

Status at LAPP

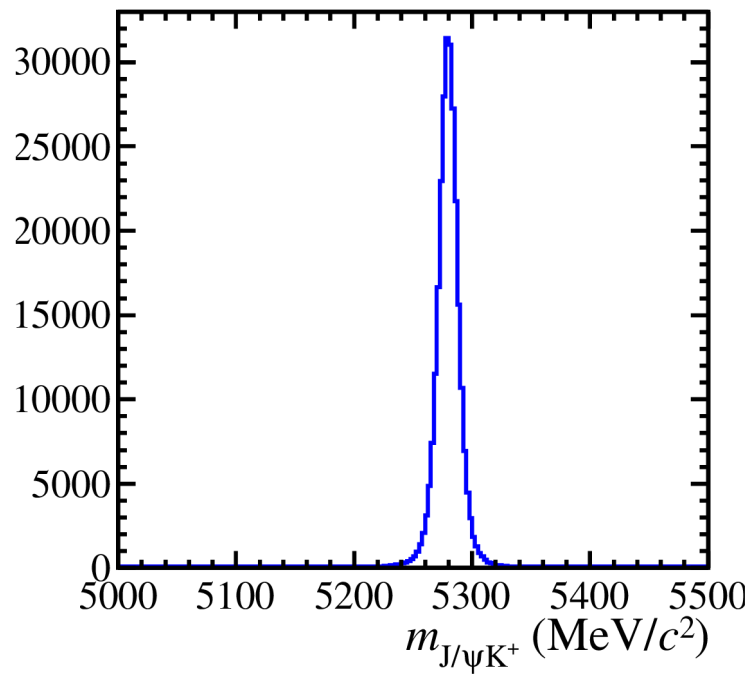
May 12th 2020, Annecy/Edinburgh meeting
M. Chefdeville, A. Downes, B. Quintana

News

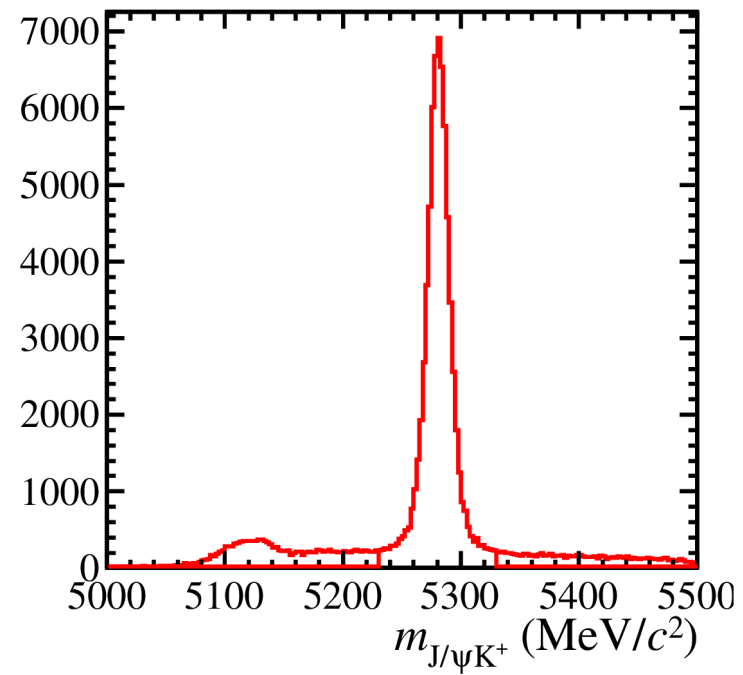
- Preparing for a WGP of JpsiEta Ntuples
 - New variables: B cone, pi0 “analog” veto, full-reco-bkg veto
 - New techniques: TMVA with negative weights, MC weights with nNeutrals
- What’s new? Data/MC tests of cone & pi0-veto on JpsiK (Max) and Chic1K (Anthony). Test prod on 2012Up: compare MC-truth, data signal and high-mass sideband regions
 - JpsiK: data s21 VS new Sim09h unstripped MC (LDST+strip.)
 - Chic1K: data s21 VS new Sim09h stripped MC

JpsiK (last meeting)

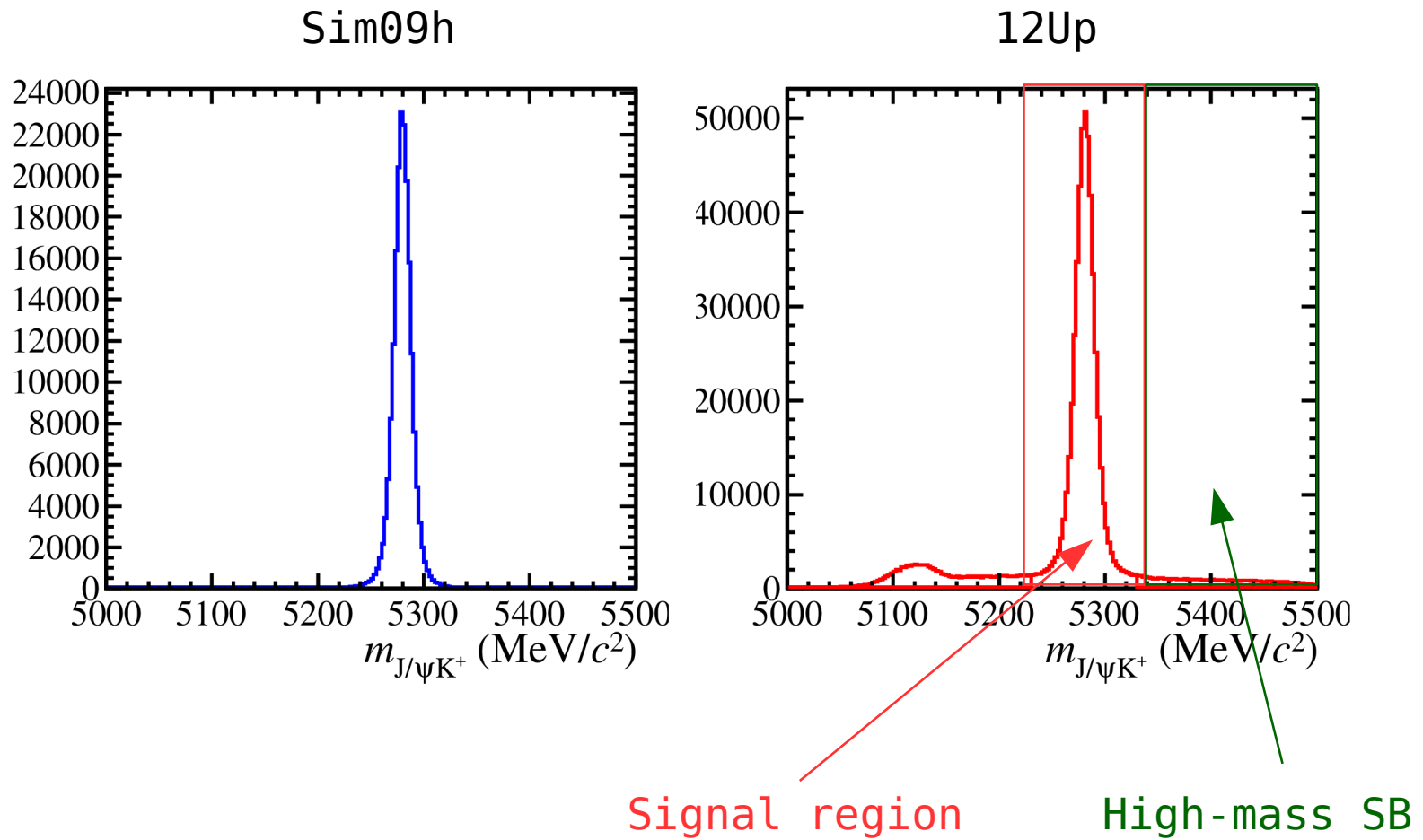
Sim09a



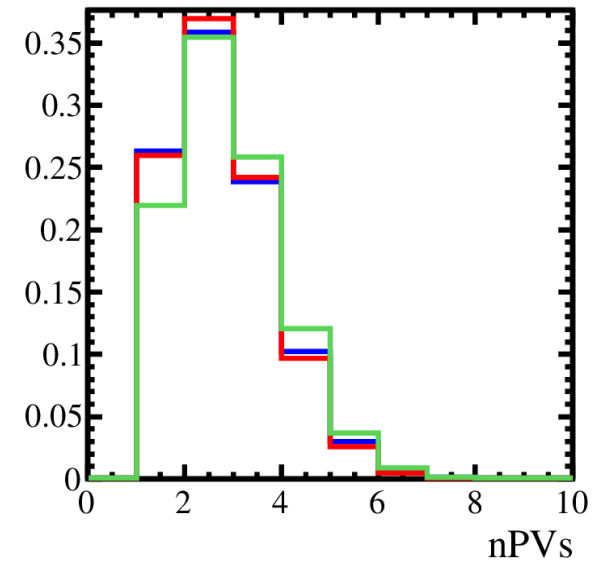
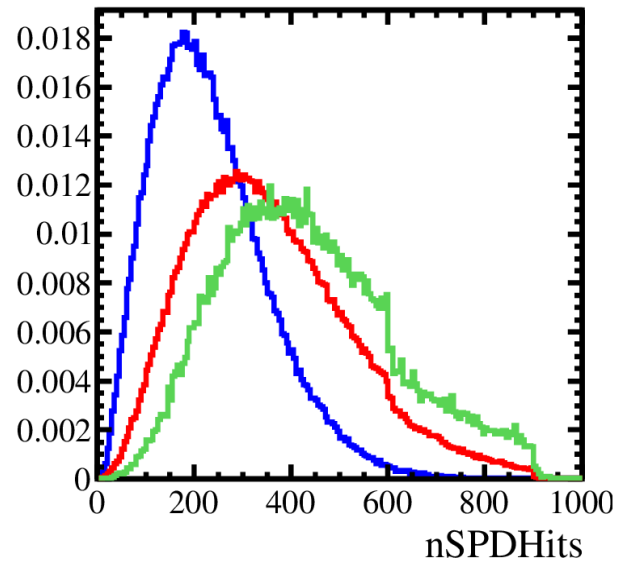
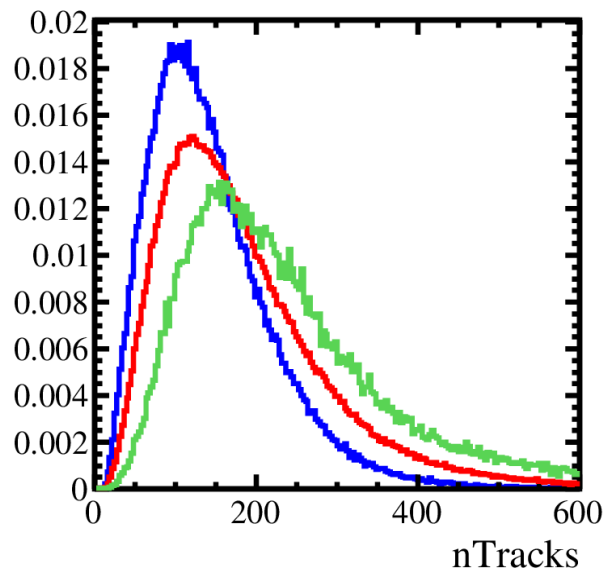
1/7th 12Up



J ψ K

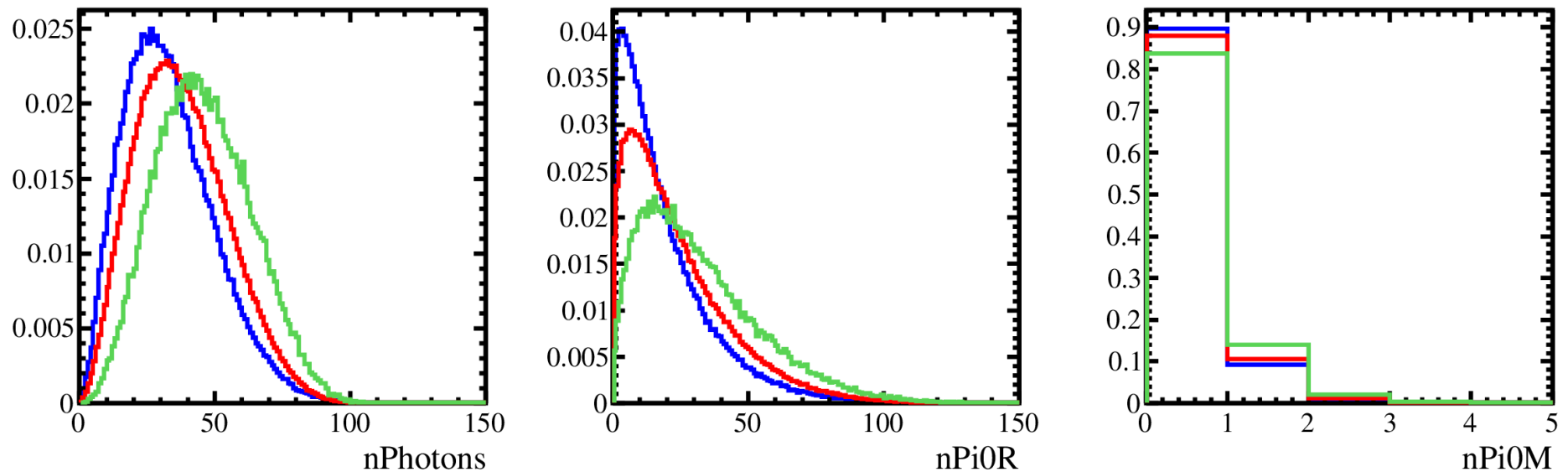


JpsiK, occupancy variables



MC-truth
Signal region
High-mass sideband

JpsiK, neutral variables

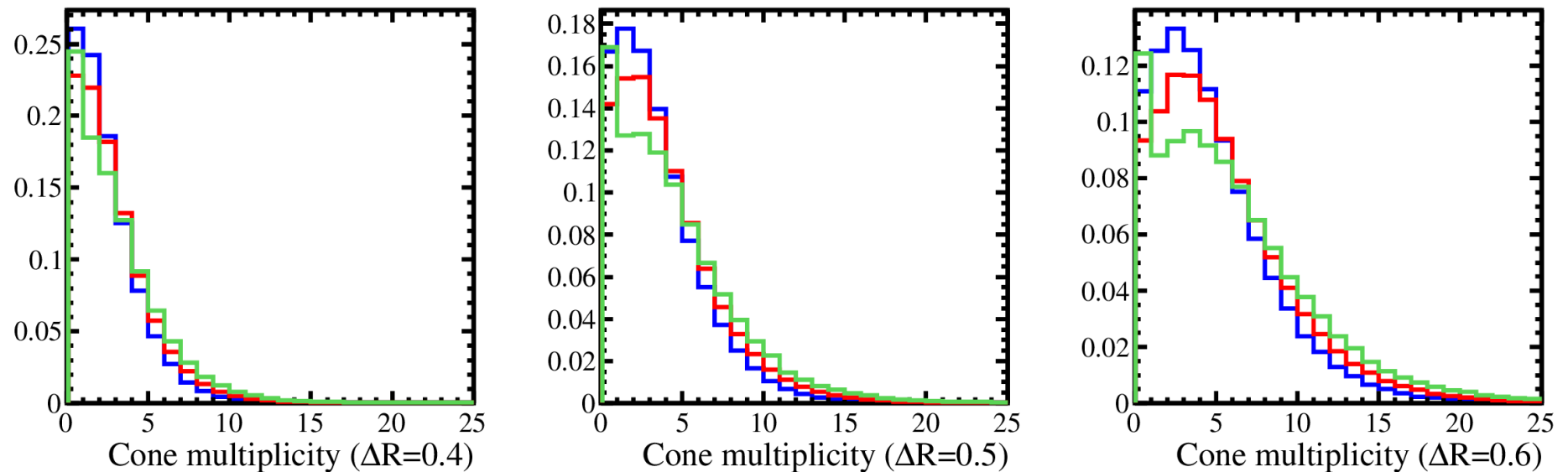


MC-truth

Signal region

High-mass sideband

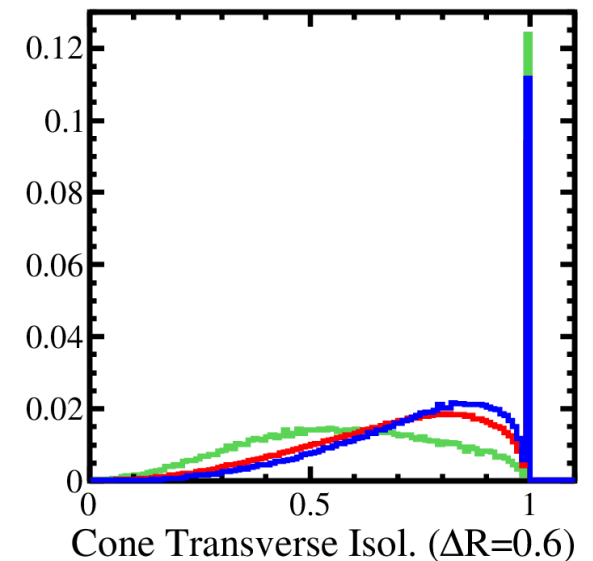
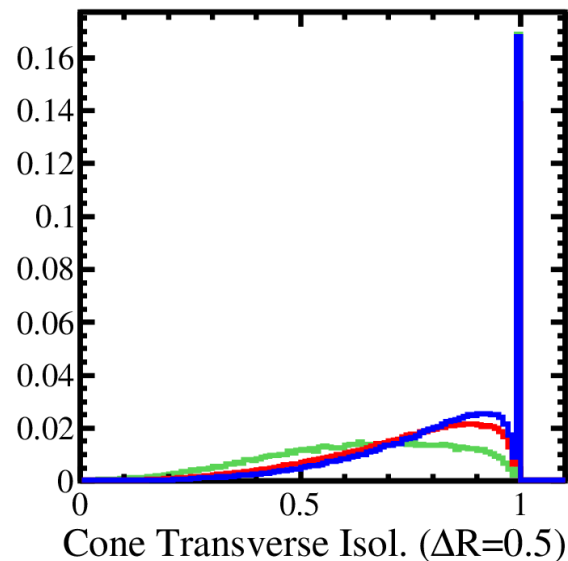
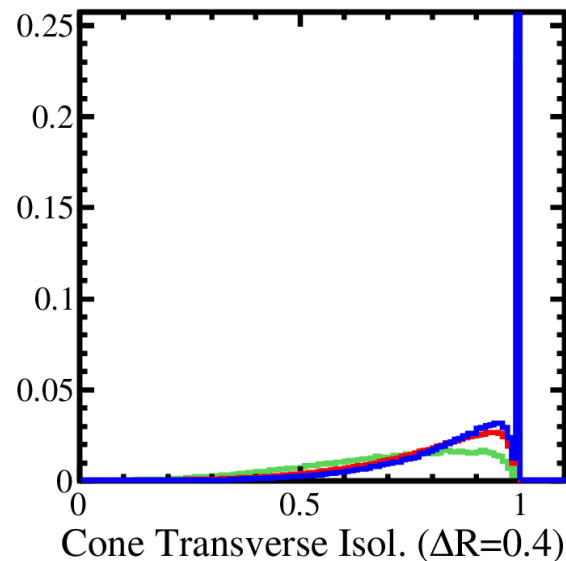
JpsiK, cone multiplicity



MC-truth
Signal region
High-mass sideband

JpsiK, cone transverse isolation

- IT more discriminating with larger cones
 - Treat $N=0$ and $N \neq 0$ separately. Also, try $\Delta R > 0.6$



MC-truth
Signal region
High-mass sideband

Outlook

- Cone isolation:
 - Is discriminating
 - Effect of nTrack-resampling should align data/MC signal
- Still to check:
 - π^0 -veto modified TupleTool on modes with a π^0 (JpsiKst)
- JpsiEta modes
 - Prepare a WGP of Ntuples
 - finalise list of relevant variables and bkg decay to be veto'ed
 - list of triggers?
 - Check our MC Sim versions: can we live with buggy (occupancy Sim09d-e-f) MC?
Will cone variable in data align in MC after nTracks reweighting?
- ...