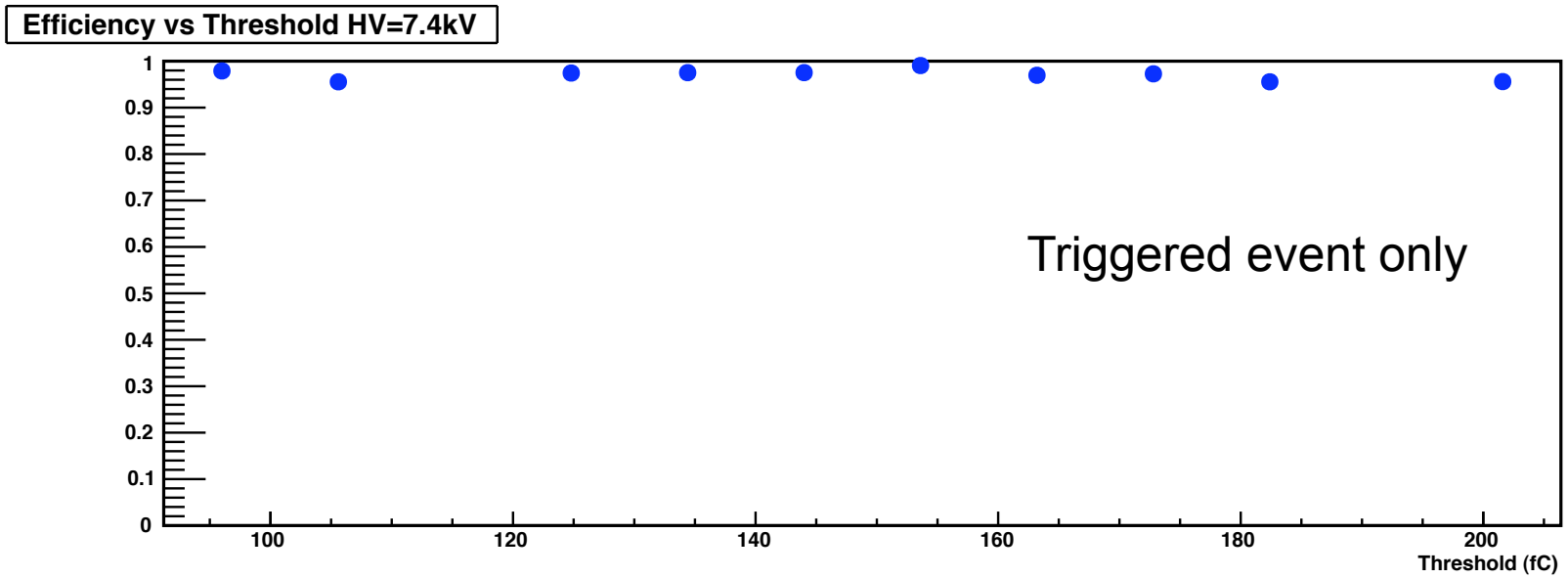
1. Clustering (for each hit pad find hits up to 2 cm away and add them to the cluster)
2. Alignment pass :
    1. fix one chamber
    2. offset the others by the difference of average x&y of clusters belonging to “Events”

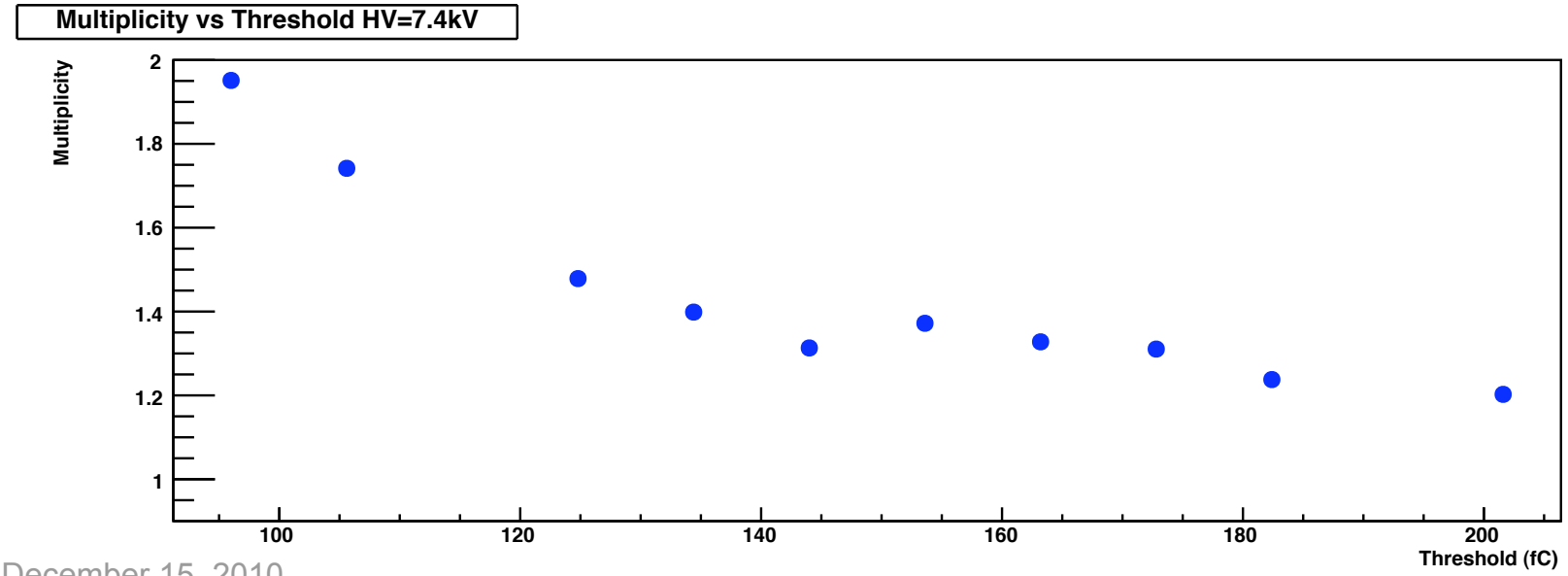
    (Event=synchronized set of frames with hits in at least 3 chambers)
3. Tracking (see next page)

Tracking & Efficiency

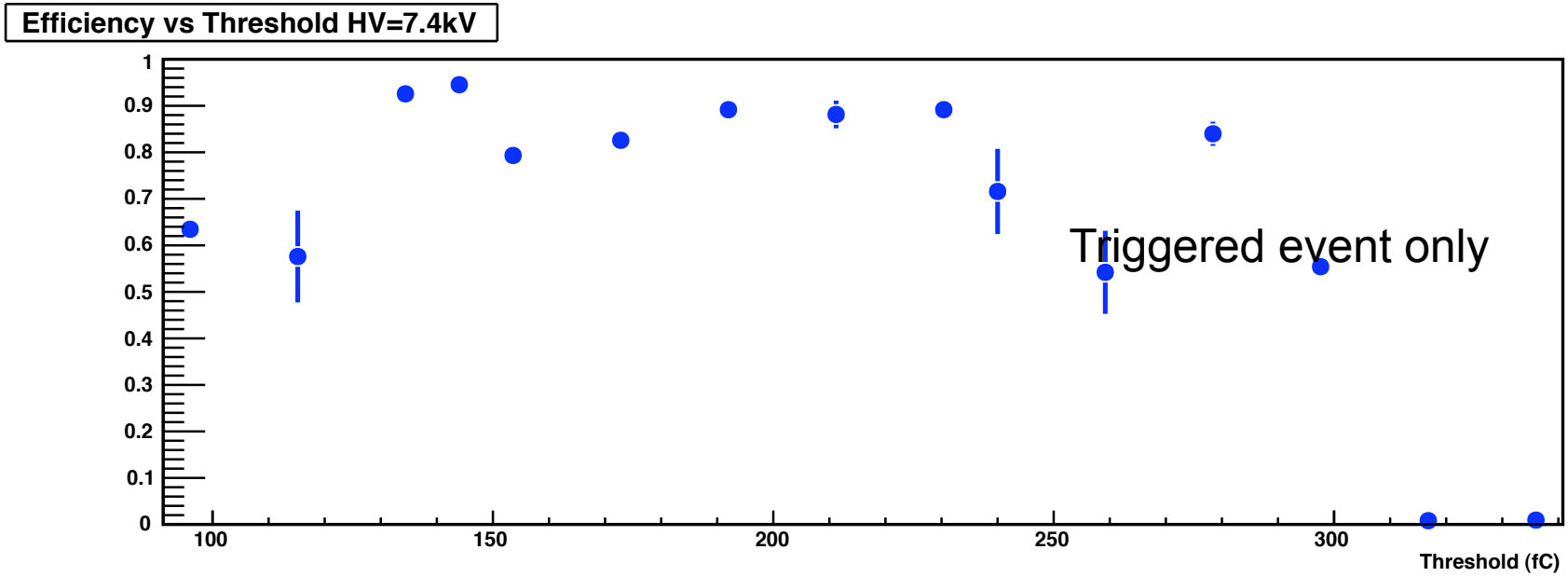
- For each pair of clusters in 2 chambers (but the one analyzed)
  1. Validate if a cluster<2 cm from prediction in a 3rd chamber
  2. Work out new track parameters with 3 chambers
  3. When 5 chambers: check last cross-check chamber and work out new parameters if possible
  4. Check if cluster is present < 2cm from prediction in studied chamber

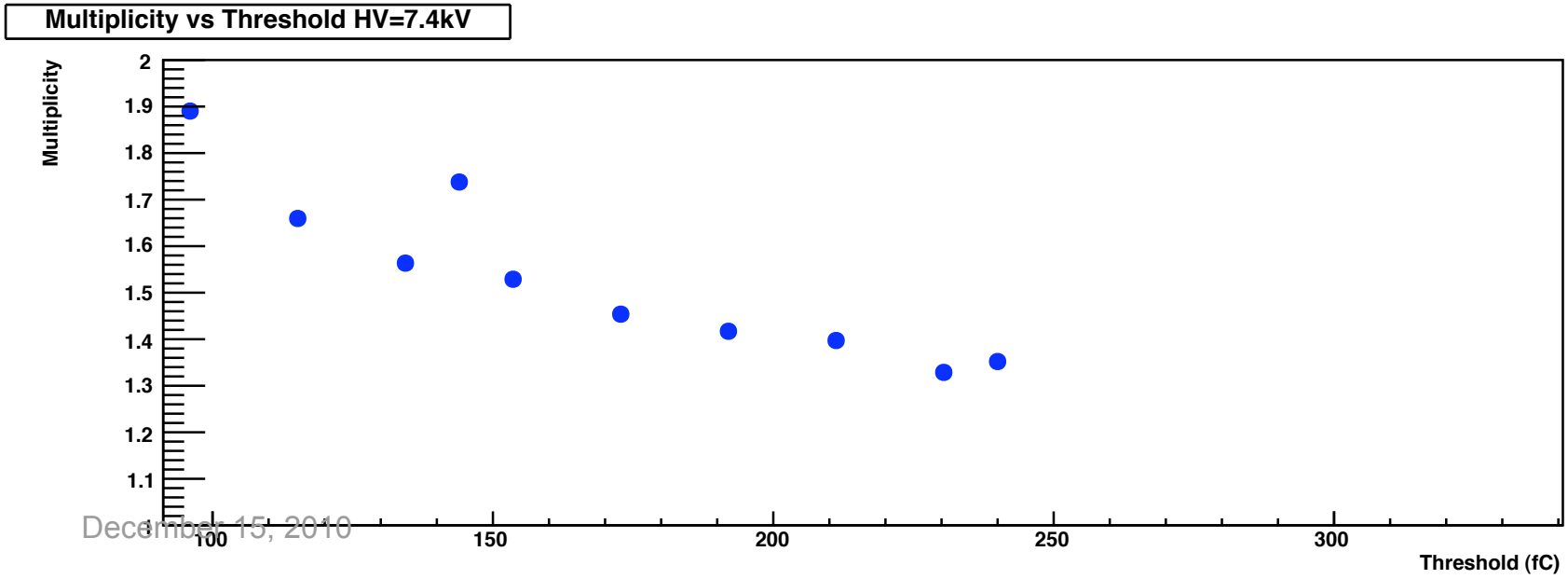
Thick Doped Glass PCB D



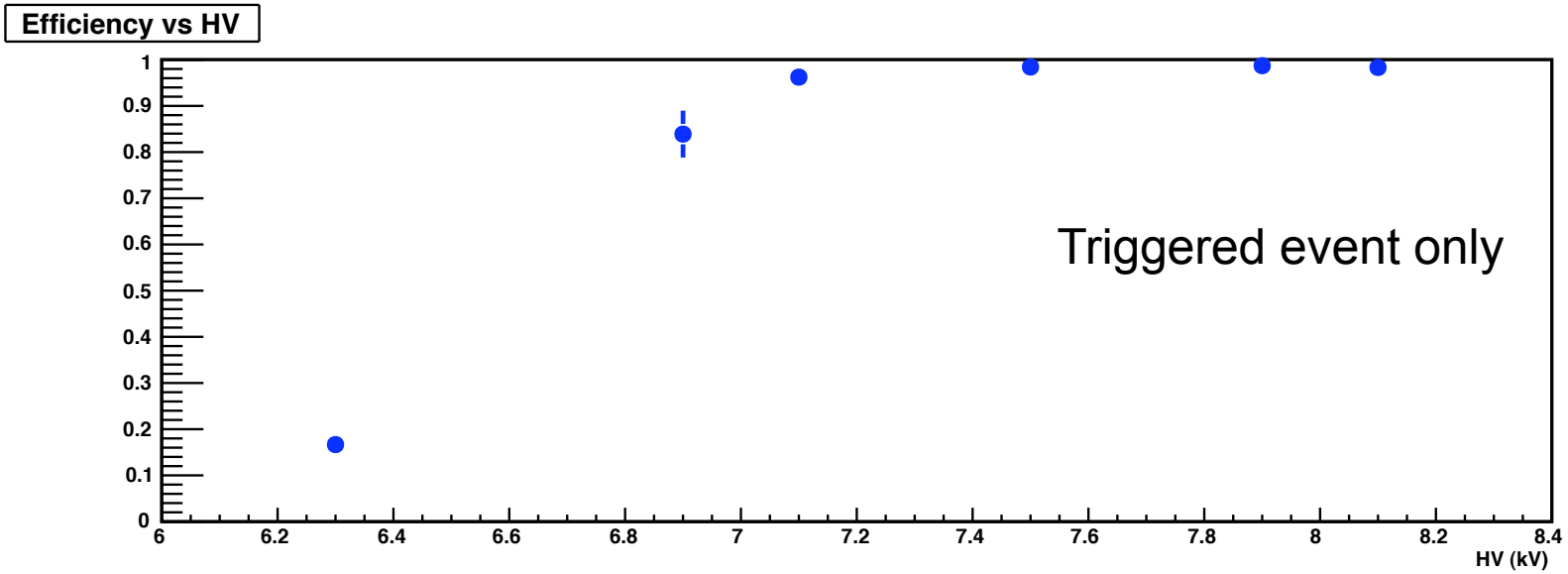


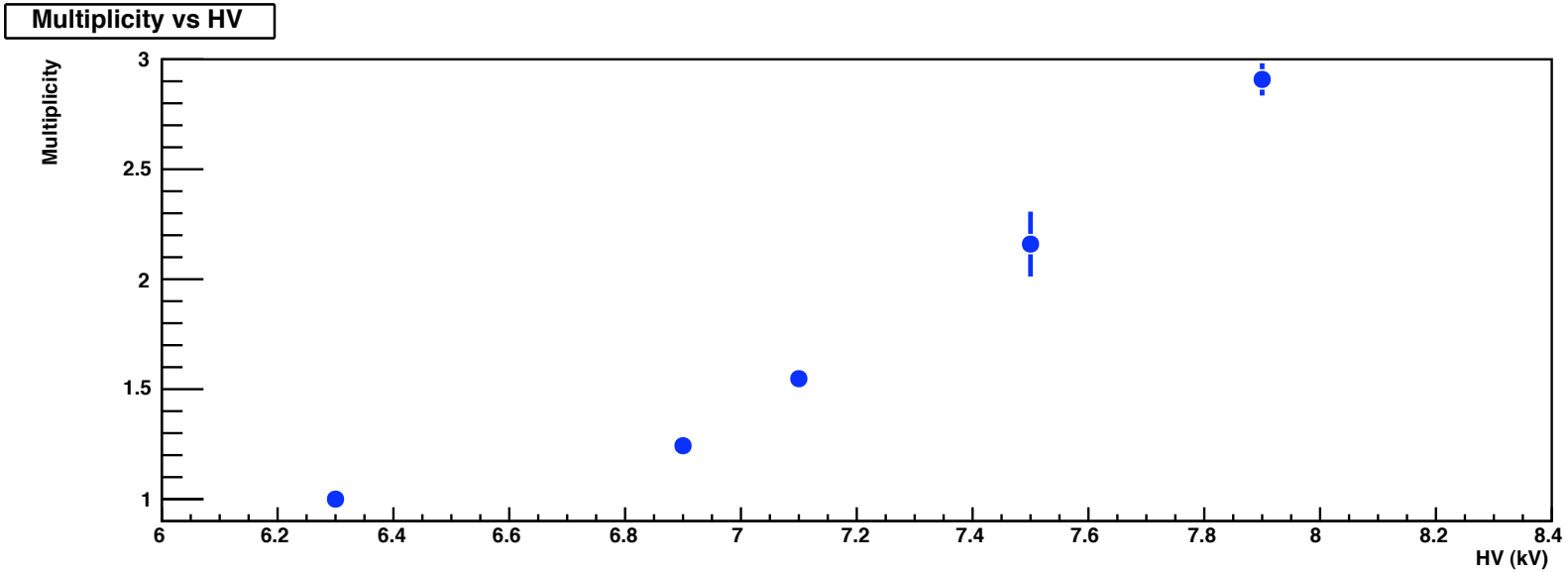
Graphite Float Glass PCB A





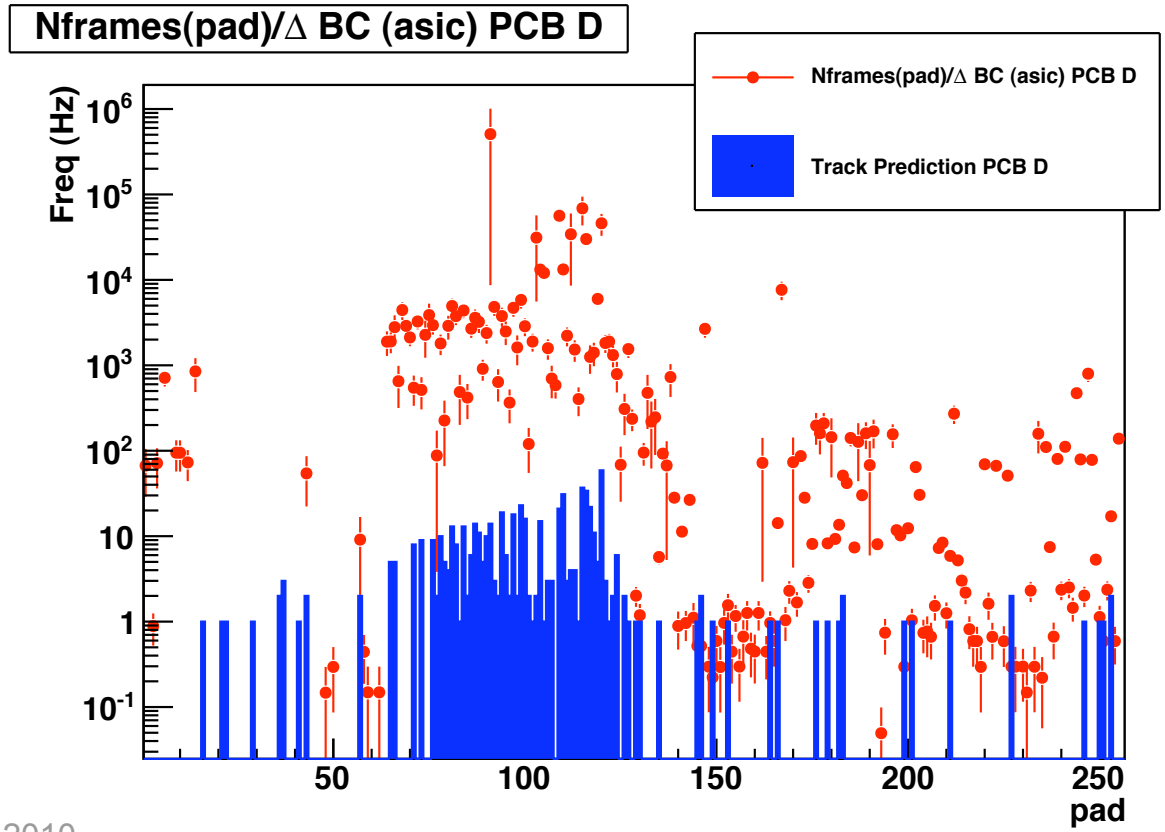
Thick Doped Glass Chamber



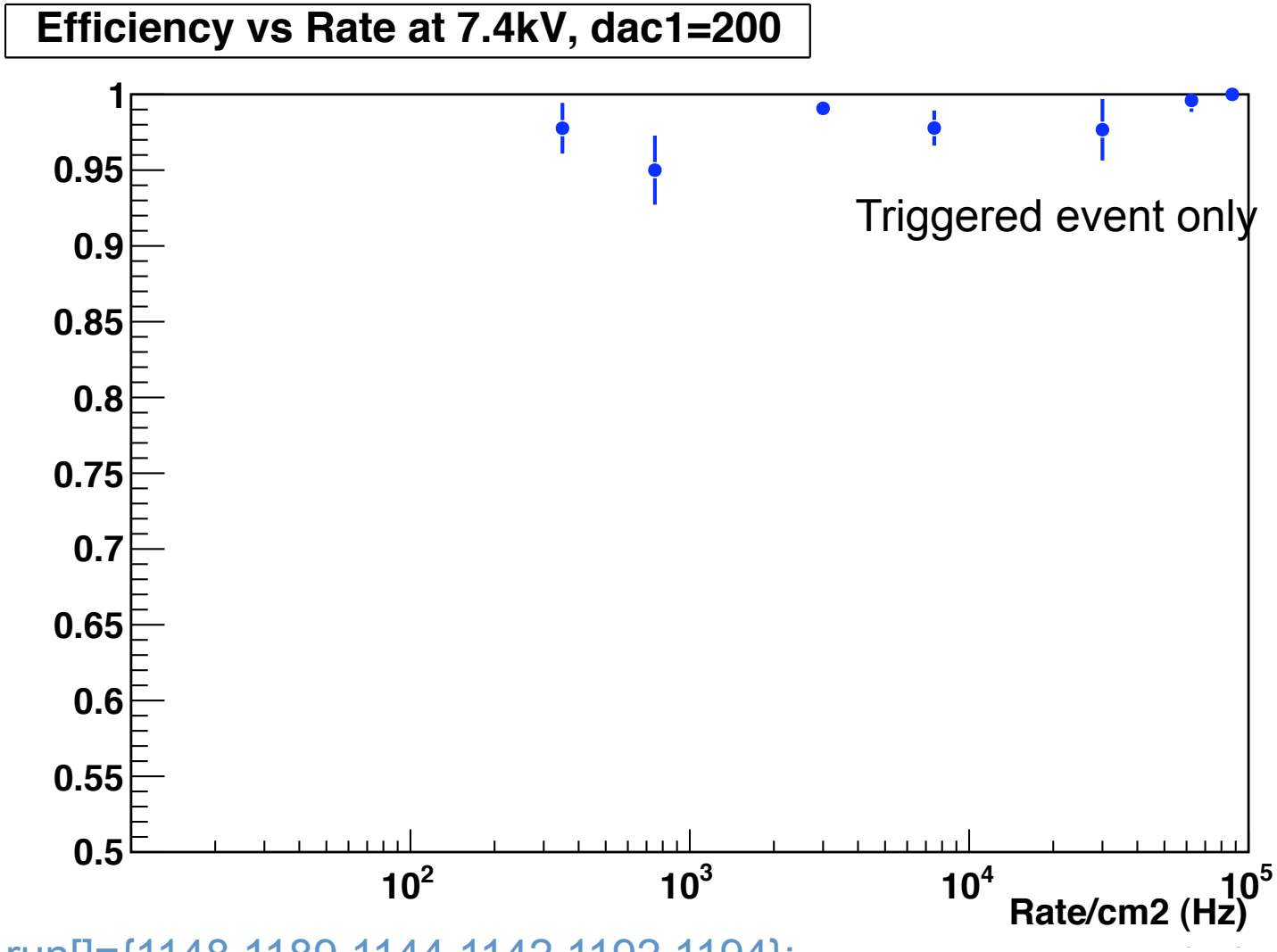


Rate calculation

- Rate/pad : rate from #frames/time in pads with predictions.

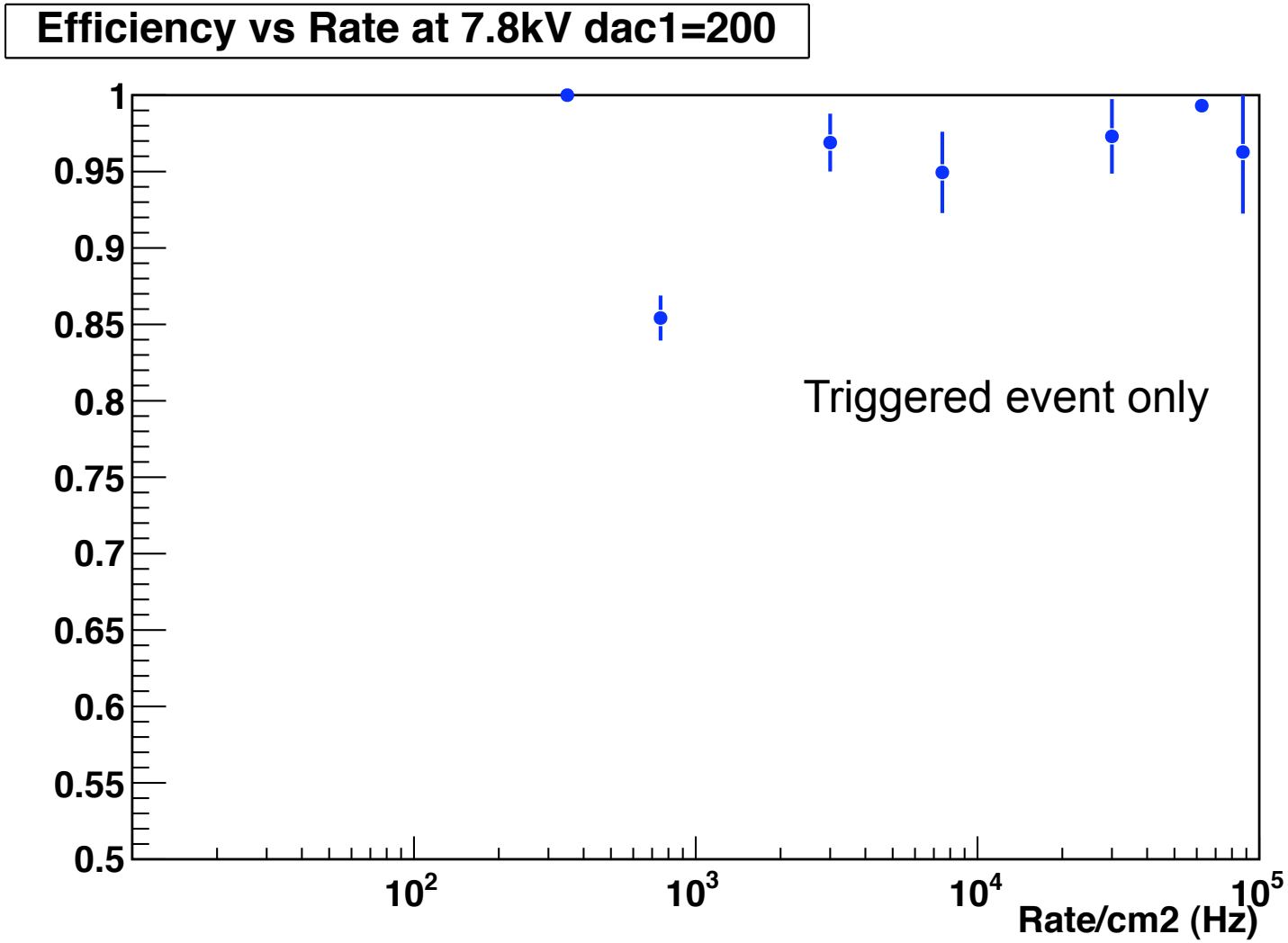


Thick Doped Glass Chamber



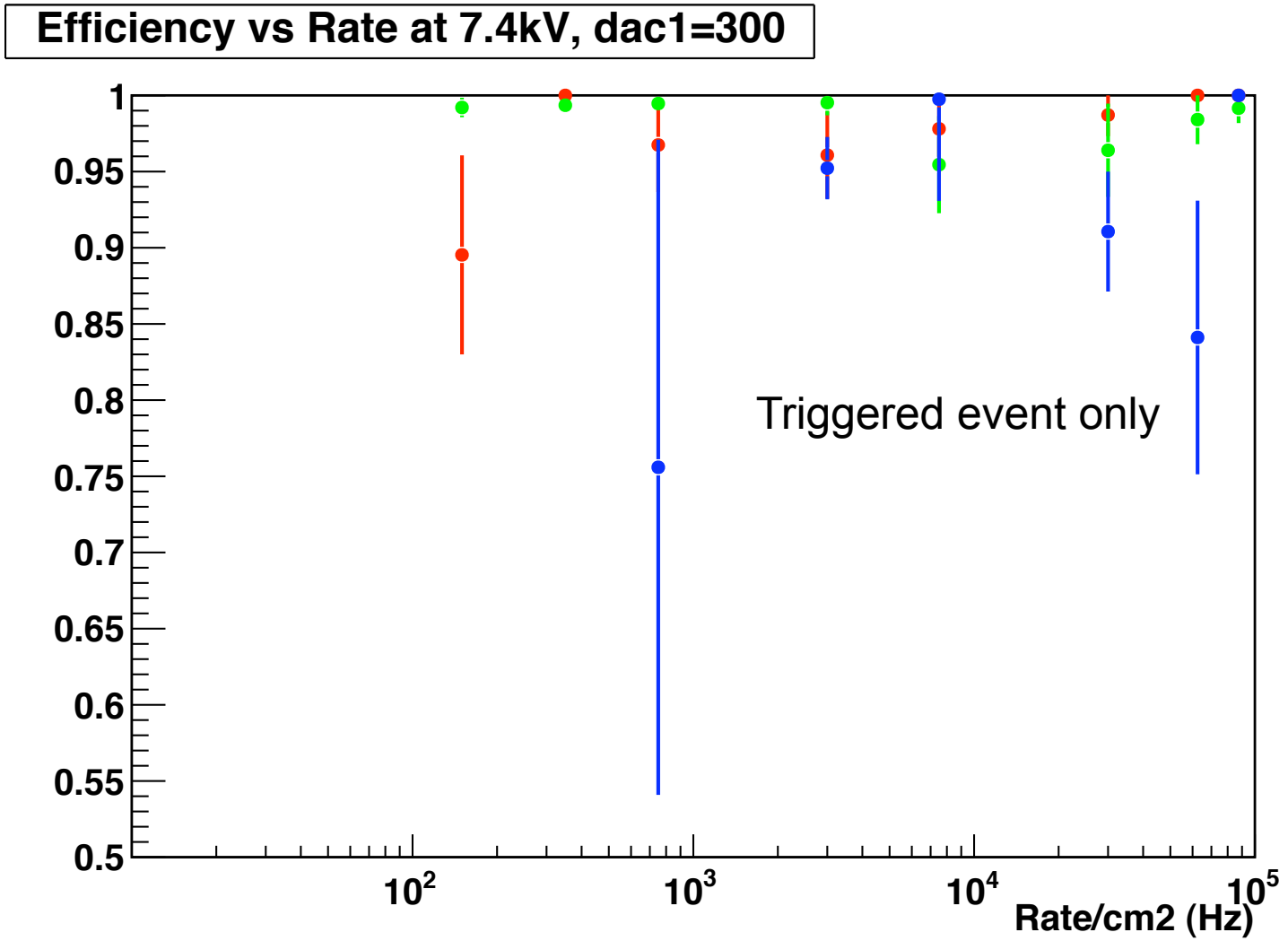
Int_t run[]={1148,1189,1144,1142,1192,1194};

Thick Doped Glass Chamber

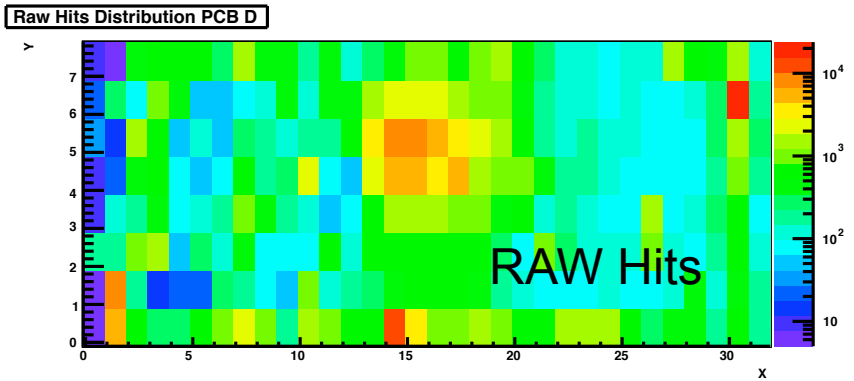


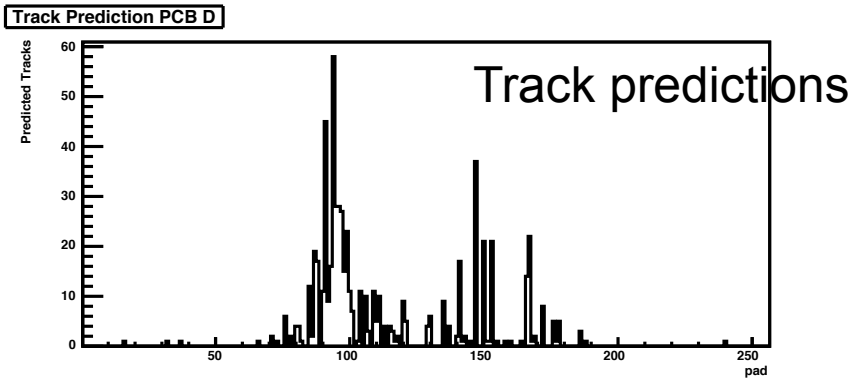
Int_t run[]={1145,1147,1196,1195,1191,1190};

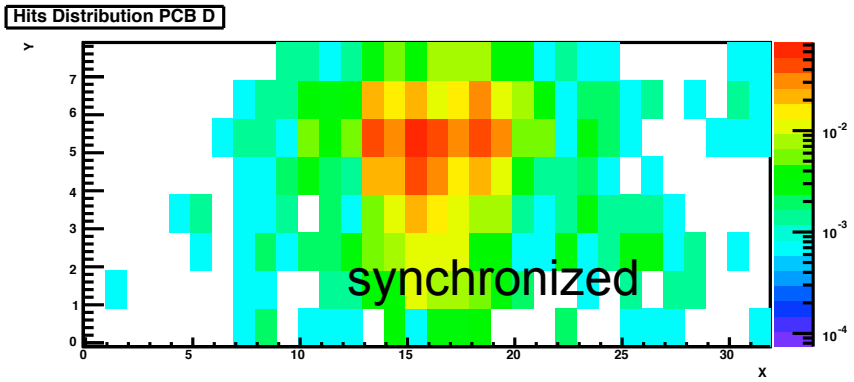
Float Glass - Graphite

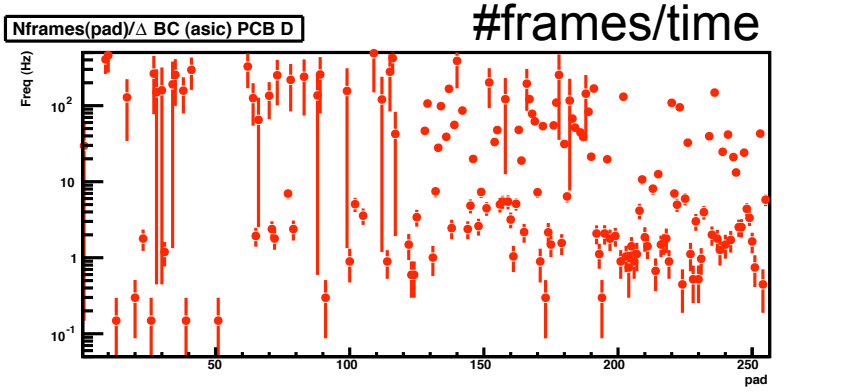


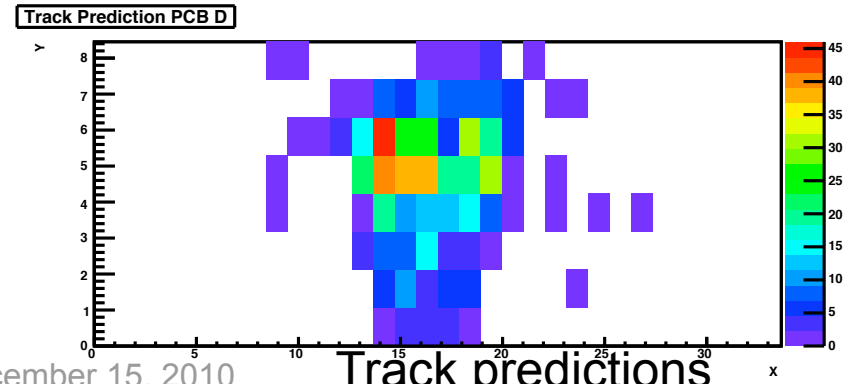
Noise Calculation

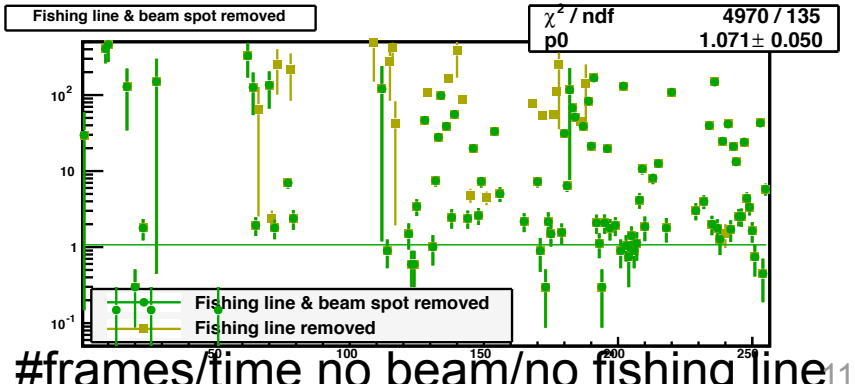




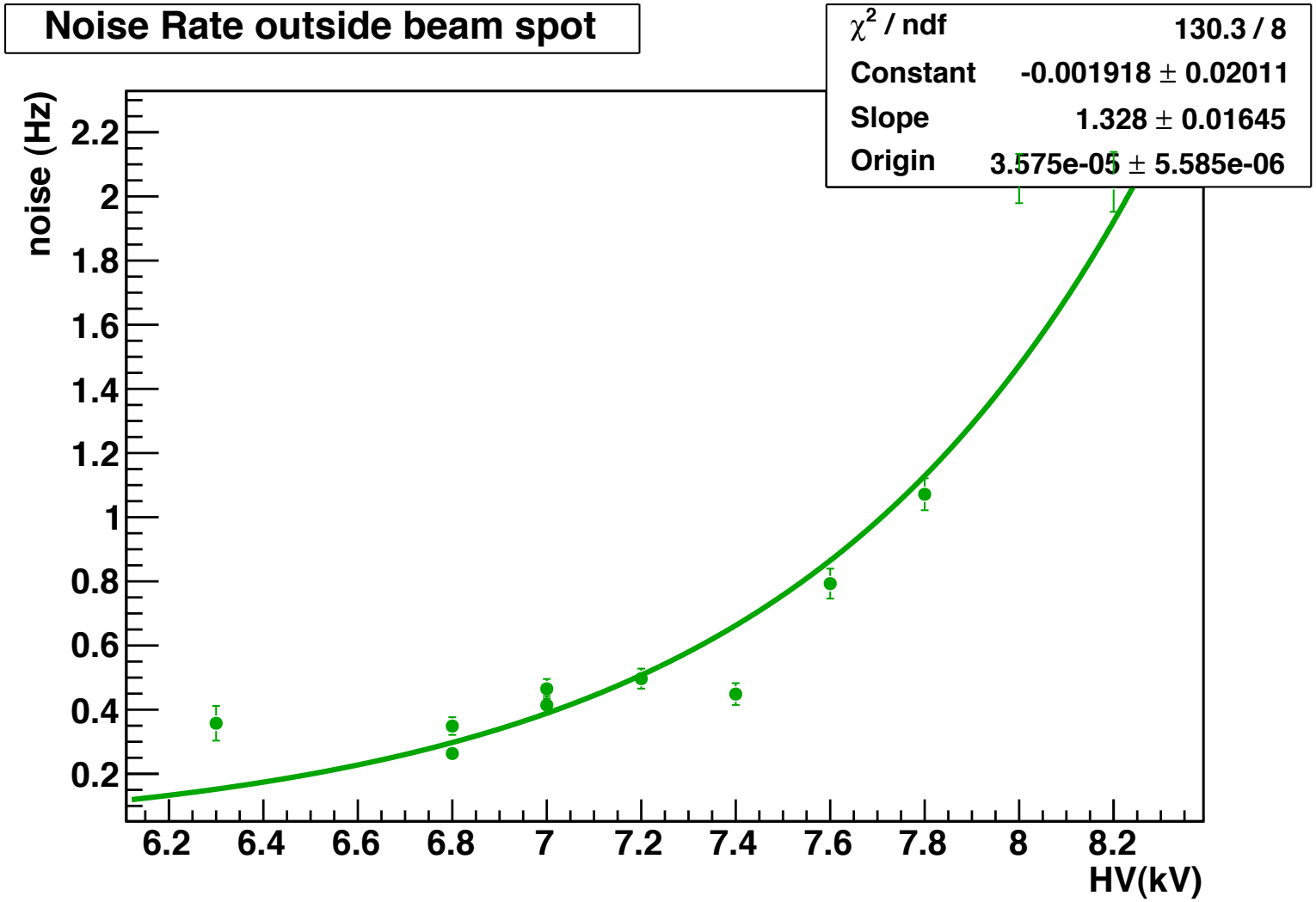








Noise Doped Glass



Int_t runs[]={1110,1112,1115,1117,1118,1119,1120,1121,1122,1123,1124};