

pp spectra @ 2.76 TeV: summary

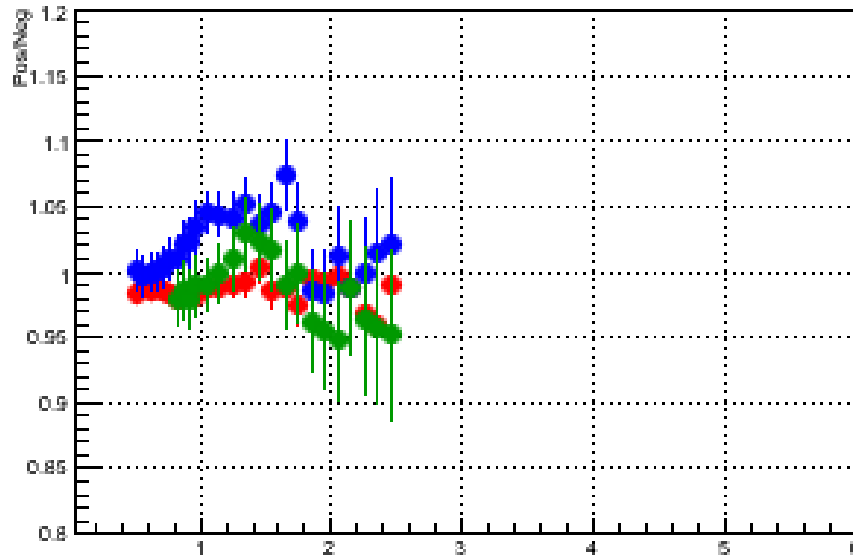
Details of the analysis

	Marek	Barbara	Raul	Francesco
Run list	146824;146817;146806;146805;146804;146803;146802;146801			Run with HMPID (good run)
Data	data/2011/LHC11a/*/pass4_without_SDD/AOD113/AliAOD.root	data/2011/LHC11a/ESDs/pass4_without_SDD/*AliESDs.root		data/2011/LHC11a/ESDs/pass3_with_SSD
MC	sim/2012/LHC12f1b/*AliAOD.root	sim/2011/LHC12f1a/	sim/2012/LHC12i3	LHC11h 5a, 5b, 5c, e3a_plus
Event cuts	AliVEvent::kMB with vertex from SPD or global tracks which NContributors >=1 ; z <10			
Track cuts	Bit1 (standalone TPC cuts for global tracks) +kTPCrefit+kITSrefit+SPDany +nclsTPC>70+plus dcaxy from GetStandardITSTPCTrackCuts2011 eta <0.8 , y <0.5 for pt>0.6GeV TOFflags	GetStandardITSTPCTrackCuts2011(kFALSE,1); eta <0.9 Y<0.5 KTOFout, kTime		GetStandardITSTPCTrackCuts2011(kFALSE,1); eta <0.9 Y <0.5

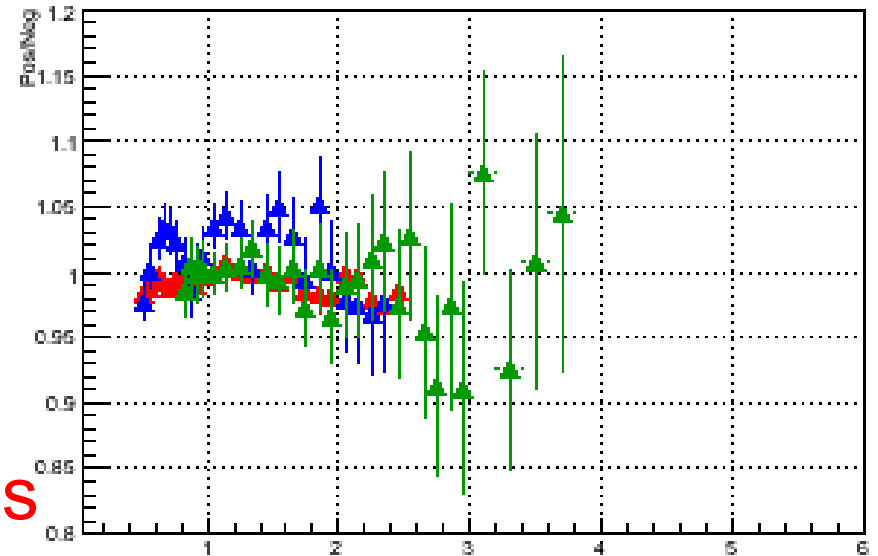
Spectra normalized over the number of MB events (analyzed)

Positive / Negative

TOFRaul

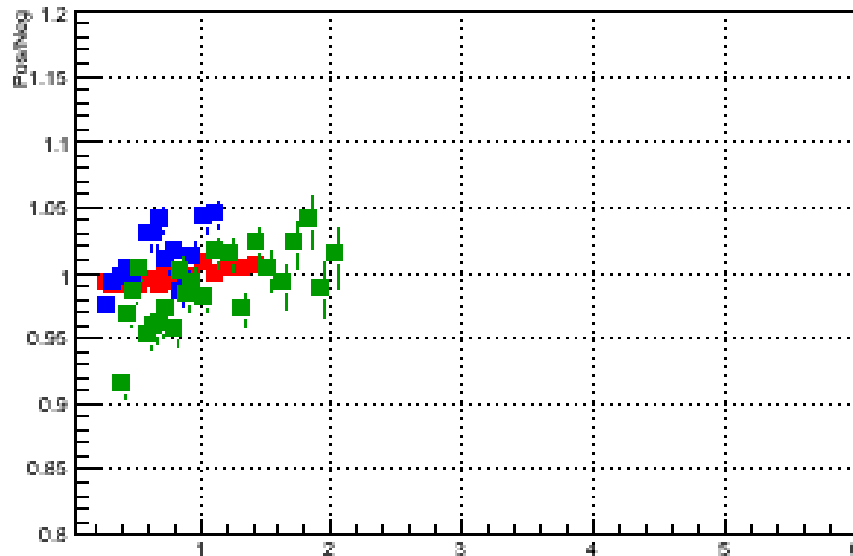


TOFBG

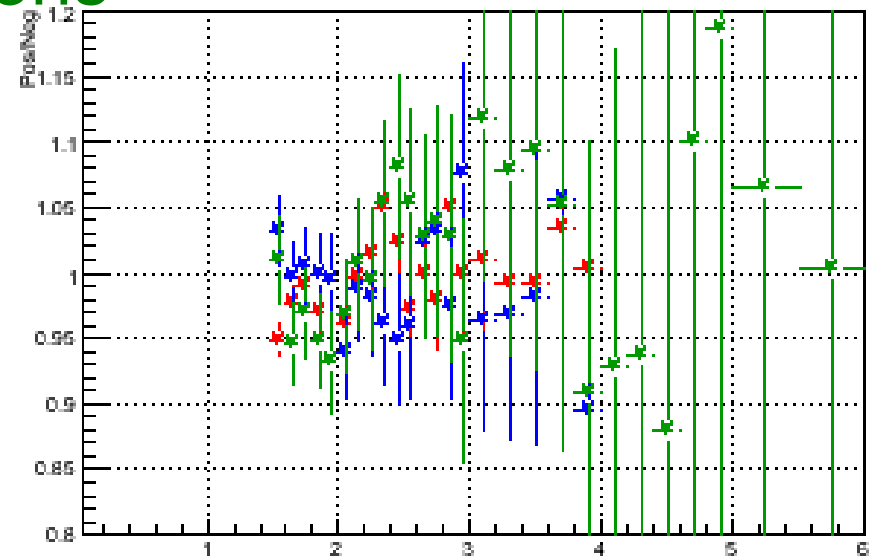


Pions
Kaons
Protons

TPCMarek

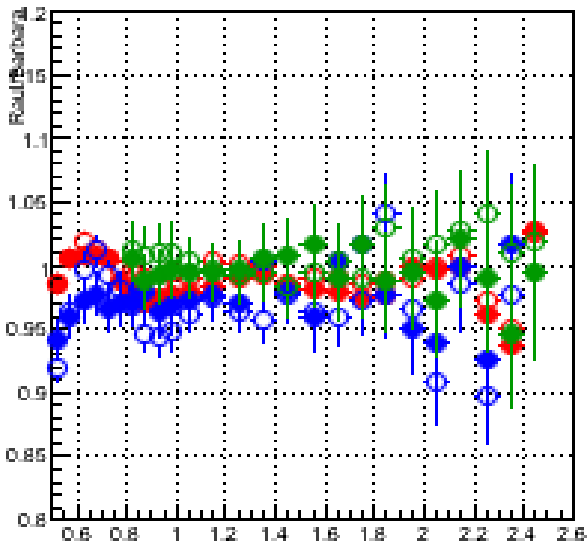


HMPID

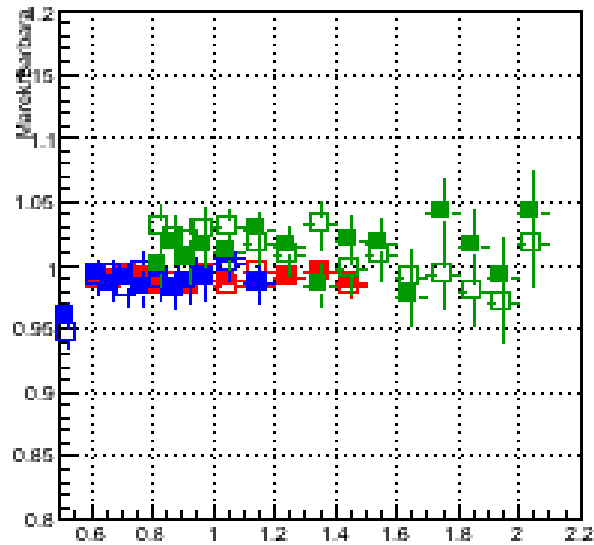


Comparison

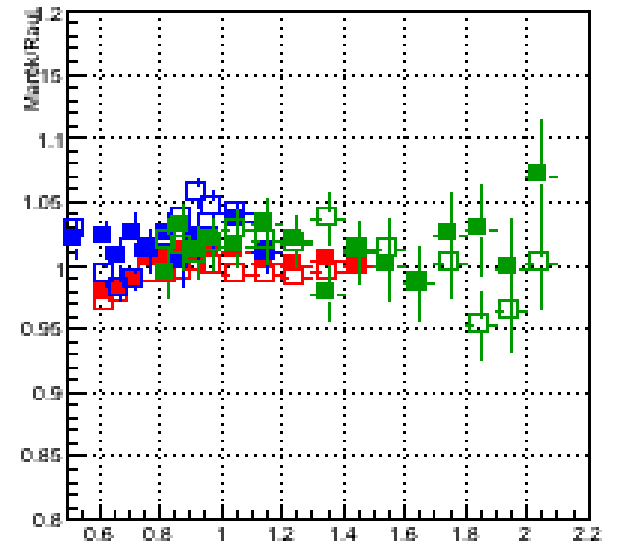
Raul/Barbara



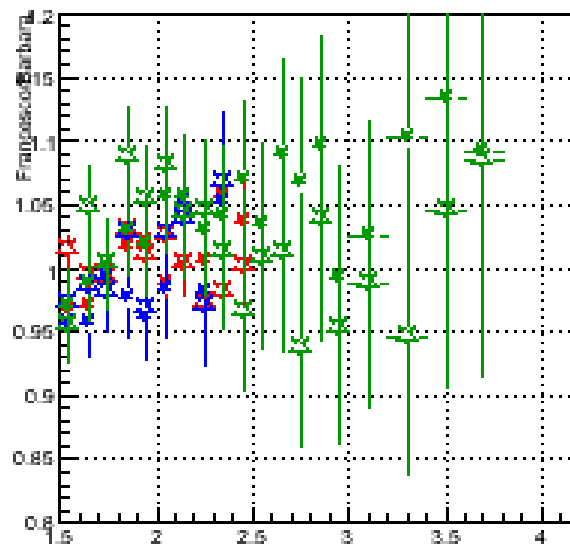
Marek/Barbara



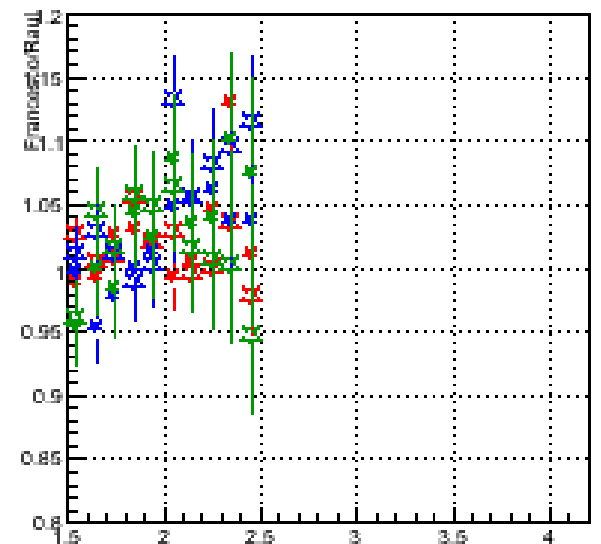
Marek/Raul



Francesco/Barbara



Francesco/Raul



Pions

Kaons

Protons

Full point -> particle

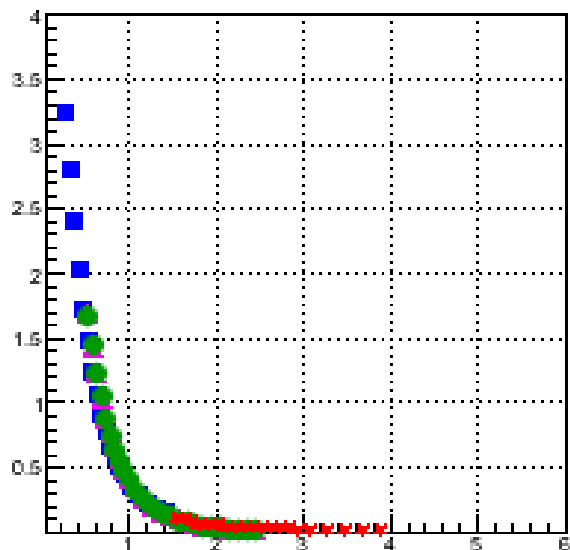
Open point -> anti-particle

Spectra

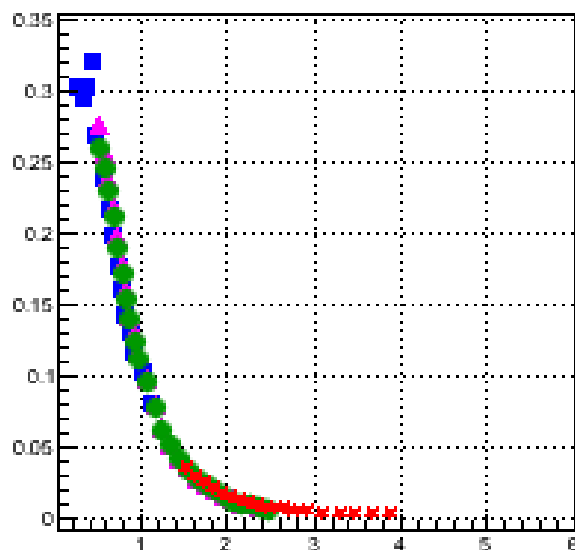
Marek
Raul
Barbara
Francesco

Normalized on num. of MB events

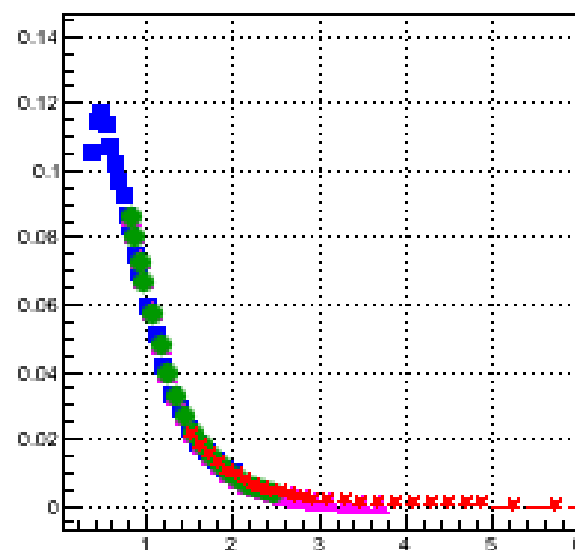
pion plus



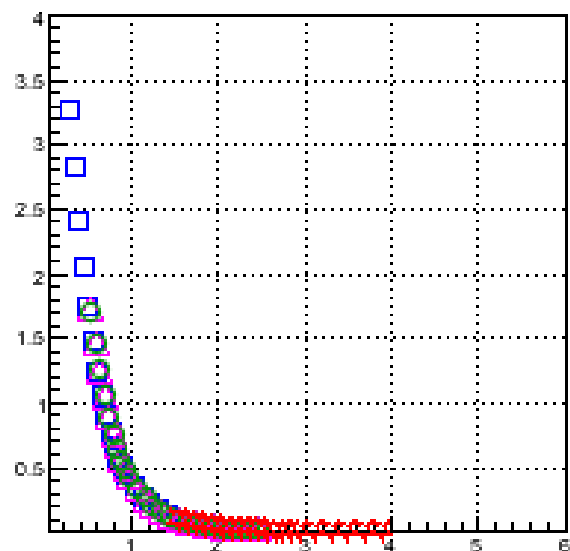
kaon plus



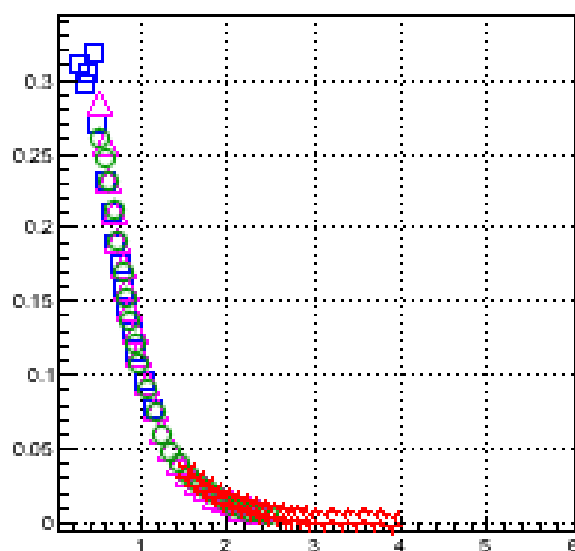
proton plus



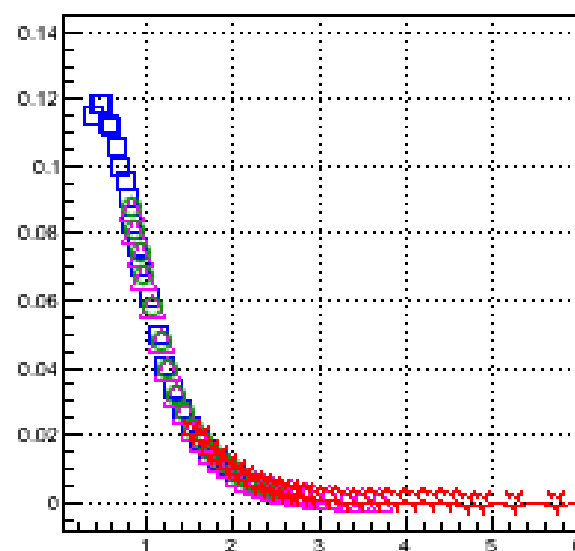
pion minus



kaon minus



proton minus

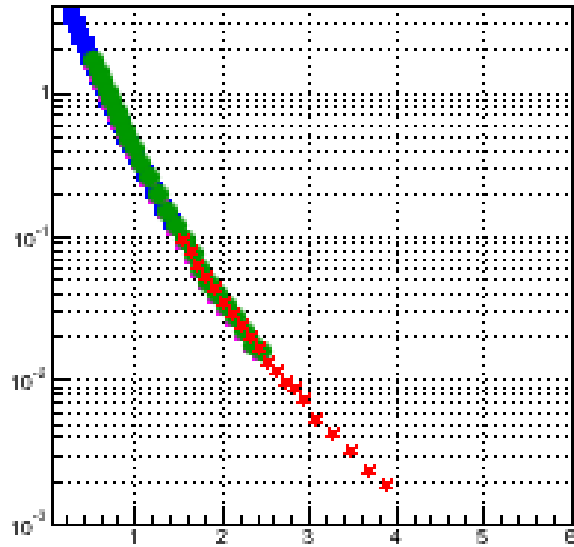


Spectra

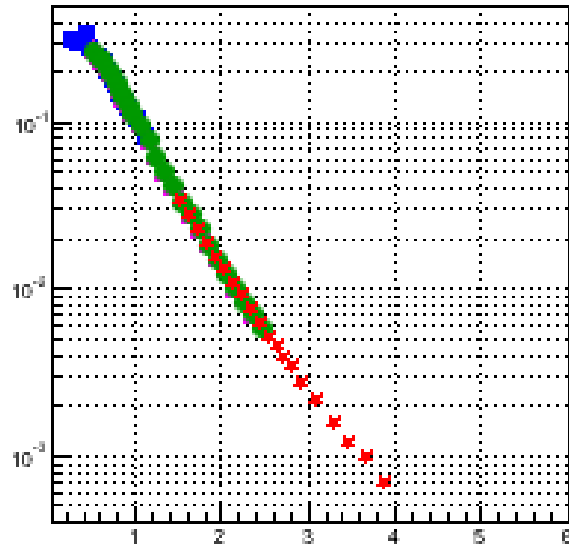
Marek
Raul
Barbara
Francesco

Normalized on num. of MB events

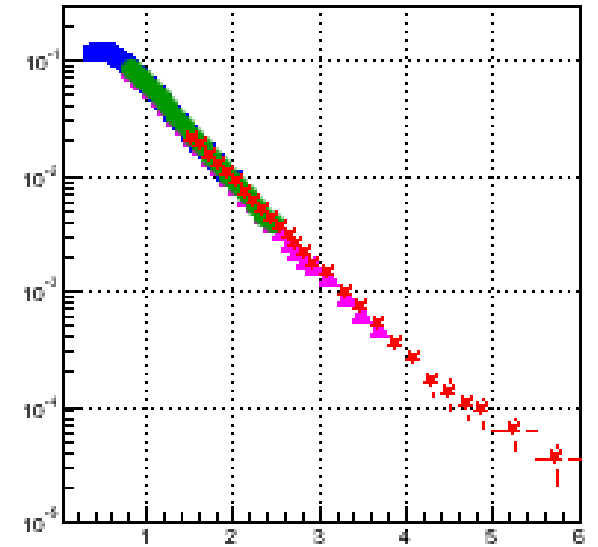
pion plus



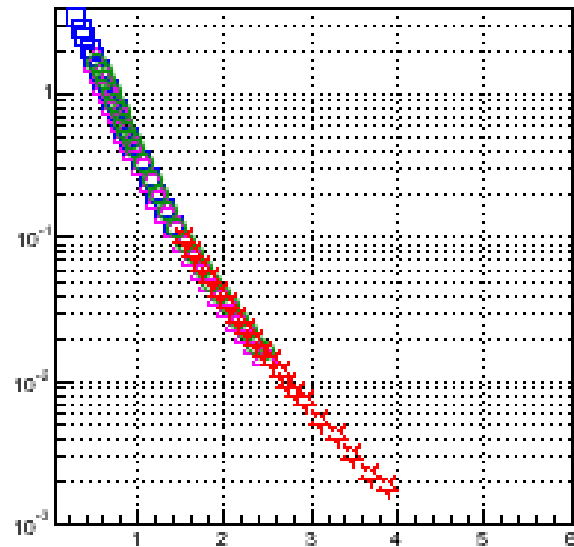
kaon plus



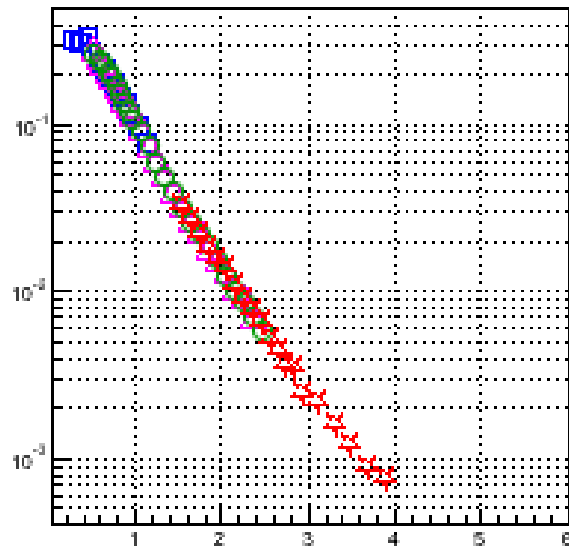
proton plus



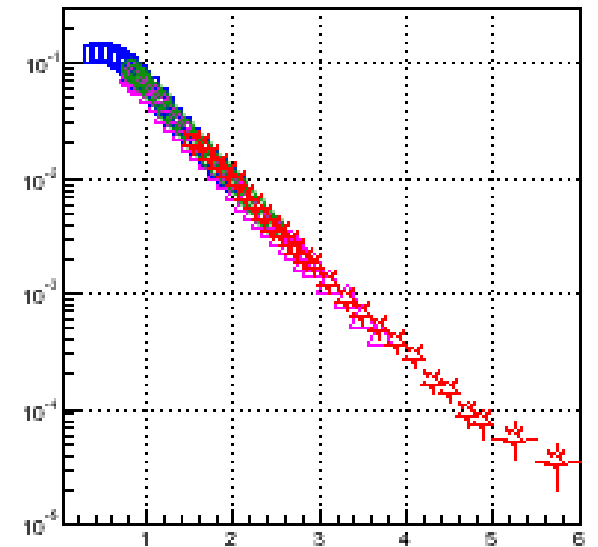
pion minus



kaon minus



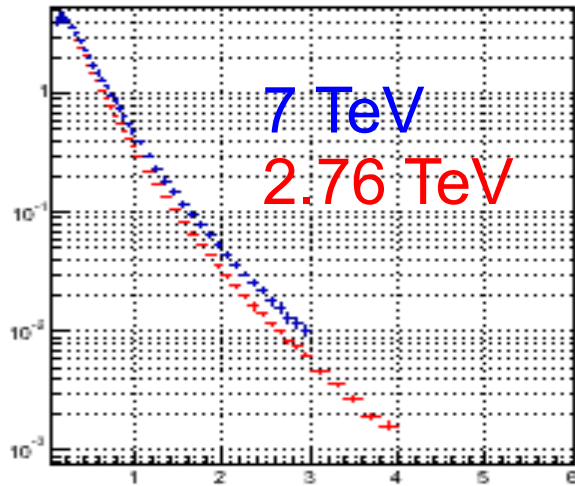
proton minus



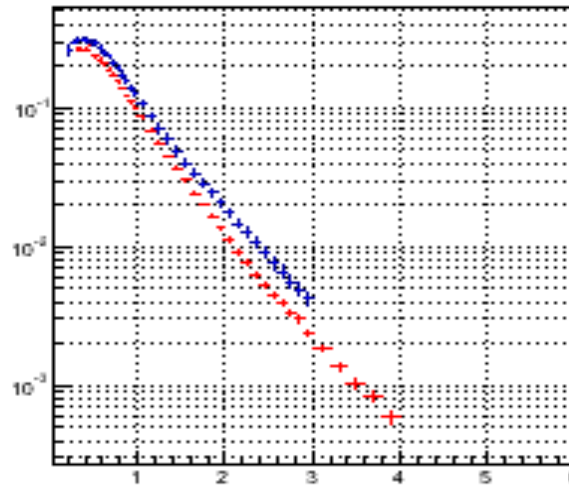
Comparison with 7 TeV spectra

Normalized on inelastic
2.76 spectra \rightarrow Scale(0.883)
7 spectra \rightarrow Scale(0.851)

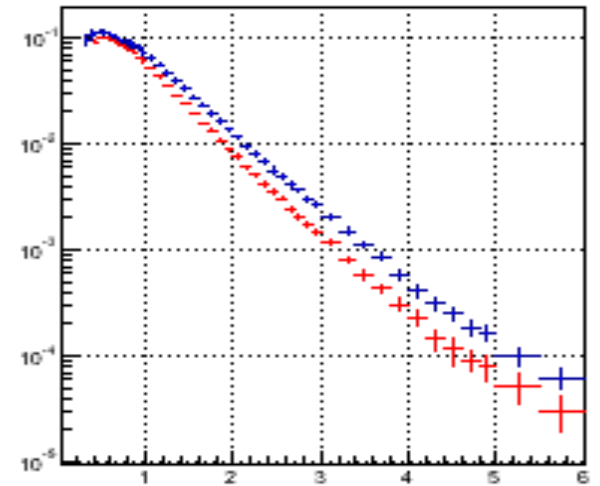
pion plus



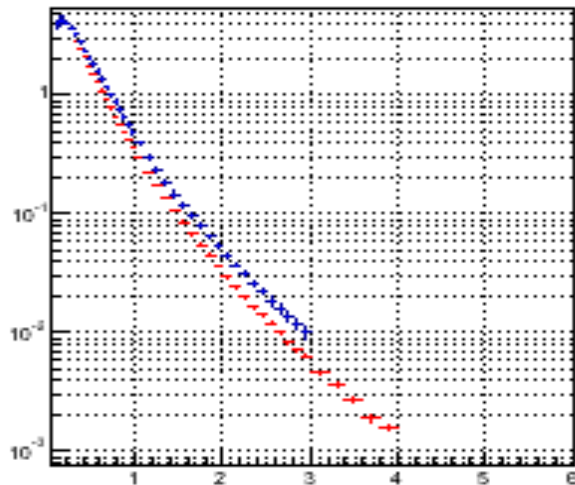
kaon plus



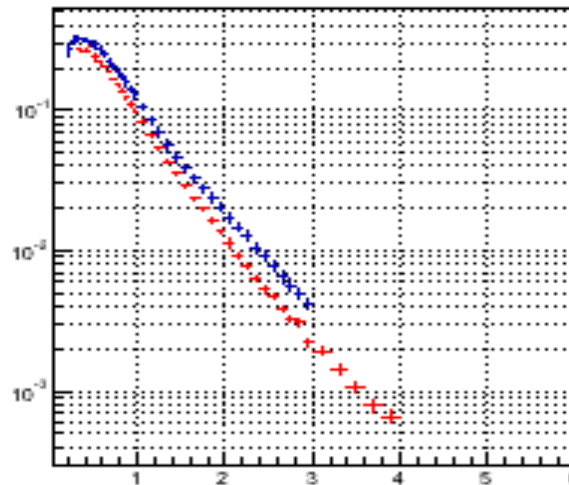
proton plus



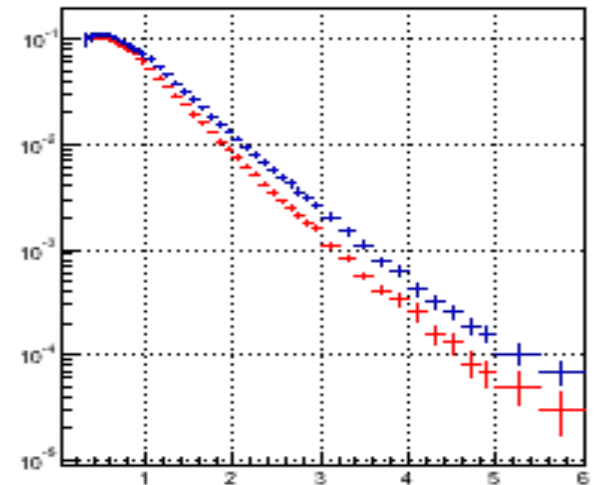
pion minus



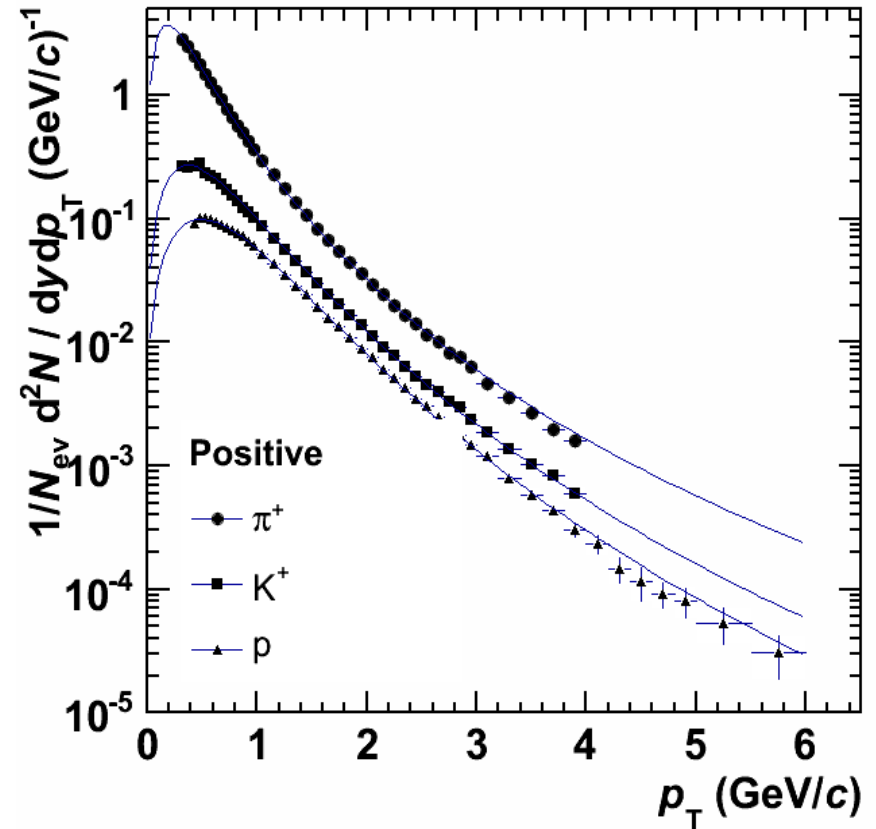
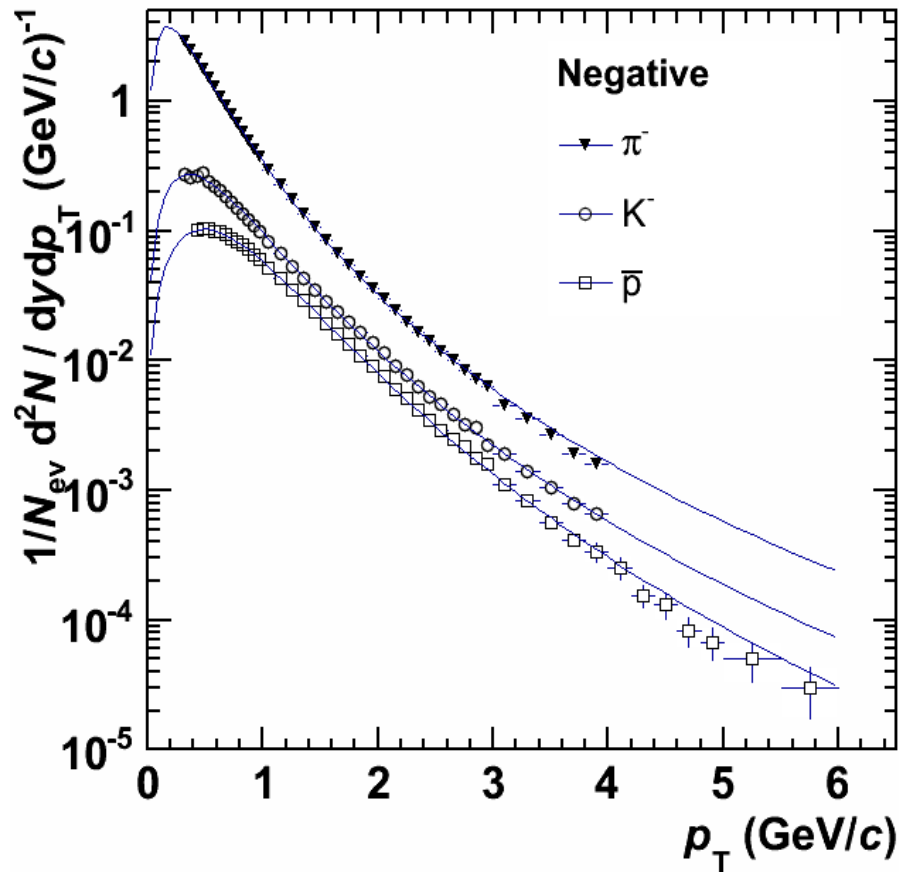
kaon minus



proton minus

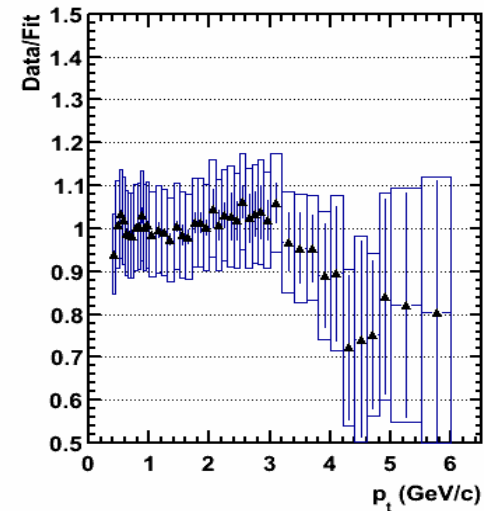
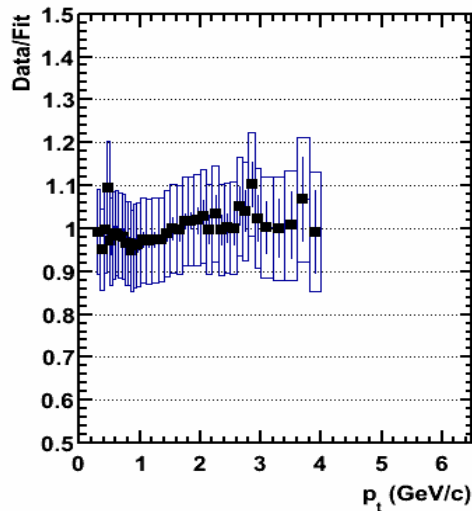
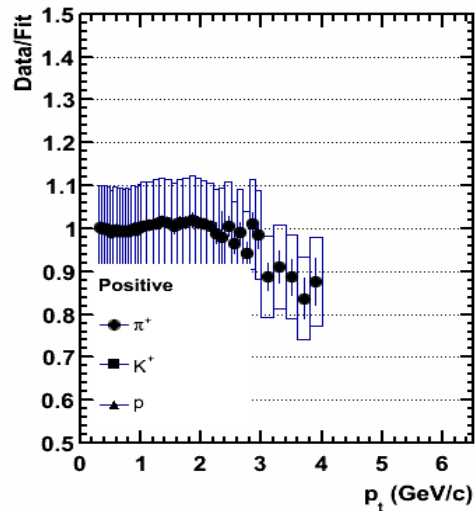
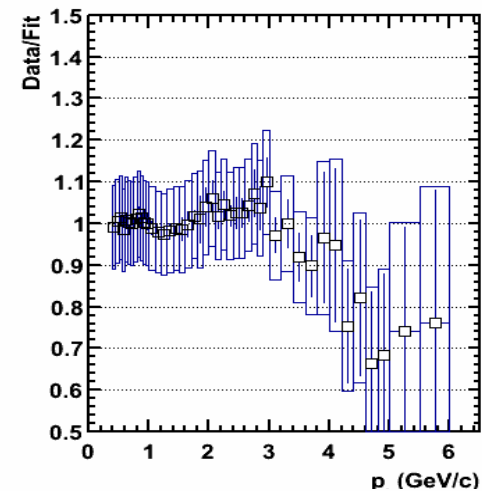
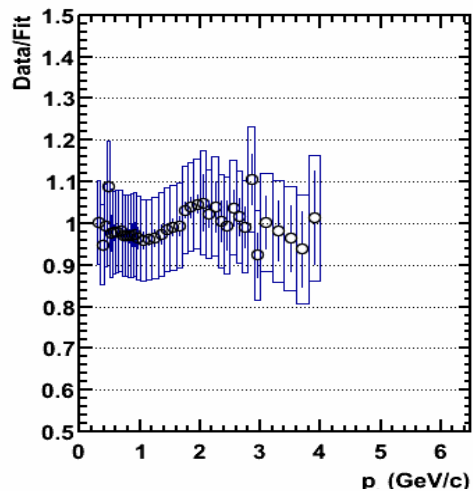
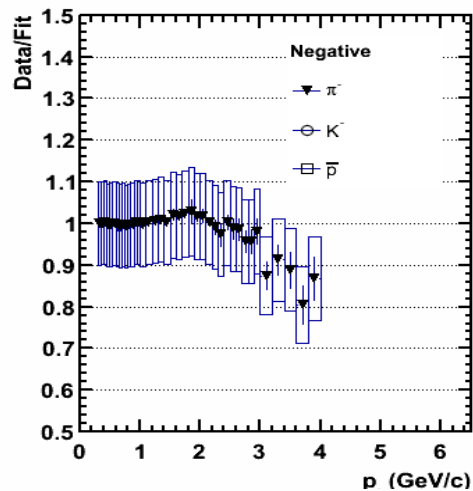


Levy-Tsallis Function



At 2.76 GeV we **do not have the systematic yet**. -> the following results at 2.76 are **NOT the final ones** but extracted to have a first raw comparison with other analysis and energies

Ratio: Data/Fit

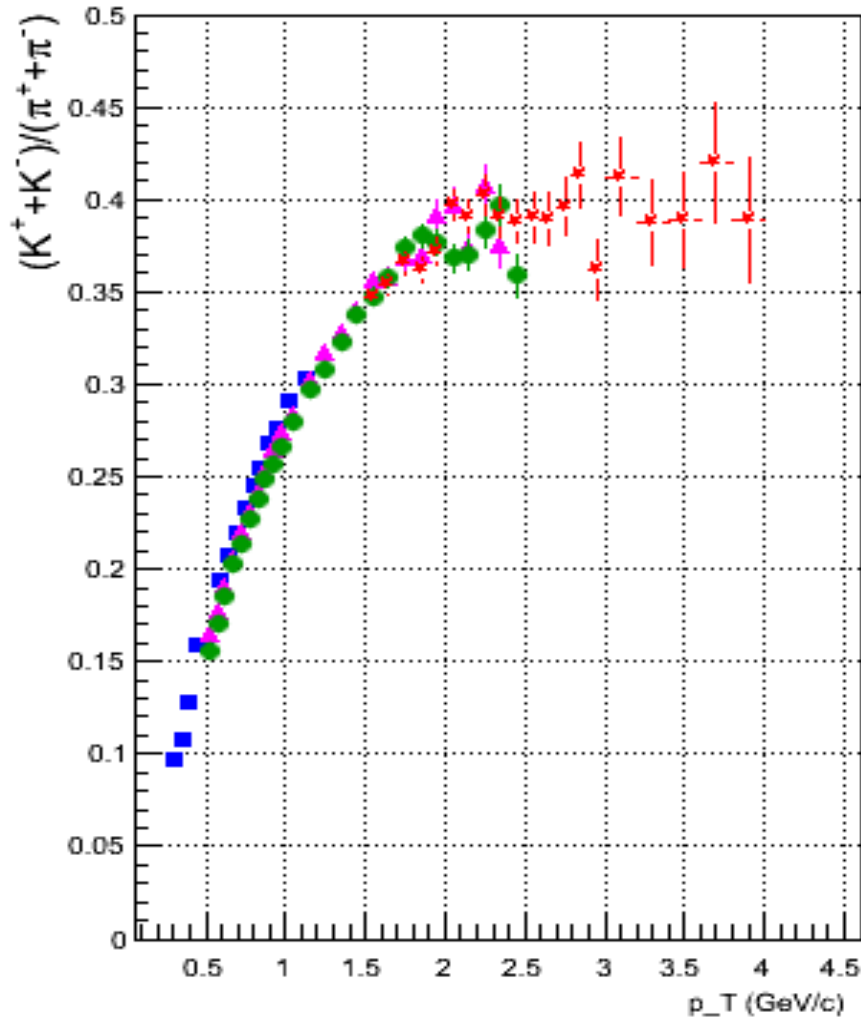


Particle yield and particle ratio

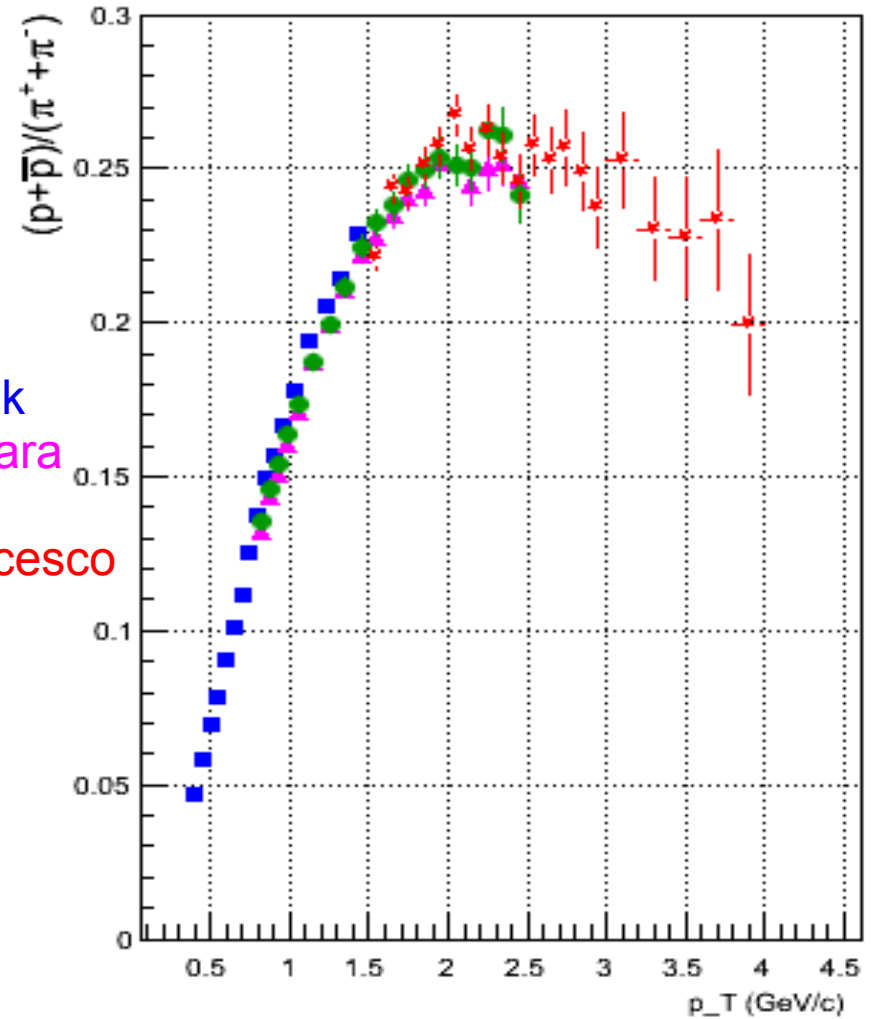
	$\pi^+\pi^-$	K^+K^-	p+anti-p	$(K^+K^-)/(\pi^+\pi^-)$	$(p+\text{anti-p})/(\pi^+\pi^-)$
$\sqrt{s}=0.9$ TeV	2.978	0.365	0.162	0.122565	0.0544
$\sqrt{s}=2.76$ TeV	3.7707	0.463	0.2102	0.122789	0.05575
$\sqrt{s}=7.0$ TeV	4.4763	0.571	0.2472	0.12756	0.05522

	Yield(7.0TeV)/Yield(0.9TeV)	Yield(2.76TeV)/Yield(0.9TeV)
$(K^+K^-)/(\pi^+\pi^-)$	1.0408	1.0018
$(p+\text{anti-p})/(\pi^+\pi^-)$	1.0151	1.0248
$\pi^+\pi^-$	1.5031	1.2662
K^+K^-	1.5643	1.2685
p+anti-p	1.5259	1.2975

Particle Ratio: pp @ 2.76 TeV

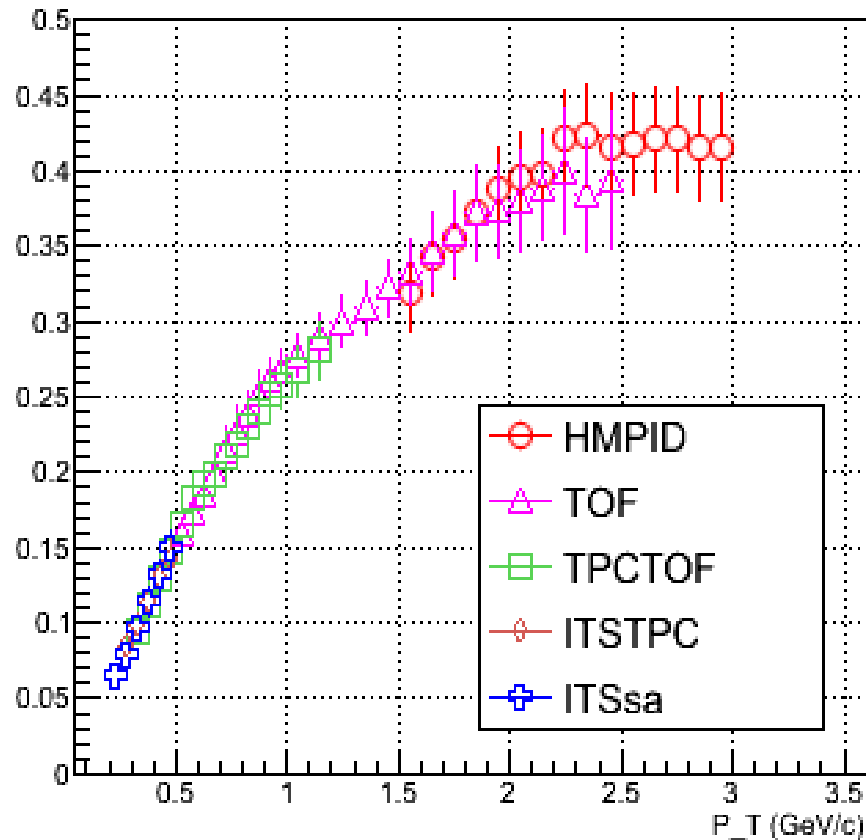


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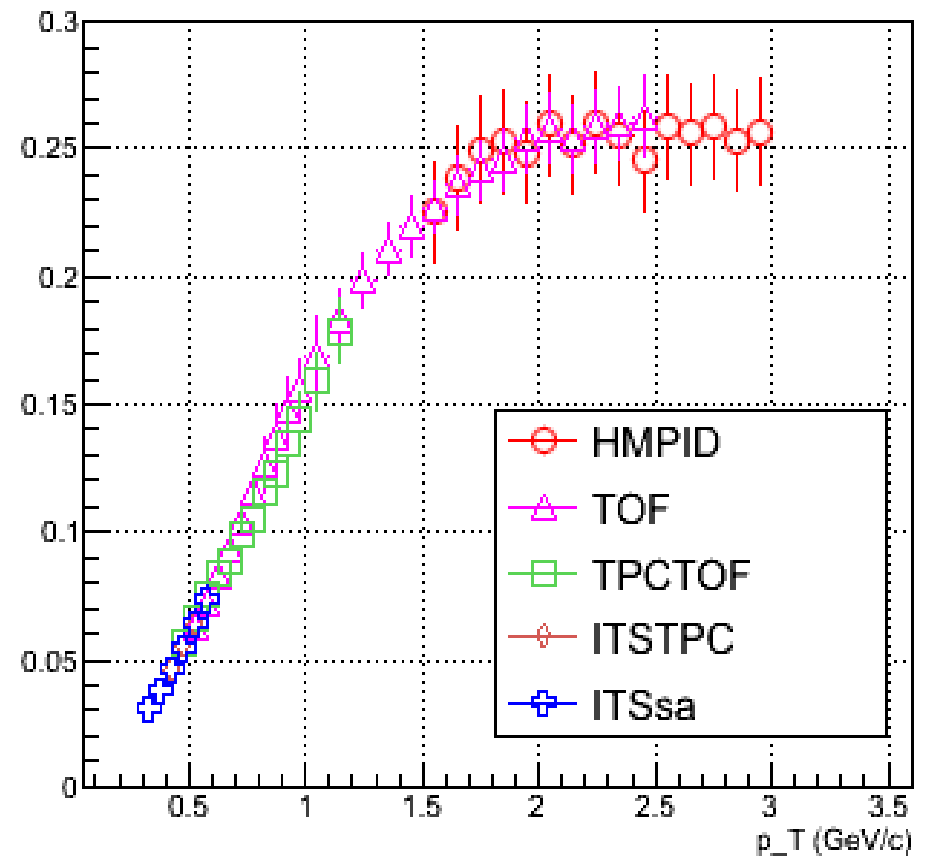


Particle ratio: pp @ 7 TeV

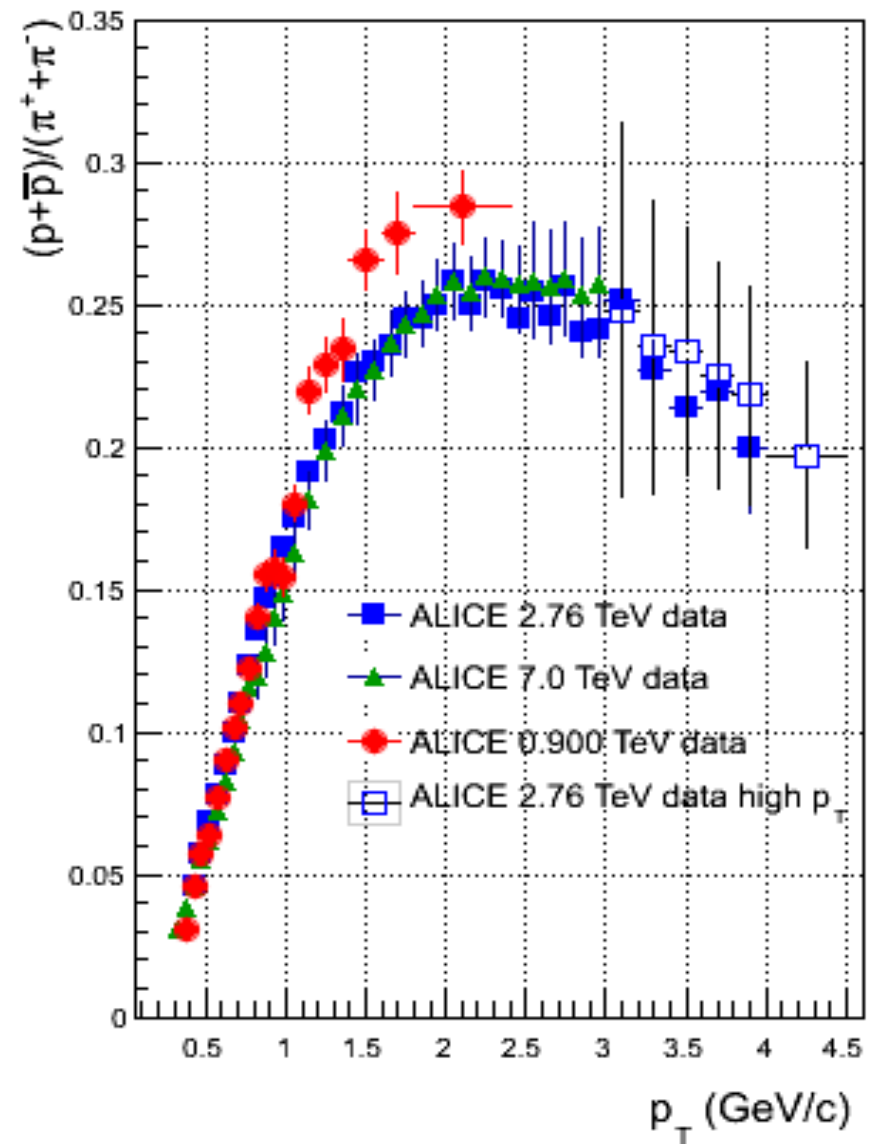
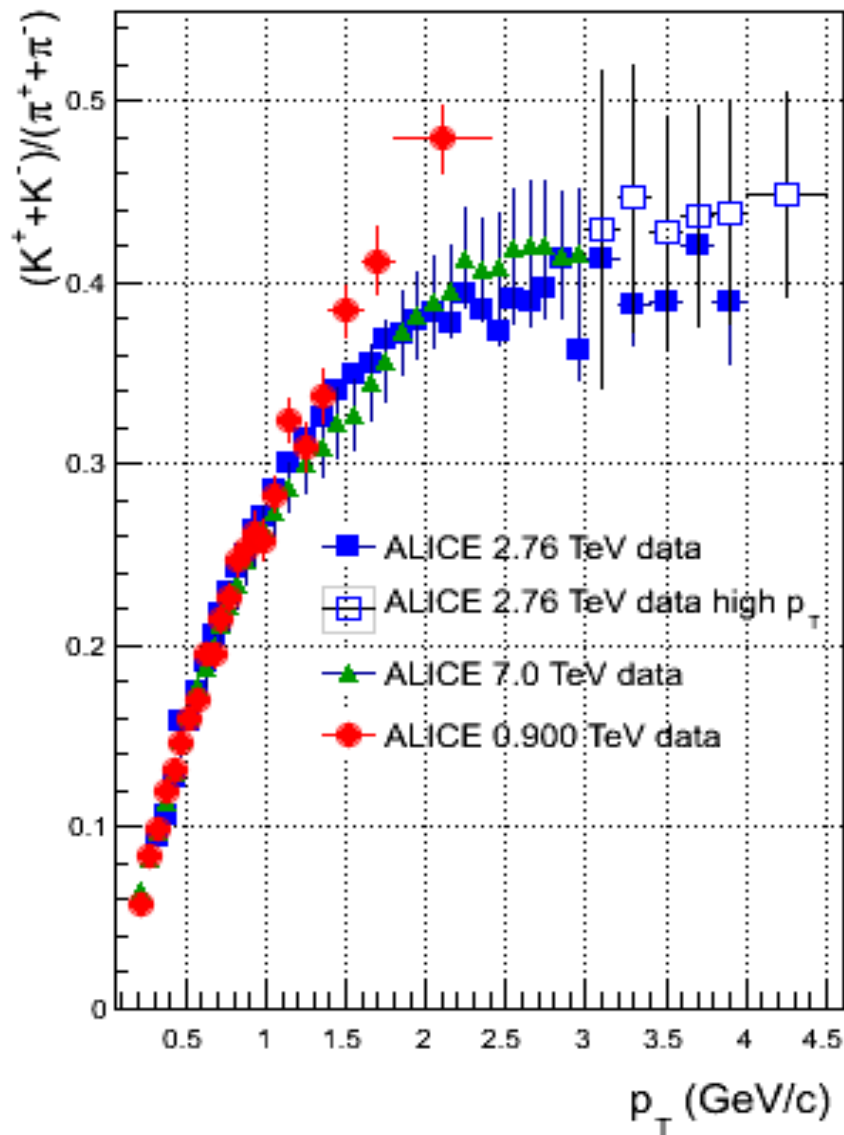
$$(K^+ + K^-) / (\pi^+ + \pi^-)$$



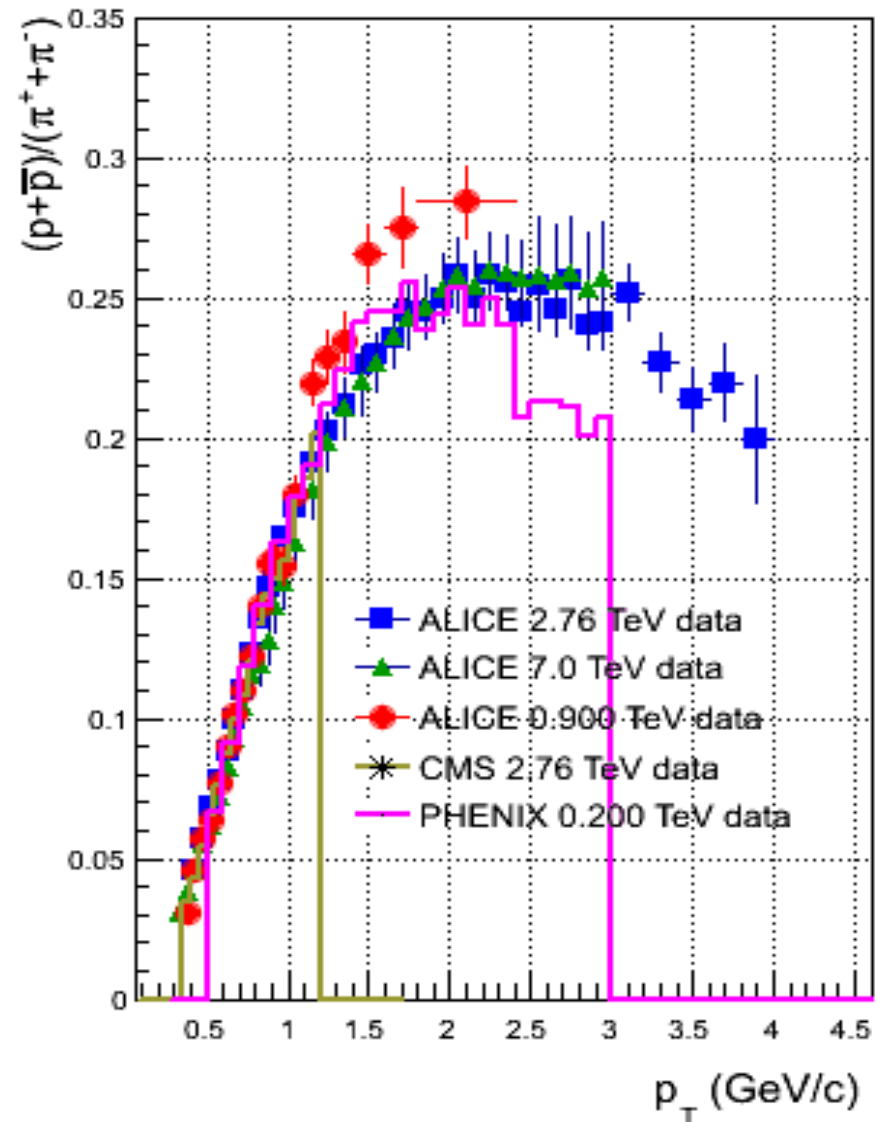
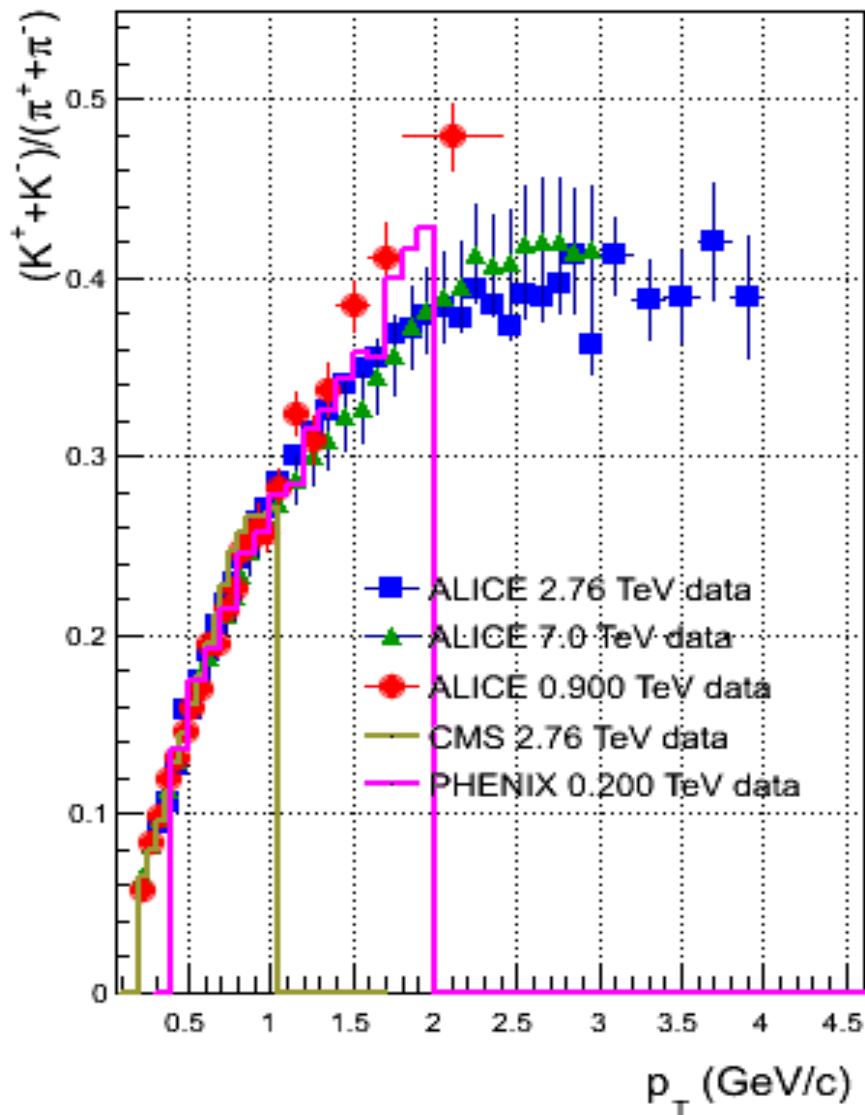
$$(p + p^-) / (\pi^+ + \pi^-)$$



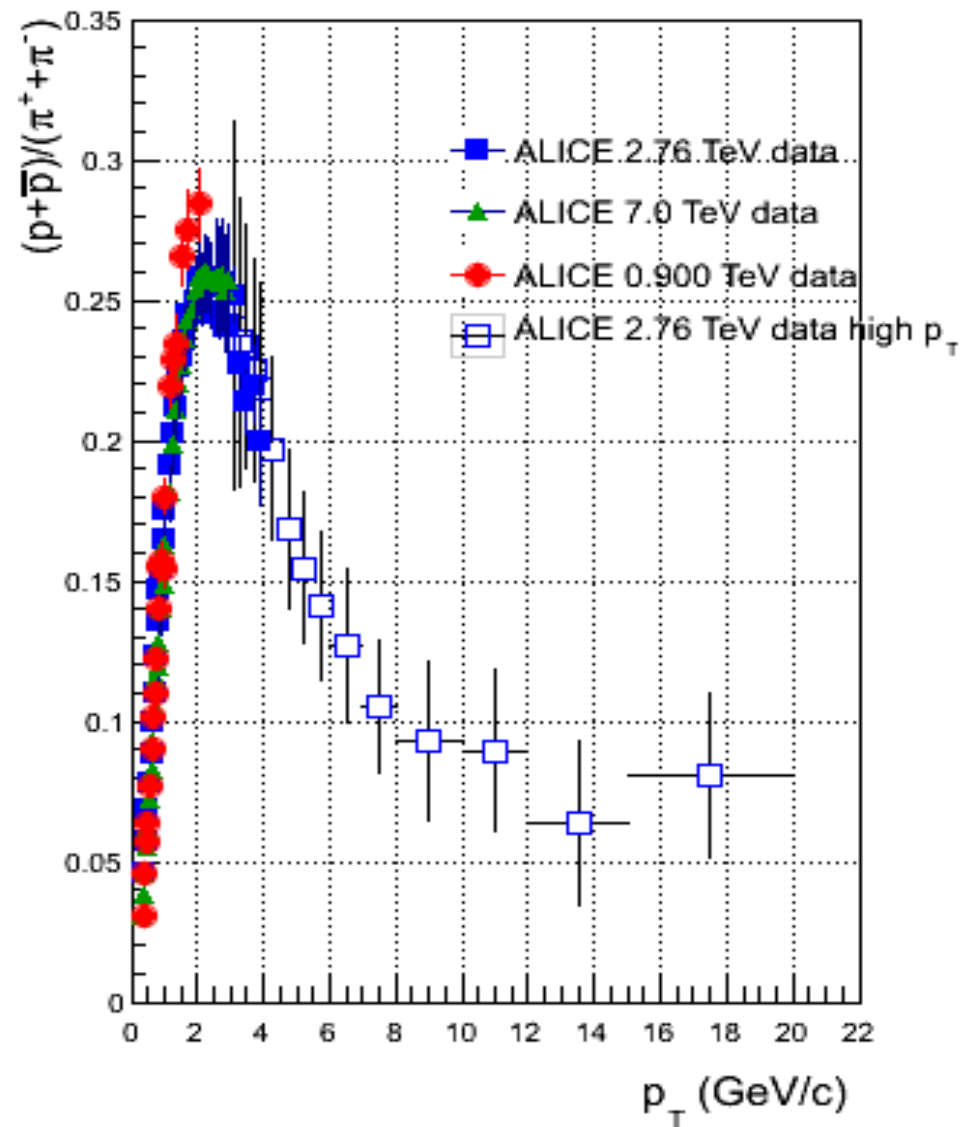
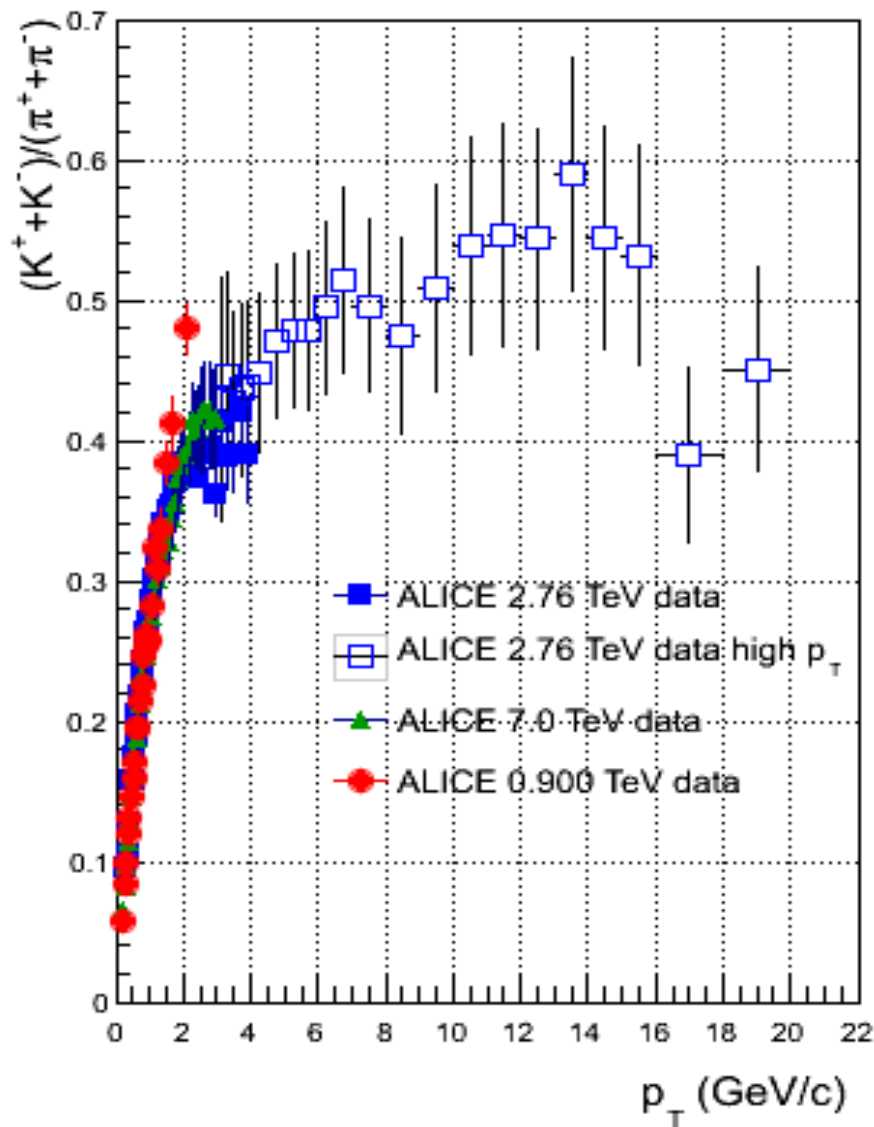
Particle ratio vs energies



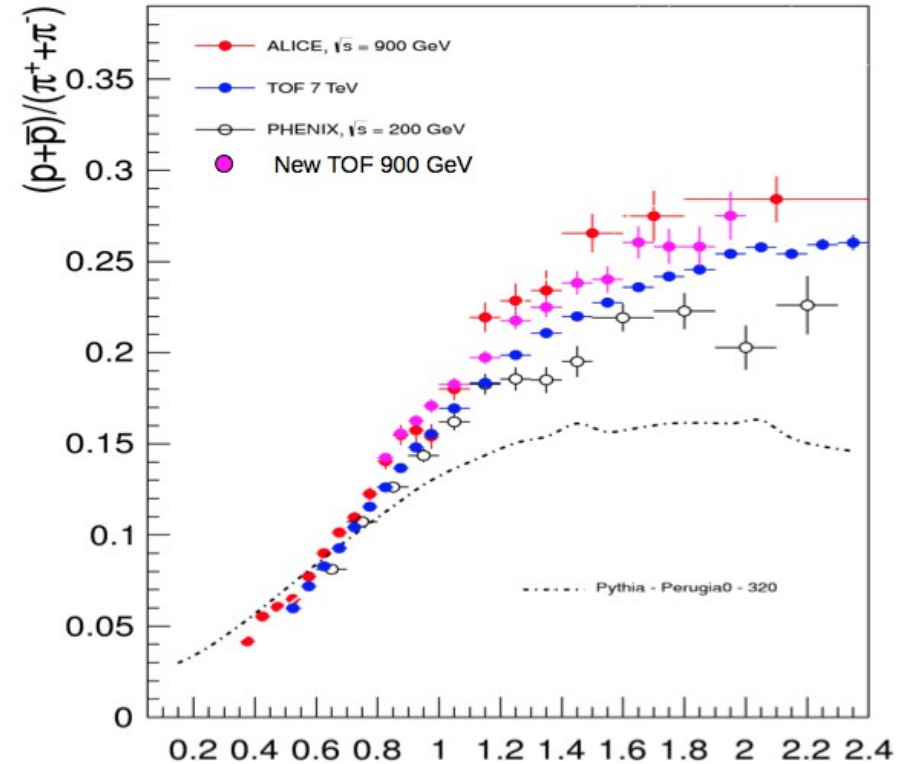
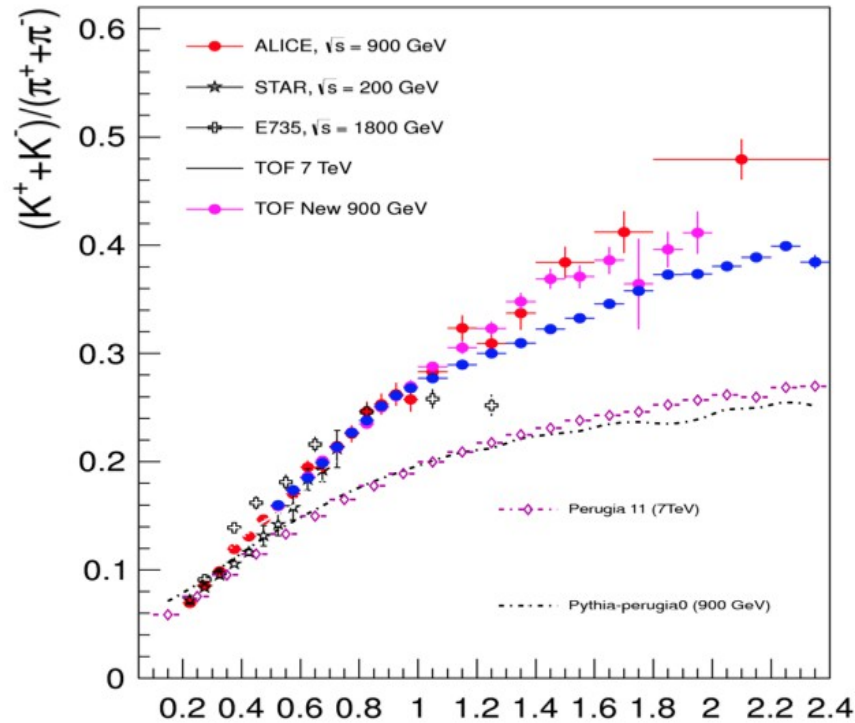
Particle ratio vs energies



Particle ratio vs energies



Check on 900 GeV data



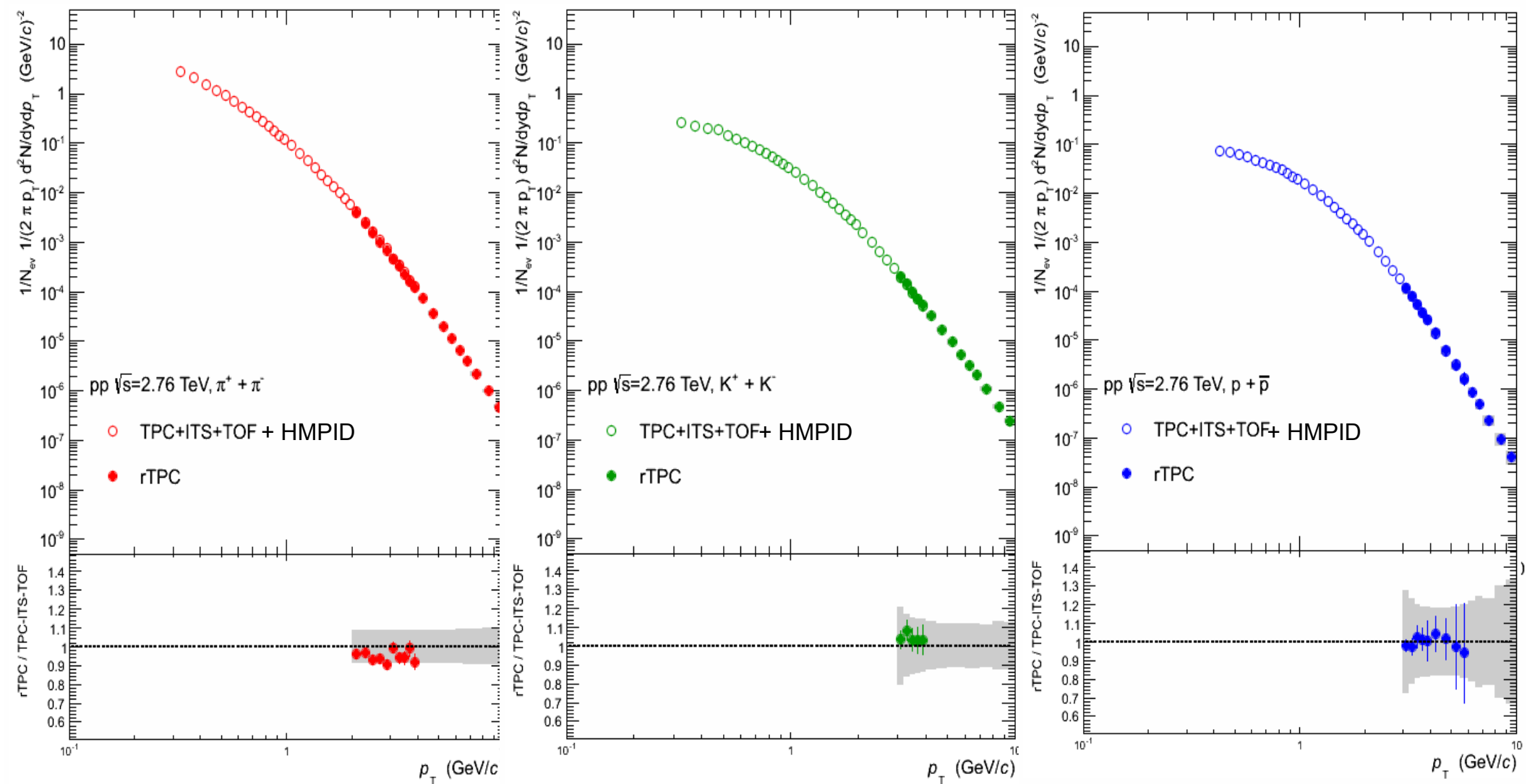
Comparison with charged particles

Beomkyu Kim

\sqrt{s}	INEL	NSD	INEL>0
900GeV	$2.975 \pm 0.001 \pm 0.037$	$3.650 \pm 0.001 \pm 0.095$	$3.797 \pm 0.001 \pm 0.045$
2.76TeV	$3.823 \pm 0.001 \pm 0.087$	$4.631 \pm 0.001 \pm 0.237$	$4.873 \pm 0.001 \pm 0.093$
7TeV	$4.725 \pm 0.001 \pm 0.159$	$5.839 \pm 0.002 \pm 0.141$	$6.148 \pm 0.001 \pm 0.082$
8TeV	$4.871 \pm 0.001 \pm 0.119$	$6.007 \pm 0.002 \pm 0.140$	$6.327 \pm 0.001 \pm 0.044$

	Non_ID	Sum of ID Spectra
Yield(2.76)/Yield(7.0)	0.8091	0.8393
Yield(0.9)/Yield(7.0)	0.6296	0.6620

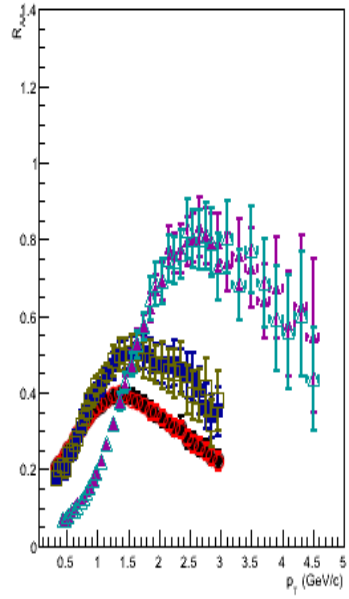
Comparison with high pT



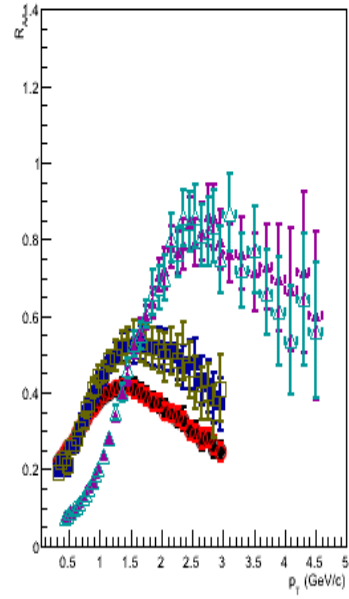
Antonio

RAA

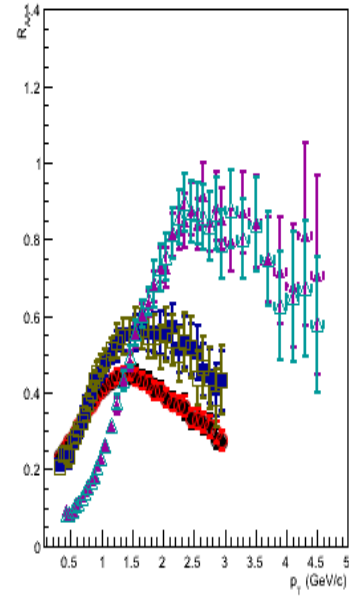
0-5



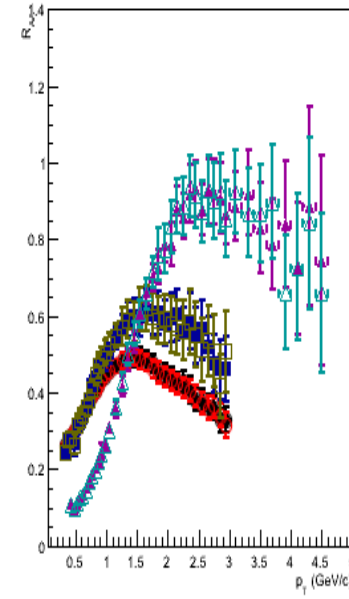
5-10



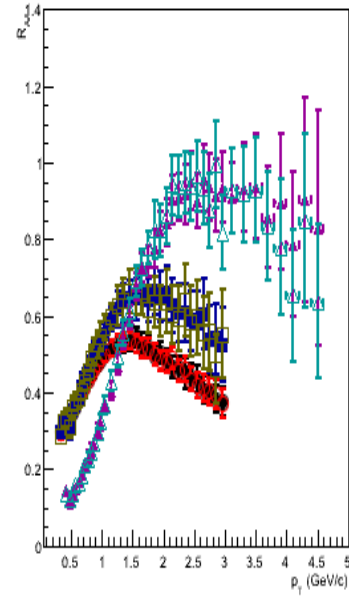
10-20



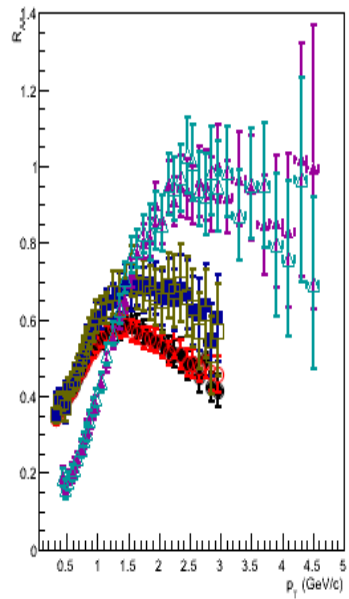
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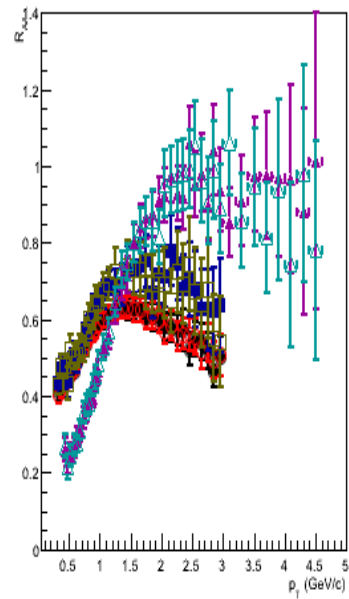
30-40



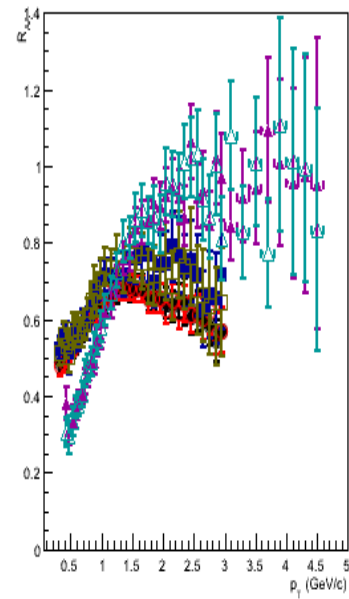
40-50



50-60



60-70



70-80

