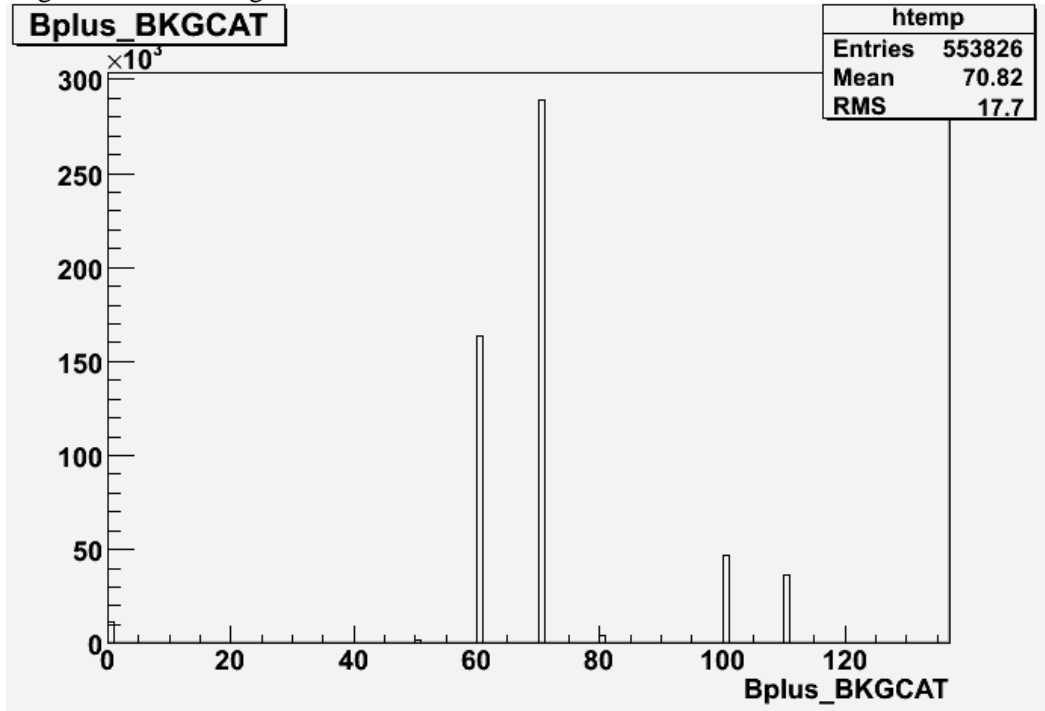
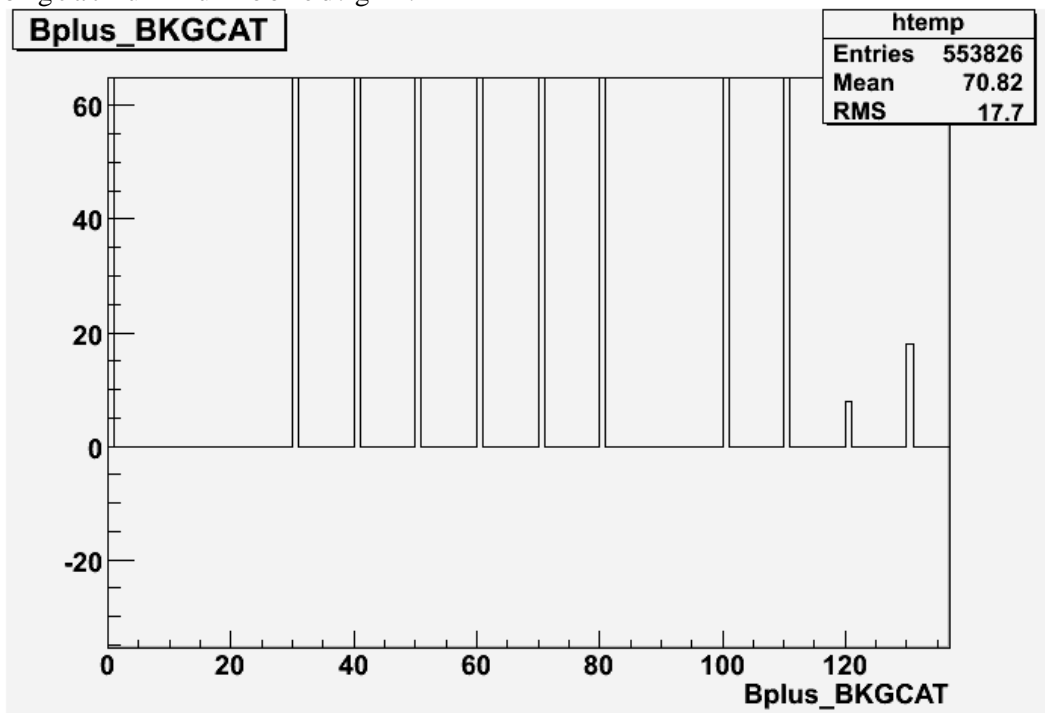


Analysis

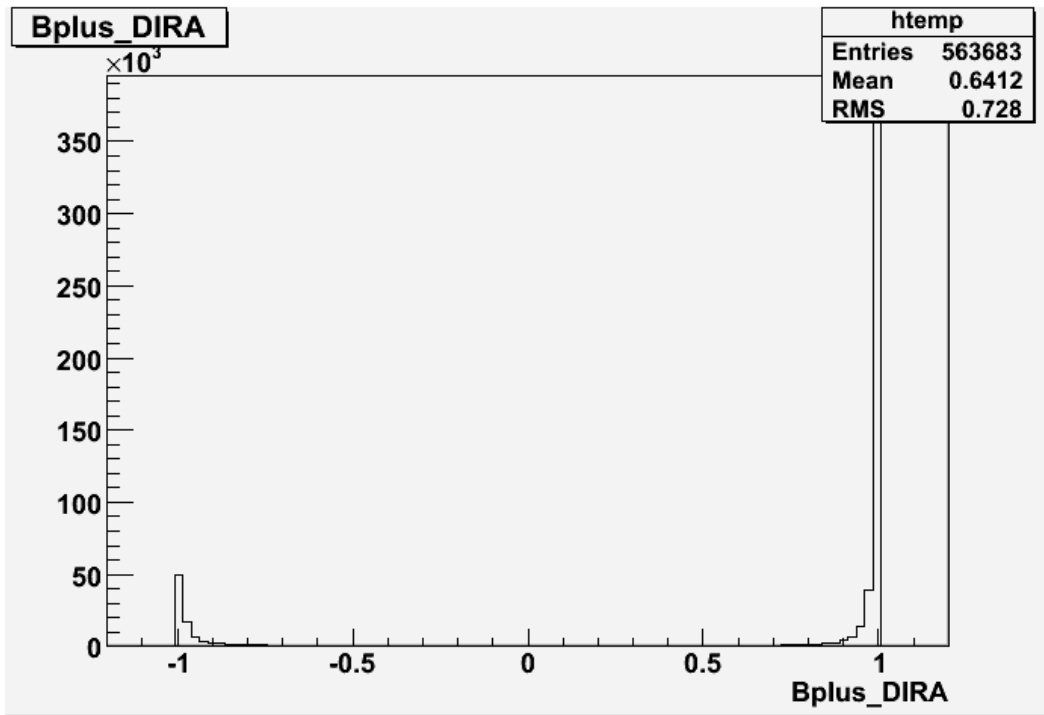
- DaVinci Particles defined at:
/afs/cern.ch/lhcb/software/releases/ANALYSIS/ANALYSIS_v1r14/Phys/CommonPar
- DaVinci BkgCategory defined at:
<http://lhcb-release-area.web.cern.ch/LHCb-release-area/DOC/davinci/release>
- Gaudi Units defined here:
/afs/cern.ch/sw/Gaudi/releases/GAUDI/GAUDI_v20r2/GaudiKernel/v25r2/GaudiKe
- bkgcatfullrun.gif:



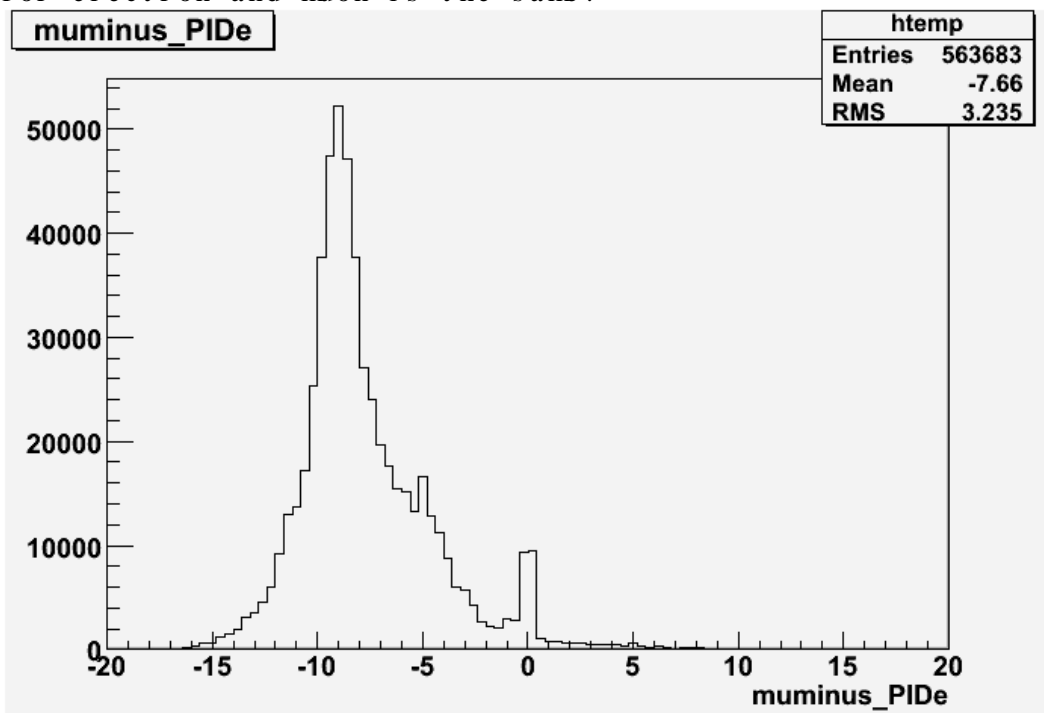
- bkgcatfullrunzoomed.gif:



- No worries about cutting off B mesons travelling out of the detector range in wrong direction!? Bplus_DIRA.gif



- dll mu-e why is there a strange peak around 0 when the likelihood for electron and muon is the same?



- Counter output of run over Run1 Events 1-30000 with v loose preselection cuts (mass window on B 4GeV and chi2/ndof vertex fit of B < 100 !). Interesting asymmetry in reconstruction of B+ and B-

"# B+ -> pi+ mu+ mu- "	29192	279088	9.5604	21.417	0.0000	1026.0
"# B- -> pi- mu- mu+ "	29192	274857	9.4155	20.984	0.0000	917.00

- Preliminary Background Run information:
 - ◆ Dilepton stripping information for dimuon stream available here:
/afs/cern.ch/lhcb/software/releases/ANALYSIS/ANALYSIS_v1r14/PhysSel/
 - ◆ DC06 stripping guide available here:
https://twiki.cern.ch/twiki/bin/view/LHCB/DC06StrippingHowTo#How_to_r

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- ◆ More stripping options in \$STRIPPINGROOT/options/Presel.opts
- ◆ How to write a decay descriptor:

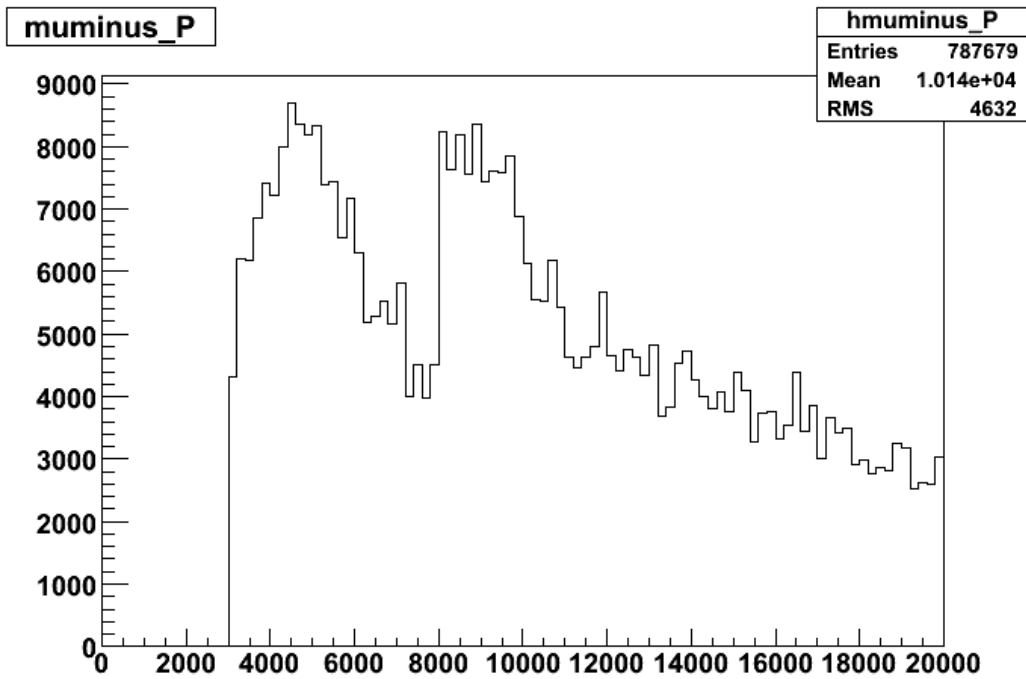
<http://lhcb-release-area.web.cern.ch/LHcb-release-area/DOC/davinci/>

- To loop over the root file produced by DaVinci use the following commands (should really run on TChain but my tchain only contains the one file) TFile * filesignal =
TFile::Open("rfio:///castor/cern.ch/user/j/johndan/DaVinciAnalysis/Bu_pi_mu.root");
filesignal.cd("DecayTreeBu2PiMuMu");
TTree * tree =
gDirectory->Get("Bu2PiMuMuTuple");
tree->MakeClass("Optimisation");
- <https://twiki.cern.ch/twiki/bin/view/LHcb/LoKiHybridFilters>
- // STRIP REST OF OPTIONS

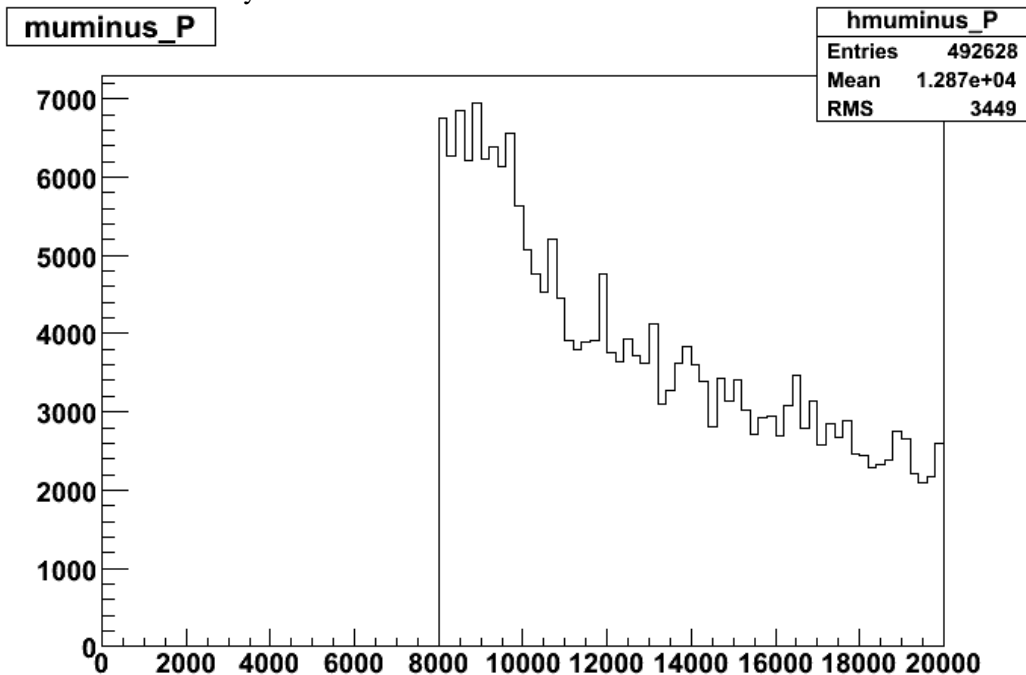
```
// STRIP OPTIONS Presel B2Di Muon Presel B2Di Muon // From
DVPresel B2Di Muon.opts: //In ->DVPresel B2Di Muon->DoPresel B2Di Muon TopAlg
+= { "GaudiSequencer/SeqPresel B2Di Muon" }; SeqPresel B2Di Muon.Members = {
"MakeResonances/Presel B2Di Muon", "PrintHeader/PrintPresel B2Di Muon" };
//In ->DVPresel B2Di Muon->DoPresel B2Di Muon->Presel B2Di Muon InputLocations
= { "Phys/StdDC06LooseMuons" }; DecayDescriptor = "J/psi(1S) -> mu+ mu-";
DaughterFilter.Selections = { "mu+ : KinFilterCriterion/LKin,
PVI PFilterCriterion/LPVI P" }; MnPt = 800*MeV; MnMomentum = 8000*MeV;
MnIPsignif = 3.0; MotherFilter.Selections = { "J/psi(1S) :
VtxFilterCriterion, FlightDistanceFilterCriterion" }; MaxChi2 = 10;
MnFSPV = 3.0; HistogramProduce = false; DaughterPlots.Variables = { "P",
"Pt", "IPs" }; MotherPlots.Variables = { "M", "Chi2", "Vz", "P", "Pt",
"IPs", "FS" }; MotherPlots.Minima = { 3000.0, 0.0, -150., 0.0, 0.0, 0.0,
0.0 }; MotherPlots.Maxima = { 3000.0, 50.0, 150.0, 20000.0, 10000.0,
10.0, 10.0 }; //In ->DVPresel B2Di Muon->DoPresel B2Di Muon OutputLevel = 3;
OutputLevel = 4; //Added: MeasureTime = true; OutputLevel = 3;
Preselection criteria which must be matched in the signal and background
samples to compare them fairly in order to optimise cuts
```

- Mu- momentum for the stripped background sample - evidence of stripping cut at 8GeV but much false reconstruction so I'll apply a 8GeV cut in my DaVinci jobs too.

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- Mu- momentum for stripped background sample *after* cut put in place at $P > 8 \text{ GeV}$ in my DaVinci code



-- DanielJohnson - 27 Aug 2008

This topic: [Main > BPi MuMuAnalysis](#)
 Topic revision: r9 - 2008-08-27 - DanielJohnson



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