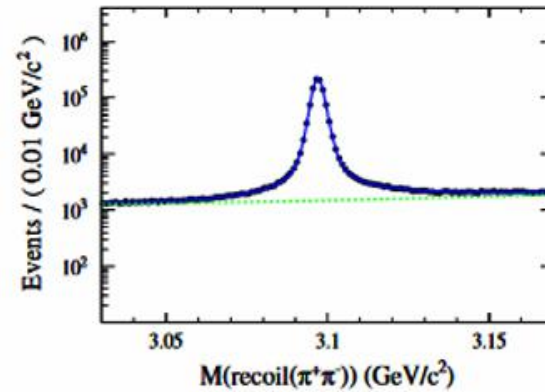
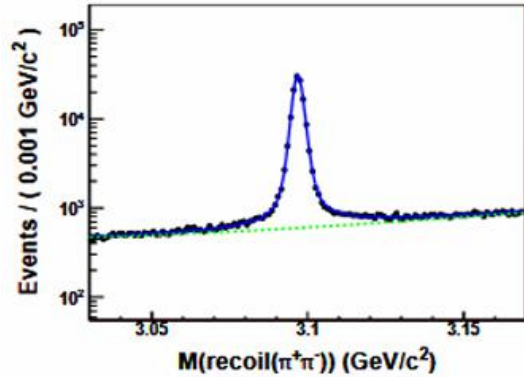


# Weekly report

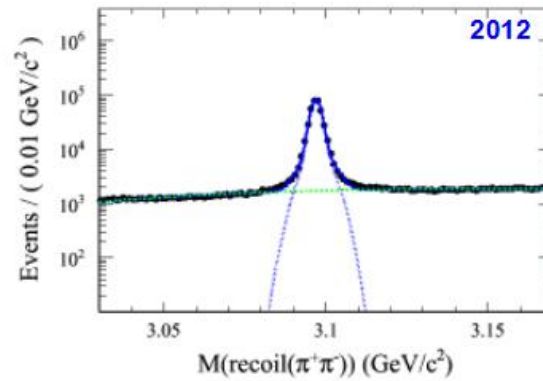
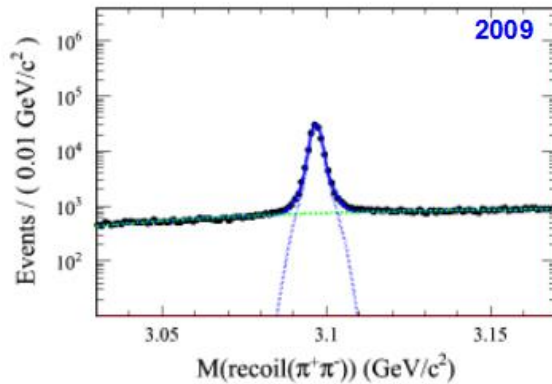
# Summary

- **Jpsi -> inv.**
  - receive suggestions from Liu Fang (chair)
  - suyu did well in checking the fits with double-gaussian function.
- **Chic -> gam lepton lepton**
  - amit repeated the previous results.
- **ChicJ --> Sigma p Ks**
  - shan updated the memo, studied some sources of systematic uncertainties

# Suyu (1)



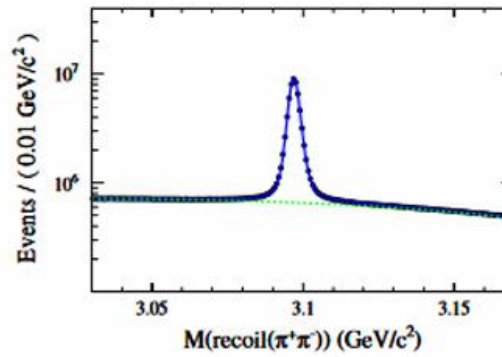
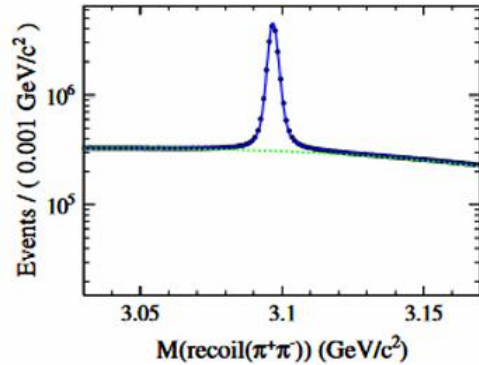
Jpsi -> invisible:



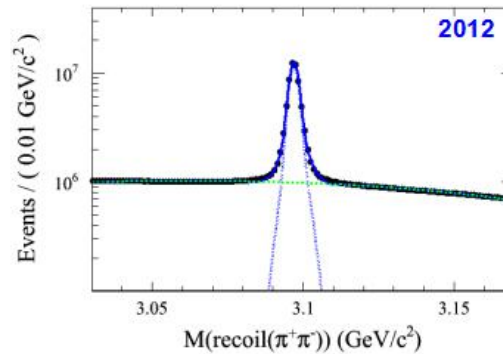
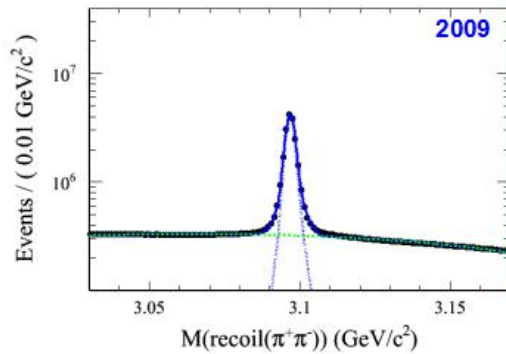
Items	Bkg		Gaussian				%	N		EDM
	c0	c1	mean	mean1	sigma	sigma1	sigfrac	nbkg	nsig	
2009	3.200e+01	-6.550e-02	3.097	3.097	1.454e-03	3.596e-03	7.521e-01	9.977e+04	1.265e+05	5.518e-05
2012	2.504e+01	-8.776e-02	3.097	3.097	1.546e-03	4.099e-03	7.690e-01	2.306e+05	3.687e+05	1.555e-05

12/09: 2.31 2.91

# suyu (2)



Jpsi -> anything:



Items	Bkg		Gaussian				%	N		EDM
	c0	c1	mean	mean1	sigma	sigma 1	sigfrac	nbkg	nsig	
2009	-1.643e+01	-8.162e-02	3.097	3.097	1.475e-03	3.570e-03	7.178e-01	4.255e+07	1.723e+07	2.799e-05
2012	-1.779e+01	-7.925e-02	3.097	3.097	1.540e-03	3.681e-03	7.135e-01	1.306e+08	5.377e+07	3.685e-04

12/09: 3.07 3.12

# shan

update the memo

- plots updating
- systematic uncertainties stem from tracking and PID for p/pi

# Kai

- prepare JC report
- ATLAS-chinese group home page

# ATLAS



中国科学院高能物理研究所  
Institute of High Energy Physics Chinese Academy of Sciences

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Muon Detector Tile Calorimeter Liquid Argon Calorimeter  
Toroid Magnets Solenoid Magnet SCT Tracker Pixel Detector TRT Tracker

The ATLAS detector at CERN's Large Hadron Collider (LHC) is the biggest detector in high energy physics. The goal of ATLAS is to search for Higgs particle as well as beyond standard model (BSM) new physics. IHEP ATLAS team plays an important role in the Higgs study and BSM searches such as di-Higgs, SUSY as well as SM physics. IHEP also participates in the ATLAS Phase-II Inner Tracker Upgrade project.

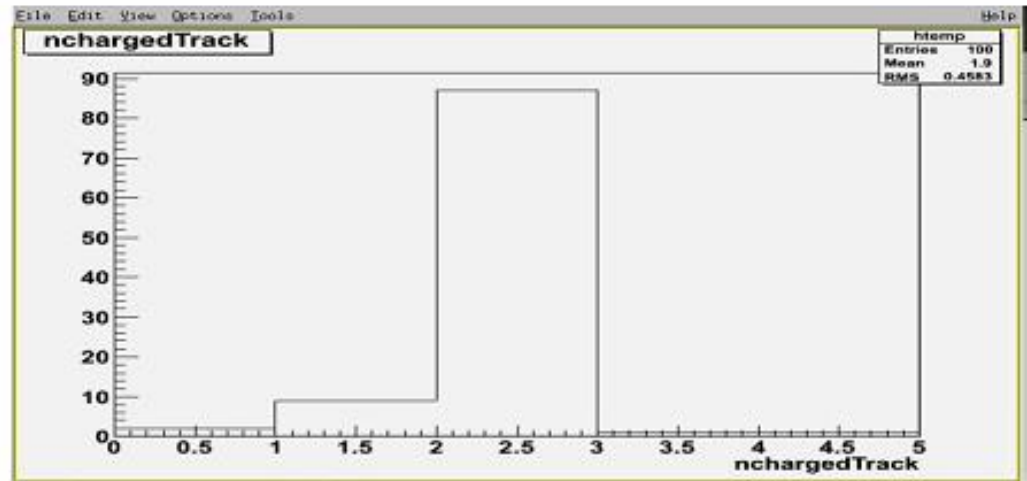
IHEP ATLAS team plays an important role in the study of Higgs and searches for the BSM physics and participates in the ATLAS Phase-II Inner Tracker Upgrade project. Currently, members of our group are working on the following activities:

- Leading ATLAS physics analyses, including Searches for New Physics beyond the SM, understanding the properties of the Higgs boson.
- On-site at CERN operating the pixel detector for the 13 TeV run.
- Performing in-house R&D towards a replacement tracking detector, designed to operate at ten times the current rate of collisions for the High-Luminosity upgrade of the LHC in next decade (HL-LHC).

IHEP ATLAS team has around 20 faculties, 10 postdocs and 20 Ph.D. students. We have wide collaborations with international labs/institutes on physics analysis, ITK project as well as training students. The students or postdocs are expected to spend some time working at CERN, located at the Franco-Swiss border near Geneva, on the detector operations, shifts and physics analyses working closely with international colleagues in ATLAS collaborations.

# Amit

- I have repeated the simulation, reconstruction and preselection again for signal MC sample for 100 events.
- I was missing some information which I had done previously with the help of Suyu and Maoqiang.
- Last week I generated this plot for charged track information.



- But when I was submitting the job again on the monday it was showing some error and I was not able to figure out the error so I decided to do this again without any help and I did correctly now.
- I wasted whole week for this and I will do my best in this week to cover my time for the last week.

# backup suyu

Items	Bkg		Gaussian				%	N		EDM
	c0	c1	mean	mean1	sigma	sigma1	sigfrac	nbkg	nsig	
2009 invi	3.200e+01	-6.550e-02	3.097	3.097	1.454e-03	3.596e-03	7.521e-01	9.977e+04	1.265e+05	5.518e-05
	3.201e+01	5.628e-02						8.827e+04	1.380e+05	5.148e-05
								13.03%	8.33%	
2012 invi	2.504e+01	-8.776e-02	3.097	3.097	1.546e-03	4.099e-03	7.690e-01	2.306e+05	3.687e+05	1.555e-05
	2.409e+01	3.666e-02						2.017e+05	3.976e+05	3.829e-05
								14.33%	7.27%	
2009 incl	-1.643e+01	-8.162e-02	3.097	3.097	1.475e-03	3.570e-03	7.178e-01	4.255e+07	1.723e+07	2.799e-05
	-1.769e+01	-5.020e-02						4.113e+07	1.866e+07	3.751e-07
								3.45%	7.66%	
2012 incl	-1.779e+01	-7.925e-02	3.097	3.097	1.540e-03	3.681e-03	7.135e-01	1.306e+08	5.377e+07	3.685e-04
	-1.902e+01	-4.982e-02						1.264e+08	5.790e+07	2.972e-06
								3.32%	7.13%	

## double gaussian fit

## Jpsi->ee shape fit

## uncertainty for fit method