





$p p \rightarrow T + gamma : quick status$

<u>Jean-Eric</u>

Internal single top meeting

Disclaimer

Due to an involuntary removal of all my ROOT files, These slides are not complete at all.

Update will come soon ...

Introduction



The considered channel (TOP-14-003) :



Final state topology:

- high pT photon
- MET
- B-quark jet
- muon

Possible FCNC couplings :

Top-gamma-u Top-gamma-c Top-g-u Top-g-c

To-do list

- Generation task :
 - Photon in MadGraph
 - Producing all required samples
- Improving Delphes simulation related to photon
- Plots, plots and plots:
 - Checking samples used in the analysis
 - Studying the spectrum of discrimant observables
- Debugging selection class and committed to SVN
- Cut-flow with Signal vs Background
- Optimization of the selection
- Using the code devoted to limits
- Perspective : the electron channel ? TMVA ?



Ongoing with Greg (see Thursday talk)



Object definition



- Tight muon: pT > 26 GeV, eta < 2.1, Pflow relative isolation < 0.12 with DR=0.4
- Loose muon: pT > 10 GeV, eta < 2.1, relative isol < 0.2
- Loose electron: pT>20 GeV, eta < 2.5

- Photon: pT > 50 GeV , eta < 2.5 , Pflow isolation with DR=0.4
- **b-quark jet** : eta < 2.5 , pT > 30 GeV



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Selection





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Selection plots



Additional plots



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Priority 1



Priority 2



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