# MAPS Geometry Simulation Status
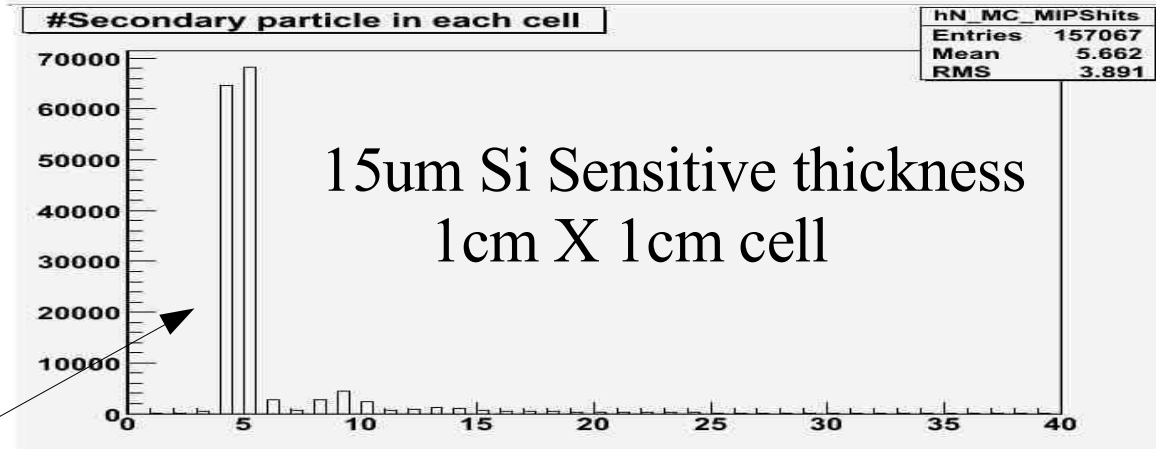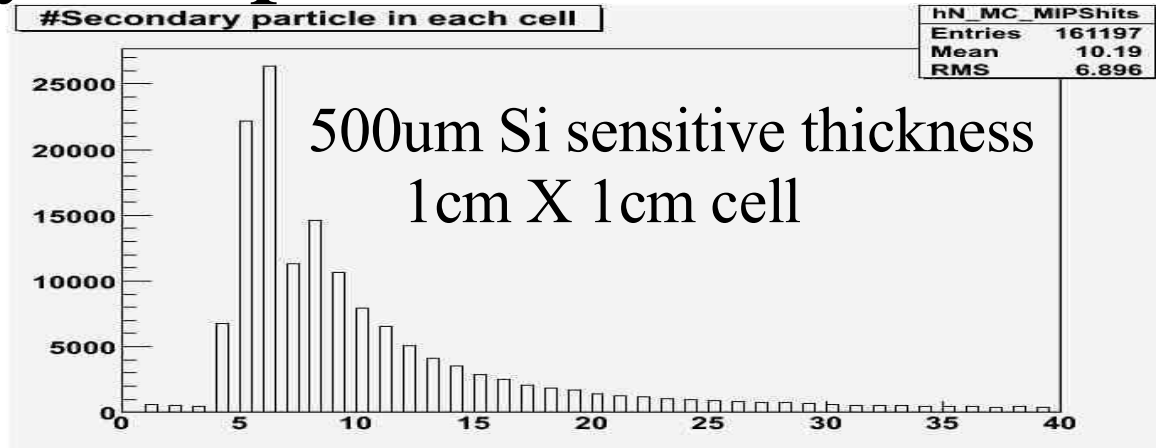
Yoshinari Mikami
University of Birmingham

MAPS meeting at RAL
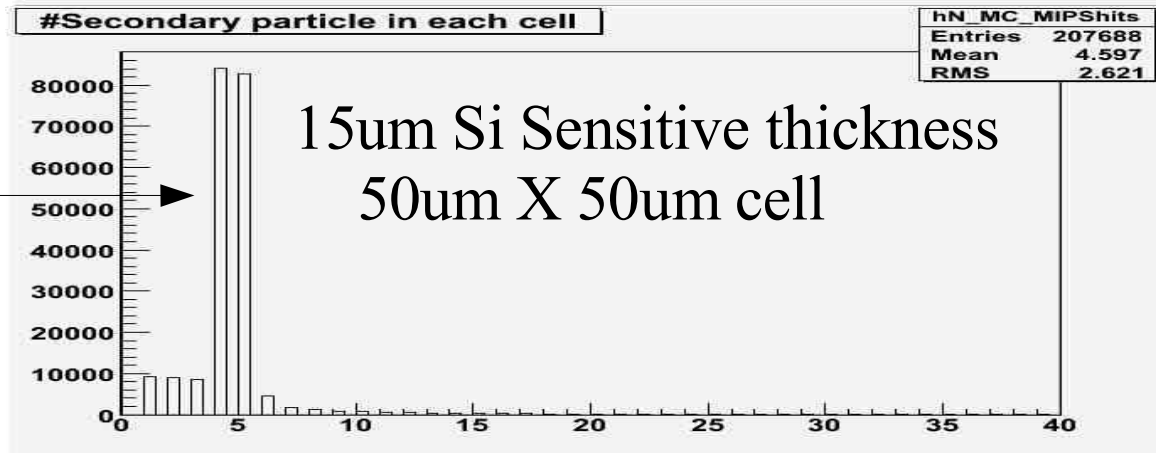12$^{th}$ July 2006

Contents:
1. #Particles which contributes on one cell_hit

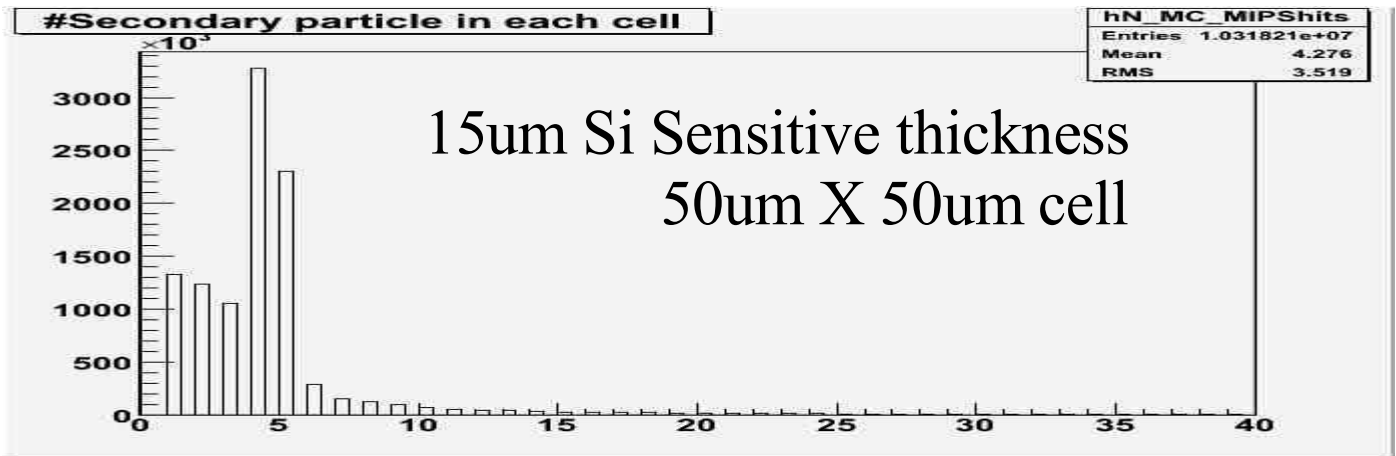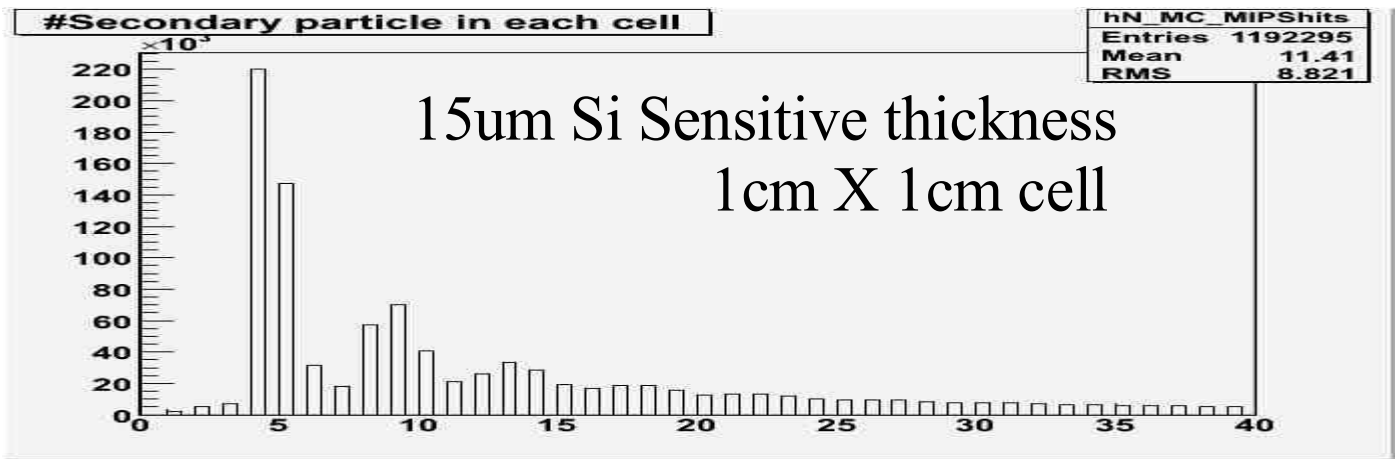# Geometry comparison with 20 GeV muon



**Arbitrary**

**MIPs peak:**
This contains at least an incoming muon and one kicked electron.

**500um Si sensitive thickness**
**1cm X 1cm cell**

hN_MC_MIPShits
Entries 161197
Mean 10.19
RMS 6.896

**15um Si Sensitive thickness**
**1cm X 1cm cell**

hN_MC_MIPShits
Entries 157067
Mean 5.662
RMS 3.891

**15um Si Sensitive thickness**
**50um X 50um cell**

hN_MC_MIPShits
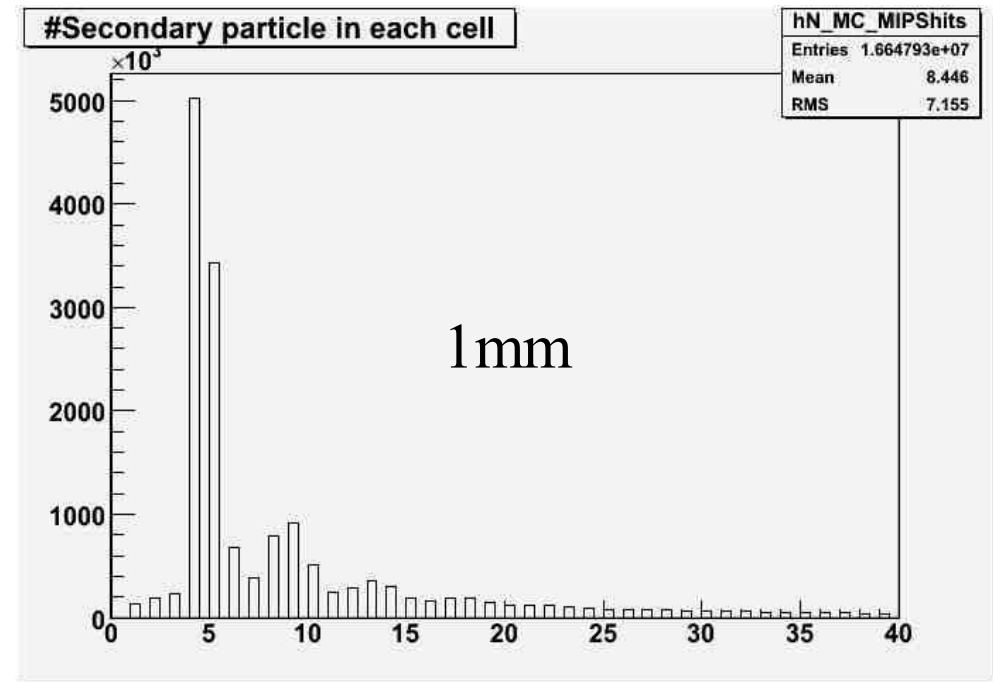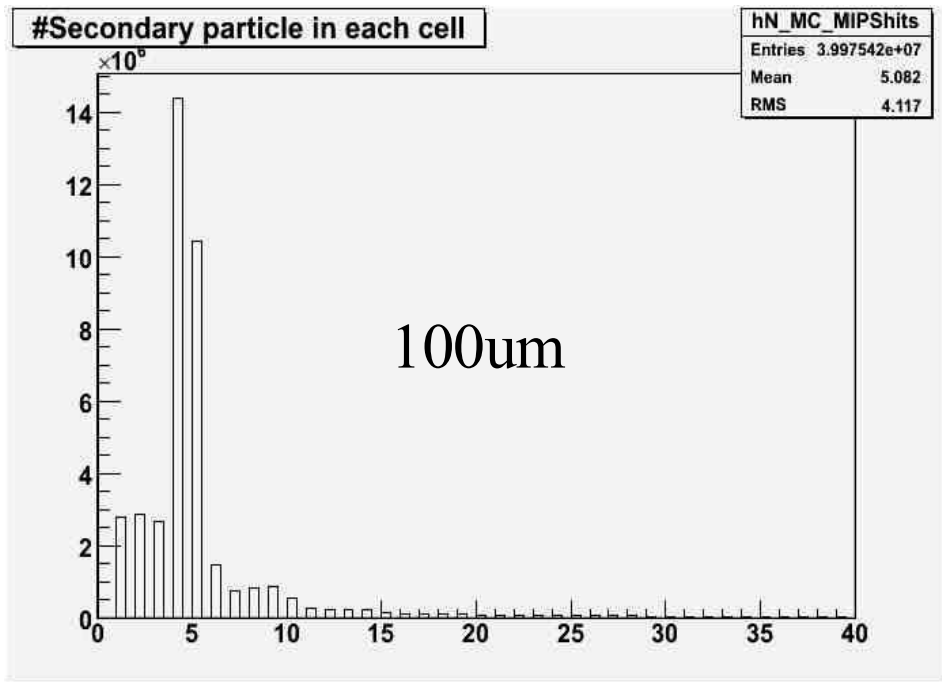Entries 207688
Mean 4.597
RMS 2.621

Number of particles which contributes on one cell_hit
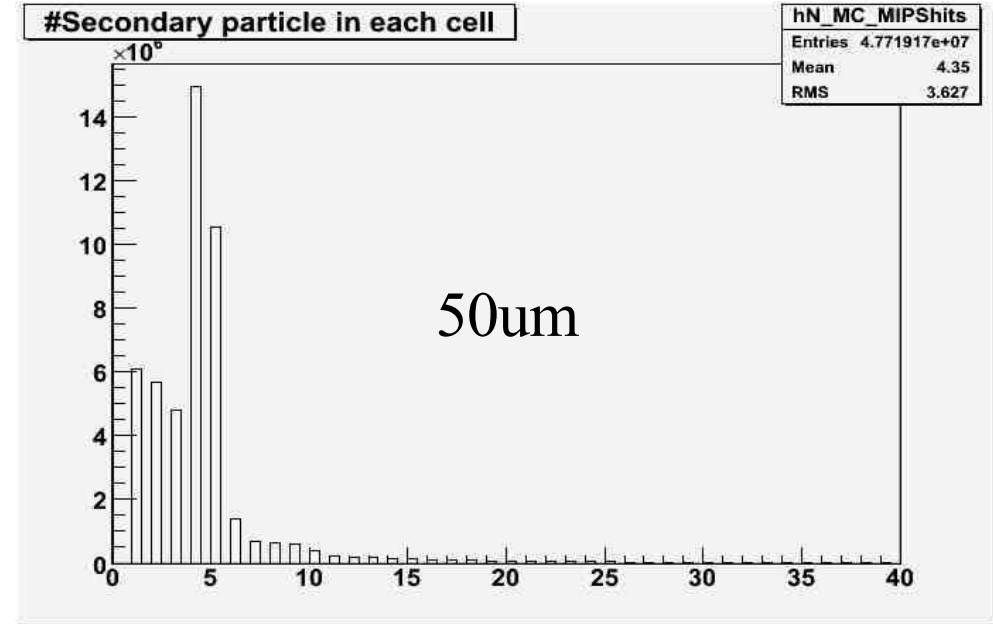
# Geometry comparison with 20 GeV electron
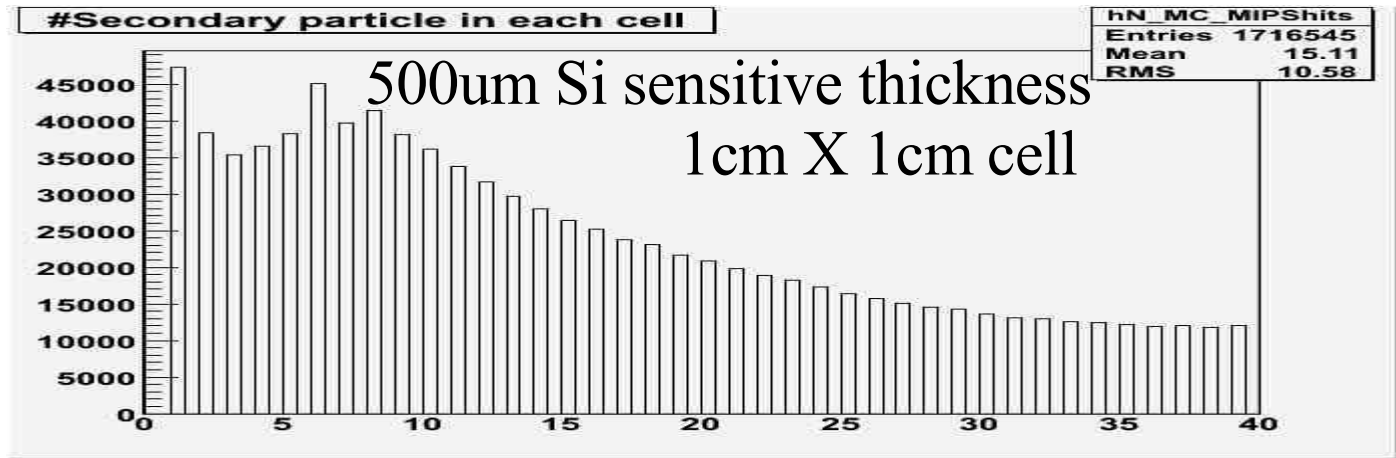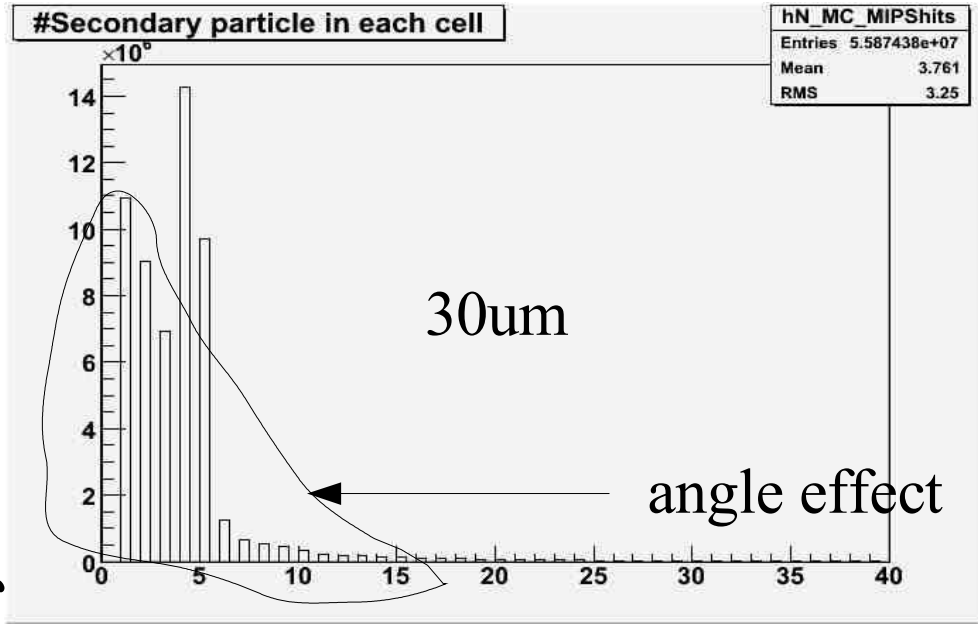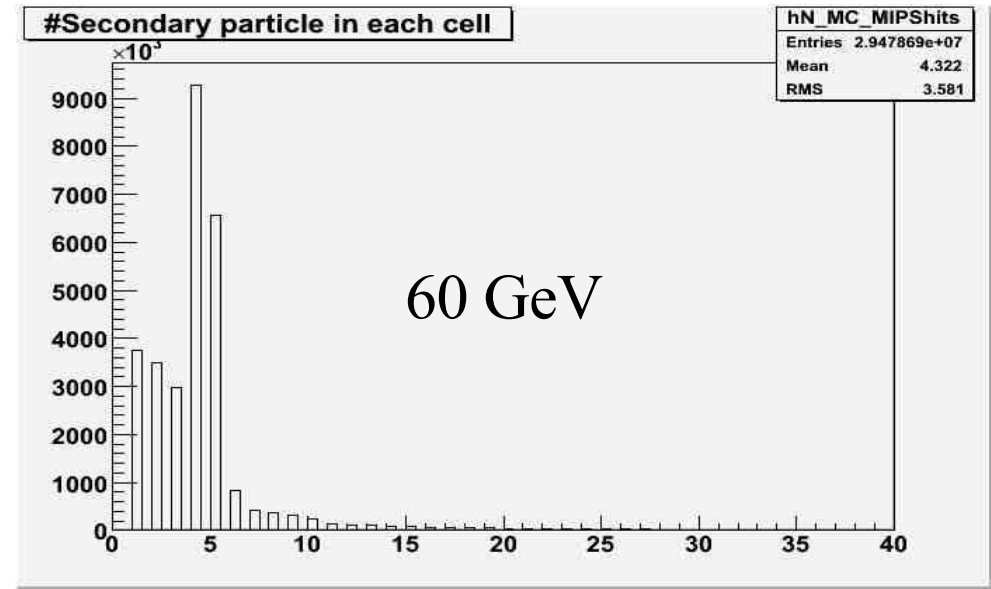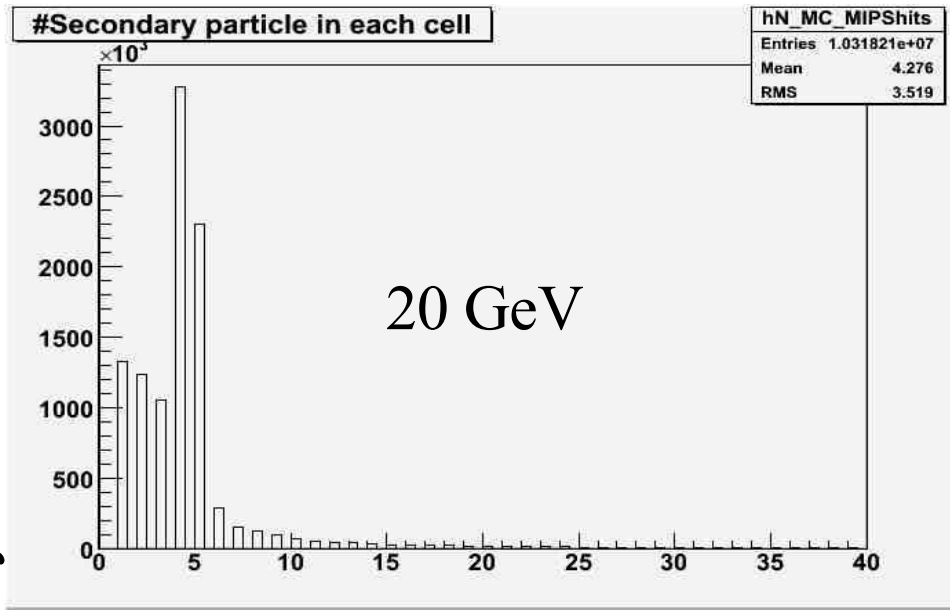


Number of particles which contributes on one cell_hit

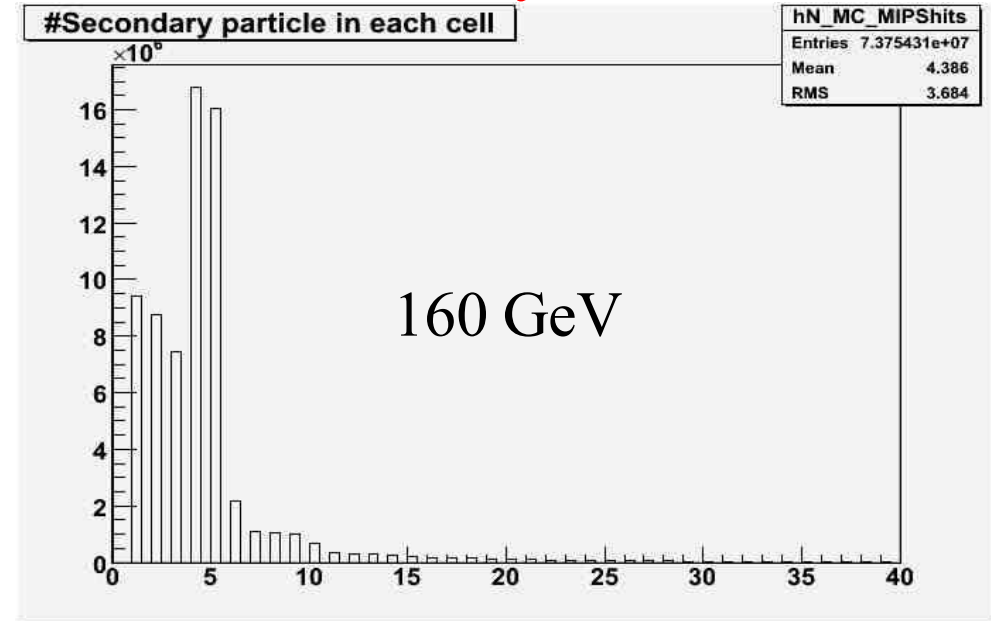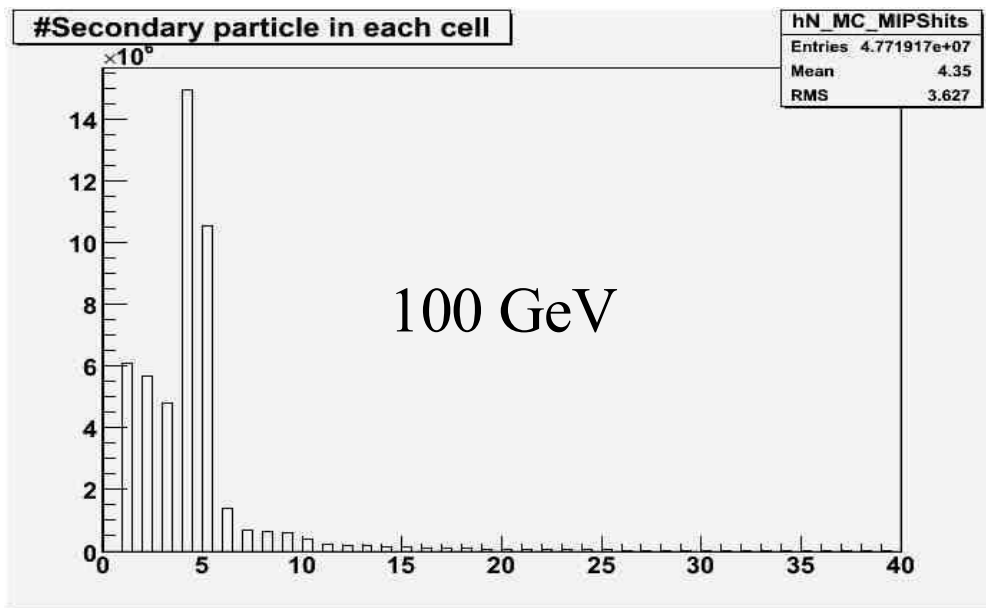# Cell size dependence with 100 GeV electron, 15um Si sensitive thickness



**Arbitrary**

**Number of particles which contributes on one cell_hit**

Energy dependence with electron, 15um Si sensitive thickness, 50umX50um cell



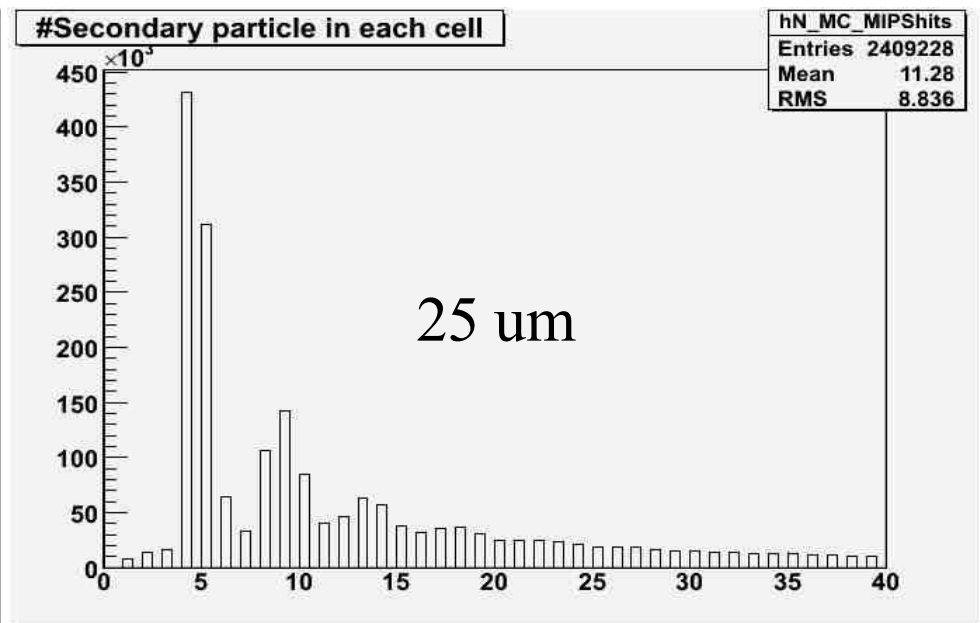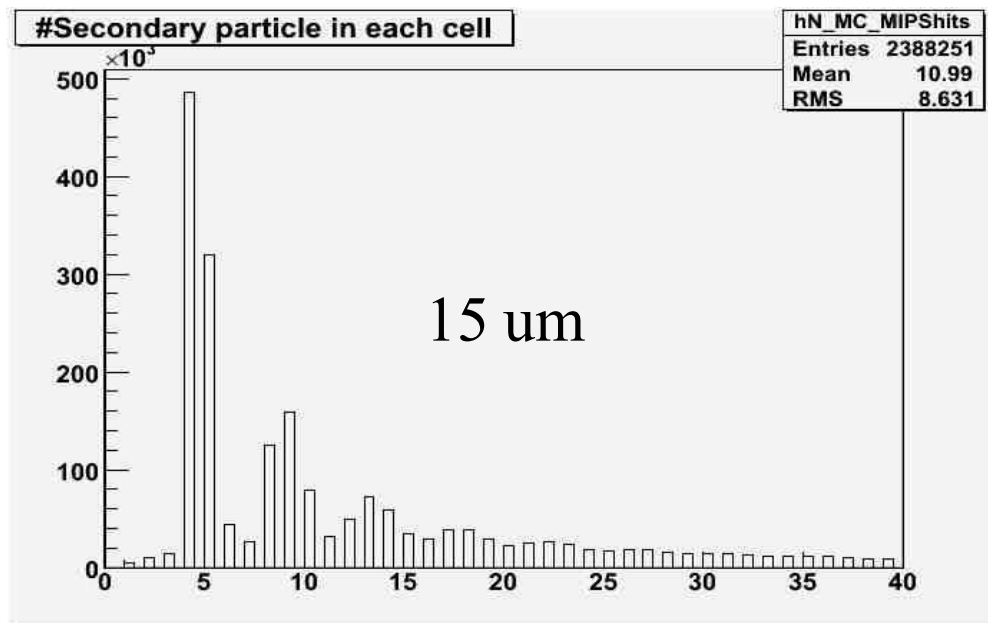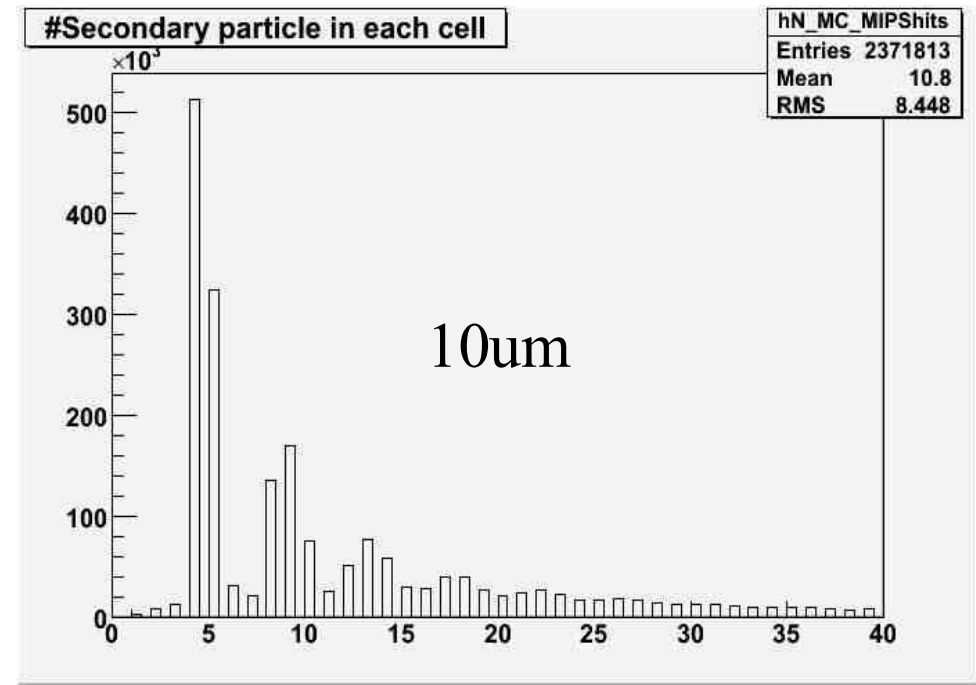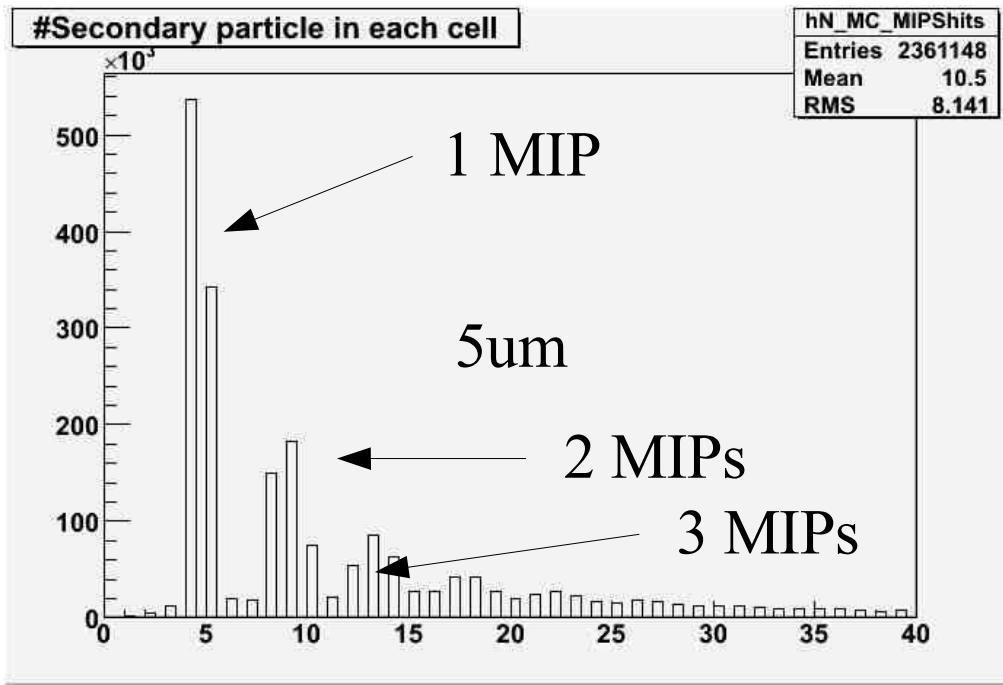There is only one MIP hit in every case!!

Arbitrary

Number of particles which contributes on one cell_hit

# Si sensitive thickness dependence with 20 GeV electron, 1cmX1cm cell



Arbitrary

Number of particles which contributes on one cell_hit

# Next steps and status

- MC studies

  - Efficiency study with angle dependence and with particle separation

- MAPS codes (Ecal02.cc for thin Si sensitive thickness with Si non-sensitive volume) and more small cell division codes (Encoder64.cc for up to 5um cell) will be ready for release. (A bug in modified Encoder64.cc is fixed by Anne-Maire. <- Thanks a lot!)