

Saclay Day 5 data. These data were taken at IRAMIS on July 29, 2015. We focus on Bulk 128 with 500-700 V :

Amp was Cividec, BW was full scope BW, sampling 10 GSa/a.

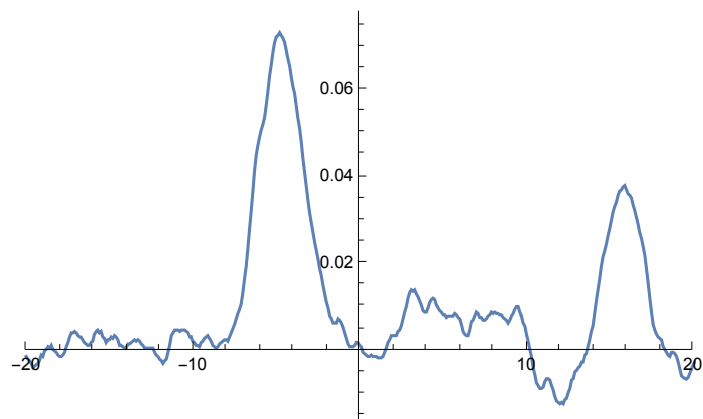
```
SetDirectory["~bastian/Desktop/day5/bulk128/500-700/500-700x20/c2"];
Namelist = FileNames[];
Namelist // Length;
nfiles = %
4079
```

```
nevents = nfiles - 1;
vv = ConstantArray[0, {nevents, 475}];
dimscope = ConstantArray[0, nevents];
```

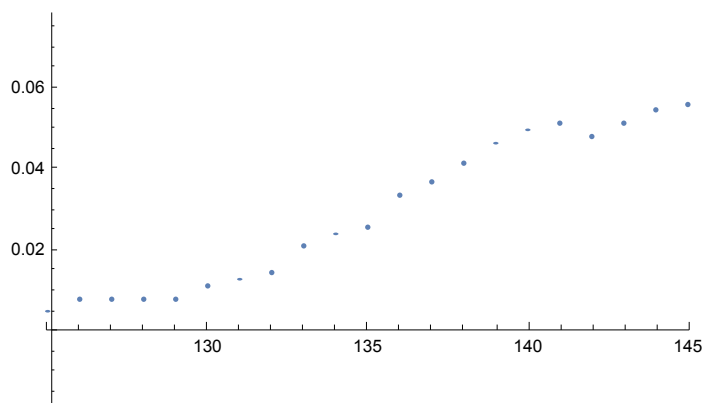
```
Do[
  scopedata = Import[Namelist[[j]], "tsv"];
  vv[[j]] = Table[scopedata[[i, 2]], {i, 6, 480}];
  , {j, 1, nevents, 1}];

tt = Table[scopedata[[i, 1]], {i, 6, 480}] * 10^9;

i = 600;
ListPlot[Transpose[{tt, WienerFilter[vv[[i]], 2, .03]}],
  PlotRange -> {{-20, 20}, Full}, Joined -> True]
```



```
ListPlot[vv[[600]], PlotRange -> {{125, 145}, Full}]
```



```

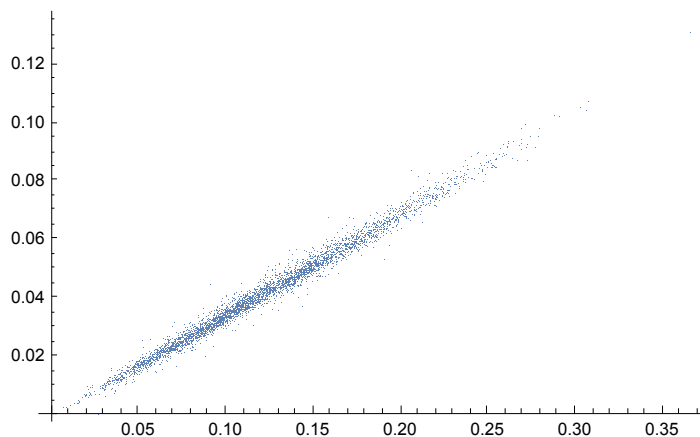
inbase2 = Table[Mean[Take[vv[[i]], 100]], {i, nevents}];
innoise2 =
  Table[RootMeanSquare[Take[vv[[i]], 100] - inbase2[[i]]], {i, nevents}];

v = Table[(vv[[i]] - inbase2[[i]]), {i, nevents}];

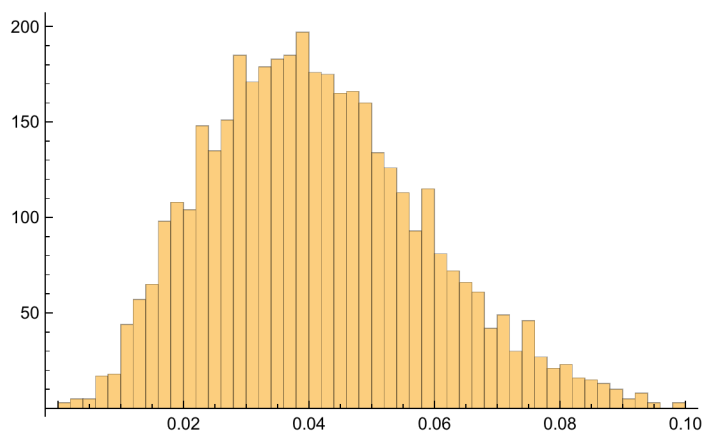
peak = Table[Max[Take[v[[i]], {100, 200}]], {i, nevents}];
area = Table[Total[Take[v[[i]], {100, 200}]]/100, {i, nevents}];

ListPlot[Transpose[{peak, area}], PlotRange -> Full]

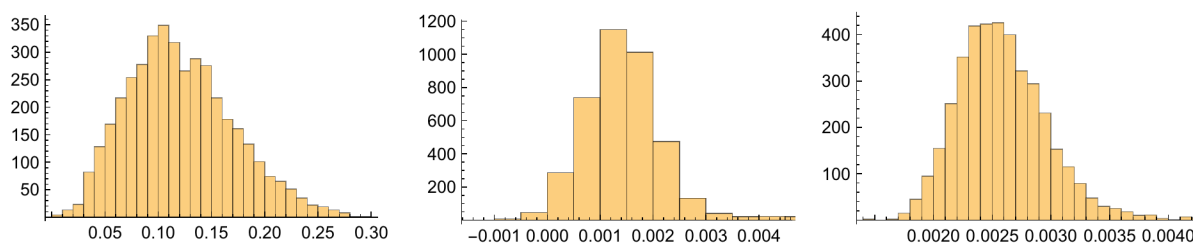
```



```
Histogram[area, {0, .1, .002}]
```



```
GraphicsRow[{Histogram[peak, {0, .3, .01}],
  Histogram[inbase2], Histogram[innoise2]}, ImageSize -> Full]
```

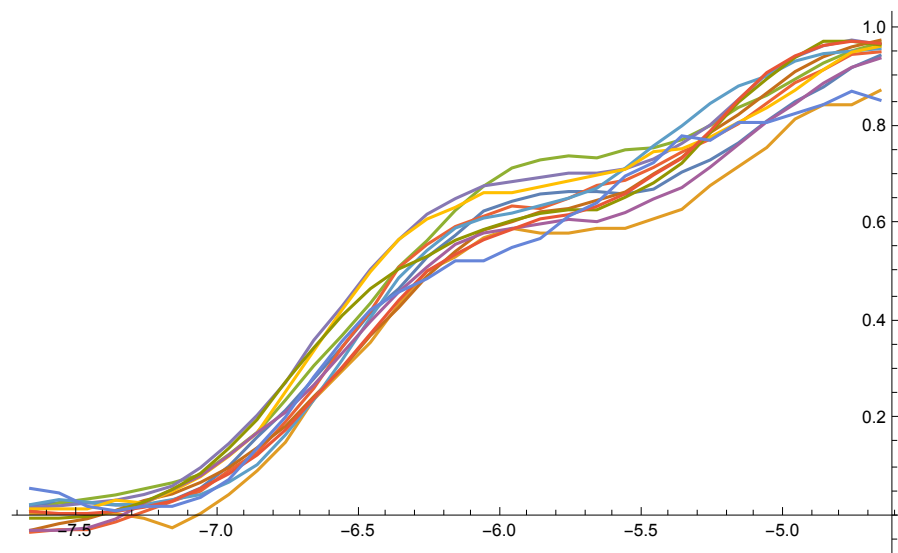


```

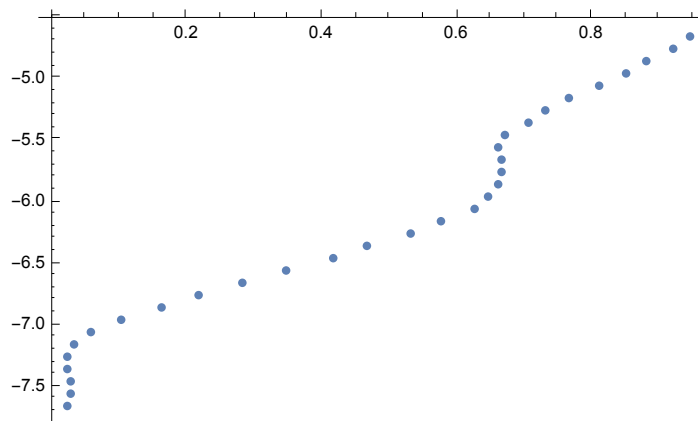
mp = Mean[peak]
rmsp = RootMeanSquare[peak - mp]
rmsp / mp
0.121233
0.0499868
0.412322

v0 =
  Table[Take[WienerFilter[v[[i]], 2, .03], {125, 155}]/peak[[i]], {i, nevents}];
ttt = Take[tt, {125, 155}];
v01 = Table[v0[[i]], {i, nevents}];
ListPlot[{Transpose[{ttt, v01[[1]]}],
  Transpose[{ttt, v01[[2]]}], Transpose[{ttt, v01[[3]]}],
  Transpose[{ttt, v01[[4]]}], Transpose[{ttt, v01[[5]]}],
  Transpose[{ttt, v01[[6]]}], Transpose[{ttt, v01[[7]]}],
  Transpose[{ttt, v01[[8]]}], Transpose[{ttt, v01[[9]]}],
  Transpose[{ttt, v01[[10]]}], Transpose[{ttt, v01[[11]]}],
  Transpose[{ttt, v01[[12]]}]}, PlotRange -> Full, Joined -> True]

```



```
ListPlot[Transpose[{v01[[1]], ttt}]]
```



```

thresh = ConstantArray[0, nevents];
Do[
  f = Interpolation[Transpose[{(v01[[i]] * (1 + RandomReal[{- .005, .005}])) , ttt}]];
  thresh[[i]] = f[0.35];
  , {i, nevents}];

```

```

Histogram[thresh, PlotRange -> Full]

```

