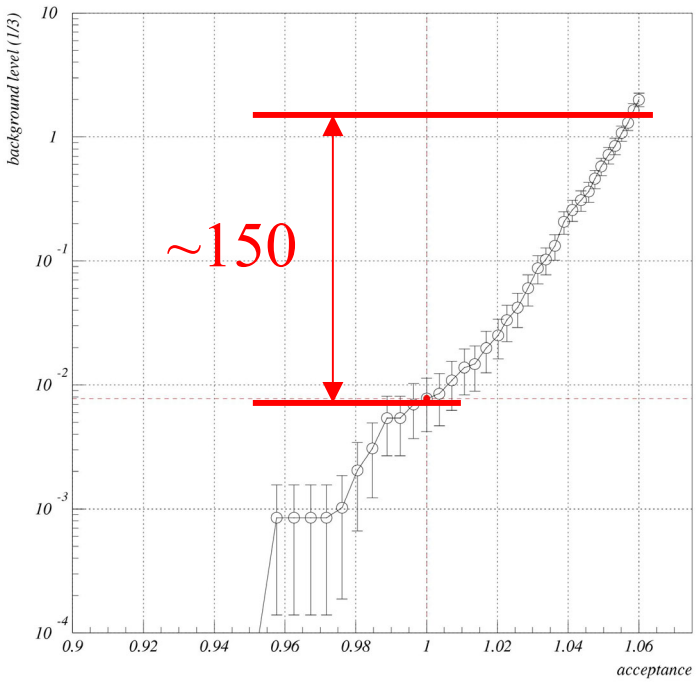
Current Status of $K^+ \to \pi^+ \gamma\gamma$ *Analysis*

Tamaki Yoshioka

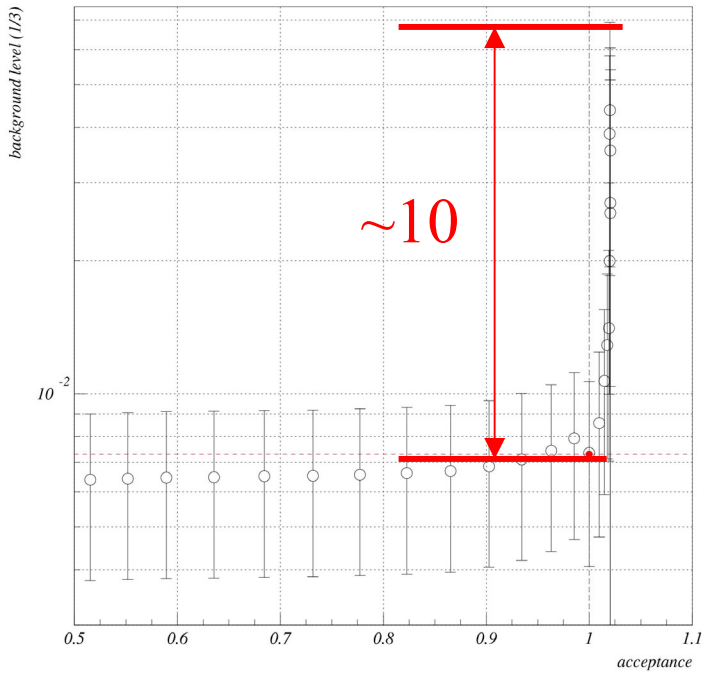
- *Outside-the-box study*
  - for Kpi2 background
  - for Muon background

Outside-the-Box Study(Kpi2)

Kp2 function

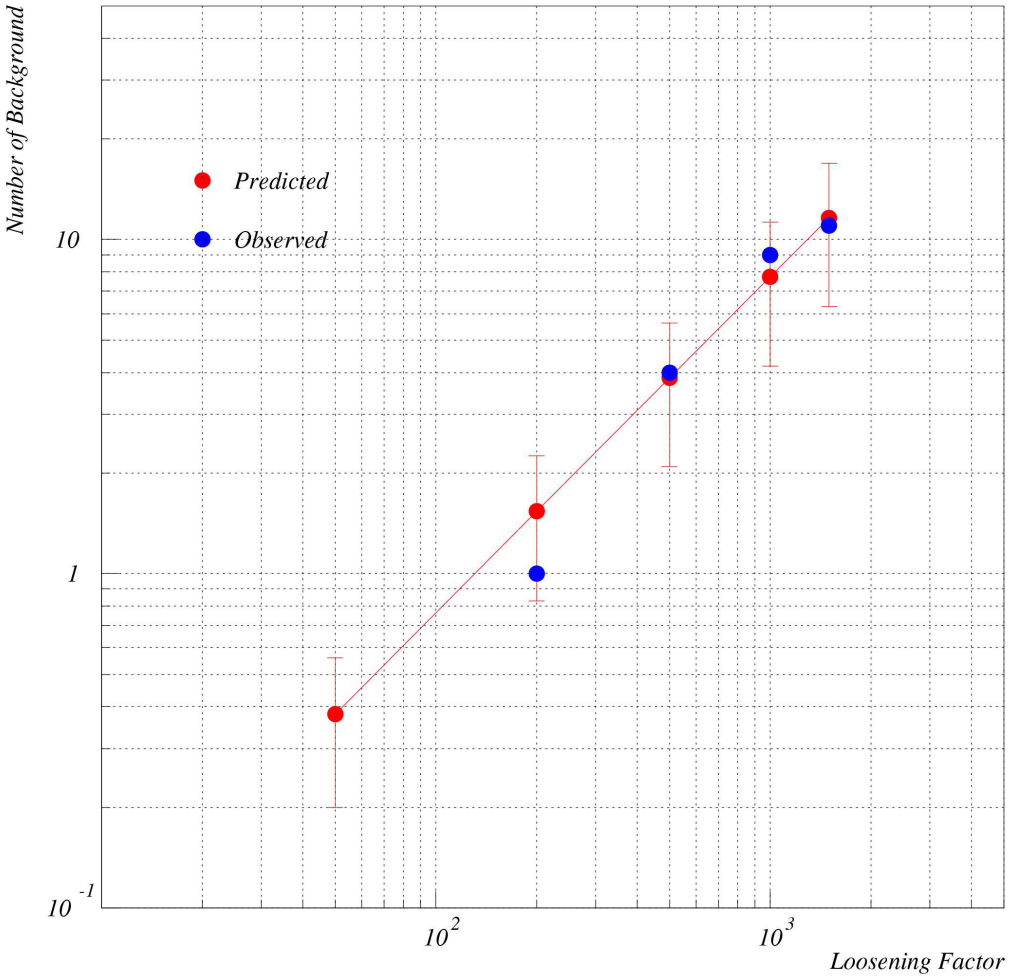


PV function



KINxPV = 10x5, 20x10, 50x10, 100x10 and 150x10 were used
Due to the fact that the PV can be loosened up to ~10.

Outside-the-Box Study(Kpi2)

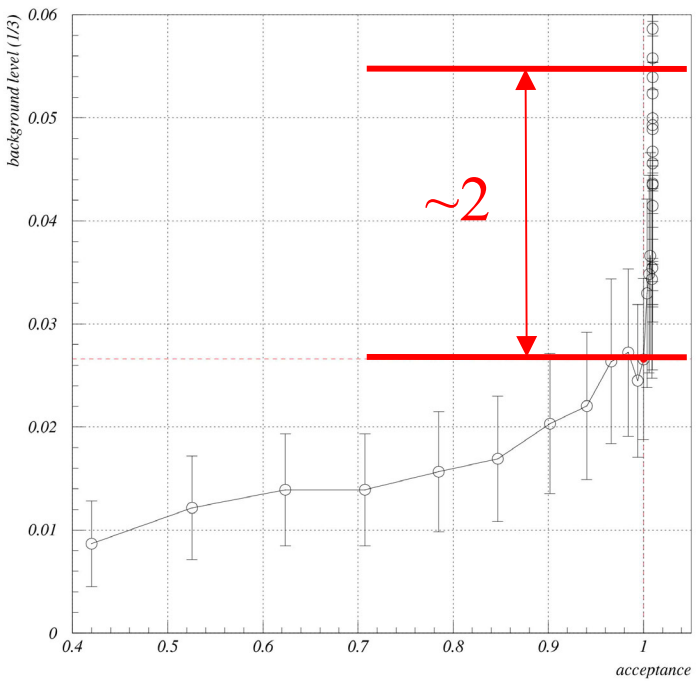


KINxPV	Predicted	Observed
10x5	0.38	0
20x10	1.54	1
50x10	3.86	4
100x10	7.73	9
150x10	11.60	11

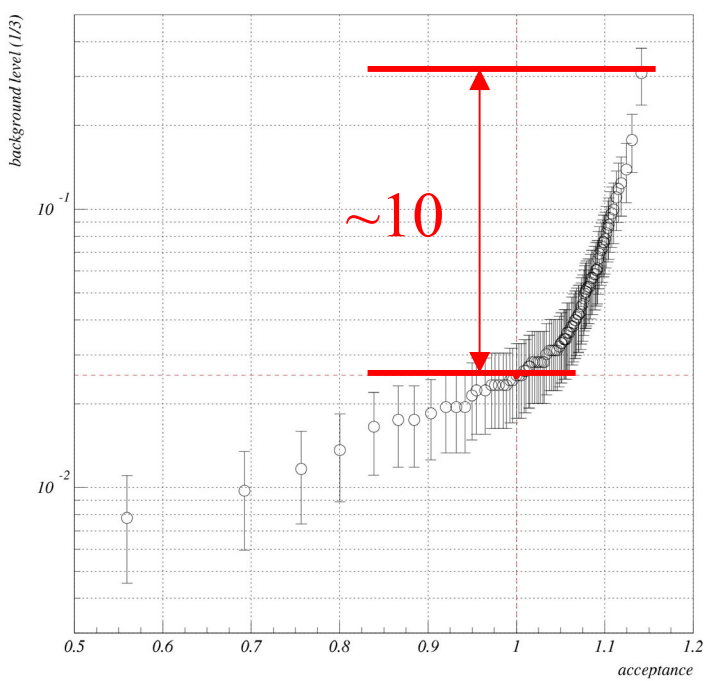
Good agreement between observed and predicted number of events can be seen.

Outside-the-Box Study(Muon)

Km2b function

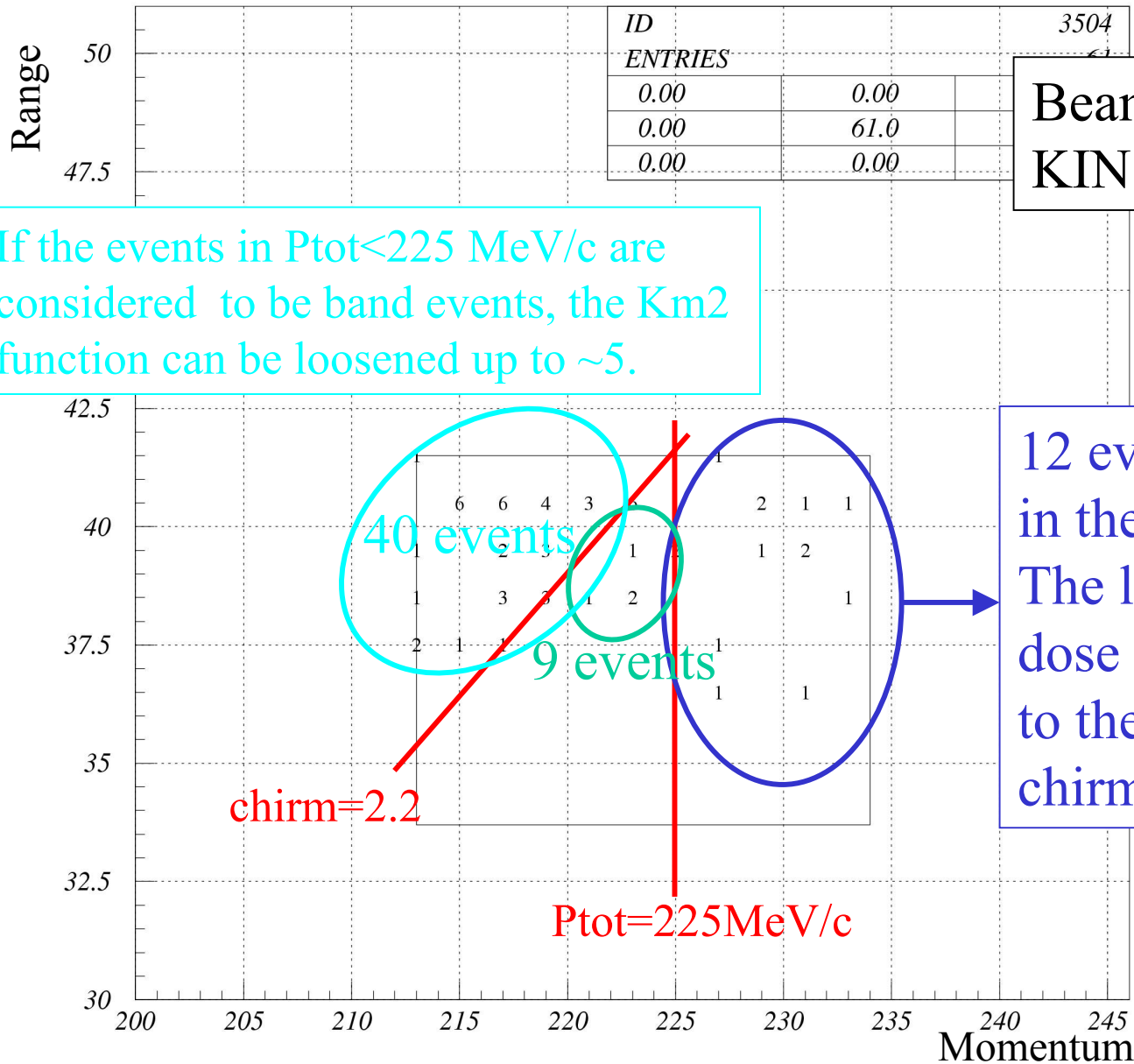


TD function



Km2 band can be loosened only a factor of 2. Hard to study. The events in the normalization branch are studied.

Normalization Branch

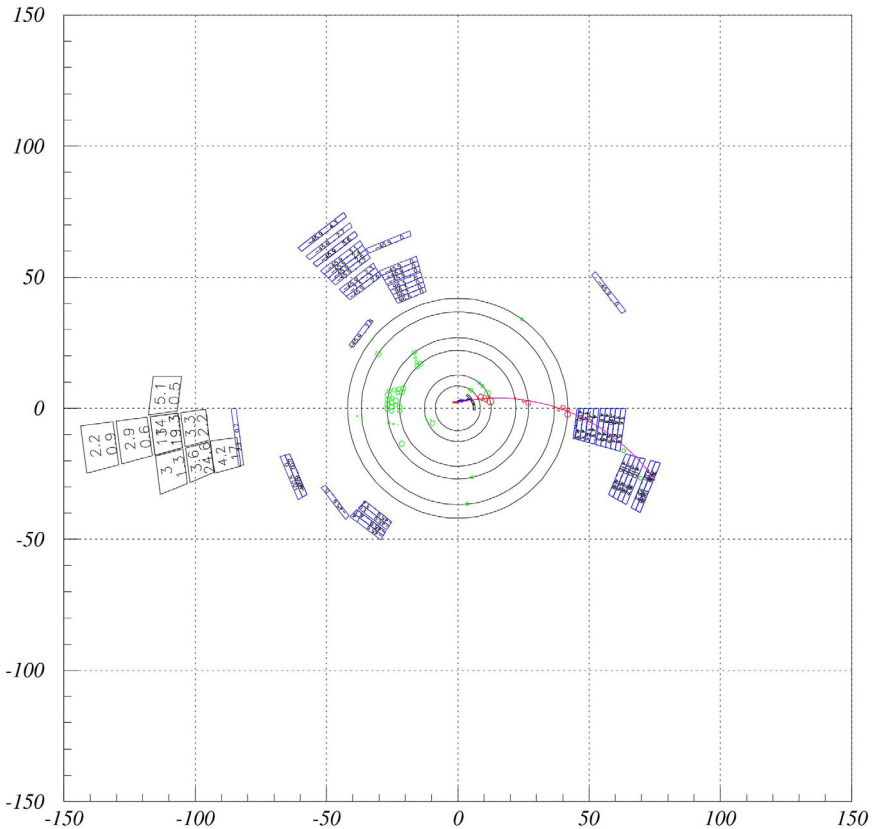


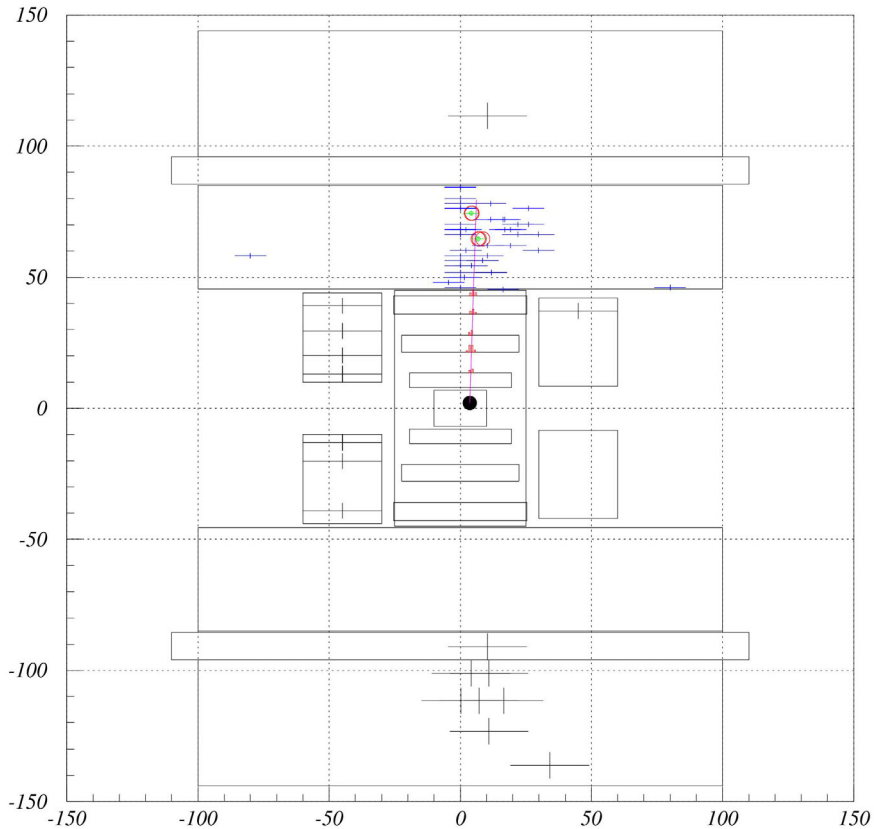
Beam, PV, TD-bar
KIN w/o rngmom

If the events in Ptot<225 MeV/c are considered to be band events, the Km2 function can be loosened up to ~5.

12 events remained in the Ptot>225MeV/c. The loosening factor dose not increase due to these events when chirm is loosened.

Typical Event Display





Seems to be radiative Km2.

Summary

- *Outside-the-box study*

  - for Kpi2 background looks OK.

  - for Muon background is currently hard to study. The events in the Ptot>225MeV/c will be studied in detail.