

MC plans in Top group

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Simulation meeting, May 20, 2004

Basic Strategy

- 4.9.1 MC request is done.
 - 5 cross sections results with 4.9.1 MC are underway for publications.
 - 5 top mass results with 4.9.1 MC, but **publPication will be with 5.3.2 MC.**
 - Many other analyses to study top properties were done with 4.9.1 MC
- Top group is now moving toward 5.3.2 MC production.
- **Follow our 4.9.1 MC strategy (full CPU+filter+HEPG study+recycling)**
(statistics in 4.9.1MC samples are fine for most of MC samples except few)
- **New features for 5.3.2 MC**
 - **MC sets with different silicon/beam lines (runs with 100nb-1 or 20 represntive runs?)**
 - **Trigger simulation, CMUP18, CEM18 etc.**
 - **Hadronic channels for W, tau decays are included (no more e/mu filter)**
- Highest priority: top mass MC samples, major bcks MC samples (W+3/4 P)
- Many top signal systematic samples: lower priority.
- ALPGEN W/Z+jets and bb MC will be recycled (takes HEPG bank for simulation), new version of ALPGEN for Wbb/cc+Njets generation later.
- Mrenna's MadGraph sample for major background processes.

Top signal MC

Process	generator	Gen evts	Acc. evts
ttbar	HERWIG	1M	2.5k (em), 40k (eh)
	PYTHIA(*)	1M	
Single top	PYTHIA	1M(t,s)	

- Diff. top masses from 130 to 230 by 2.5 GeV step from 150 to 200, 5 GeV step outside this region (each: 200k): total 7.5M
- Single top will be done at Karlsruhe
- Top systematic samples (10 set: 4M): lower priority.

W/Z+njets

(top bck, W/Z signal)

ALPGEN / MadGraph	e(gen)	mu	Tau(*)
W + N jets (N=0,1,2,3,4)	300K	300	300
Z + N jets (N=0,1,2,3)**	300	300	300
Wccbar + N jets (N=0,1)	300	300	300
Wbbbar+ N jets (N=0,1)	300	300	300
Wc+N jets (N=0,1,2,3)	300	300	300
Zccbar + N jets (Z=0,1)	300	300	300
Zbbbar + N jets (N=0,1)	300	300	300

*:Wbb/cc+1/2jets, W+3/4jets in e/mu:highest priority

WW/WZ+njets (top bck, EW signal)

ALPGEN+HERWIG	e(gen)	Mu	Tau
WW + N jets (N=0,1,2)	each 300k	each 300	each 300
WZ + N jets (N=0,1,2)	each 300	each 300	each 300
ZZ+ N jets (N=0,1,2)	each 300	each 300	each 300

No more e/mu/tau filter

QCD samples

- B-enriched QCD dijet sample for b-tagging with e/mu filter (5M: very low lepton filter efficiency, thus use 4.9.1MC hepg)
- BB/CC + 0,1,2,3,4 Njets: each 300K (for top hadronic channel)