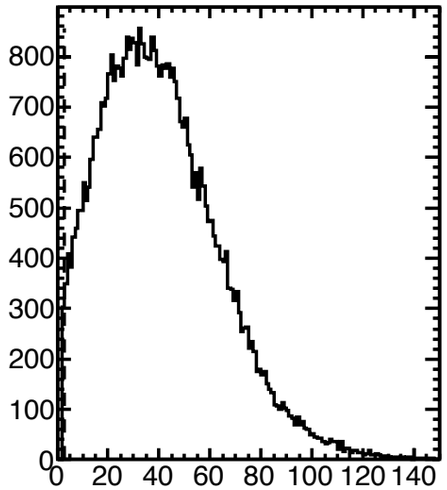
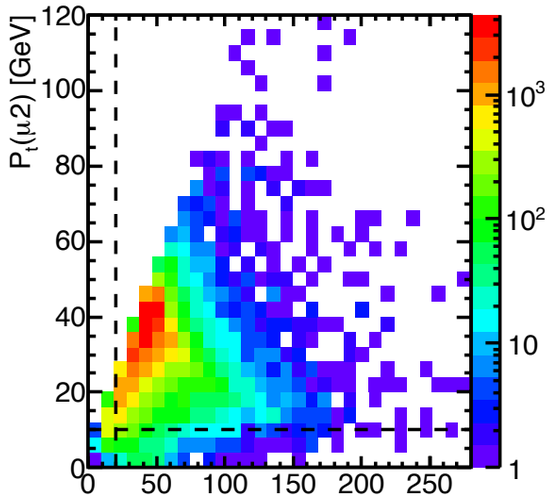
21, Feb, 2013 加茂直之

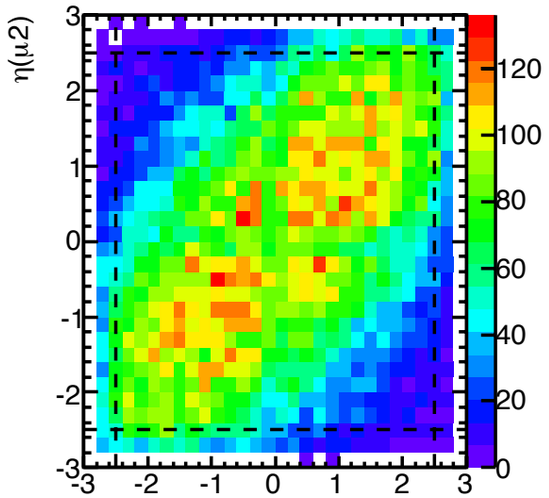
- 変更点はJVF(Jet1)>0.5かつ
- JVF(Jet2)<0.25のJet2は無視して2ndJetVetoをする
- 右がイベント数の変化

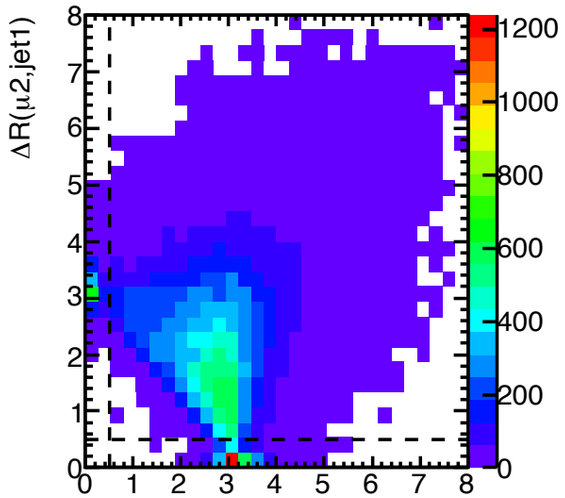
no cut	47490
muon,JET,DR	18755
JVF(Jet1)>0.5	7750
DPHI > π-0.2	2973
2ndJetVeto	2029

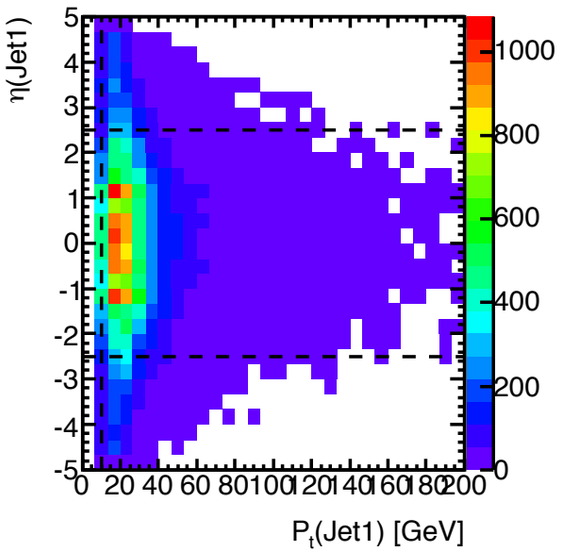
カットパラメータ分布

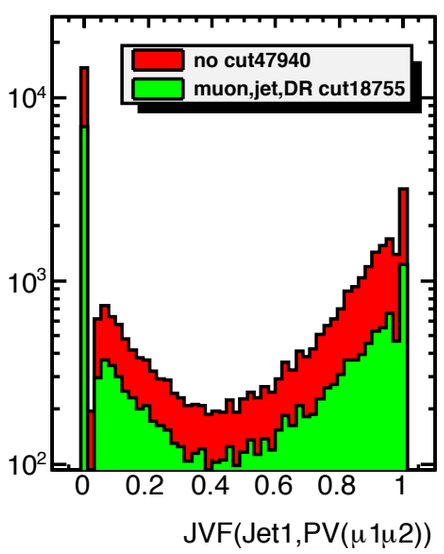

vxp_nTracks

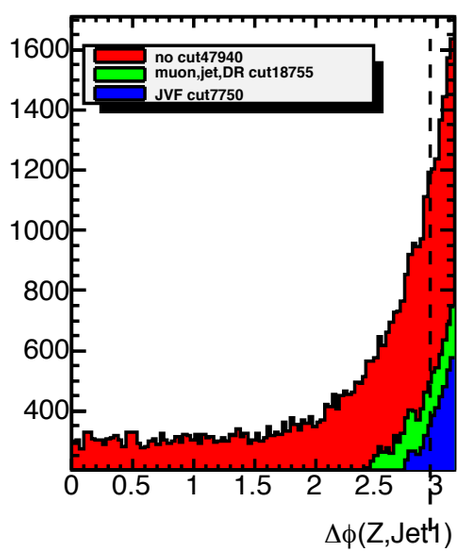

$P_t(\mu 2)$ [GeV]
$P_t(\mu 1)$ [GeV]

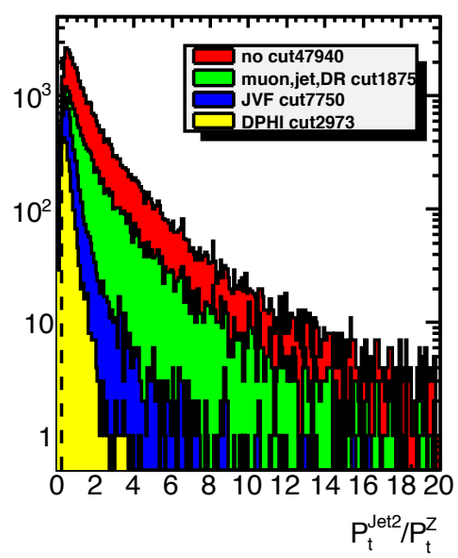

$\eta(\mu 2)$
$\eta(\mu 1)$


$\Delta R(\mu 2,jet1)$
$\Delta R(\mu 1,jet1)$

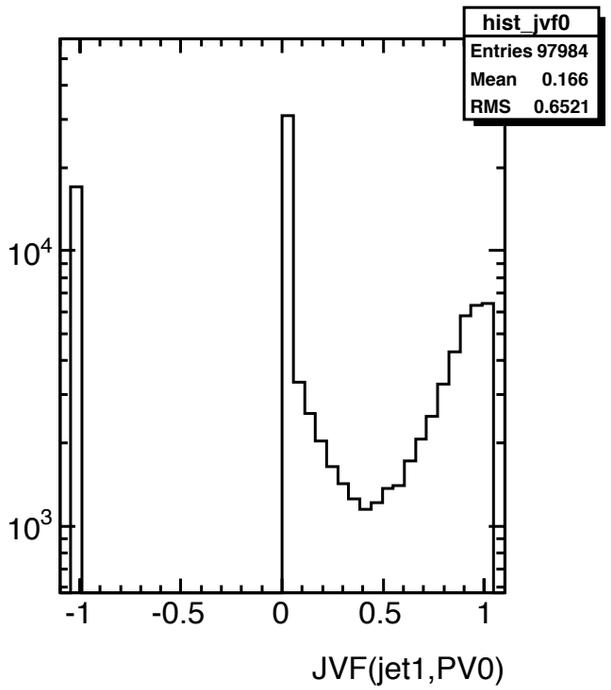

η(Jet1)
P_t(Jet1) [GeV]

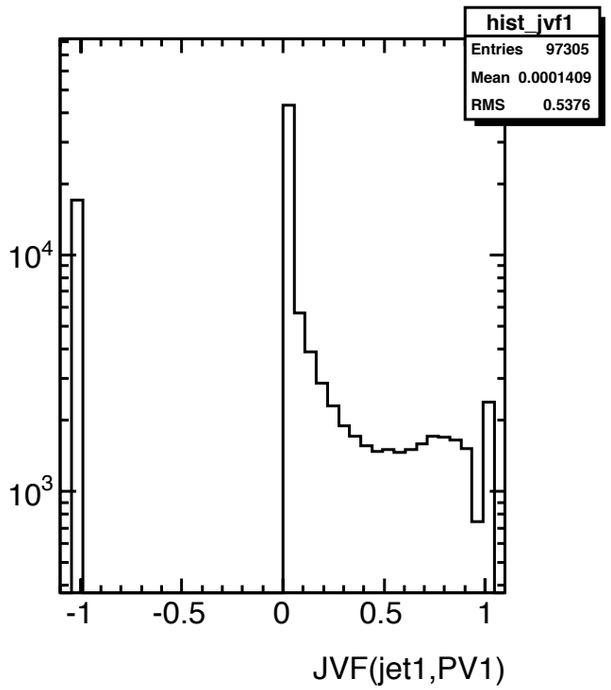

no cut47940
muon,jet,DR cut18755
JVF(Jet1,PV($\mu 1\mu 2$))

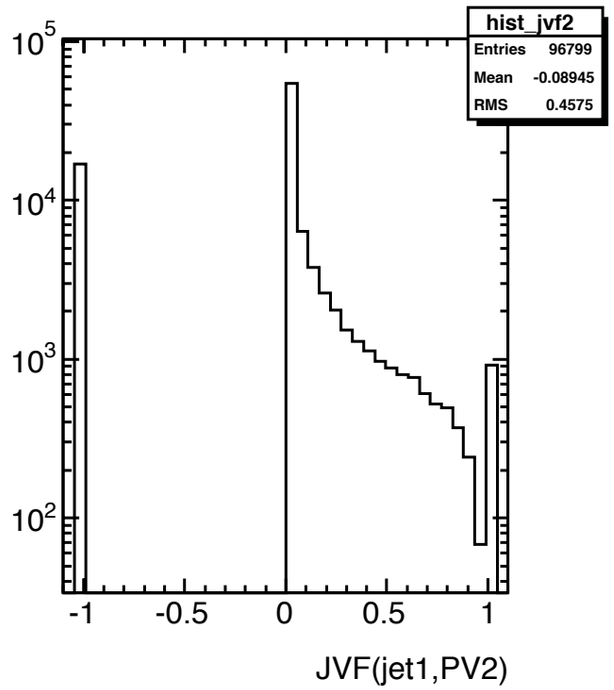

no cut47940
muon,jet,DR cut18755
JVF cut7750
$\Delta\phi$(Z,Jet1)

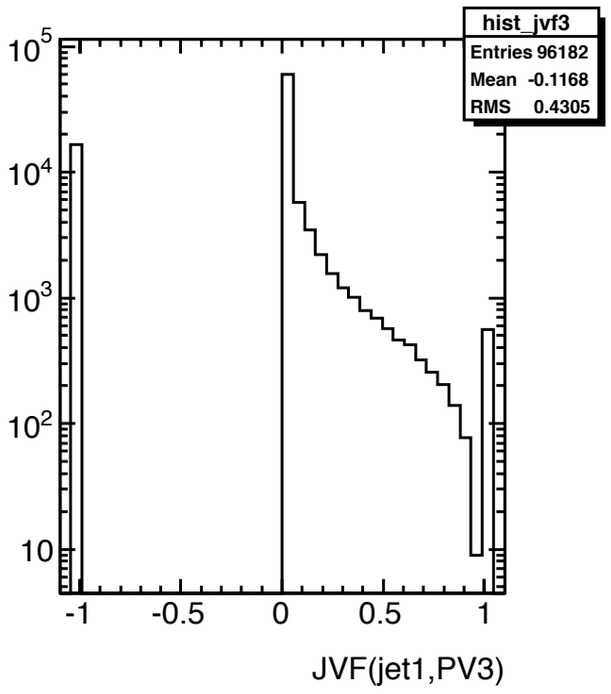

no cut47940
muon,jet,DR cut1875
JVF cut7750
DPHI cut2973
P_t^{Jet2}/P_t^Z

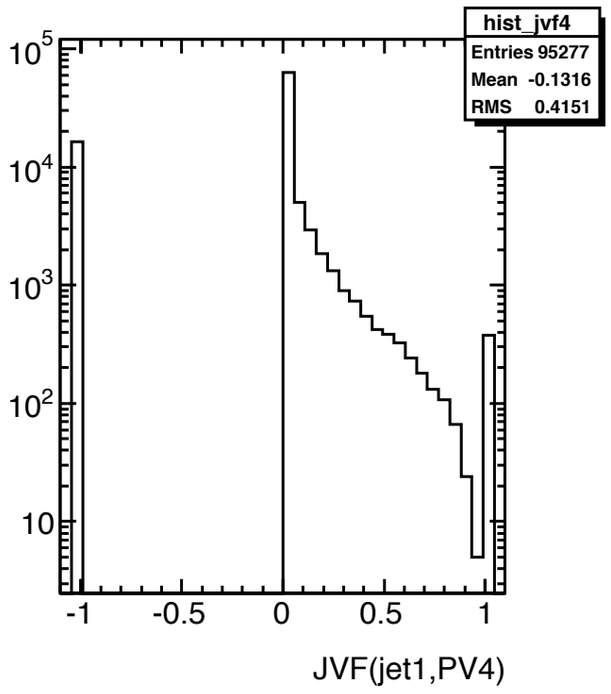
JVF(Jet1,PV(mu))



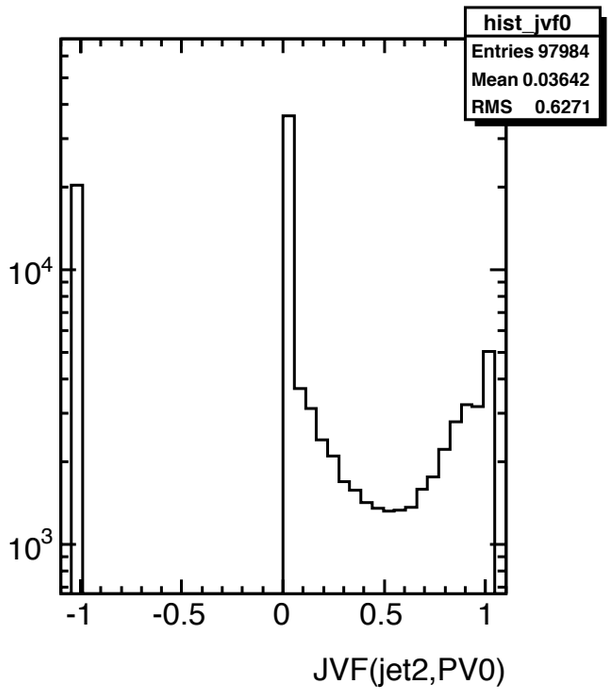


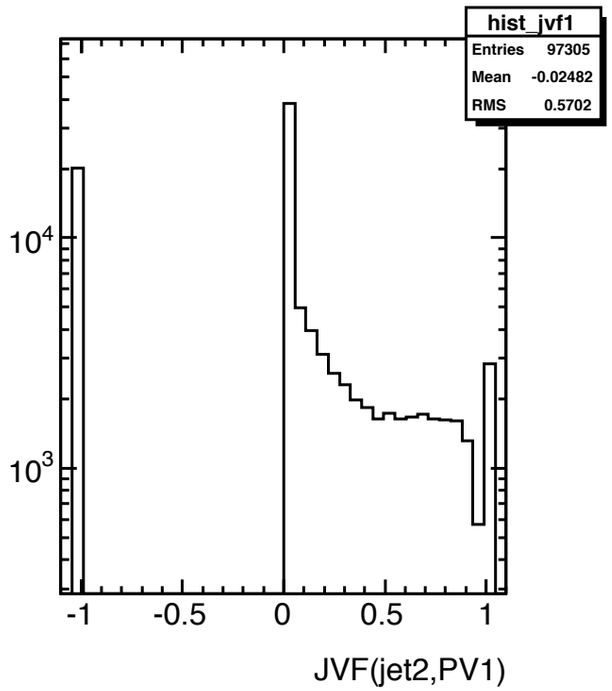


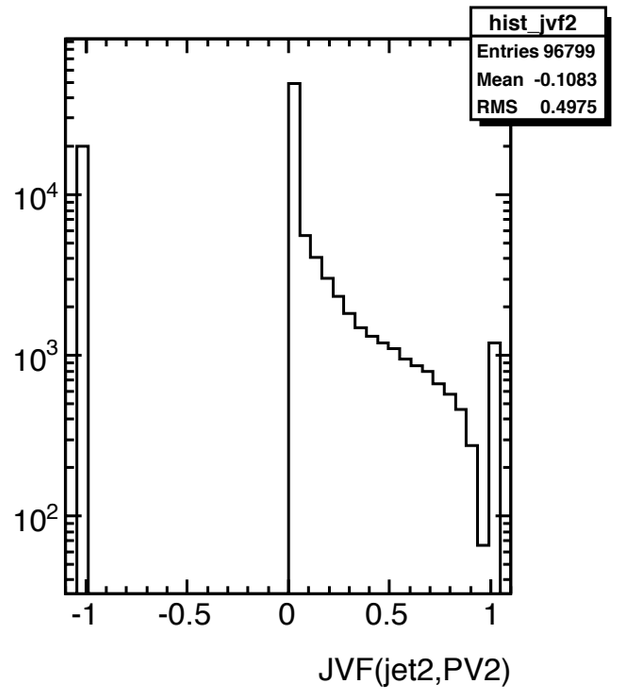


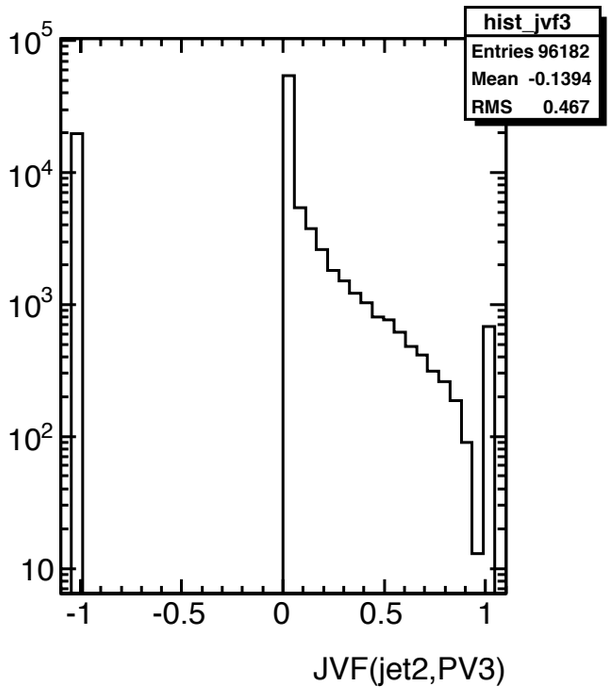


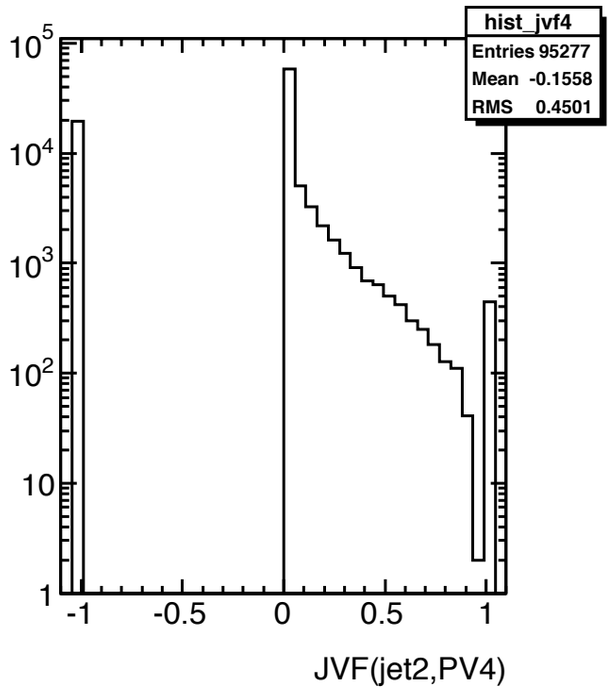
JVF(Jet2,PV(mu))



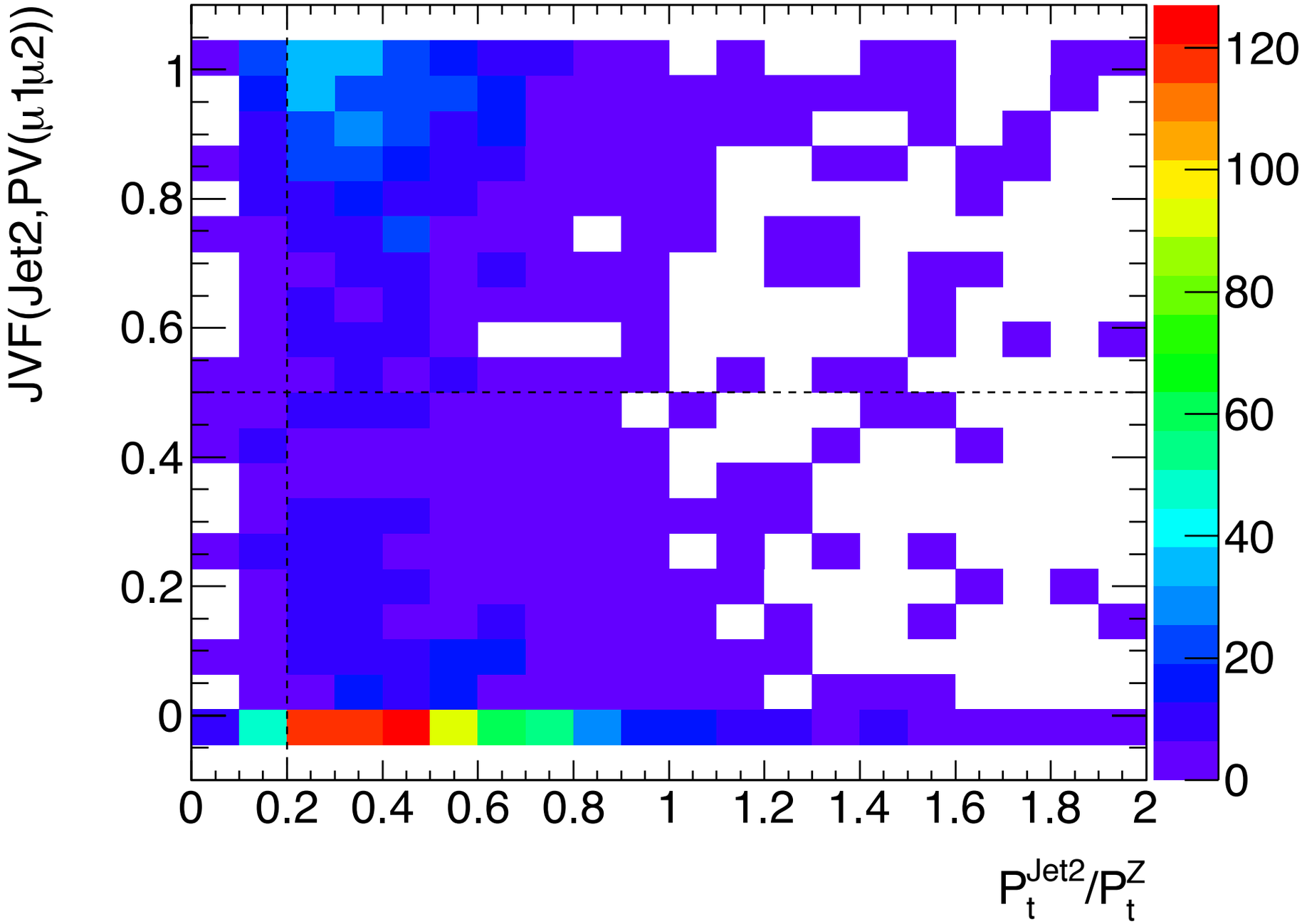




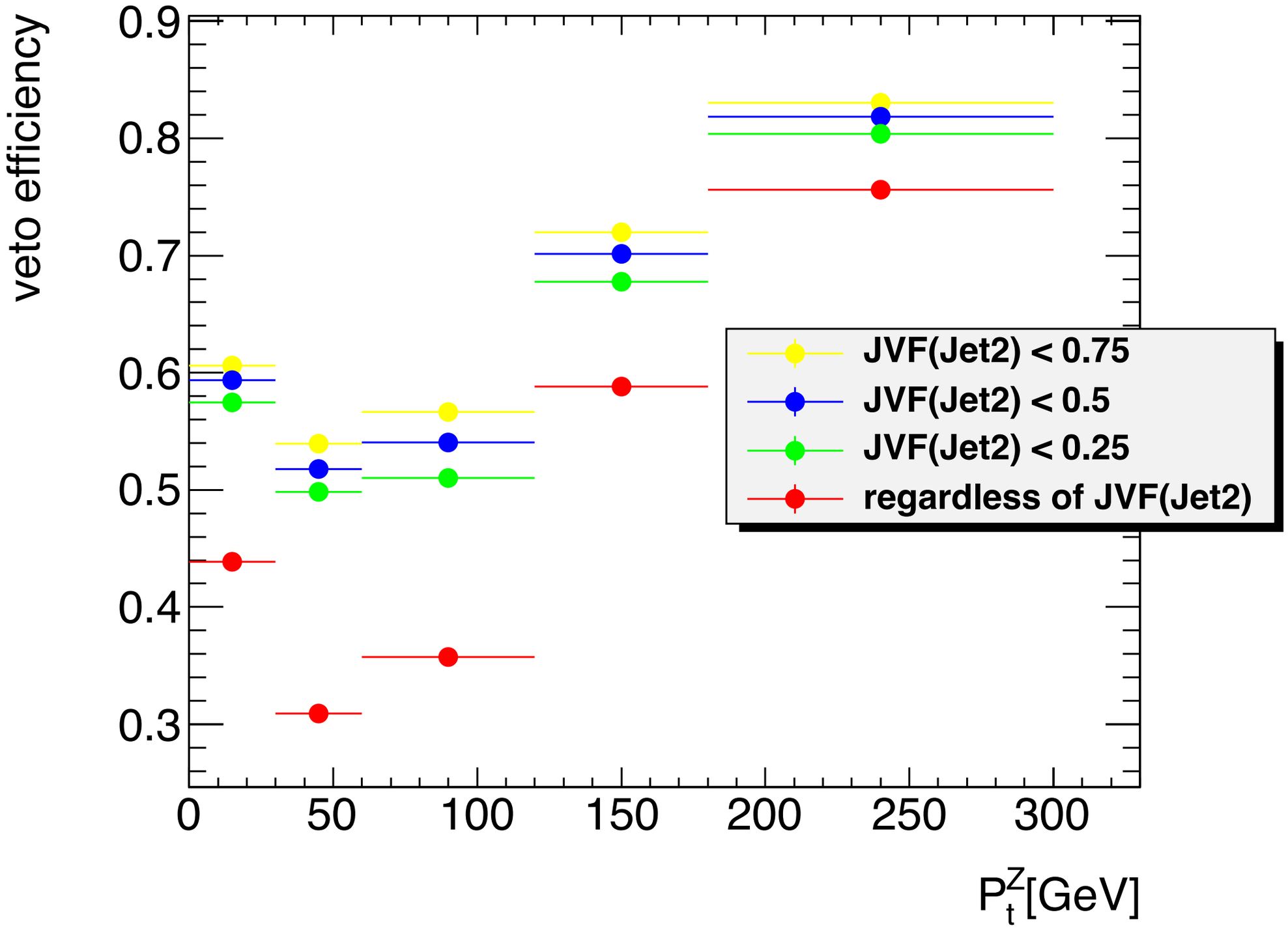




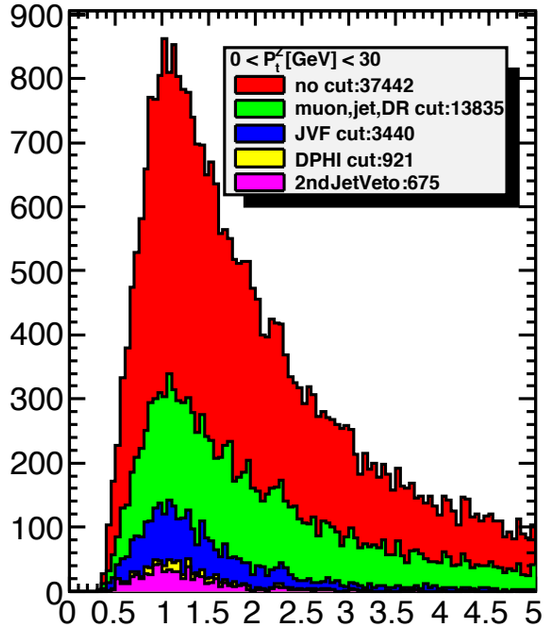
Pt_Jet2/Pt_ZとJVF

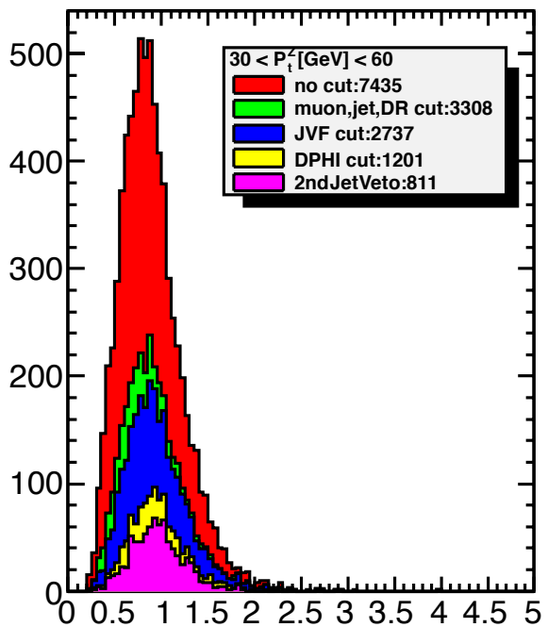


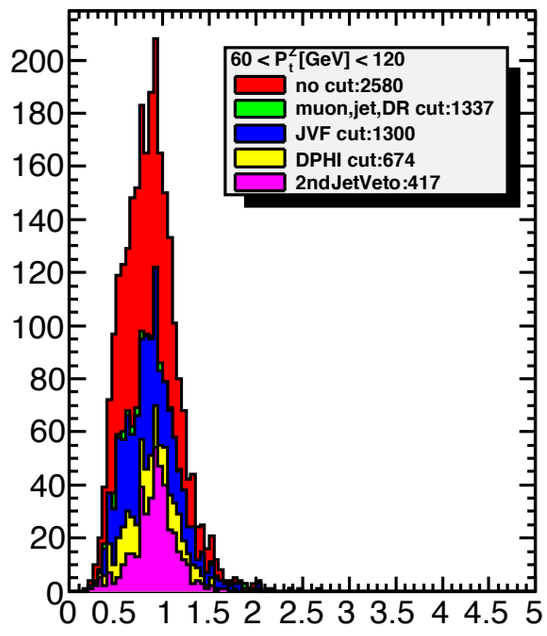
veto effiecincyのJVF(Jet2)依存性

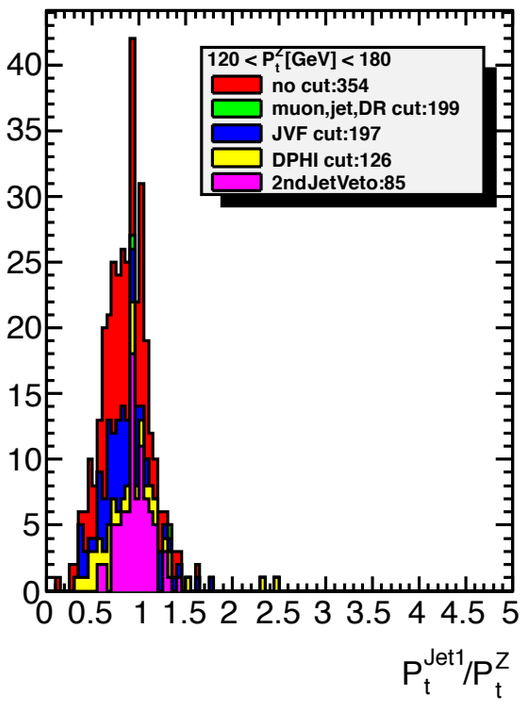


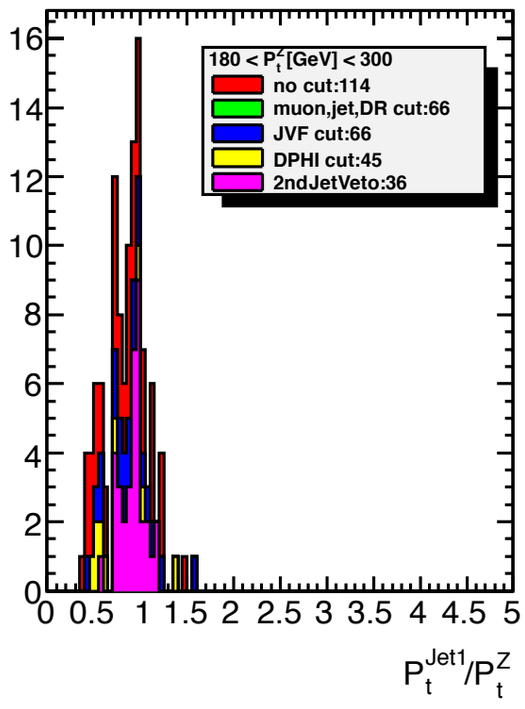
Pt_Jet1/Pt_Zのcutによる変化



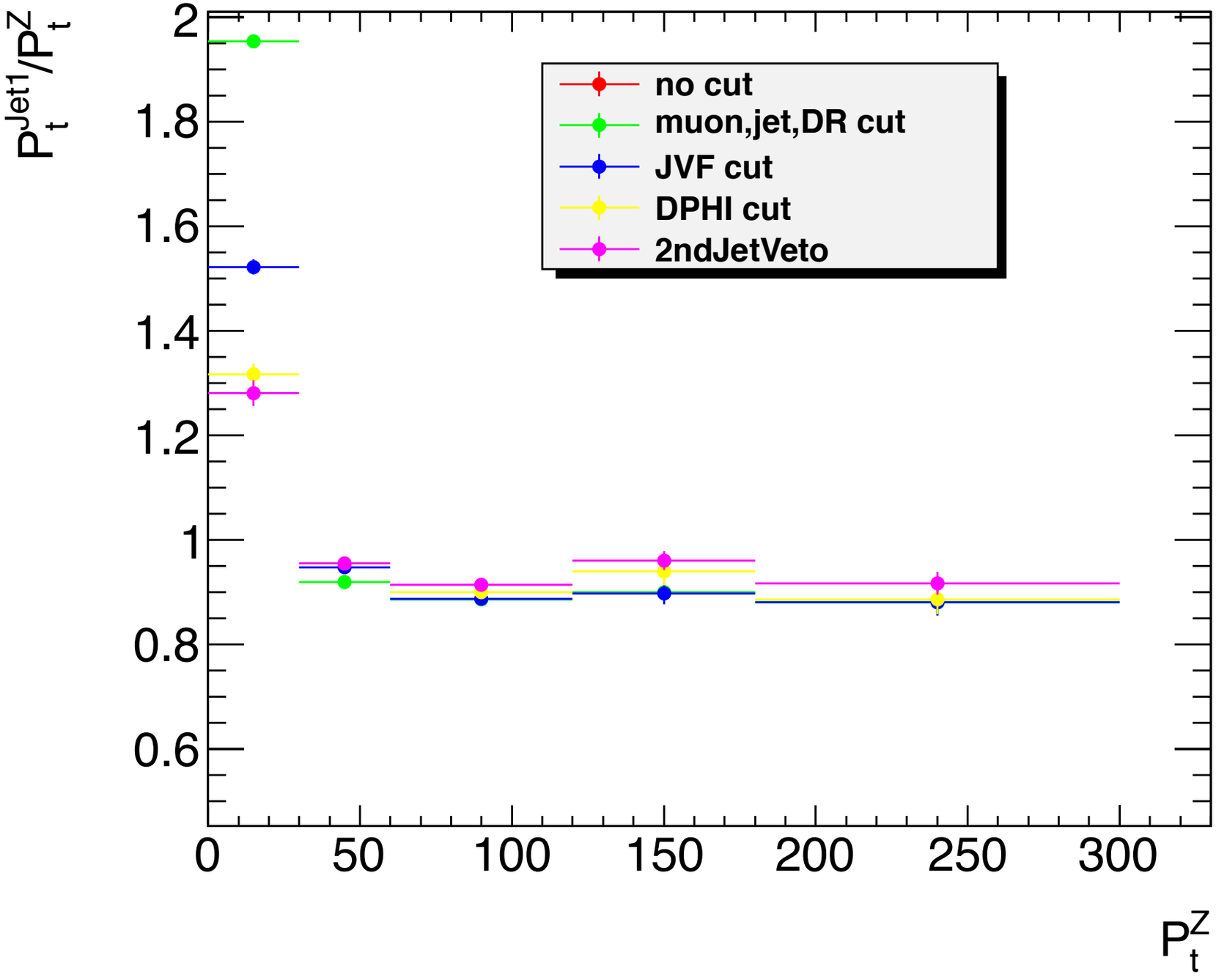




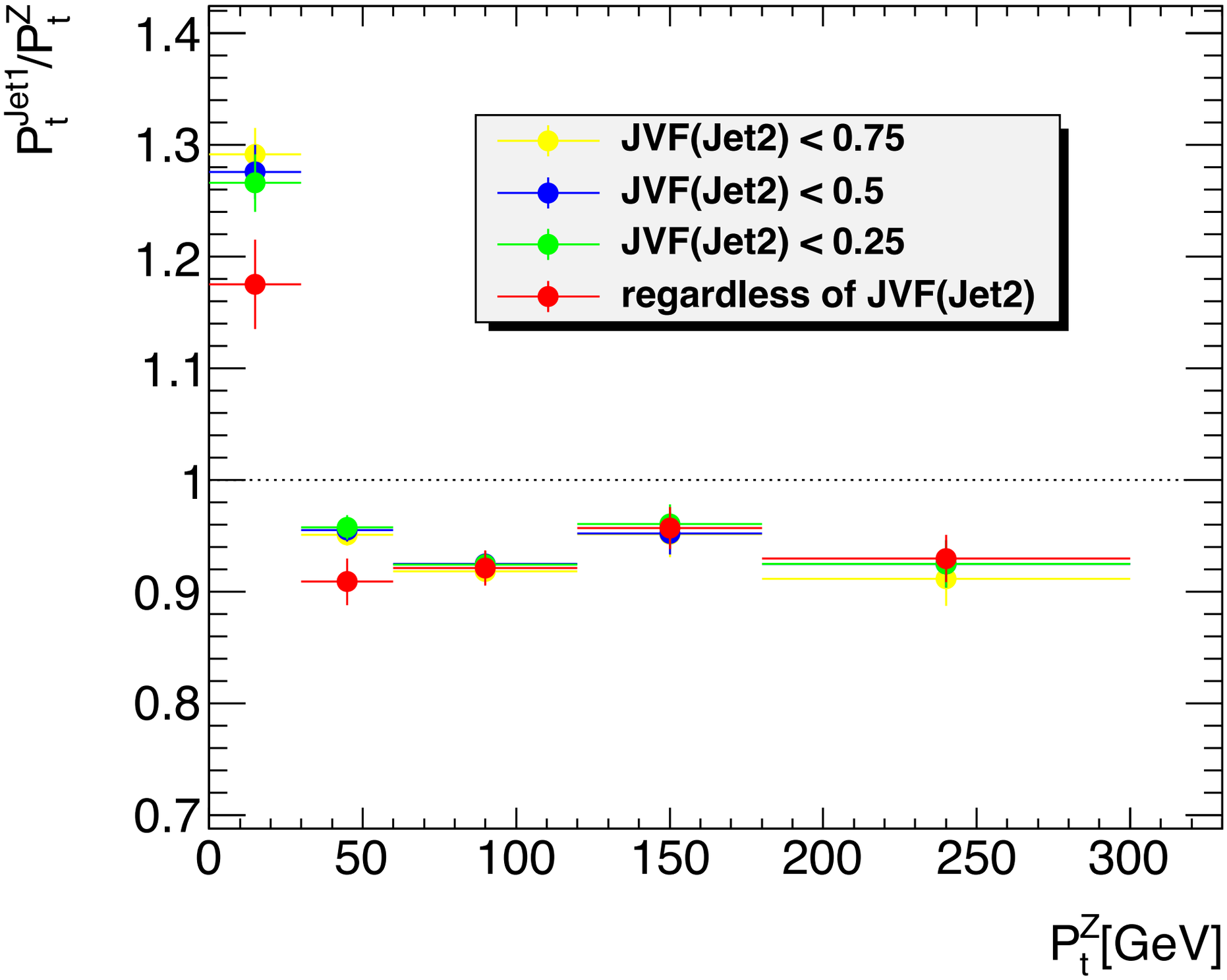




Pt_Jet1/Pt_Zのcutによる変化 (前頁のmeanとerrorを出したもの)



Pt_Jet1/Pt_ZのJVF依存性



- 統計増やす予定だったけれど、
- （移植性の問題？でマクロが走らず）うまくできなかった。
- あと、Dataでちょっとやってみたが、数TBぐらいだと統計が少なそうだった。
- 次からはgridに投げることにする

back up

Data

- mc12_8TeV.147807.PowhegPythia8_AU2CT10_Zmumu.merge.NTUP_JETMET.e1169_s1469_s1470_r3610_r3549_p1344
- event number : 100000

cut value

variable	Cut
vxp_n	≧2
Pt_mu1	> 20GeV
Pt_mu2	>12GeV
$\lvert\eta$ _mu$\rvert$	<2.47
Pt_Jet	>10GeV
$\lvert\eta$ _Jet$\rvert$	<1.2
$\Delta\Phi$(Jet,Z)	$>\pi$ -0.2
ΔR(Jet,mu)	>0.35
Pt_2ndJet/Pt_Jet	<0.2

使用した変数

- Jet:Jet_AntiKt4TopoEM
- muon:mu_staco

algorithm

- 任意の２つの異なるchargeのmuonでloop
- そのうえで適宜cutをかける
- 66GeV < M_mumu < 116GeVになるeventをselect
- もしこれを満たすmuonが２pair 以上存在すれば、91GeVに近いmuon pairをselectする