

# RBRC Meeting

$\pi^0$  Analysis practice

23/02/02

Seunghwan



# Event Cut

Event Cut condition:

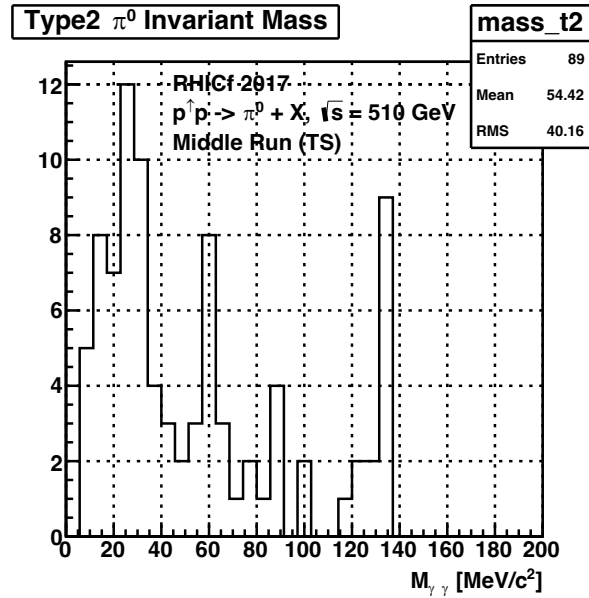
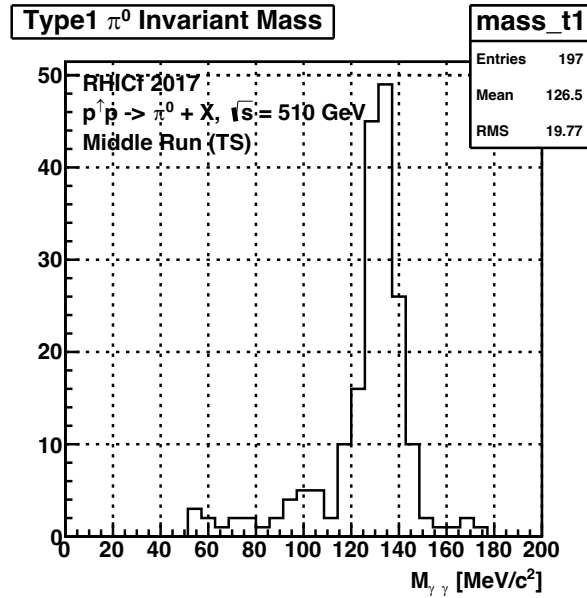
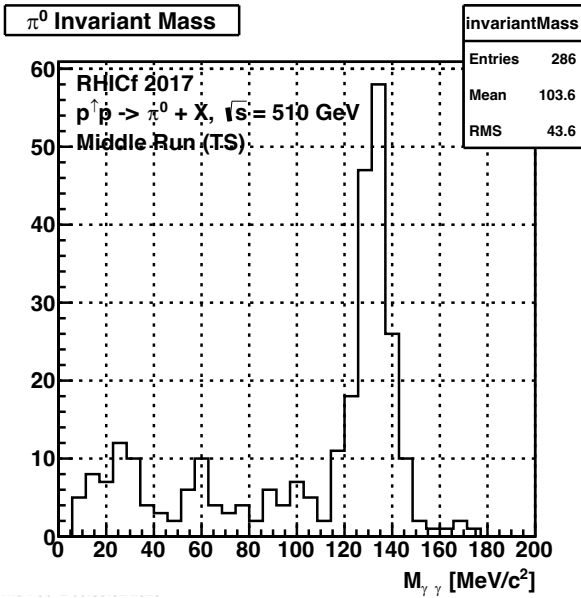
$$E_\gamma < 20 \text{ GeV}$$

$$Position_{Hit} < Tower \text{ Edge (4mm)}$$

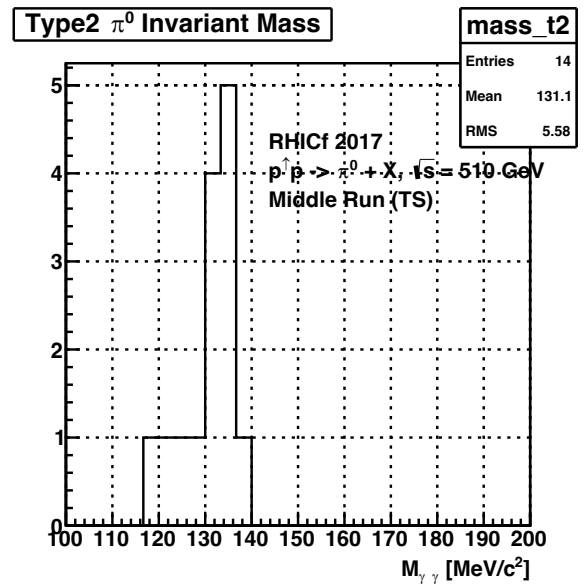
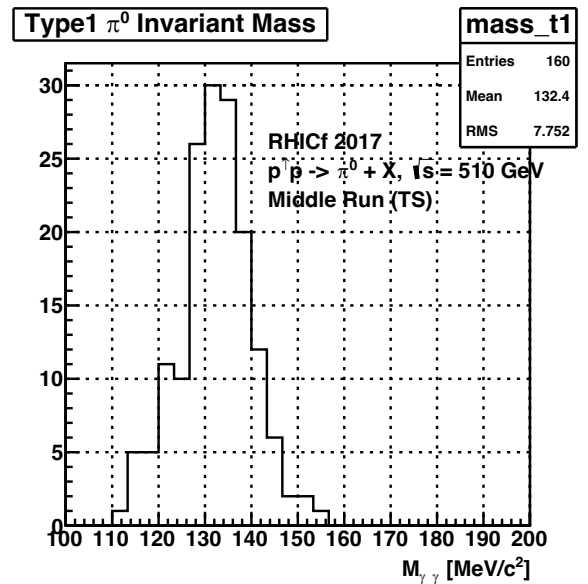
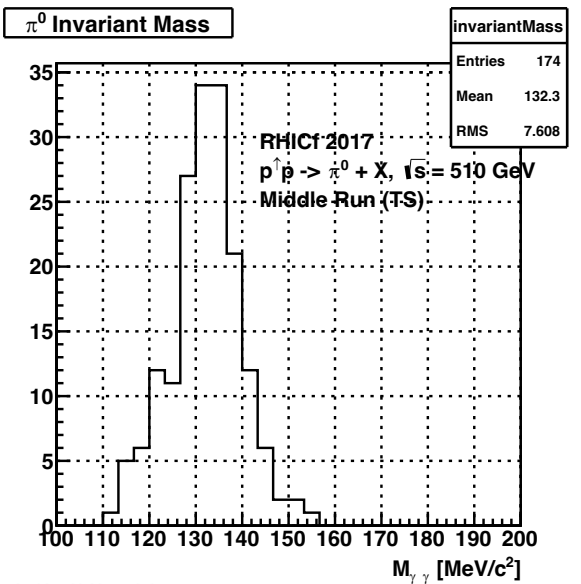
$$PID \neq \text{photon}$$

This study was conducted for analysis methods and tools to be analyzed in practice.

# Invariant Mass



Because of the very poor statistics,  
It is not distinguished from the signal



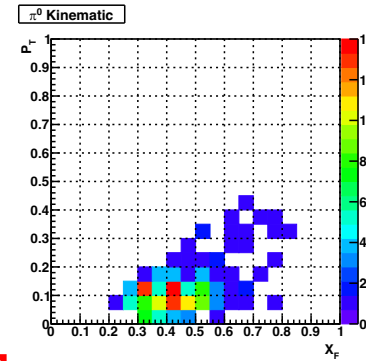
After Mass Cut :

$$110 \text{ MeV}/c^2 < m_{\gamma\gamma} < 160 \text{ MeV}/c^2 ,$$

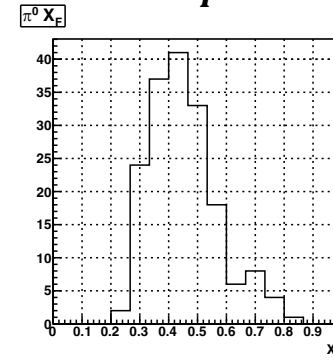
# $\pi^0$ Kinematics diagram

Despite the low statistics,  
It seems to be consistent with Minho's analysis note.

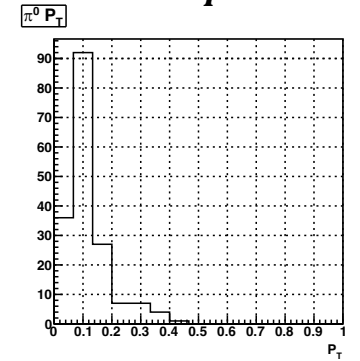
$x_F$  vs  $P_T$



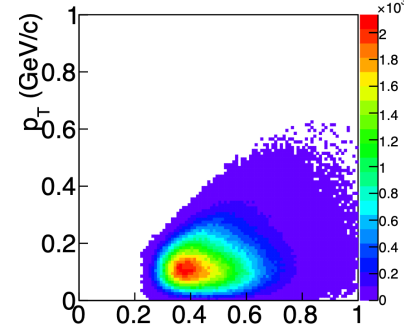
$x_F$



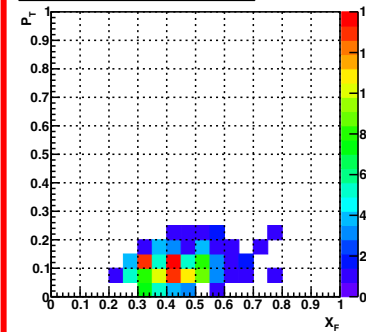
$P_T$



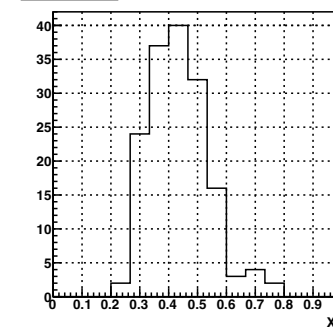
(b) Type-I



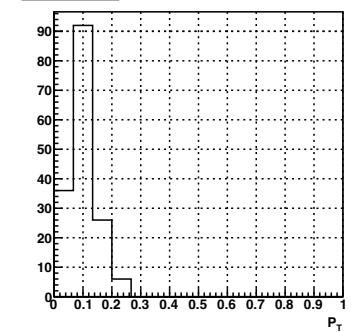
Type1  $\pi^0$  Kinematics  $x_F$  vs  $P_T$



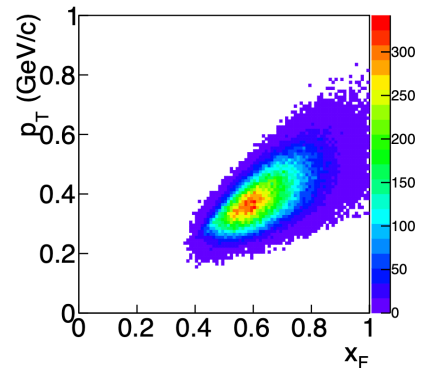
Type1  $\pi^0$   $x_F$



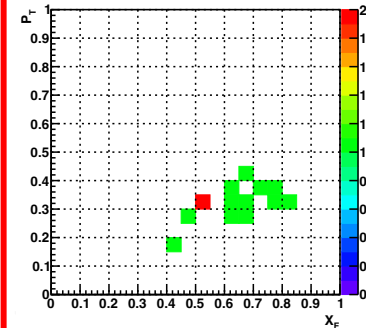
Type1  $\pi^0$   $P_T$



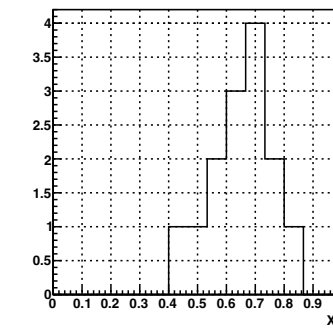
Type-II



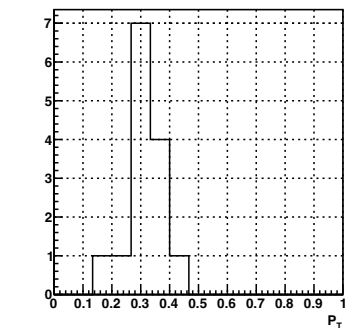
Type2  $\pi^0$  Kinematics  $x_F$  vs  $P_T$



Type2  $\pi^0$   $x_F$



Type2  $\pi^0$   $P_T$



From Minho's note