

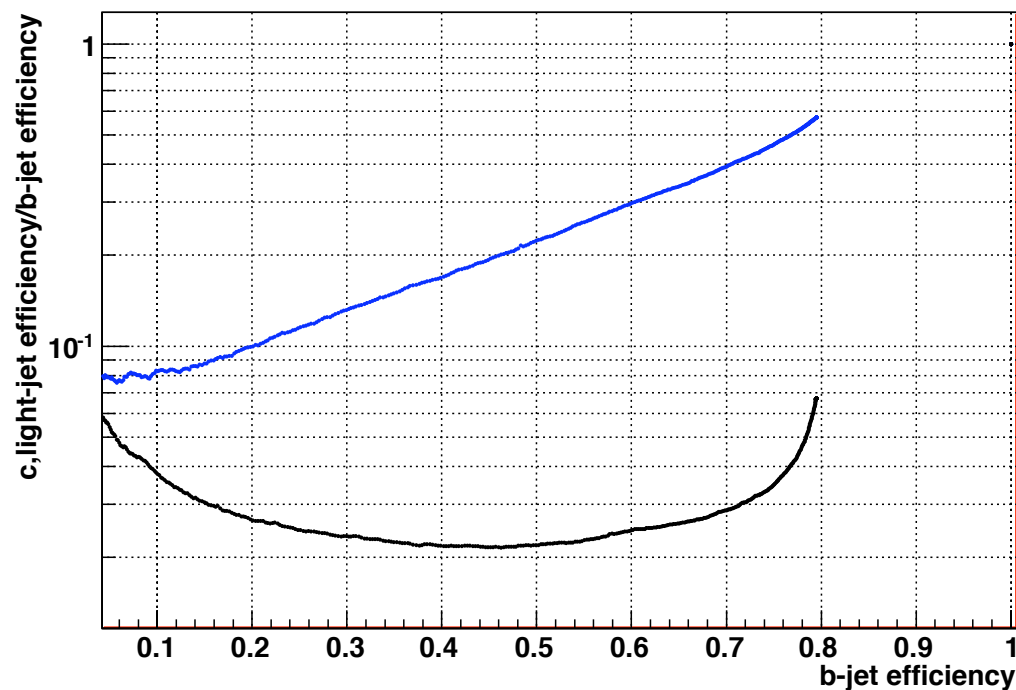
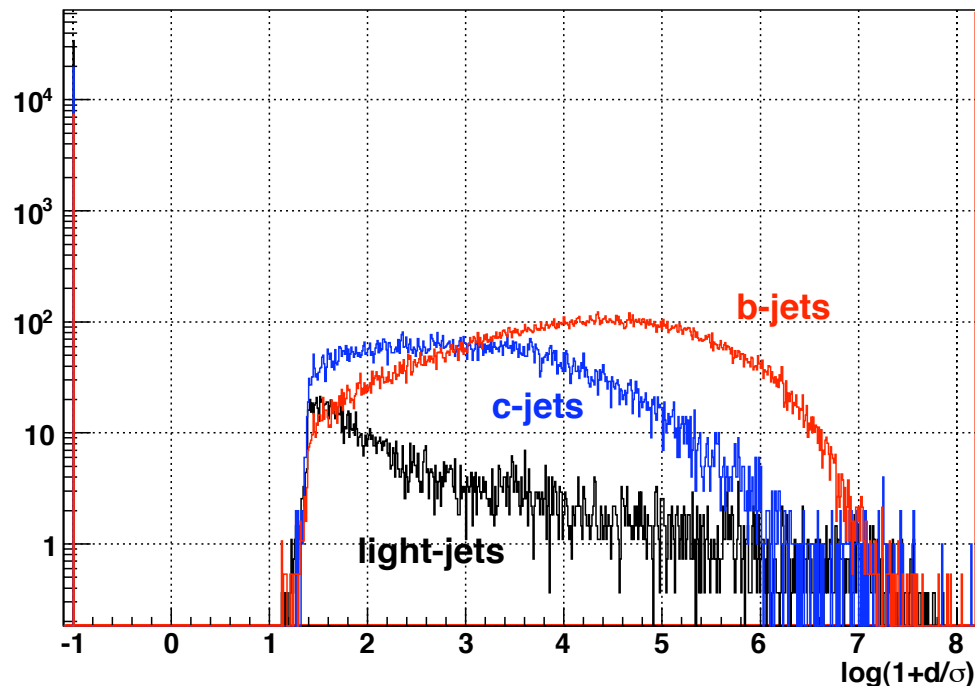
$tt \rightarrow 6 \text{ jets in } 4\text{th}$

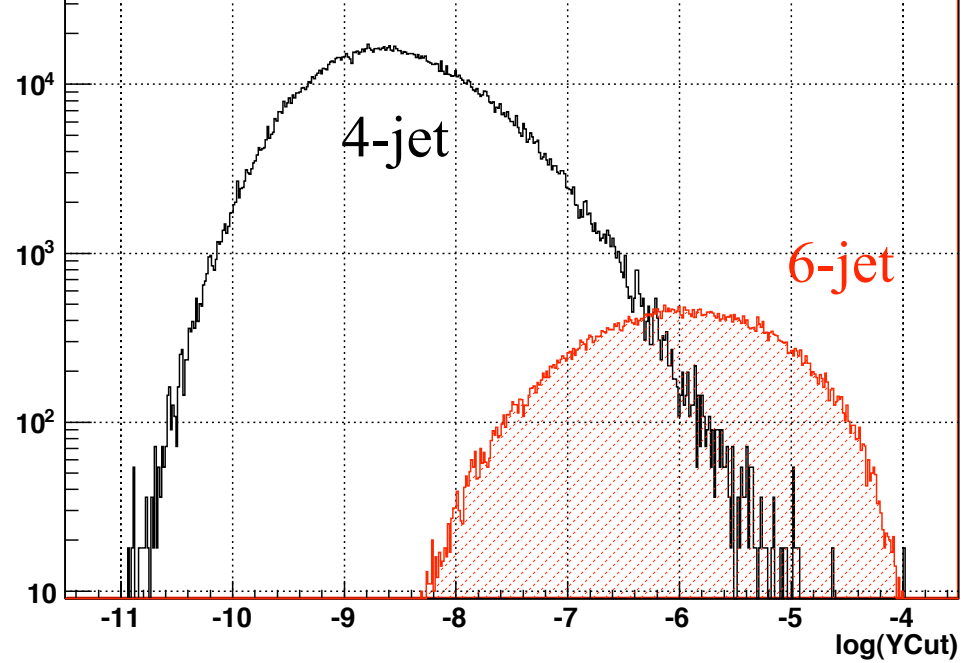
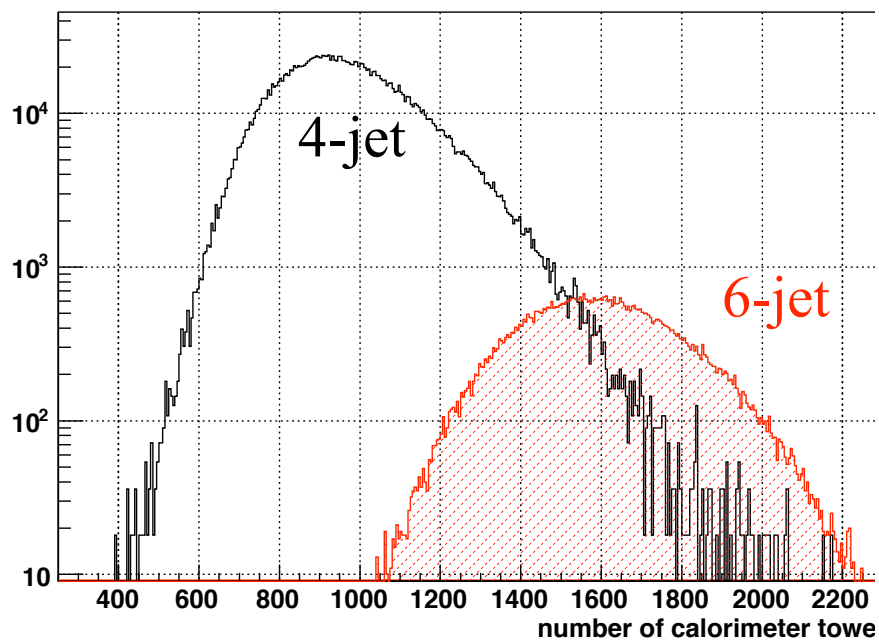
**Fedor Ignatov (words by John Hauptman)**

TLC09, April 17-21, 2009 –Tsukuba, Japan

b-tagging and c,uds rejection that we *will* incorporate into the continuing analysis of ttbar.

Results you see will only get better!



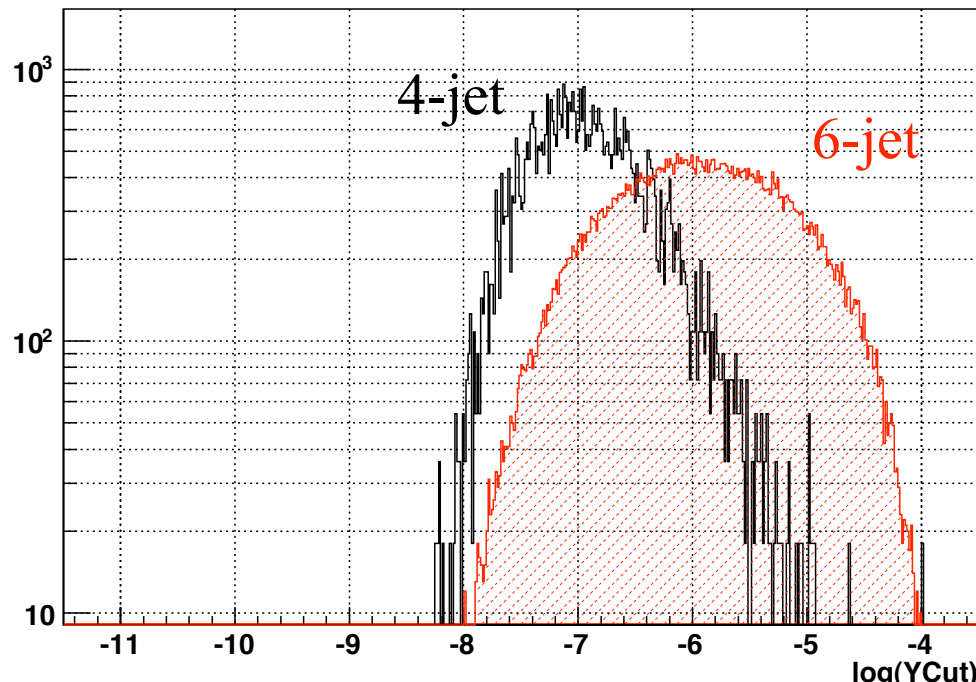


after applied cut

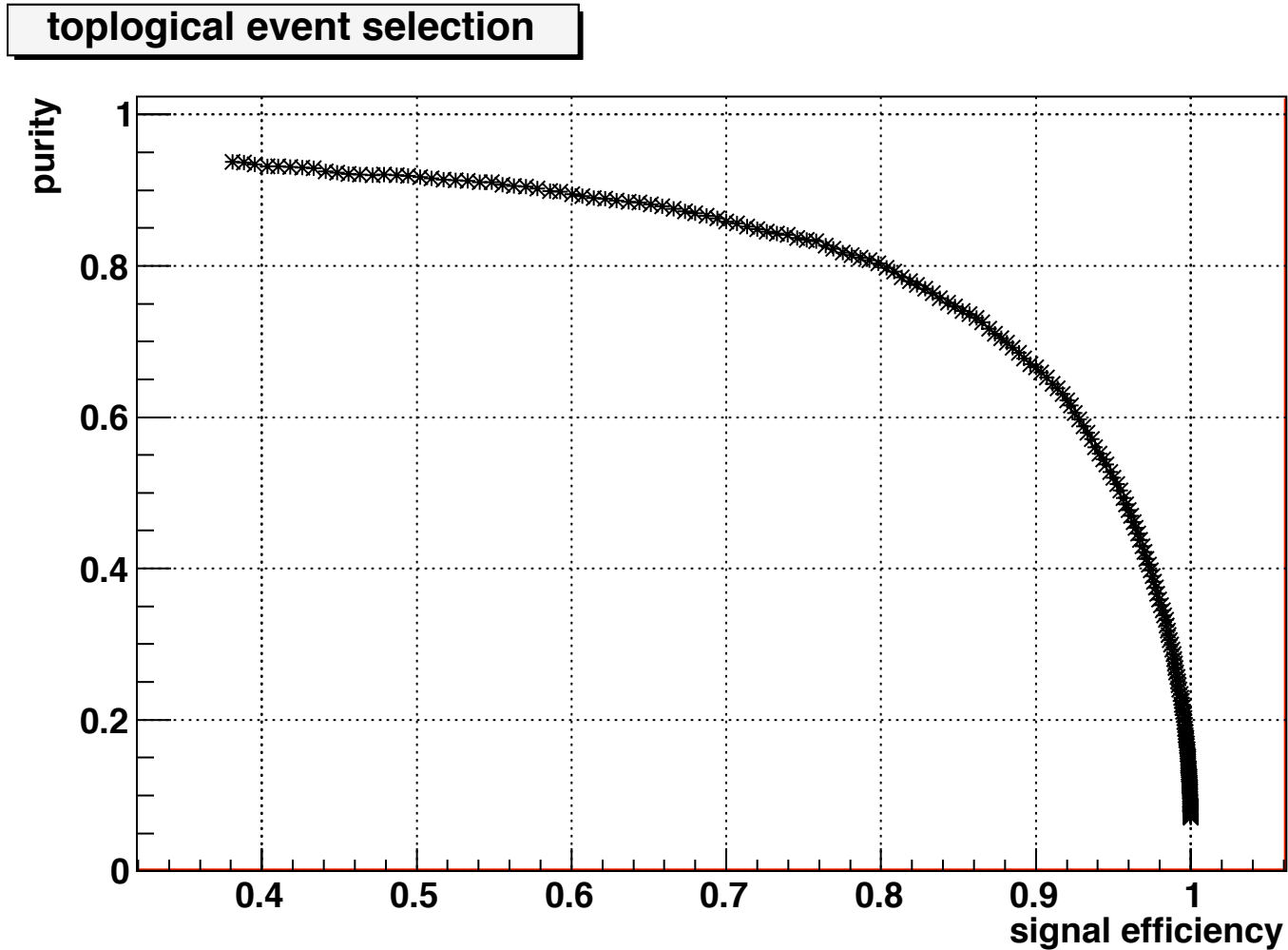
## Selections:

1. # calor towers
2.  $y_{\text{cut}}$  for 6-jets

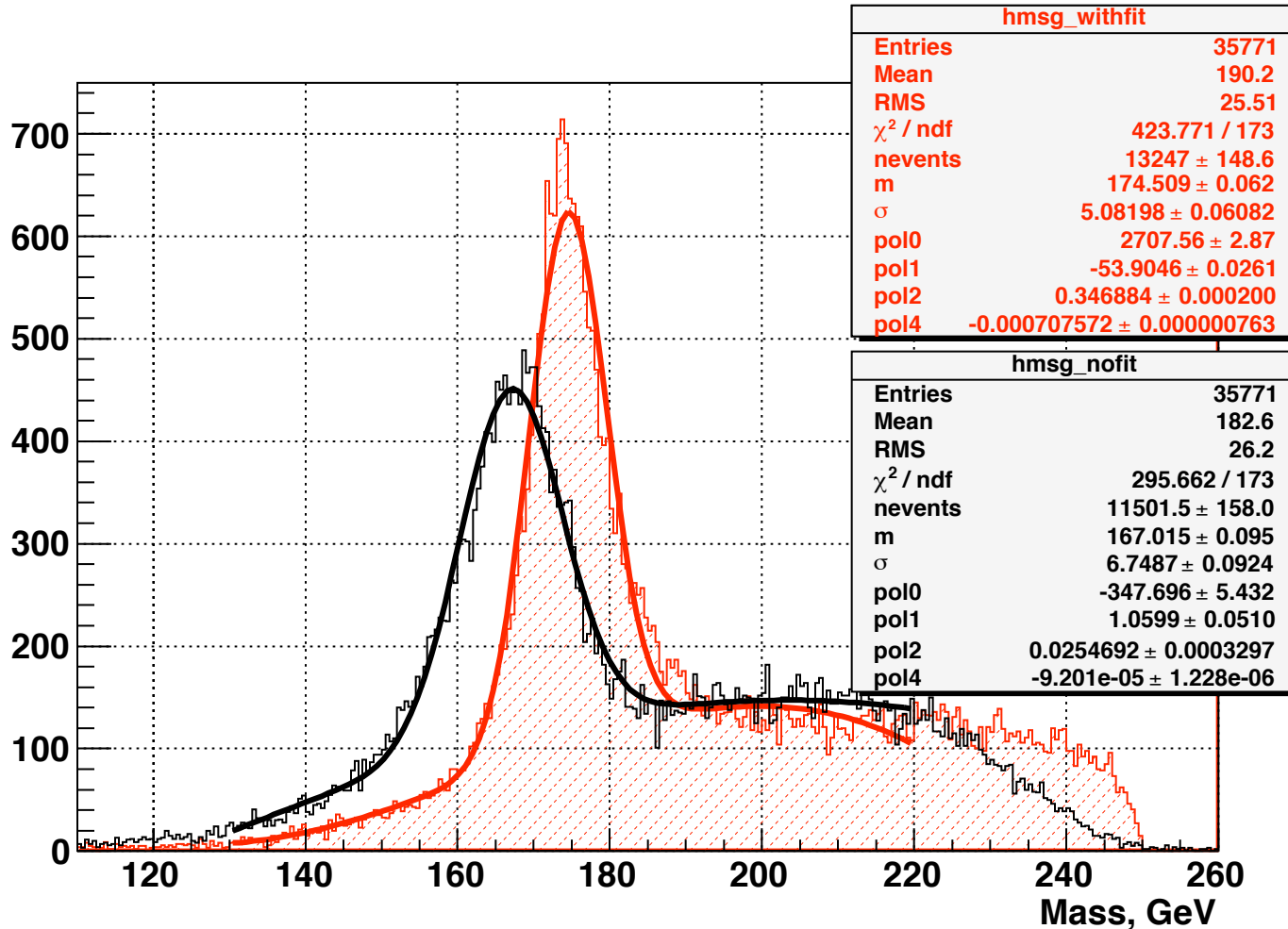
Next, chi-squared selection of 2-jet of 3-jeta, for each t



# Purity vs. Efficiency after topological selections



The  $t$  mass distribution after these selections  
is the black distribution



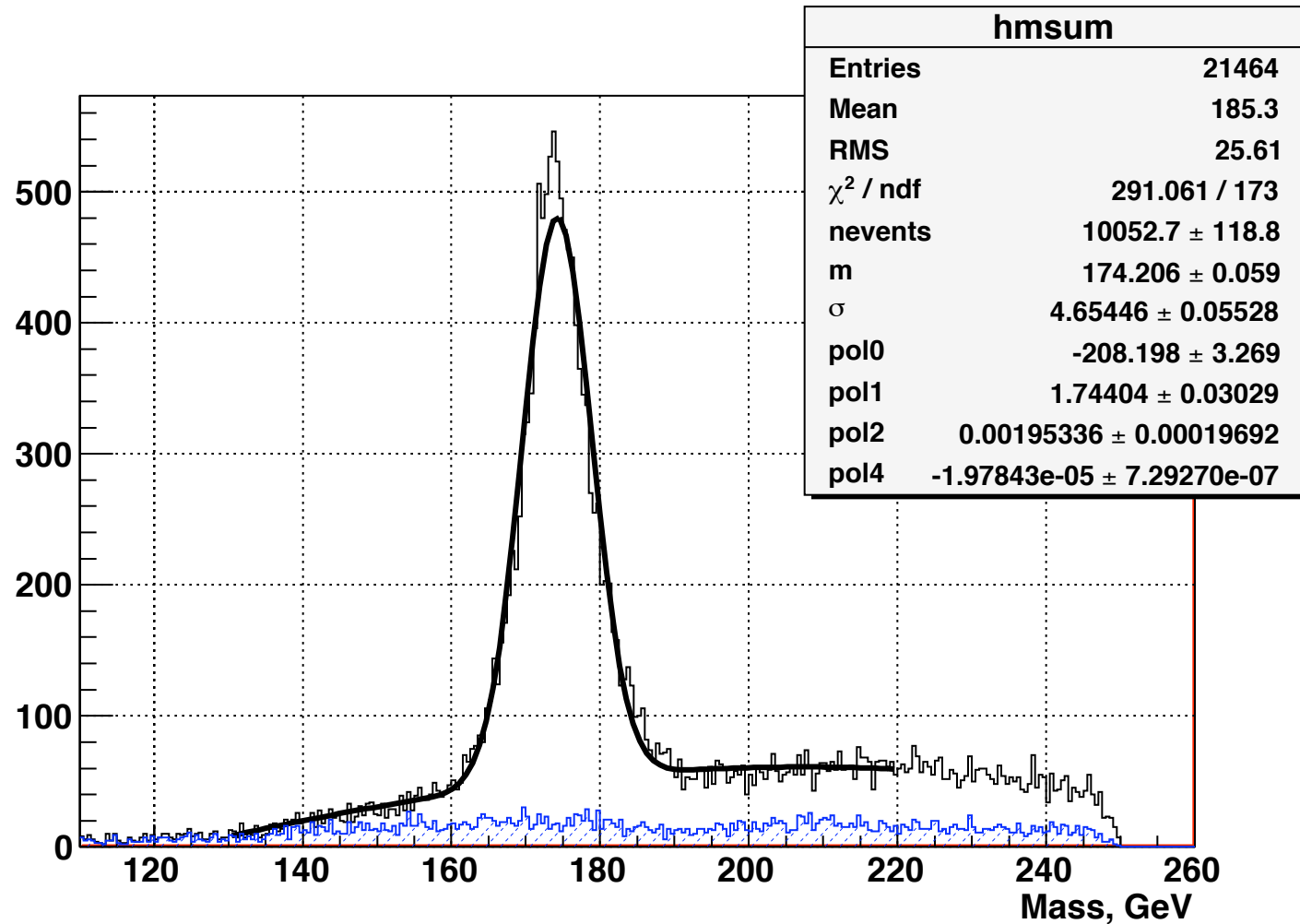
For all combinations of 3-jets, and sub-combinations of 2-jets out of the 3-jets, and perform a chi-squared fit using MarlinKinFit with 7 constraints:

1. total 3-momentum = 0
2. total energy = 500 GeV
3.  $M_{W1} = M_{W2} = 80.4 \text{ GeV}/c^2$
4.  $M_t = M_{tbar}$

Choose the lowest chi-squared combination.

This gives the t mass distribution as the red distribution in the figure.

Make a tight chi-squared cut  $< 45./7$  giving the t mass distribution in the figure.



$\sigma \sim 4.7 \text{ GeV}$

$\sigma(\text{t mass}) \sim 0.05 \text{ GeV}$