



Jet Corrections meeting

<http://www-cdf.lbl.gov/~currat/talks/>

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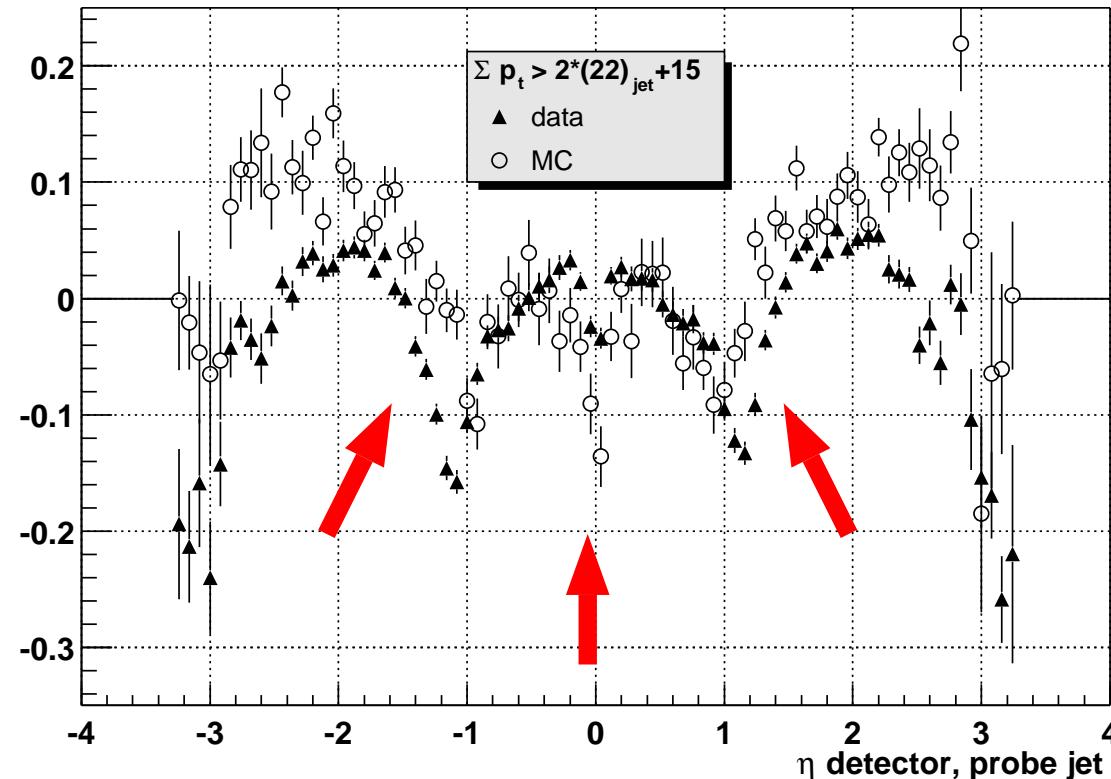
- ❖ Update & sanity plots on data/MC comparison
- ❖ JET_20 cross sections

Comparison data/MC: dijet balance (1)

- ◆ data: gjet01 sample (stripped) Feb-June 2002, no PPR correction
- ◆ MC: run # 85890 \sim 600k events
- ◆ Σp_T cut to stand away from (possible) trigger bias

cdfSim v. 4.5.3

Dijet balance



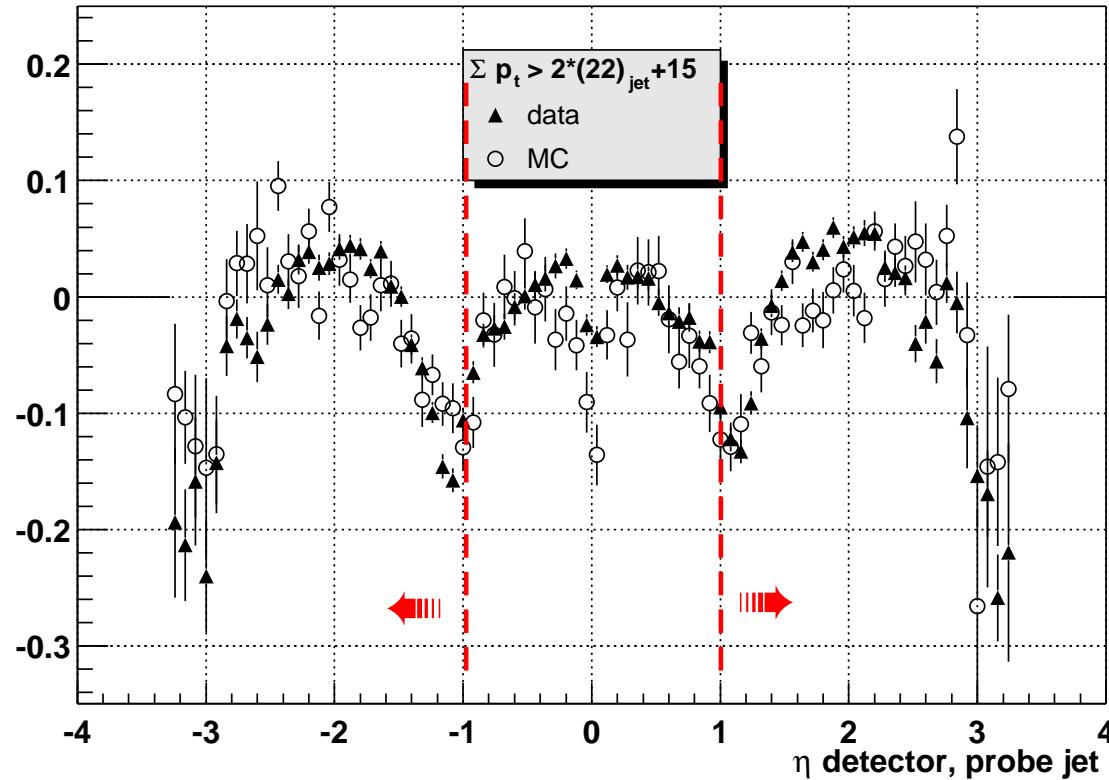
Stats data: 41210 entries / 2M events

👉 Cracks / Plug+WHA E-scale ?!

Comparison data/MC: dijet balance (2)

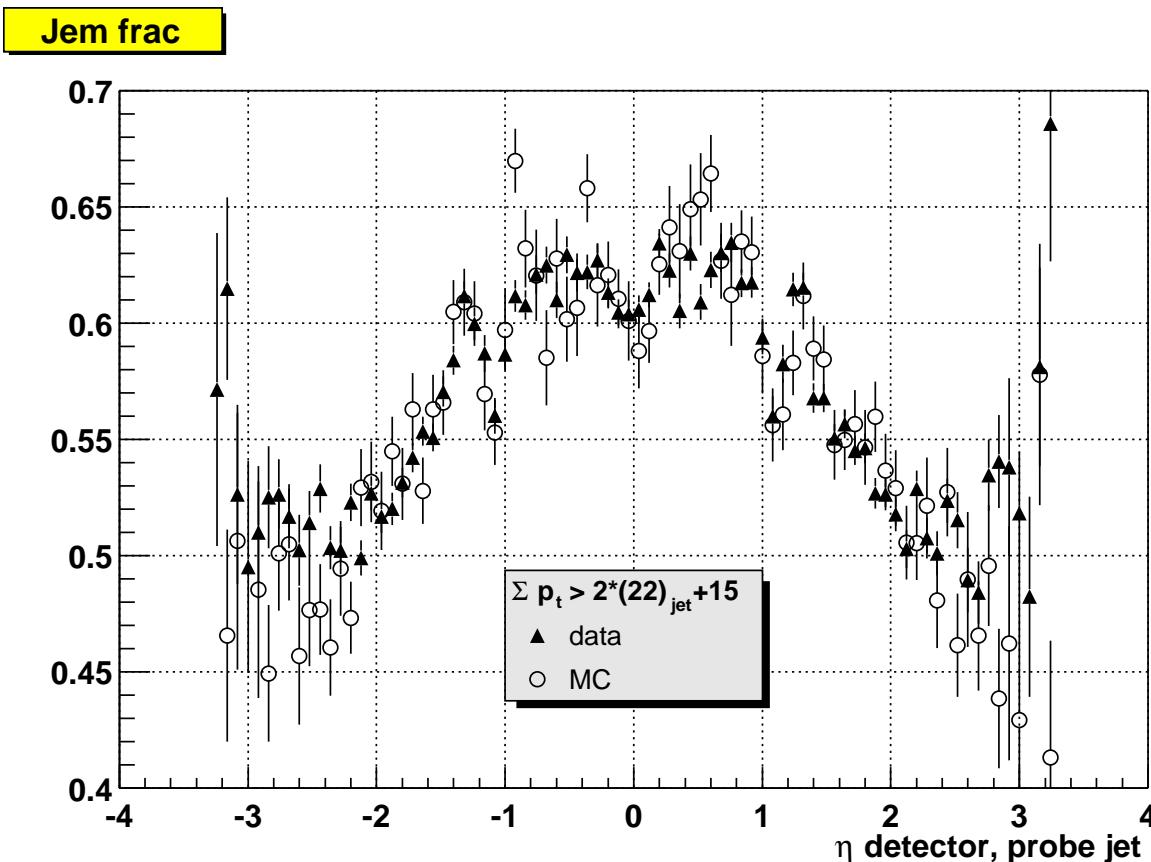
Correction “by hand”: $0.92 \times E_T(\text{probe})$ for $|\eta| > 1$

Dijet balance



- ❖ WHA+plug in agreement within statistics
- ❖ 10× more MC events have been requested

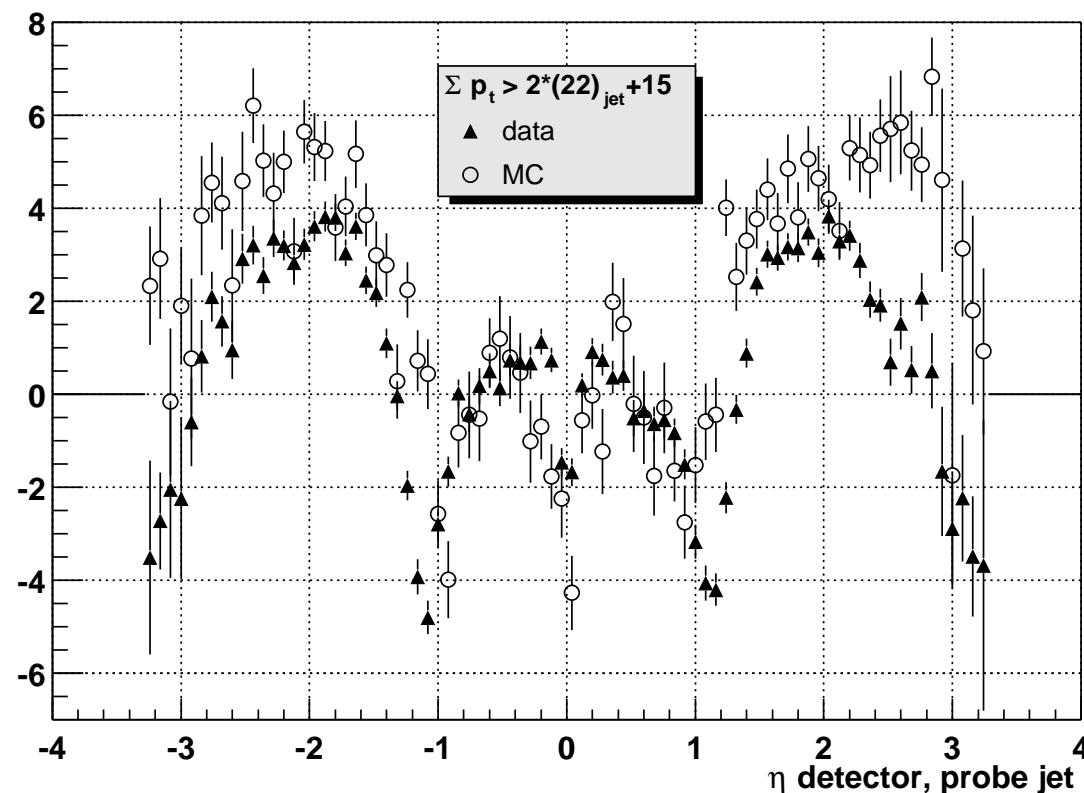
Jet EM fraction in agreement right “out of the box” ...



☞ note that 90°-crack is OK

Missing E_T projection onto the probe jet axis

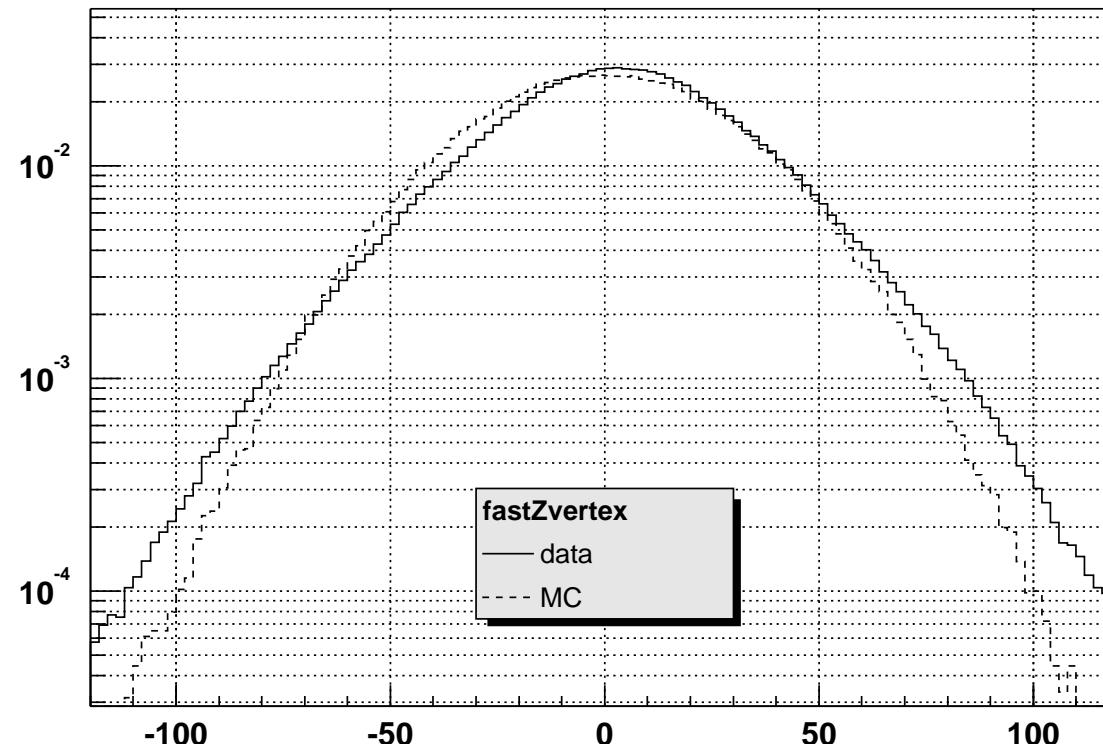
mEt proj



Same symptom (plug+WHA) as for “raw” dijet balance

FastZvertex (strategy 3): $\langle z \rangle \simeq +3$ cm in the data ...

fastz



Need to be taken into account at some point in the simulation

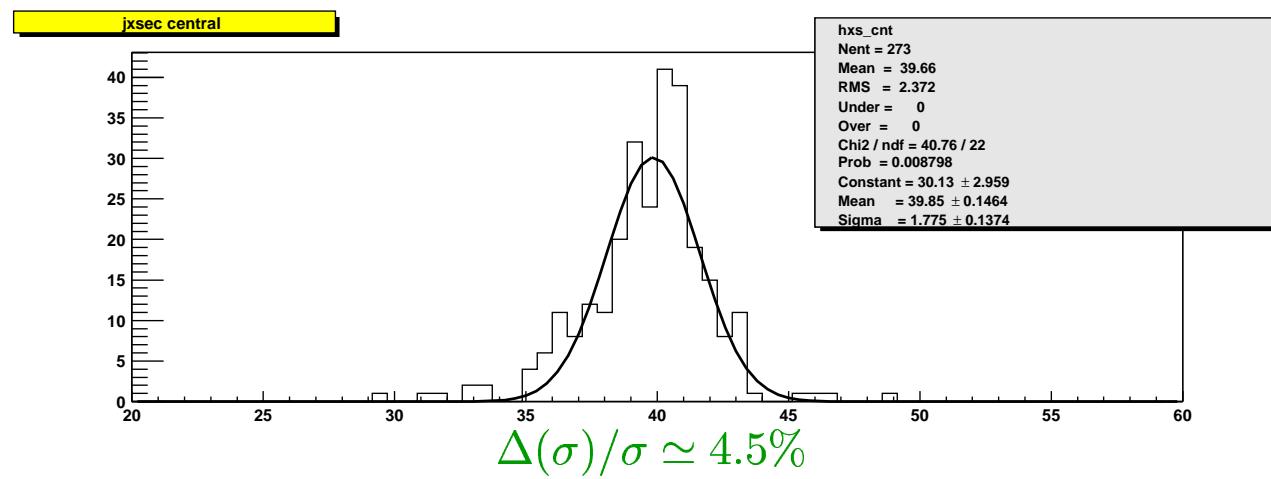
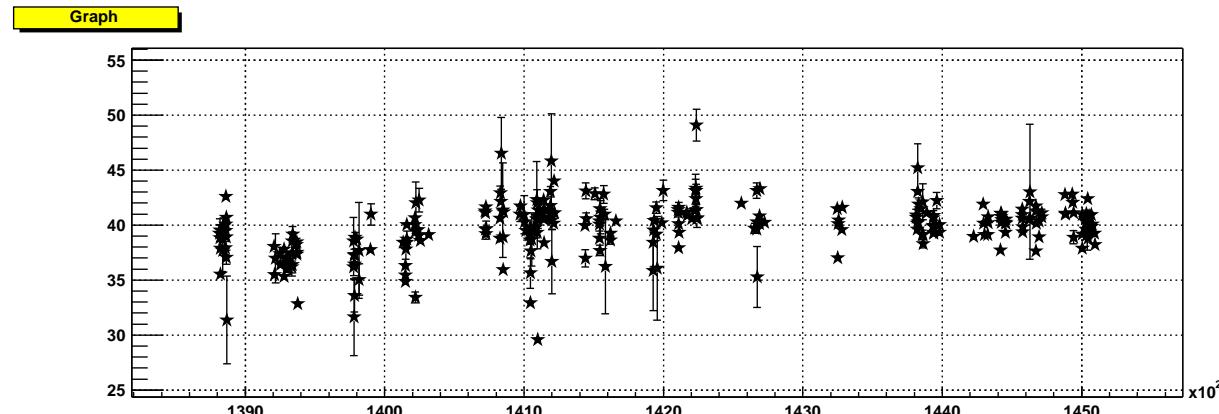


Jet_20 cross sections: central

GOOD RUNS: considering lead jet of the event, $|\eta| < 1$

Cuts: $M_{Et} Sig < 4$ $|z| < 60 \text{ cm}$

- ◆ Top: cross section in [nb] as a function of [run #]. Statistical errors only.
- ◆ Bottom: cross section in [nb]





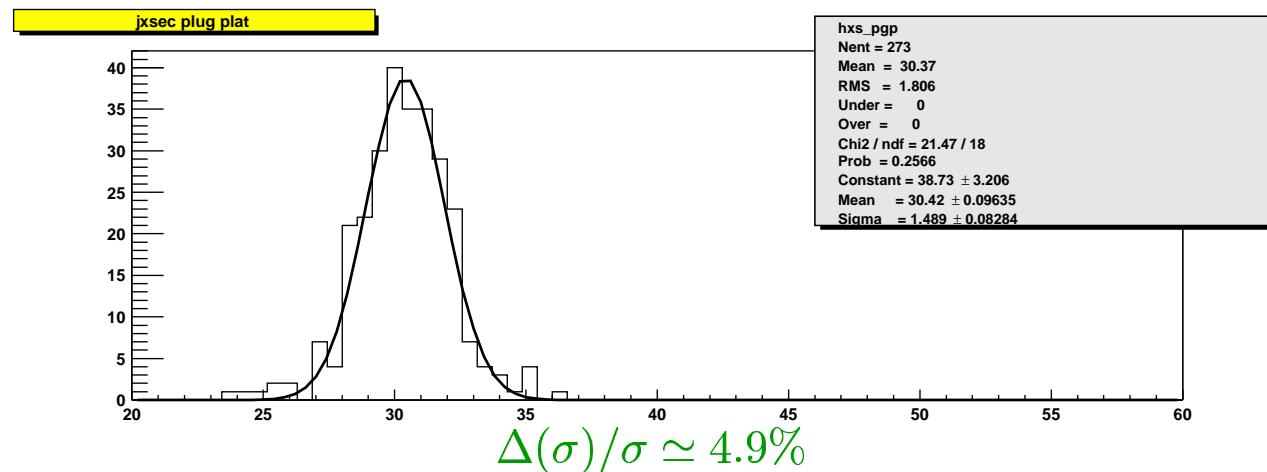
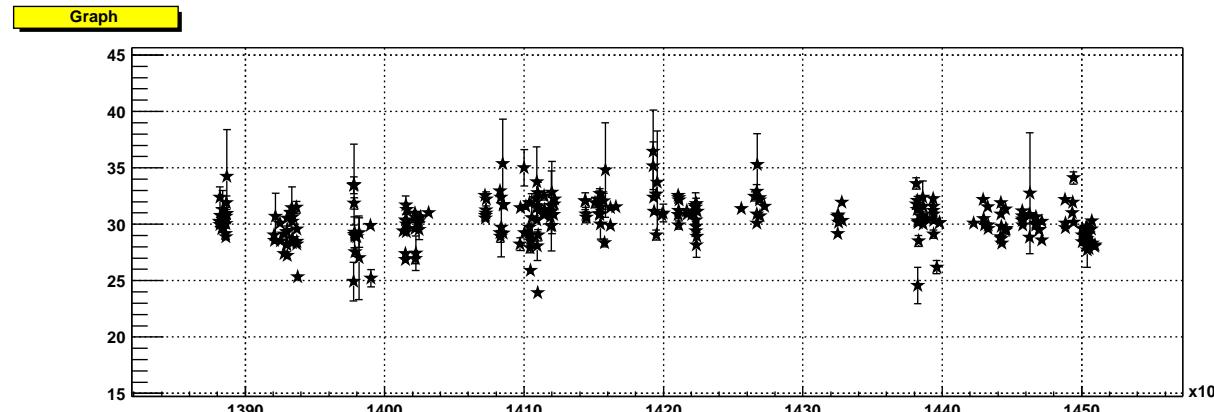
Jet_20 cross sections: plateau



GOOD RUNS: considering lead jet of the event, $1.5 < |\eta| < 2.4$

Cuts: $MET Sig < 4$ $|z| < 60 \text{ cm}$

- ❖ Top: cross section in [nb] as a function of [run #]. Statistical errors only.
- ❖ Bottom: cross section in [nb]





Jet_20 cross sections: high η



GOOD RUNS: considering lead jet of the event, $|\eta| > 2.4$

Cuts: $METSig < 4$ $|z| < 60$ cm

- ❖ Top: cross section in [nb] as a function of [run #]. Statistical errors only.
- ❖ Bottom: cross section in [nb]

