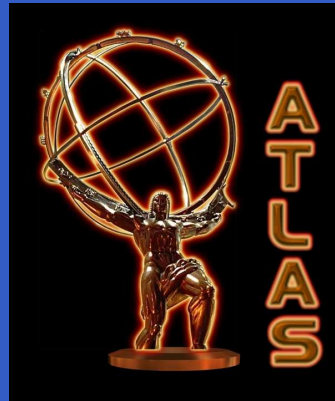




Title



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Second Yellow CERN Report (YR2) "Handbook of Higgs XS: 2. Differential Distributions"

- Deadlines:
 - ◆ for the skeletons of all sections: July 30, 2011
 - ◆ for the complete document: Oct 1, 2011
- Authorship: active members of subgroups with new contributions (not necessarily all)
- Contents:
 - ◆ general: recipe to assess THU+PU for distributions
 - ◆ results on production channels ggF, VBF, WH/ZH, tt -> distributions with THU+PU
 - ◆ BRs: THU+PU
 - ◆ MSSM: general recipes / results for specific scenario(s) for XS and distributions with THU+PU
 - ◆ PO: heavy Higgs mass/width, signal-bkg interference
 - ◆ **NLOMC: tools and error estimates for XS * acceptance**
 - ◆ specific topics: jet veto, more ?

Recall the Common Cuts...



Common Cuts - is revision necessary?

- VH->Vbb (PRELIMINARY!)
 - ◆ $pt(H) > 200 \text{ GeV}$
 - ◆ $pt(V) > 200 \text{ GeV}$
 - ◆ No additional C/A jets with $pt > 20 \text{ GeV}$ ($|\eta| < 2.4$)
- ttH->ttbb (PRELIMINARY!)
 - ◆ exactly one isolated lepton with $pt > 25 \text{ GeV}$ (20 GeV) e(mu).
 - ◆ ≥ 6 jets with $pt > 20 \text{ GeV}$
 - ◆ ≥ 4 b-tagged jets with $pt > 20 \text{ GeV}$

NLO MCs now available:

- VH->Vbb: MC@NLO and POWHEG (Giacinto, Doug, Michiel, Chris P, Clara...)
- W+bb: POWHEG (Giacinto, Doug, ..)
- Z+bb: ????
- ttH->ttbb: aMC@NLO (Daniela, Chris CT, Chris P, ...)
- tt+bb: ????