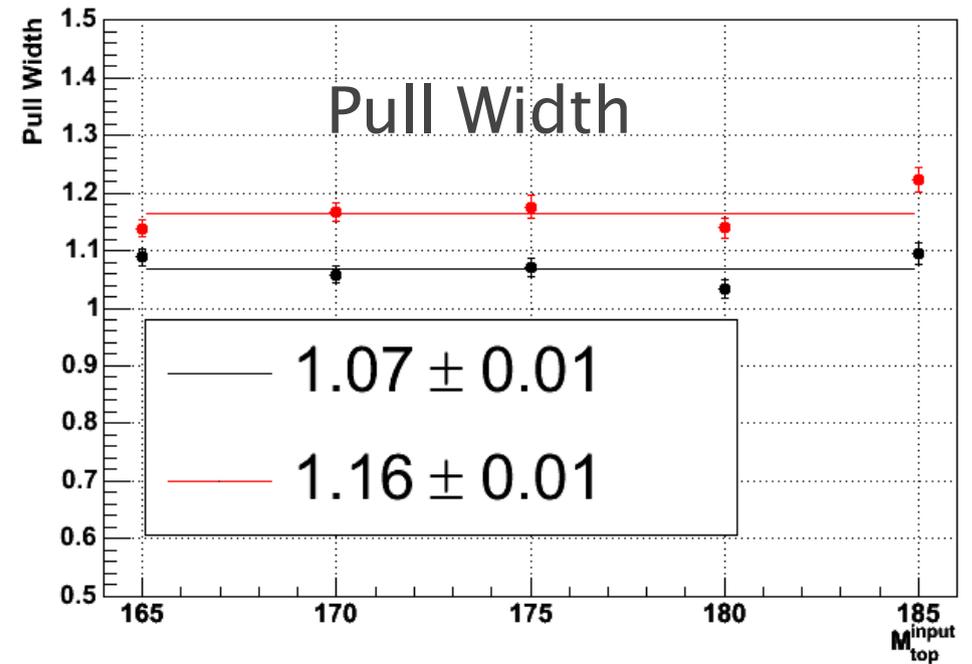
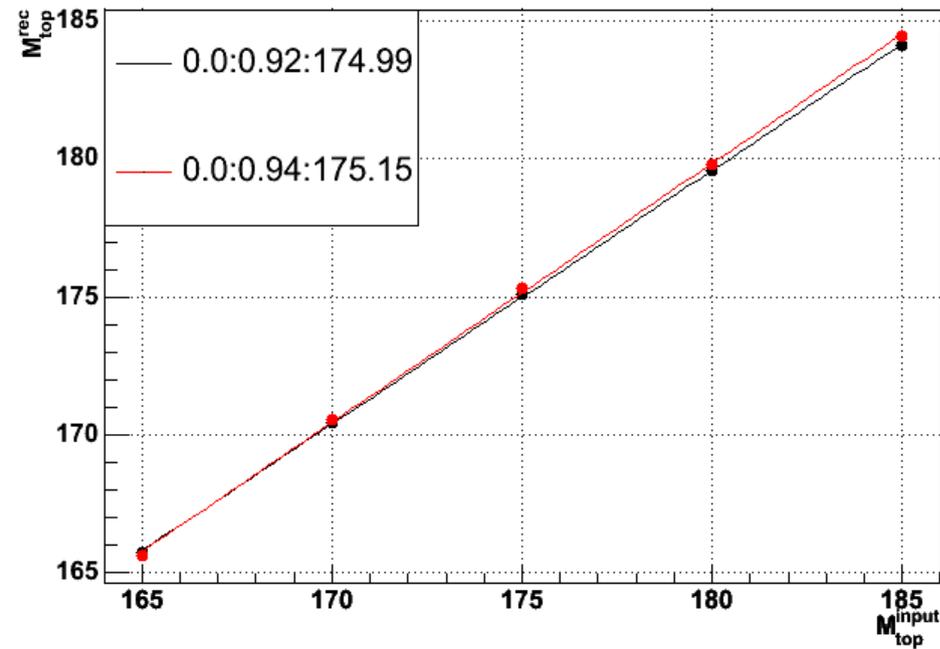


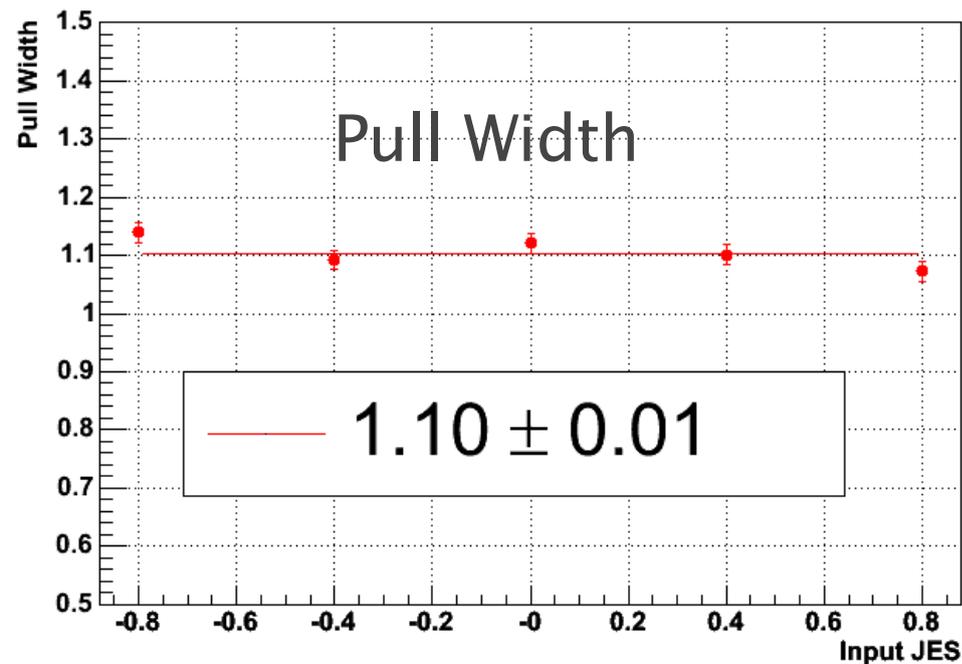
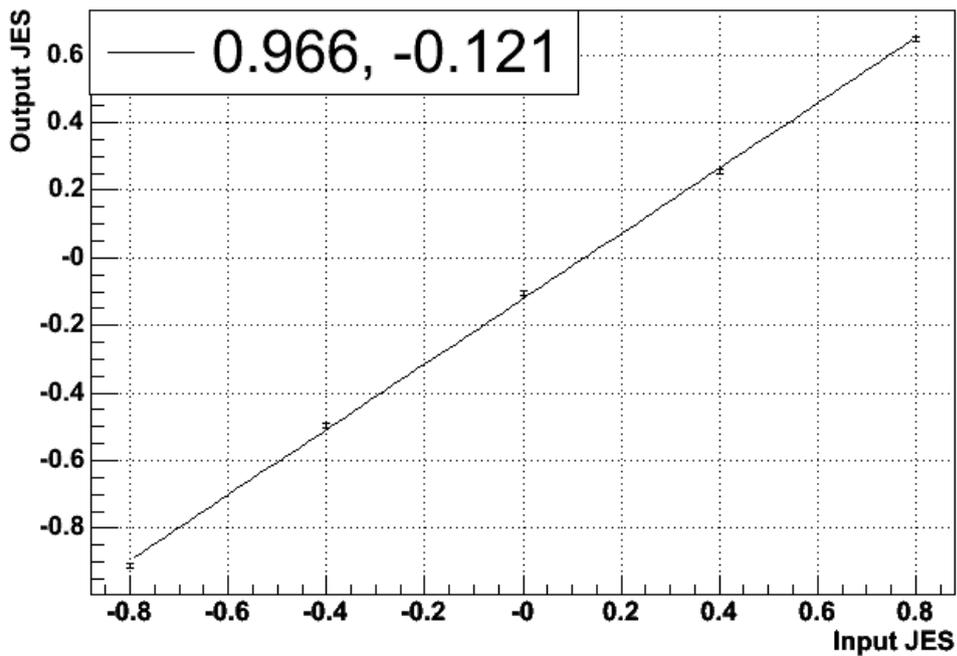
Pseudo Experiments(Mtop)

1D vs 2D
Right combination
2500 PE's/point

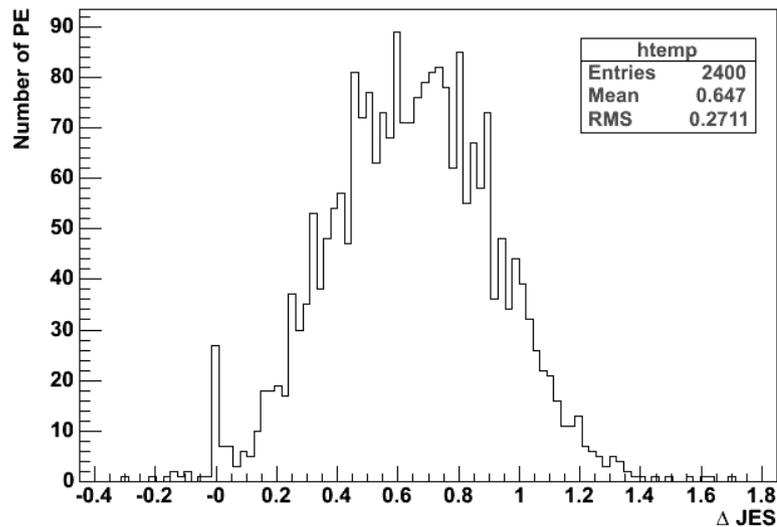
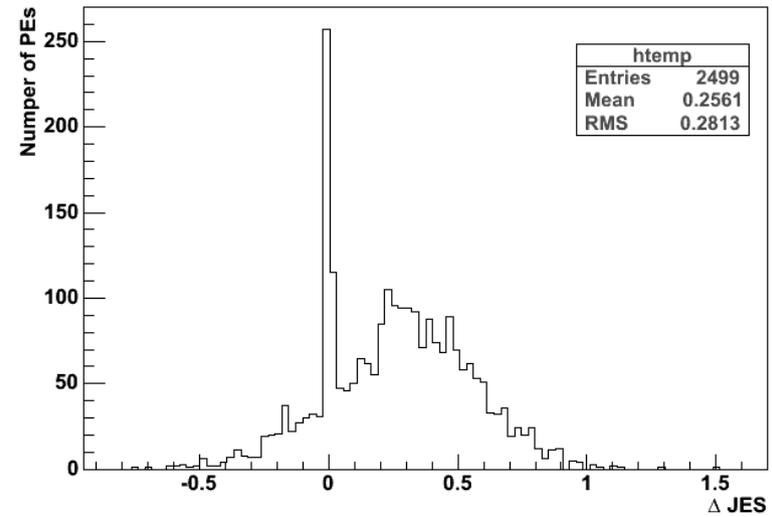
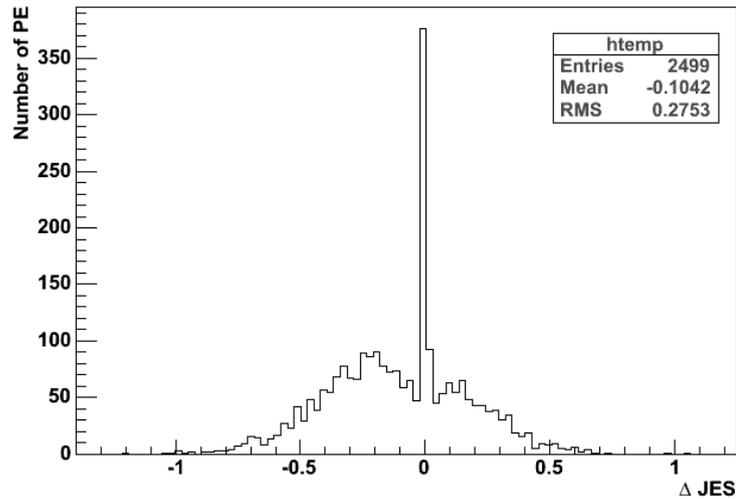


Pseudo Experiments(JES)

Right combination
2500 PE's/point

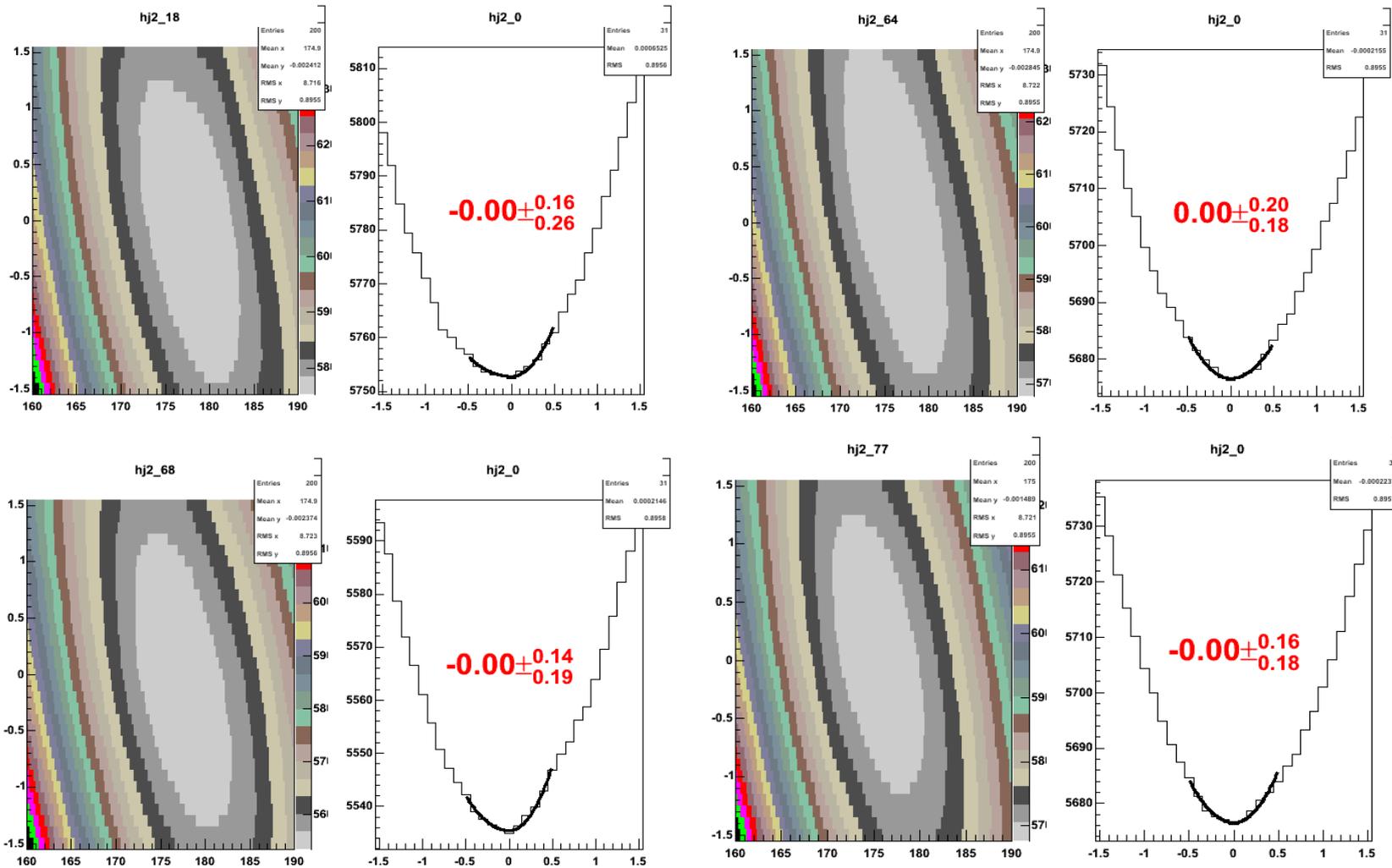


Pseudo Experiments(JES)



Bug?

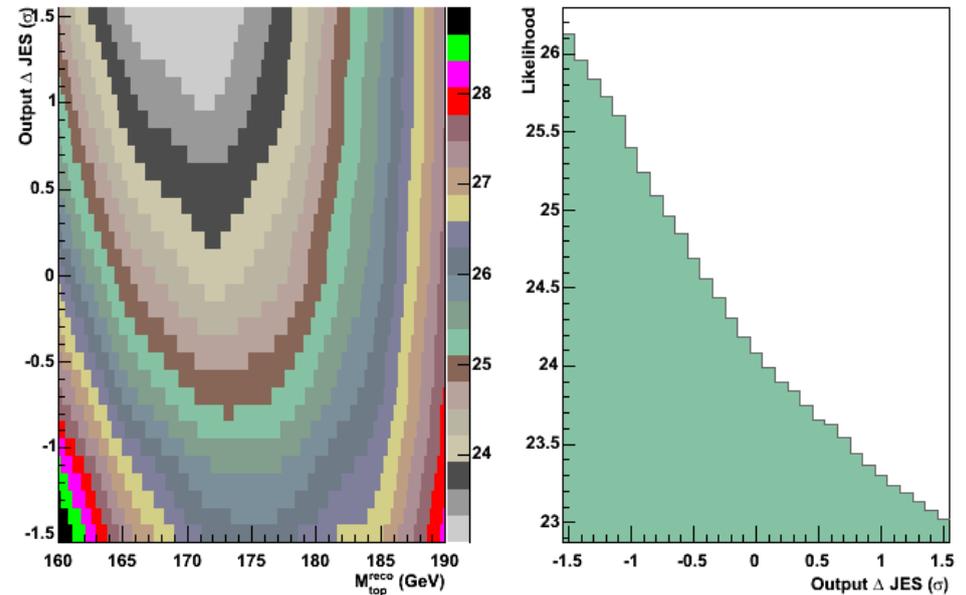
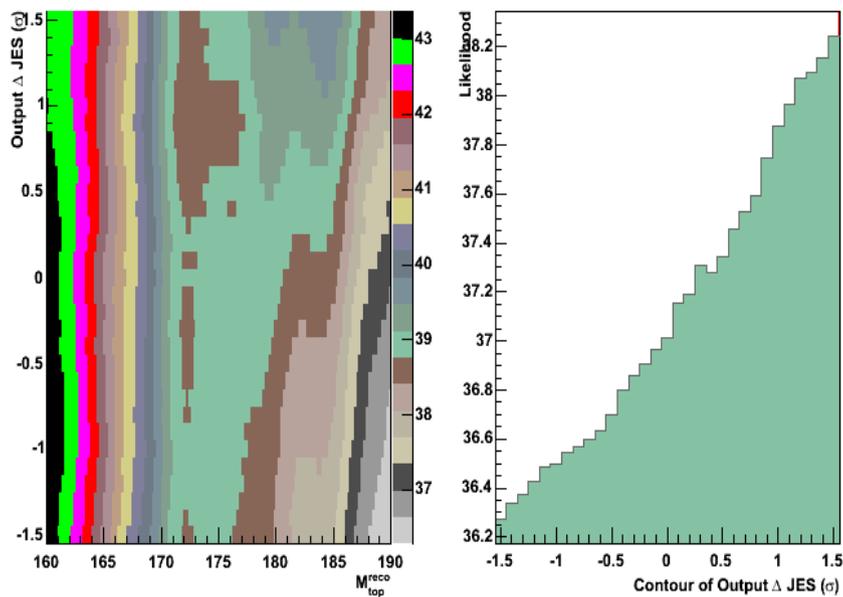
JES likelihood/PE



Investigating now...

Event likelihood

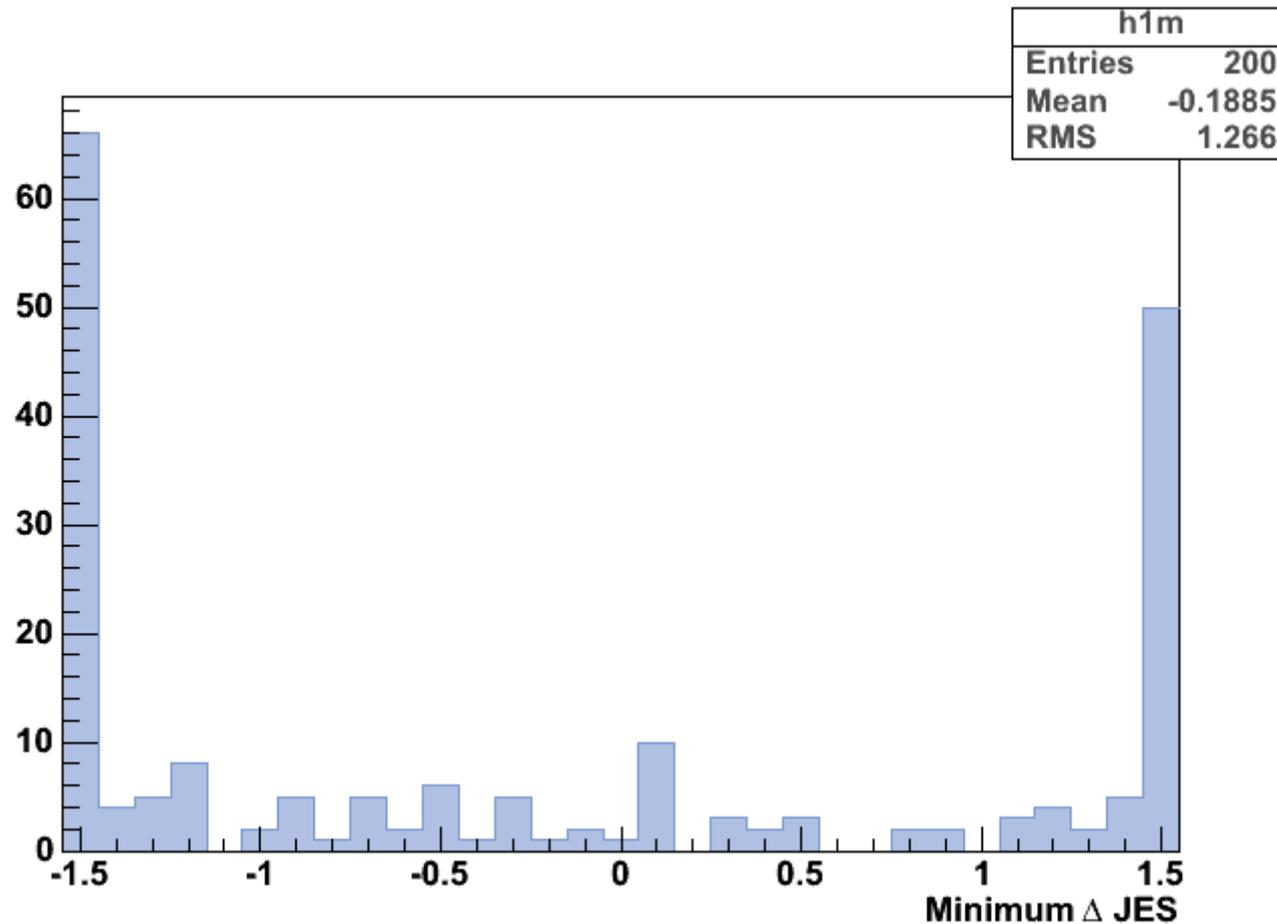
Two examples of event likelihood



minimum point of these examples are out of range
(-1.5~1.5)

Minimum JES

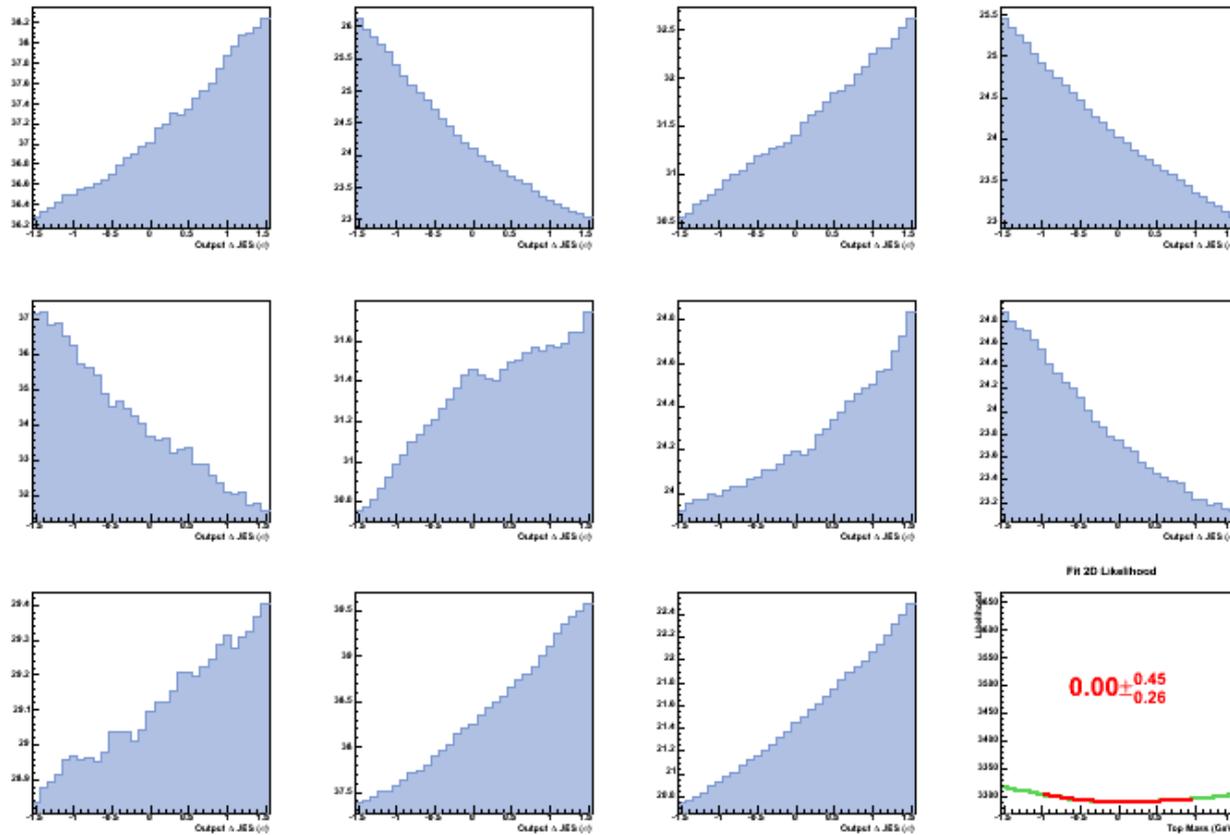
Minimum points for each event likelihood



There are many minimum points on boundary of range.

Event/Joint likelihood

Joint likelihoods whose minimum point is on boundary.



Scan range on JES should be extended.

Plans

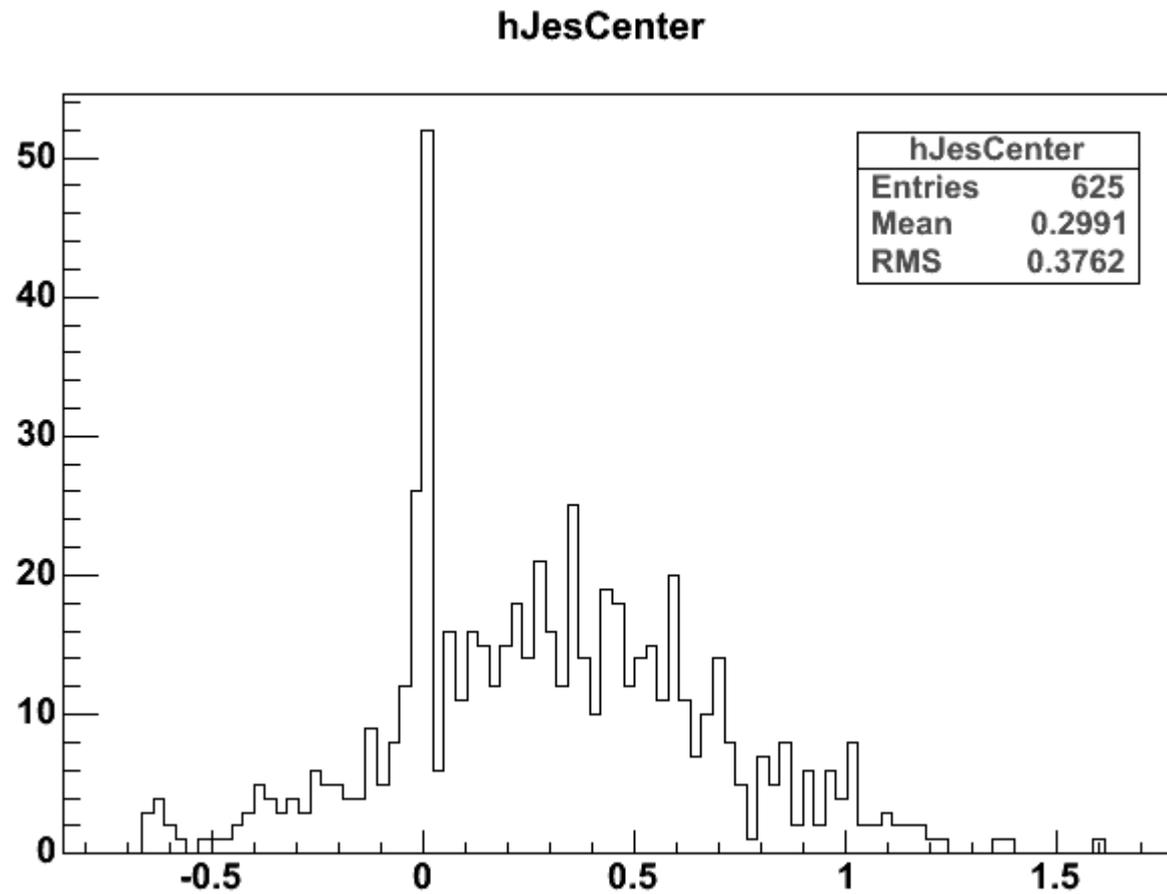
- **JES scan range**
 - **Make additional TF for extended range(Done)**
 - **Processing time will increase(~3000jobs on CAF)**
- **Shape study**
 - **Event selection for all backgrounds is almost done.**
- **Apply backgrounds**
- **Estimate systematic error**

- **Full status report on early June.**

- **1.2/fb or 1.7/fb**
 - **ntuple for 1.7/fb is ready**
 - **Background estimation for 1.7/fb is not done yet.**

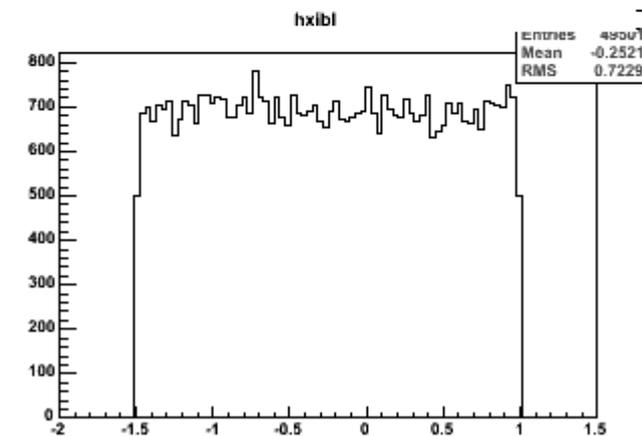
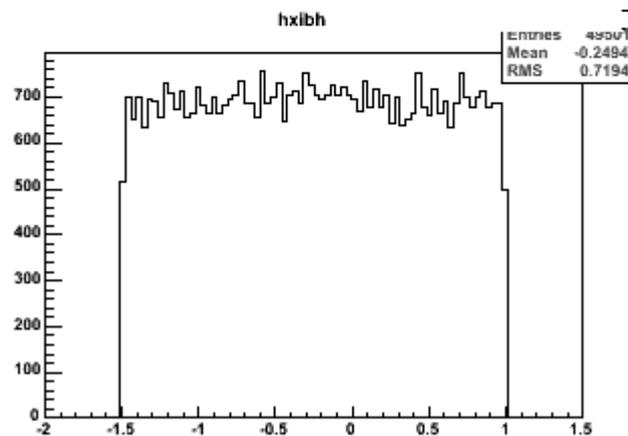
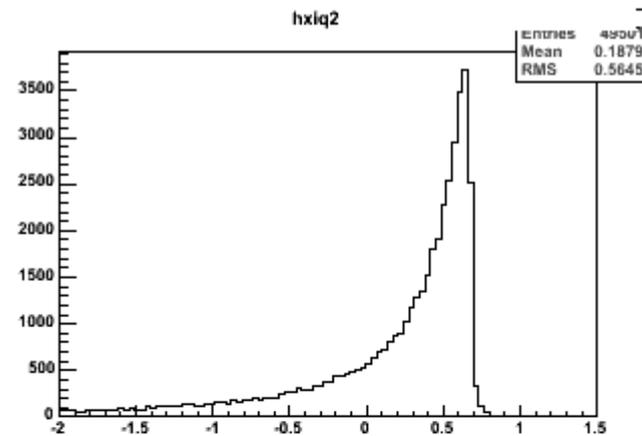
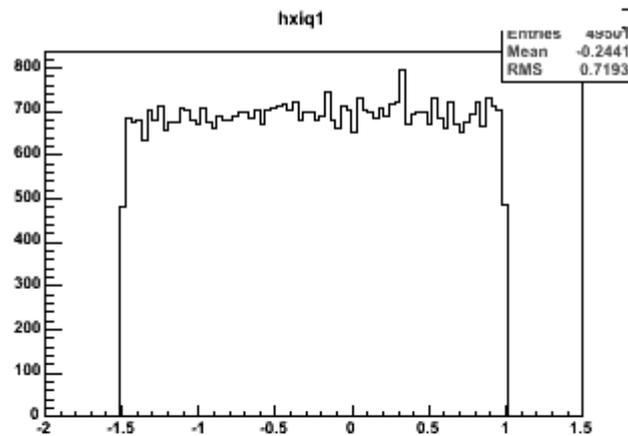
Bug for JES calibration

After extended scan range for delta JES



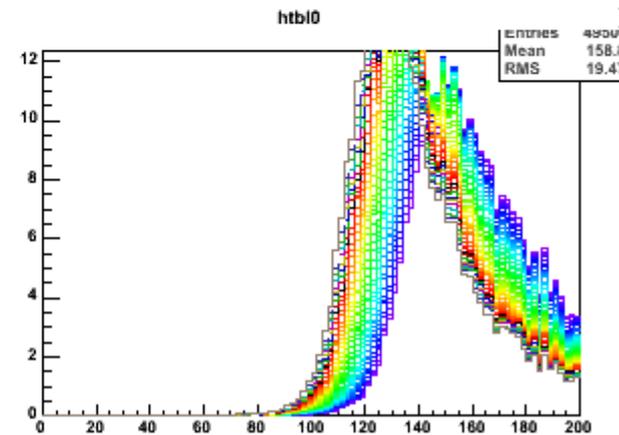
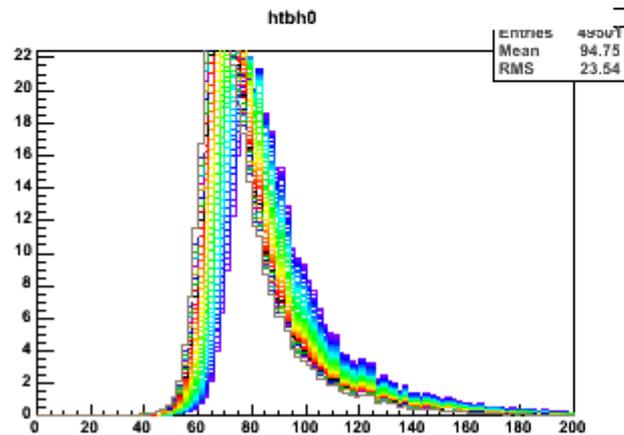
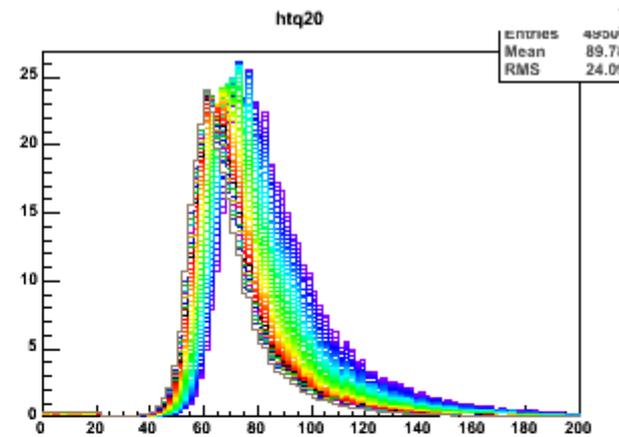
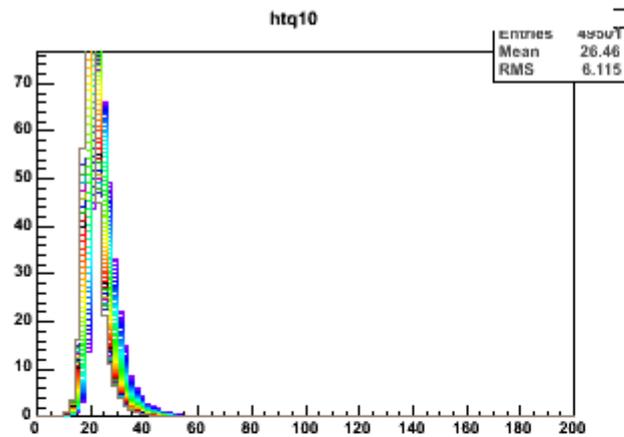
Checking weight from TF

Distributions for generated xi randomly



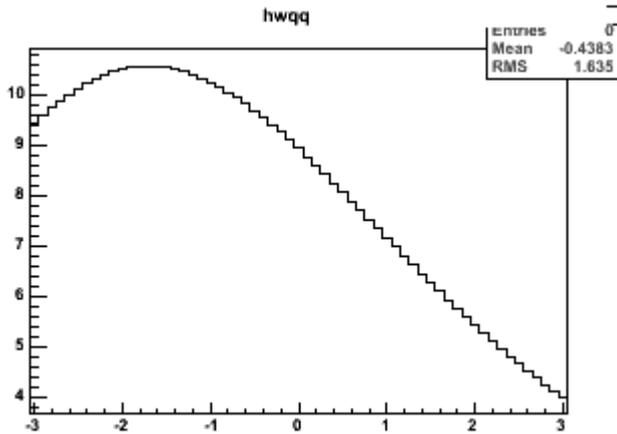
Checking weight from TF

Reconstructed jets with TF for one event

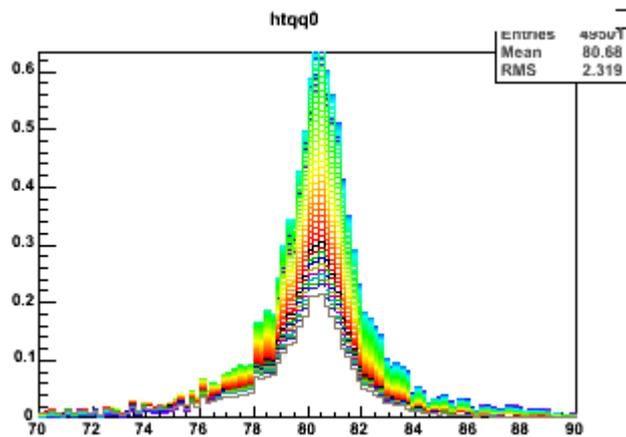
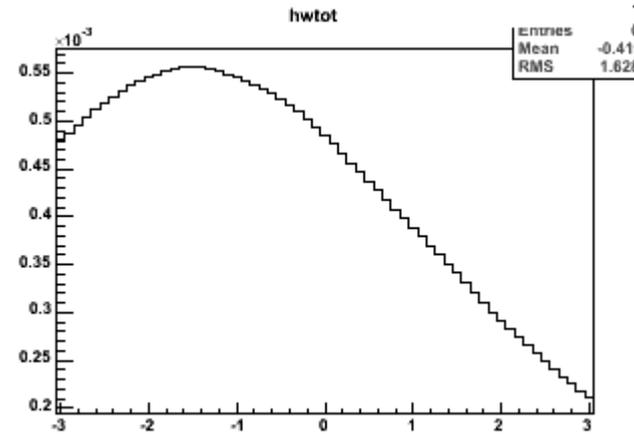


Checking weight from TF

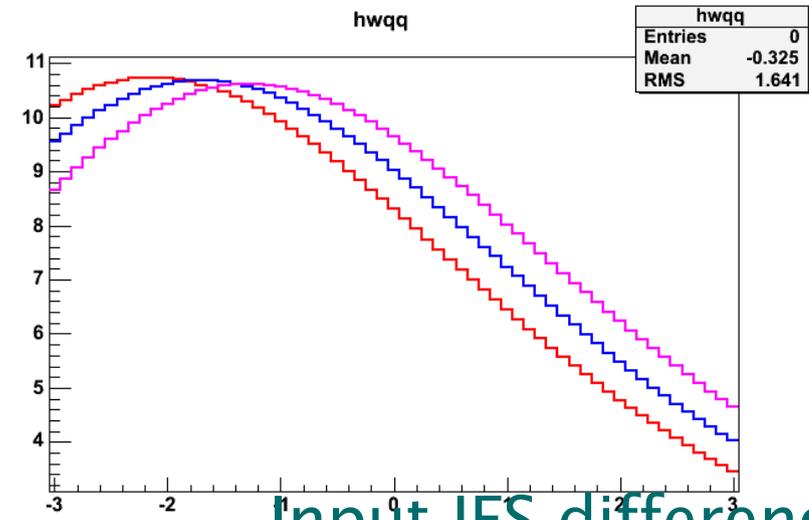
Weight for $W \rightarrow 2j$



Weight for $4j$

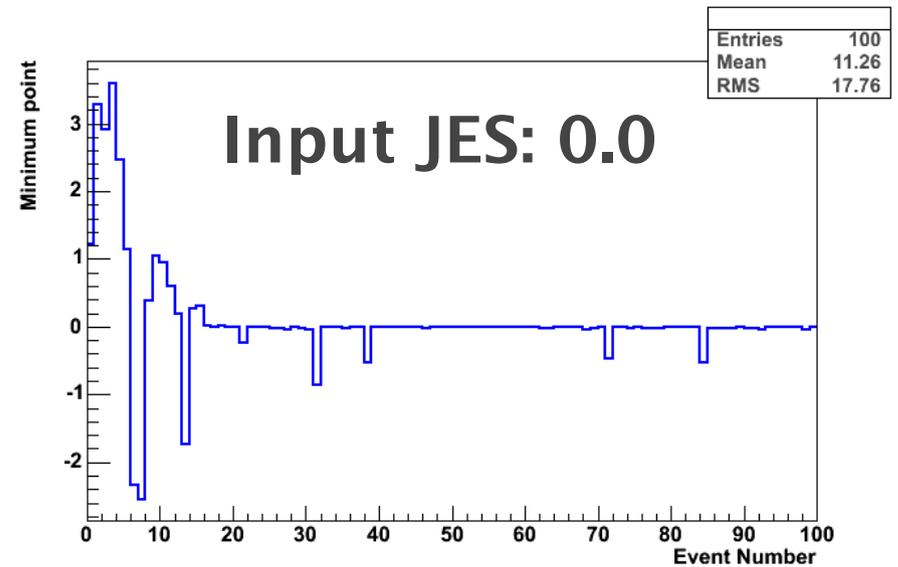
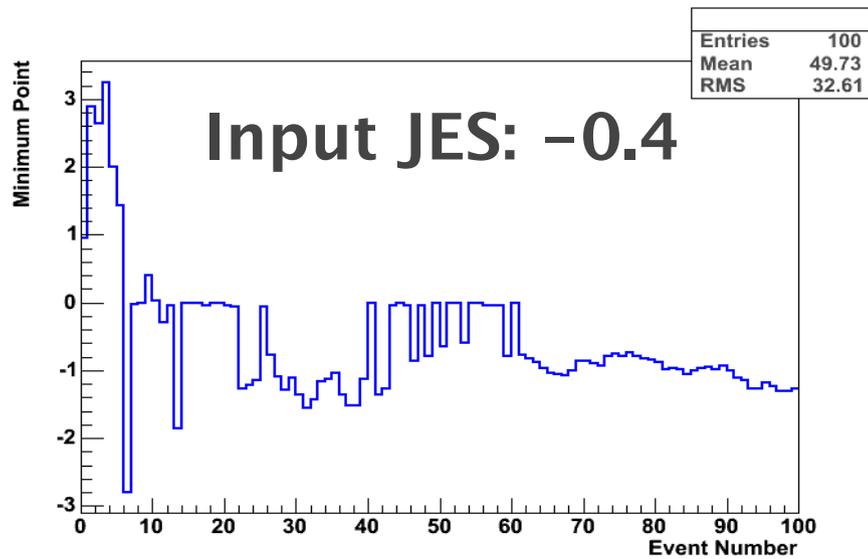


Reconstructed S_w in a event

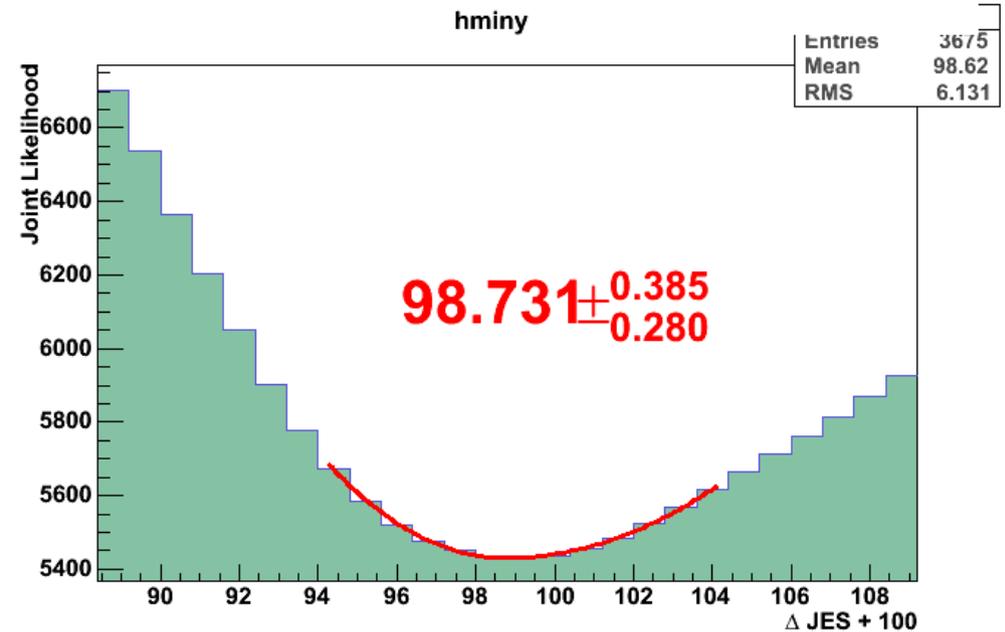
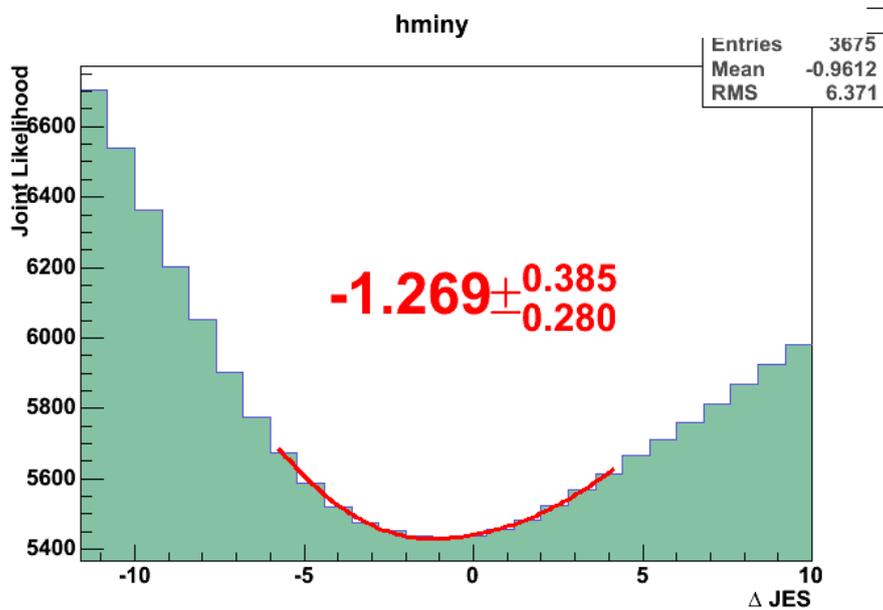


Input JES differences

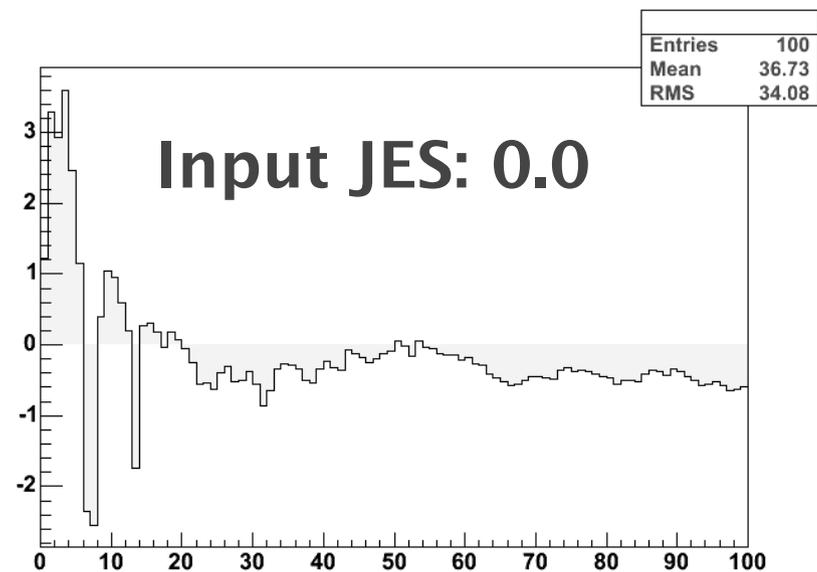
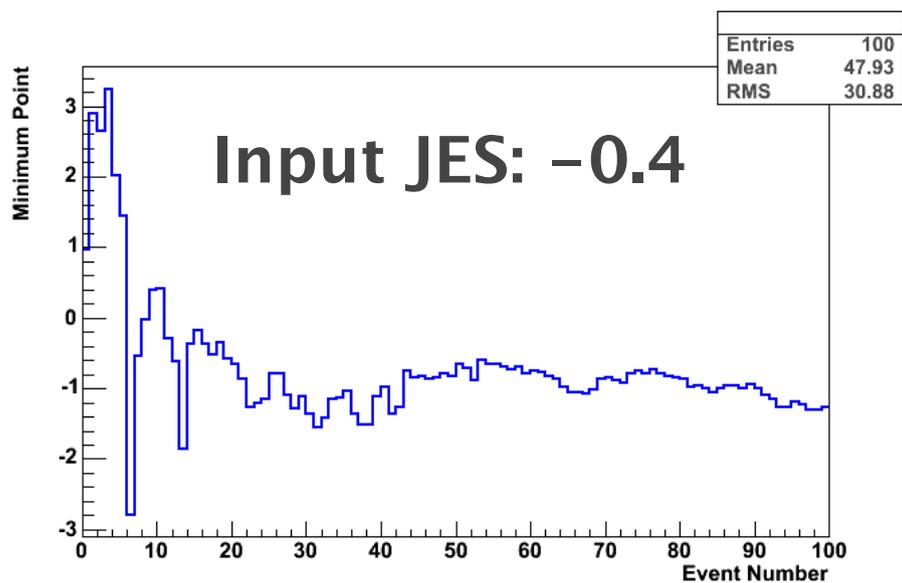
Checking weight from TF



Checking weight from TF

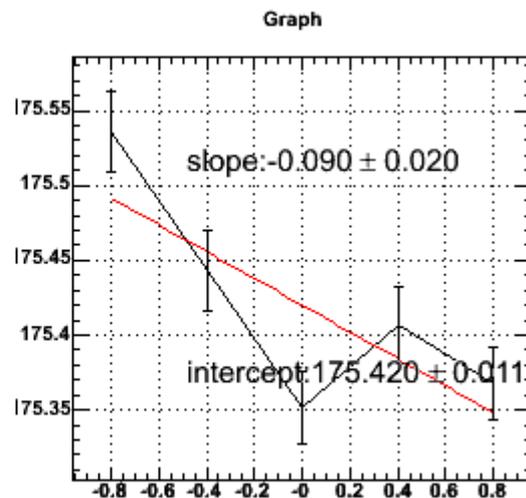
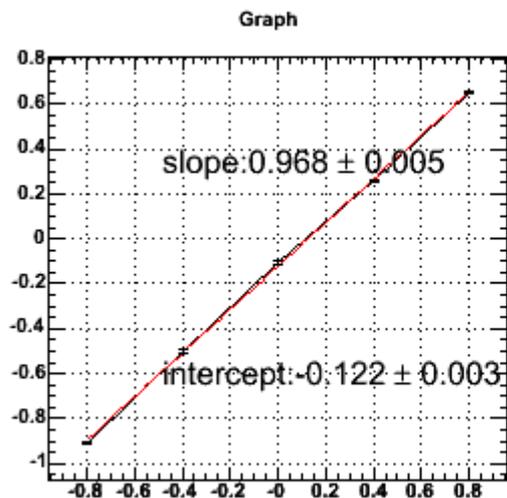


Checking weight from TF



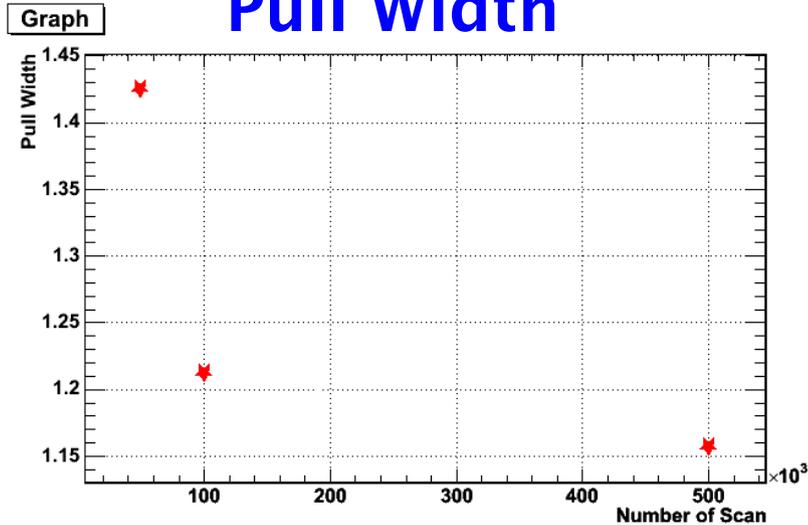
Pseudo Experiments

- Slope for JES is almost 1.
- Output JES shift lower
- Dispersion of reconstructed mass is taken as systematic uncertainty.



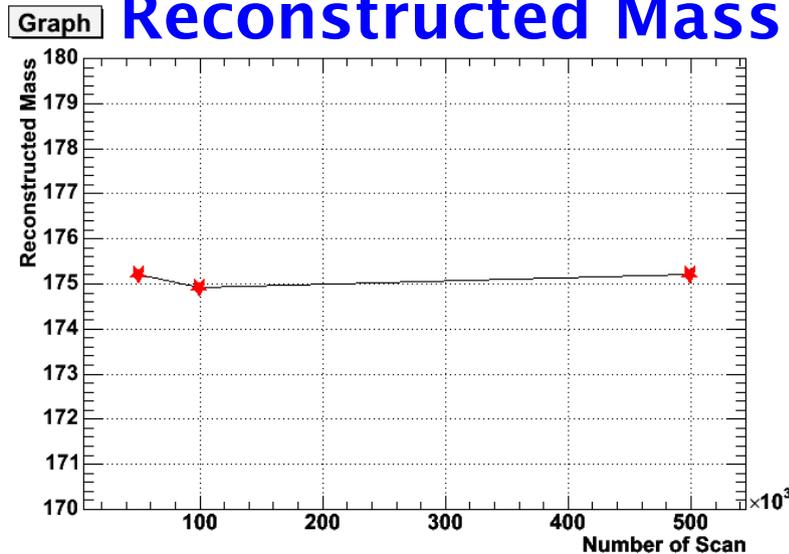
Pull Width for Mass Reconstruction

Pull Width

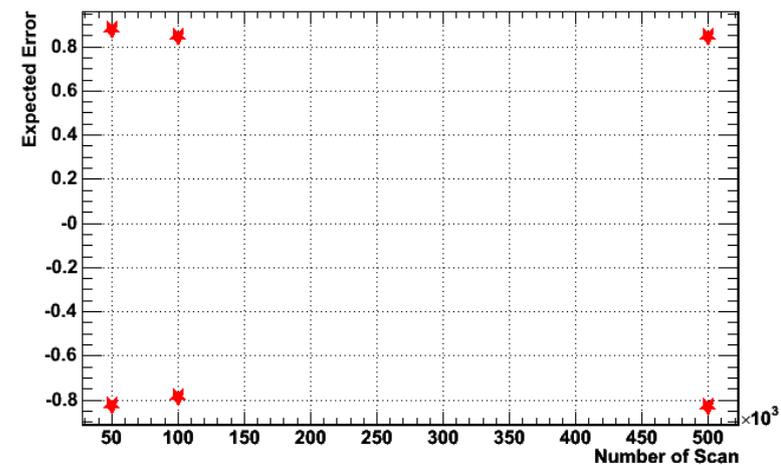


- Pull Width goes down as # of scan increase although it still high.
 - Effect of removing importance sampling??
- Reconstructed Mass and Expected Error is almost flat as a function of # of scan

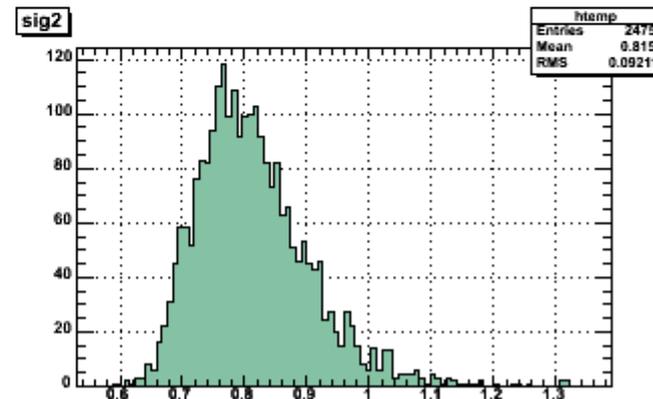
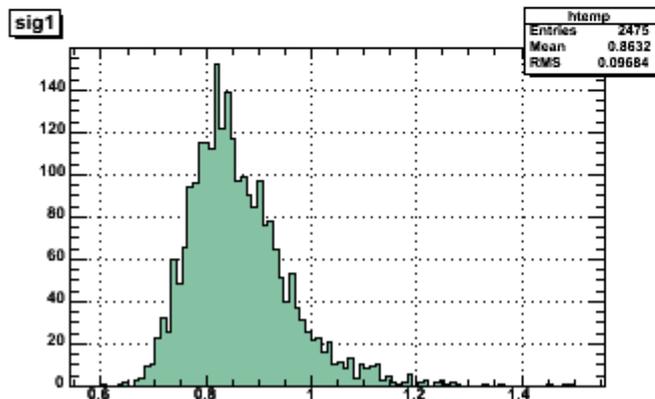
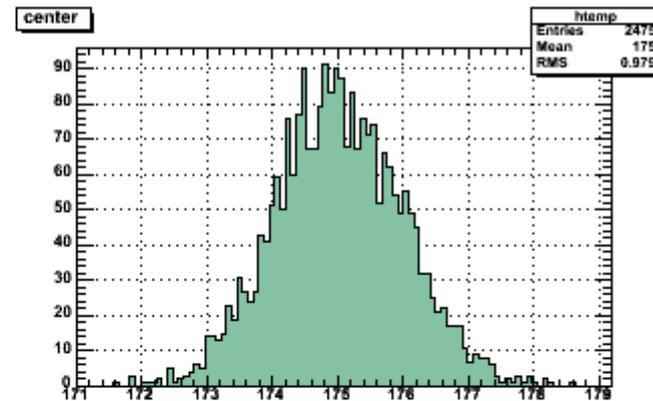
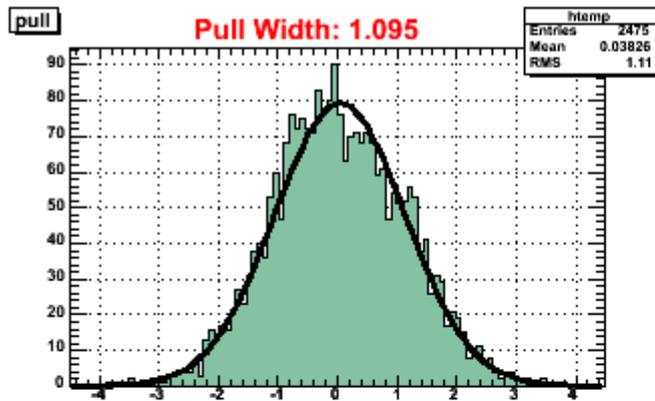
Reconstructed Mass



Expected Error



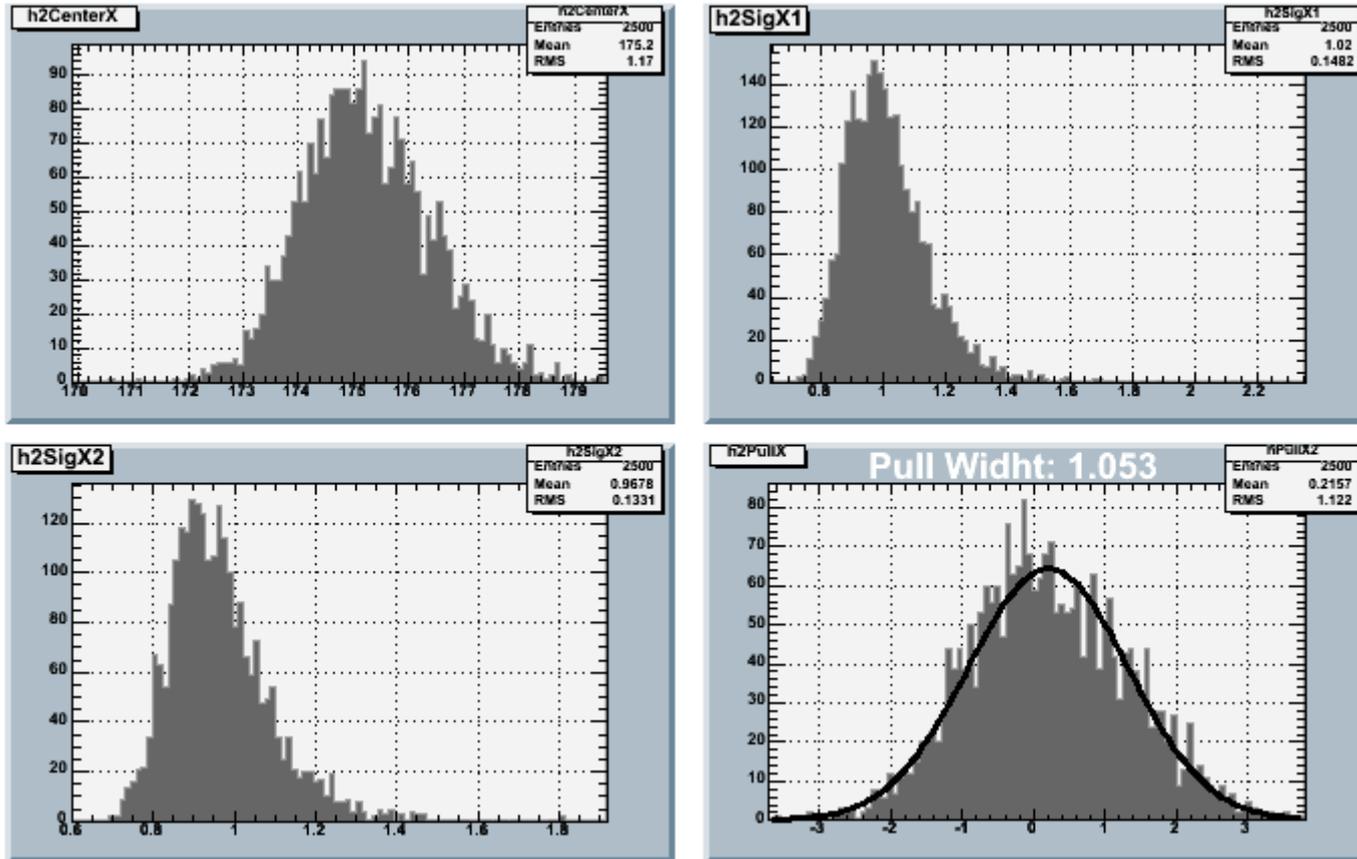
1M Scans



Pull width is still high

Importance sampling

50k scans

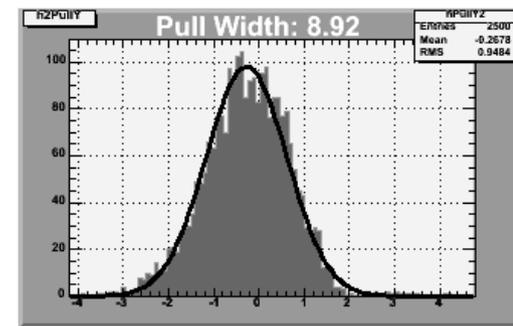
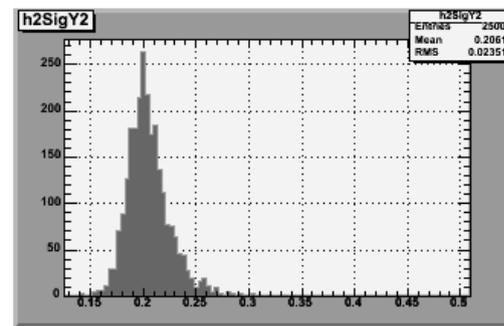
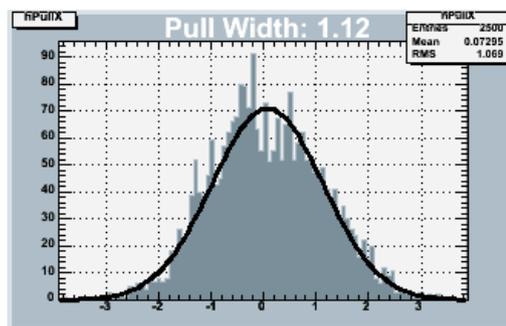
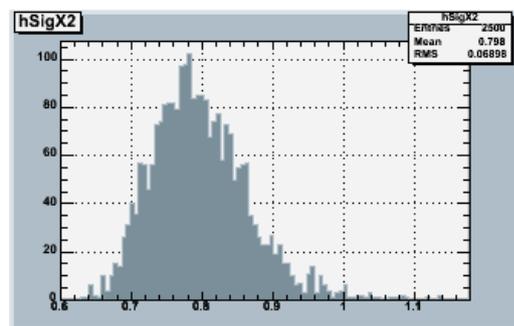
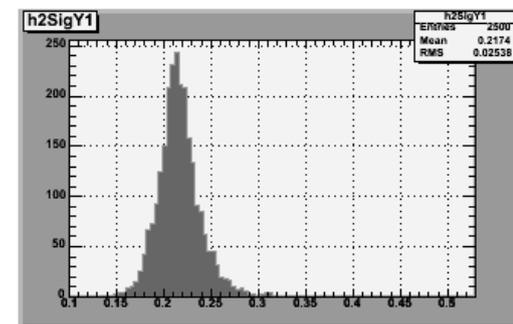
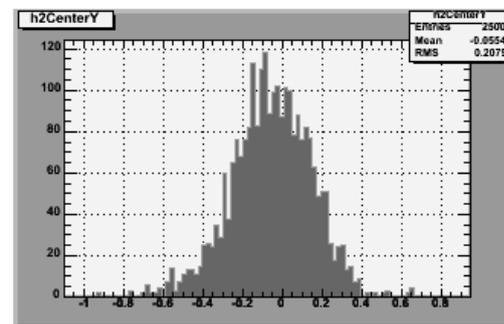
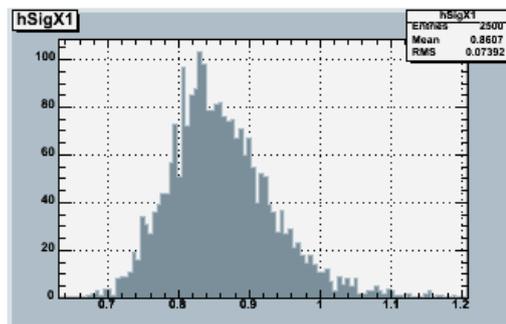
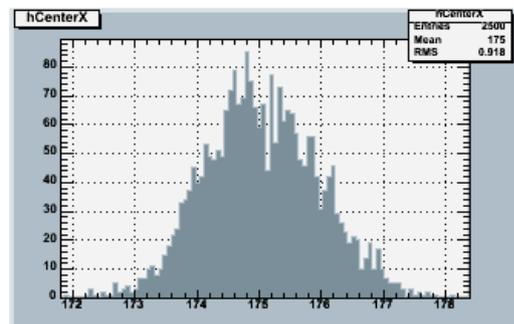


Pull width is reasonable?

Importance sampling 2D

Mass

JES

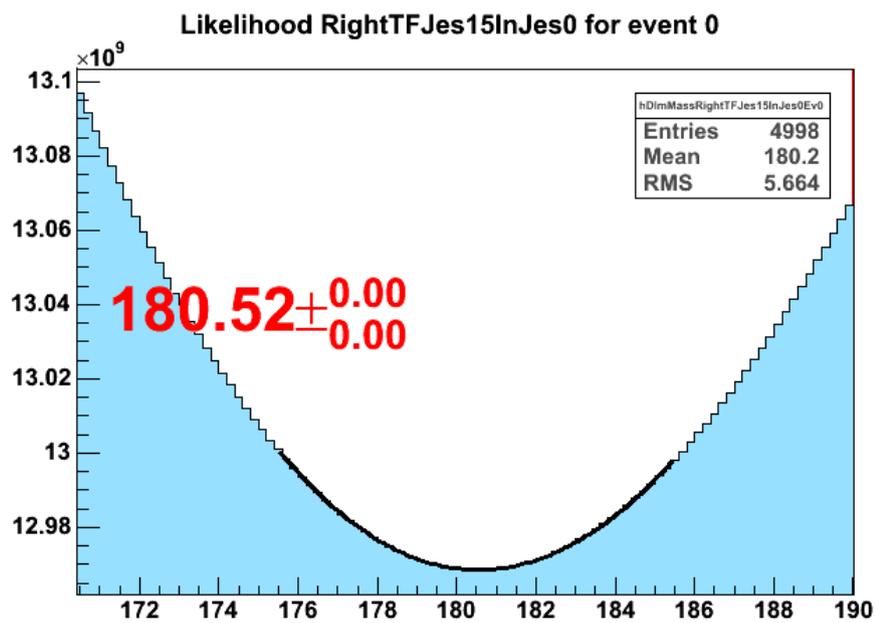


Pull width goes higher

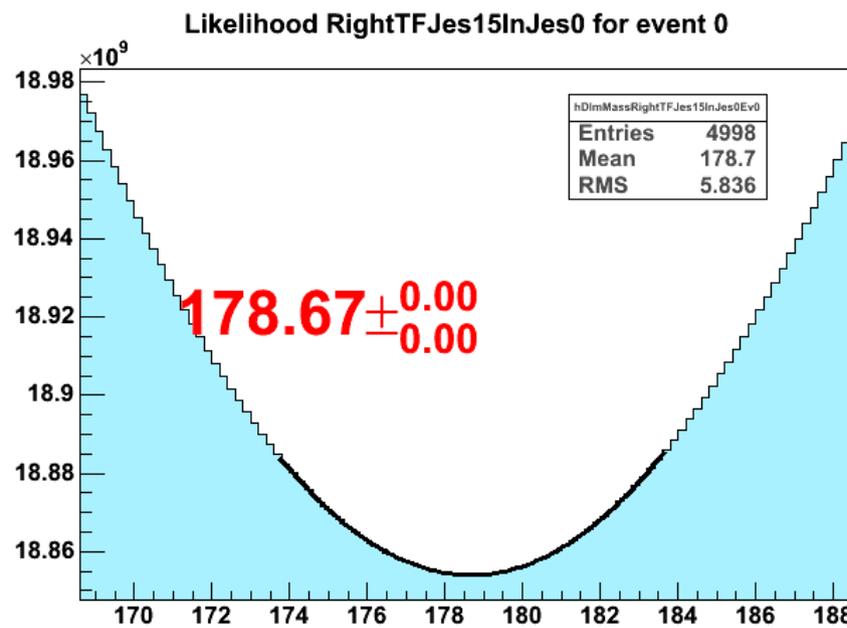
Pull width is low

Joint likelihood/path

with M*Gamma

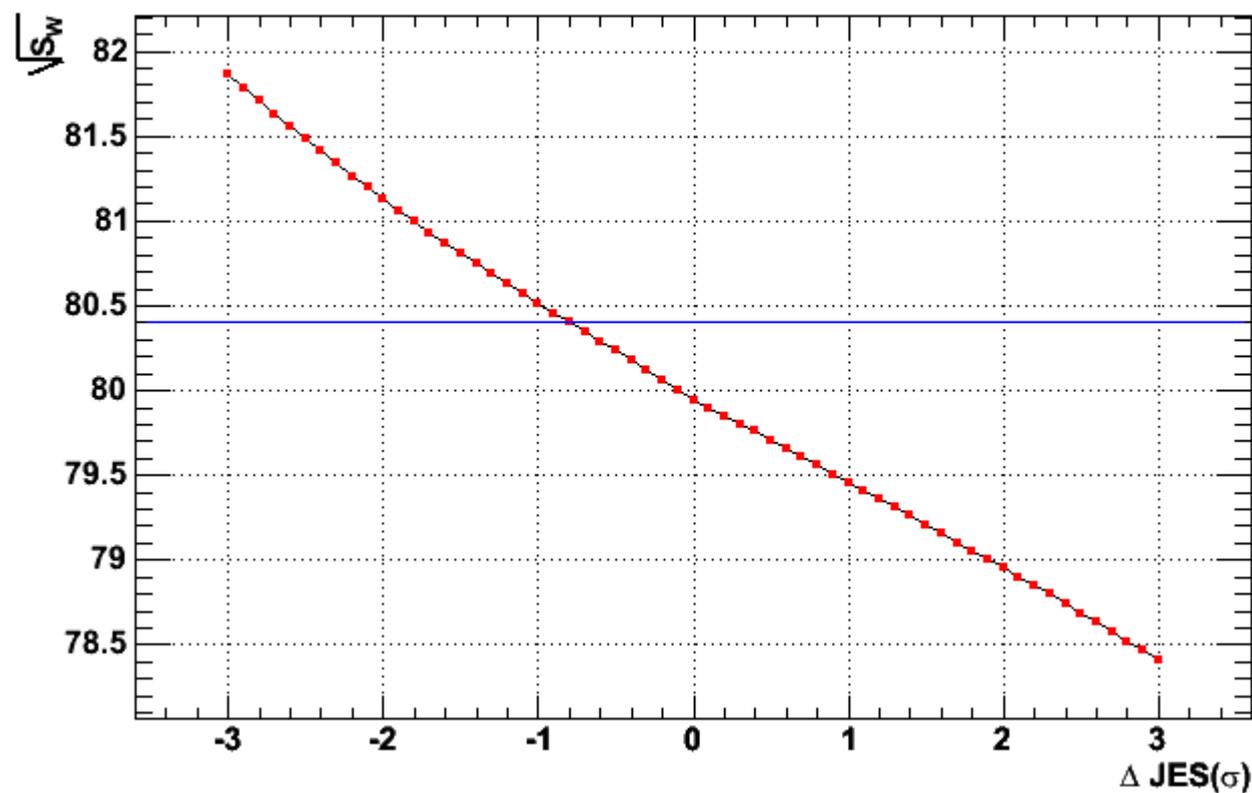


w/o M*Gamma



Invariant mass of W

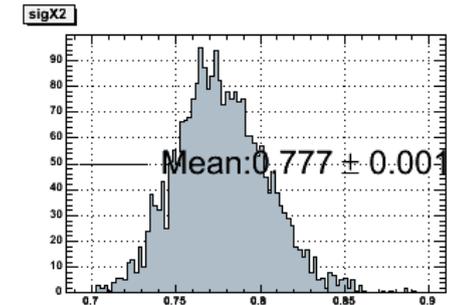
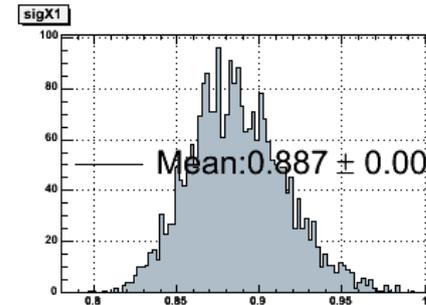
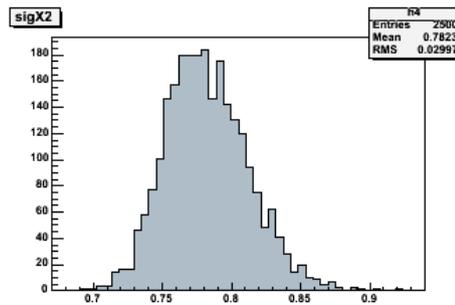
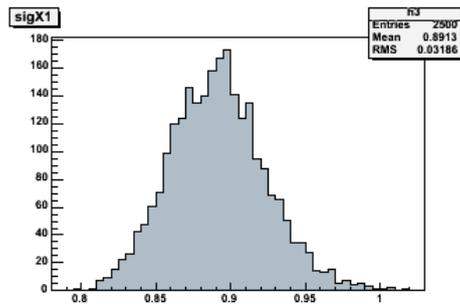
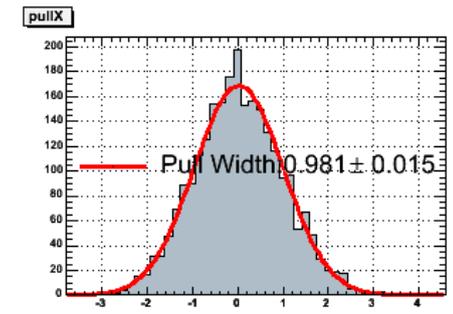
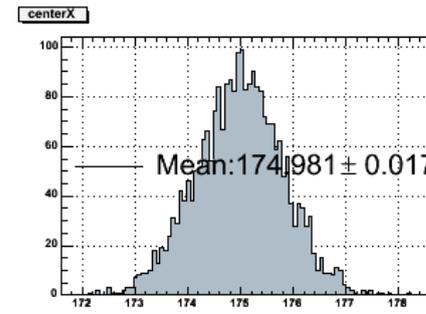
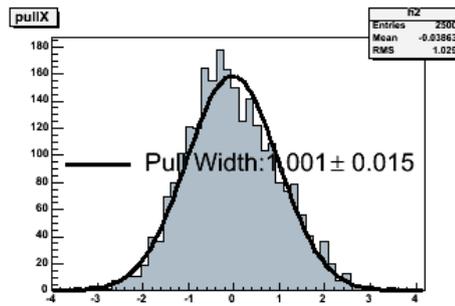
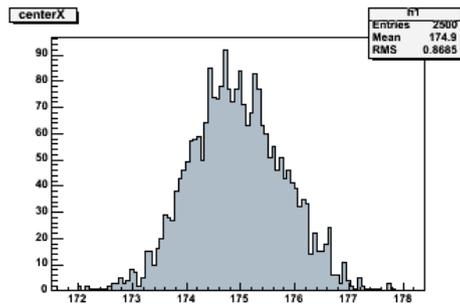
Graph



Importance sampling 1D

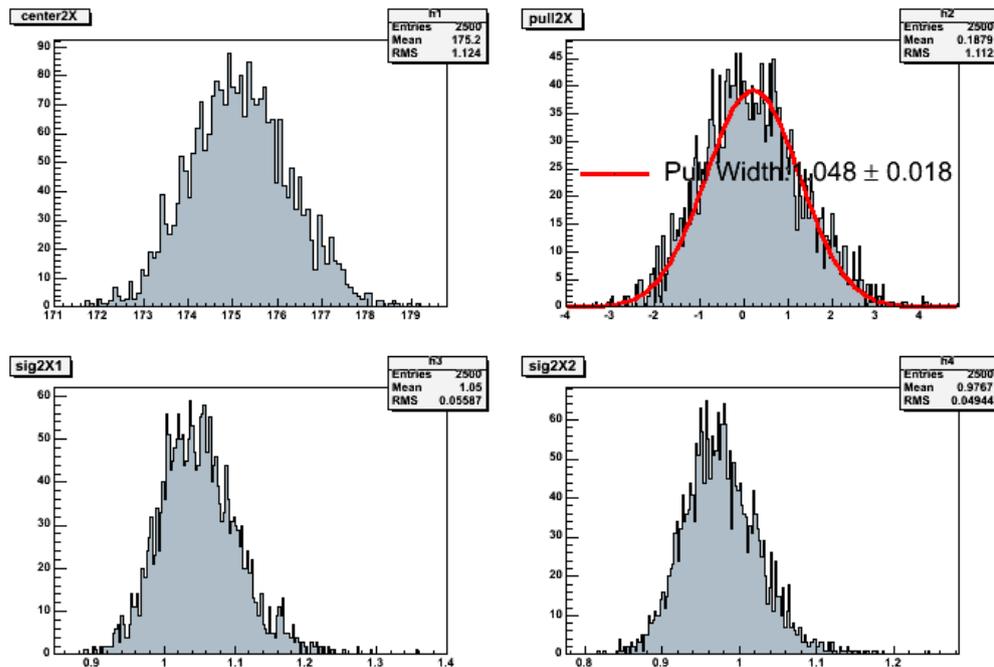
100k scans

200k scans

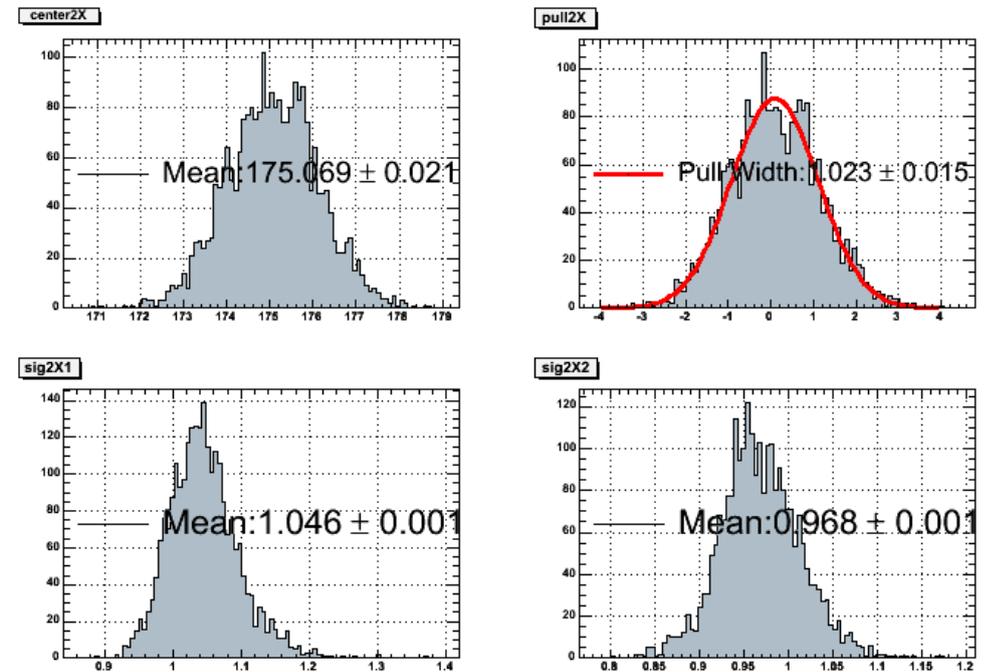


Importance sampling 2D

100k scans



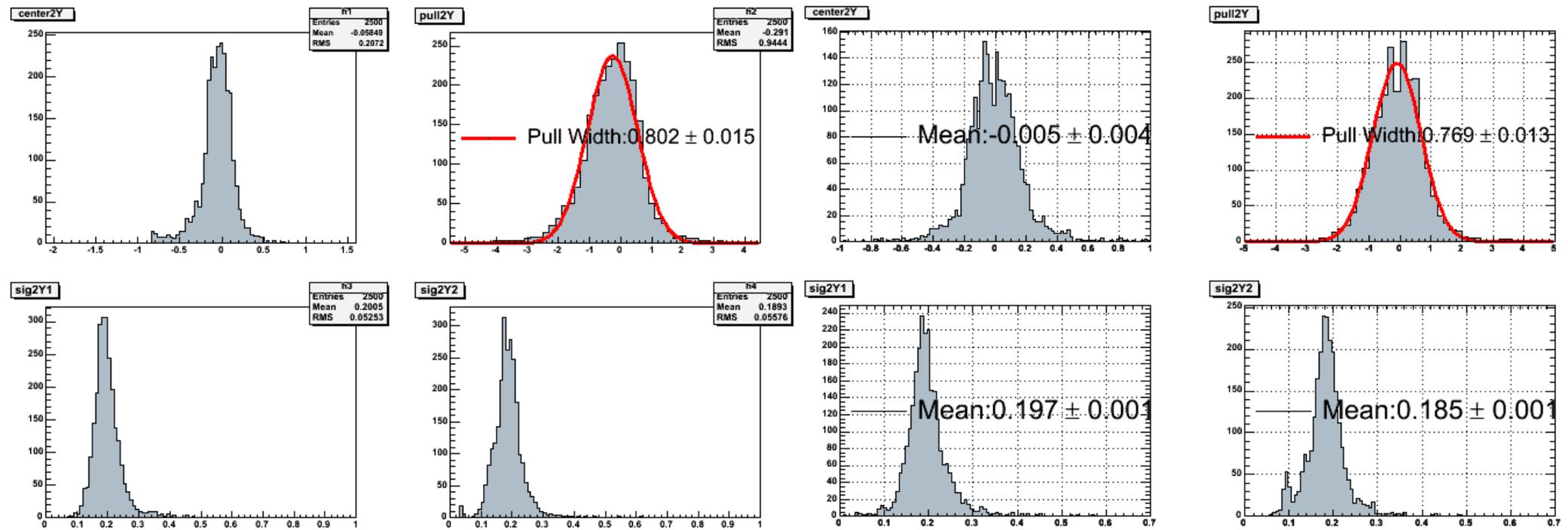
200k scans



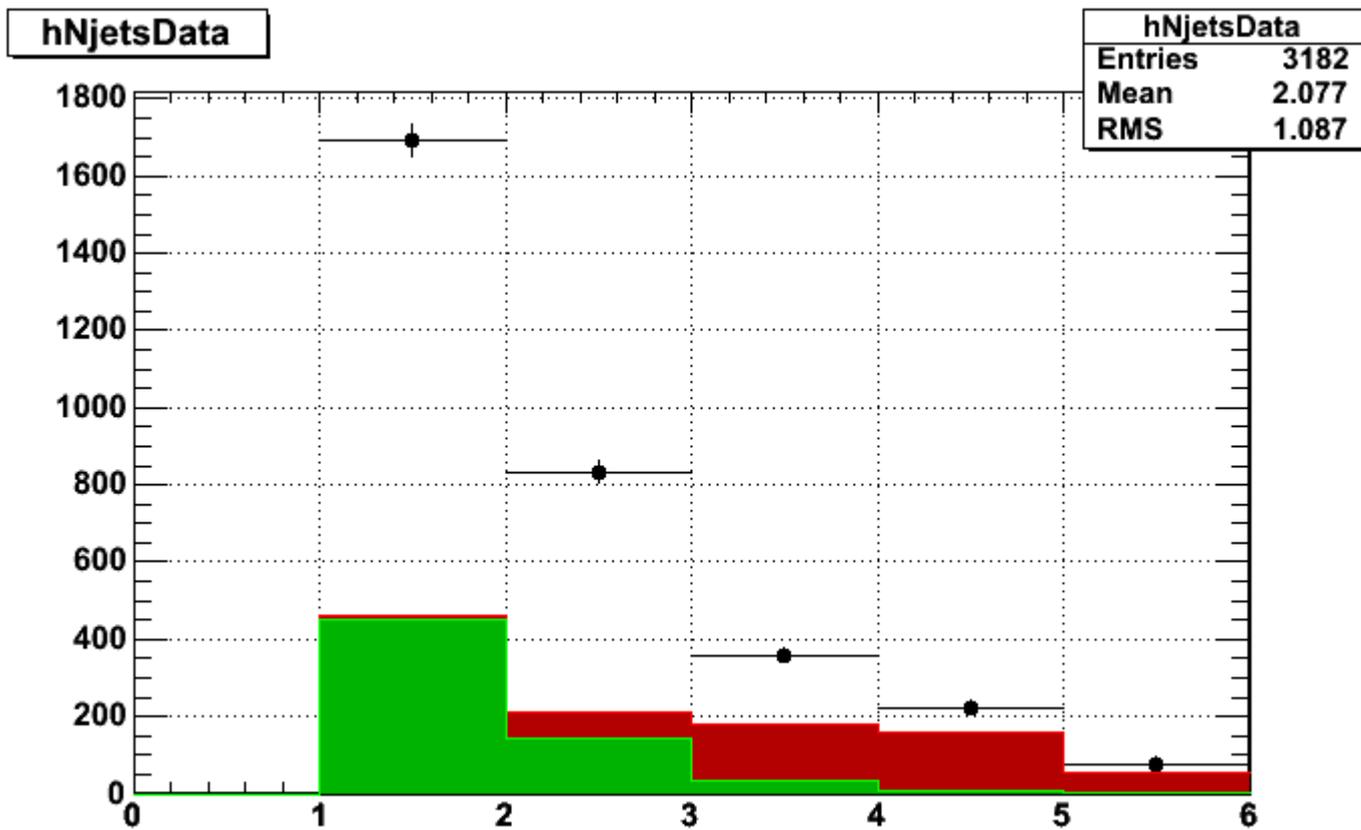
Importance sampling 2D

100k scans

200k scans



Background



Plan

- Process DLM for all the signal and background MC this weekend
 - Scan: 100k
 - Calibrated TF
 - 1ev/h: ~10000 medium jobs on CAF
- Event selection for new data(2fb-1) done by this week end
- Kinematic shapes
- Period 11(2fb-1) background estimation will be done by end of June
- Pseudo experiments will be calculated after 2fb background ready
- Blind samples should be run over by Full Status report

- Status Report : 07/3/2007?
 - linearity and pulls for signal samples(background samples if possible)
- Full Status : 07/10/2007
- Prebless : 07/18/2007
- Go back to Japan : 07/20/2007
- Bless : After going back to Japan