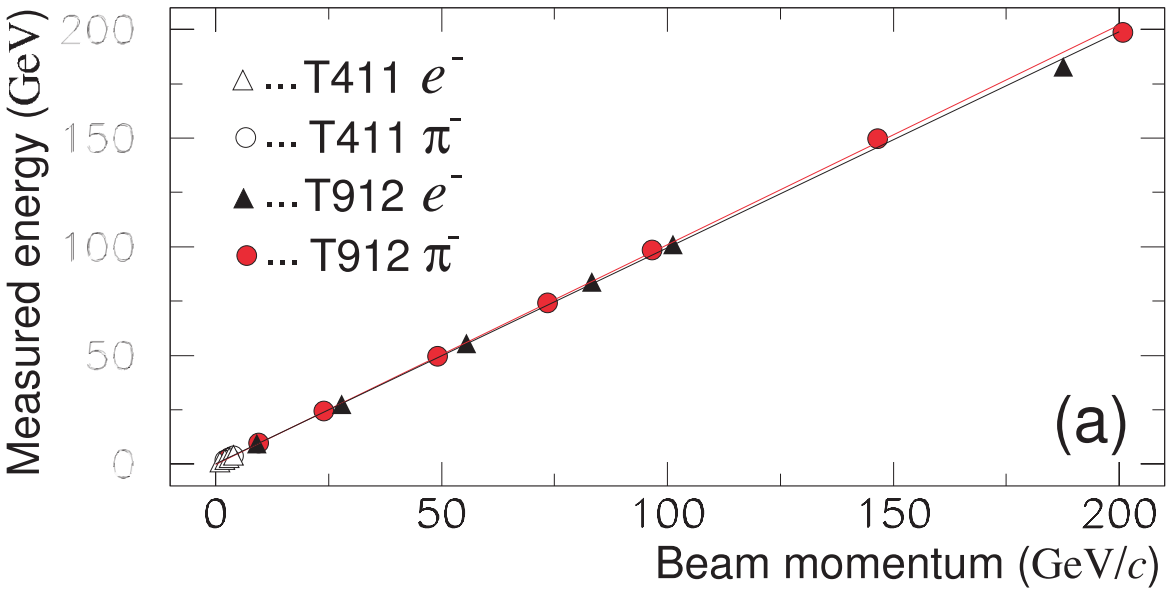
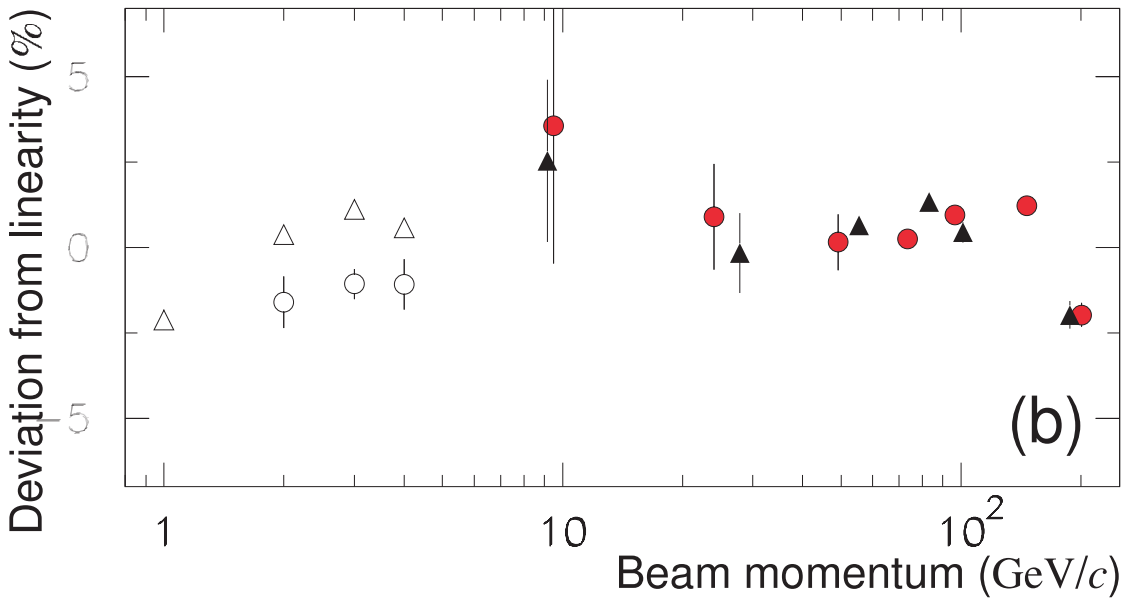
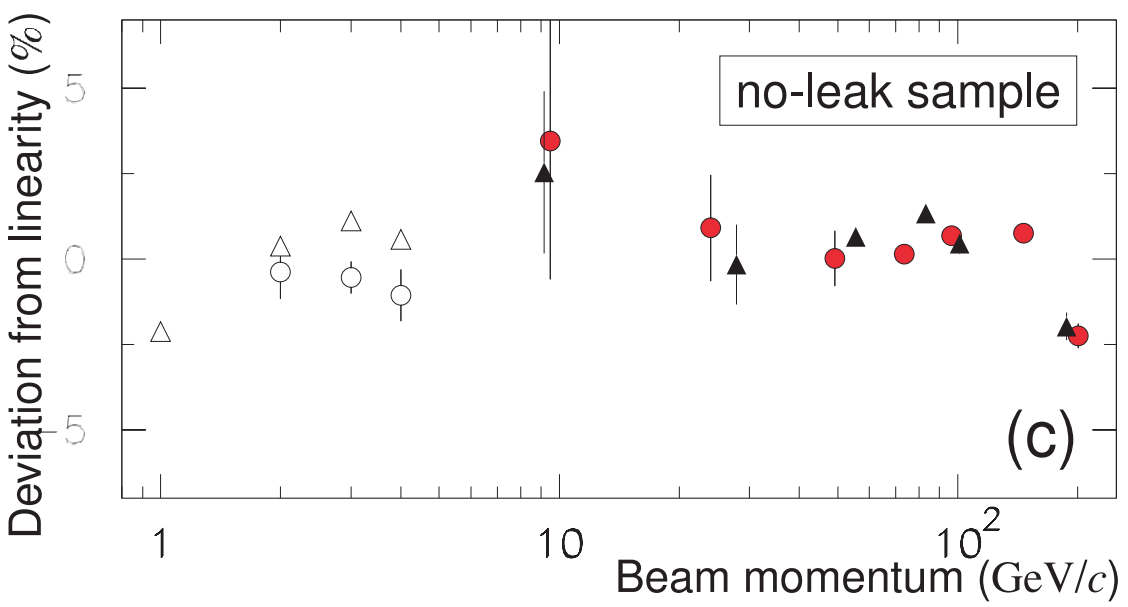
b) Linearity

sm07


Measured energy (GeV)
200
150
100
50
0
△ ... T411 e^-
○ ... T411 π^-
▲ ... T912 e^-
● ... T912 π^-
(a)
0
50
100
150
200
Beam momentum (GeV/c)

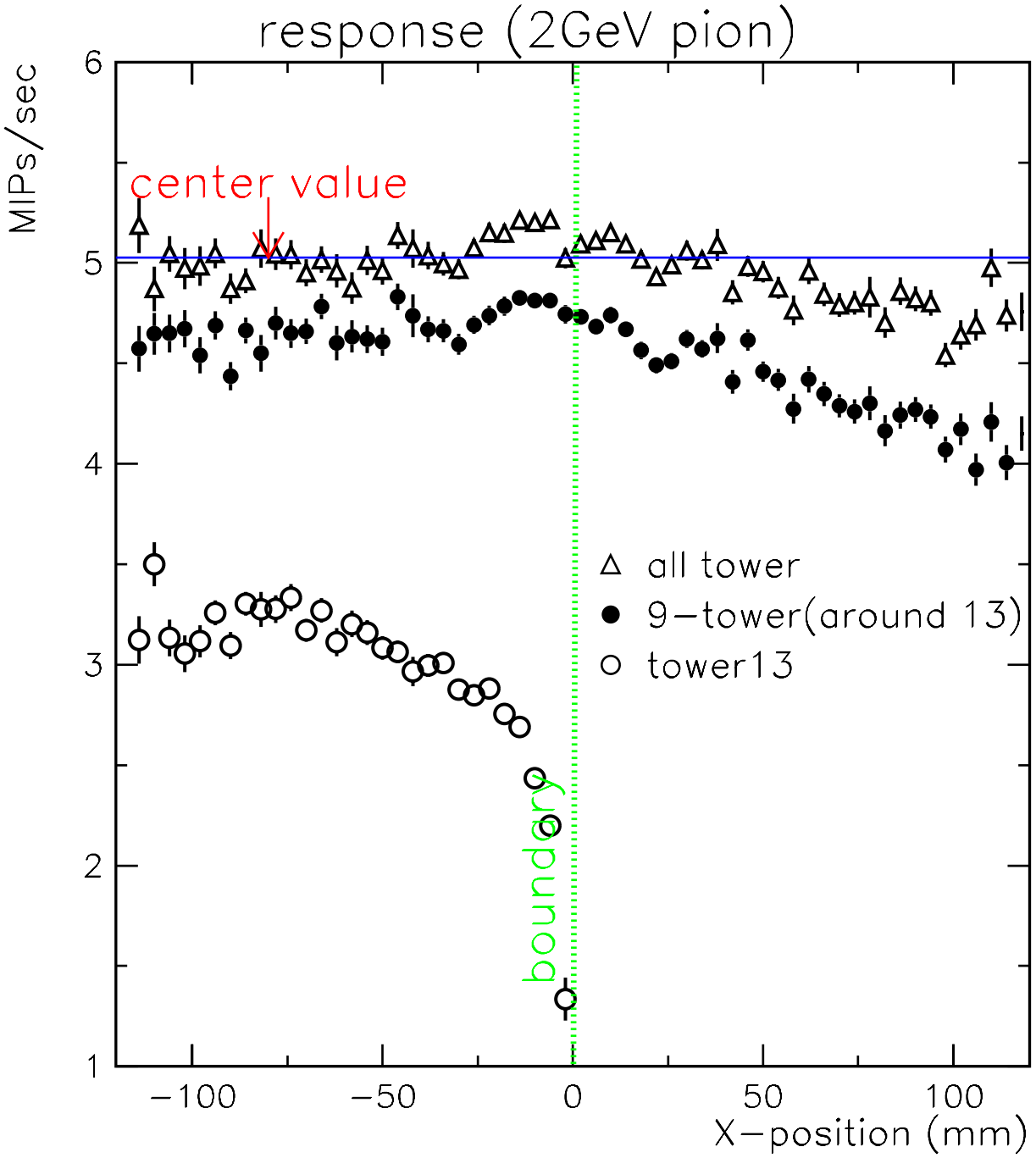

Deviation from linearity (%)
5
0
−5
(b)
1
10
10^2
Beam momentum (GeV/c)

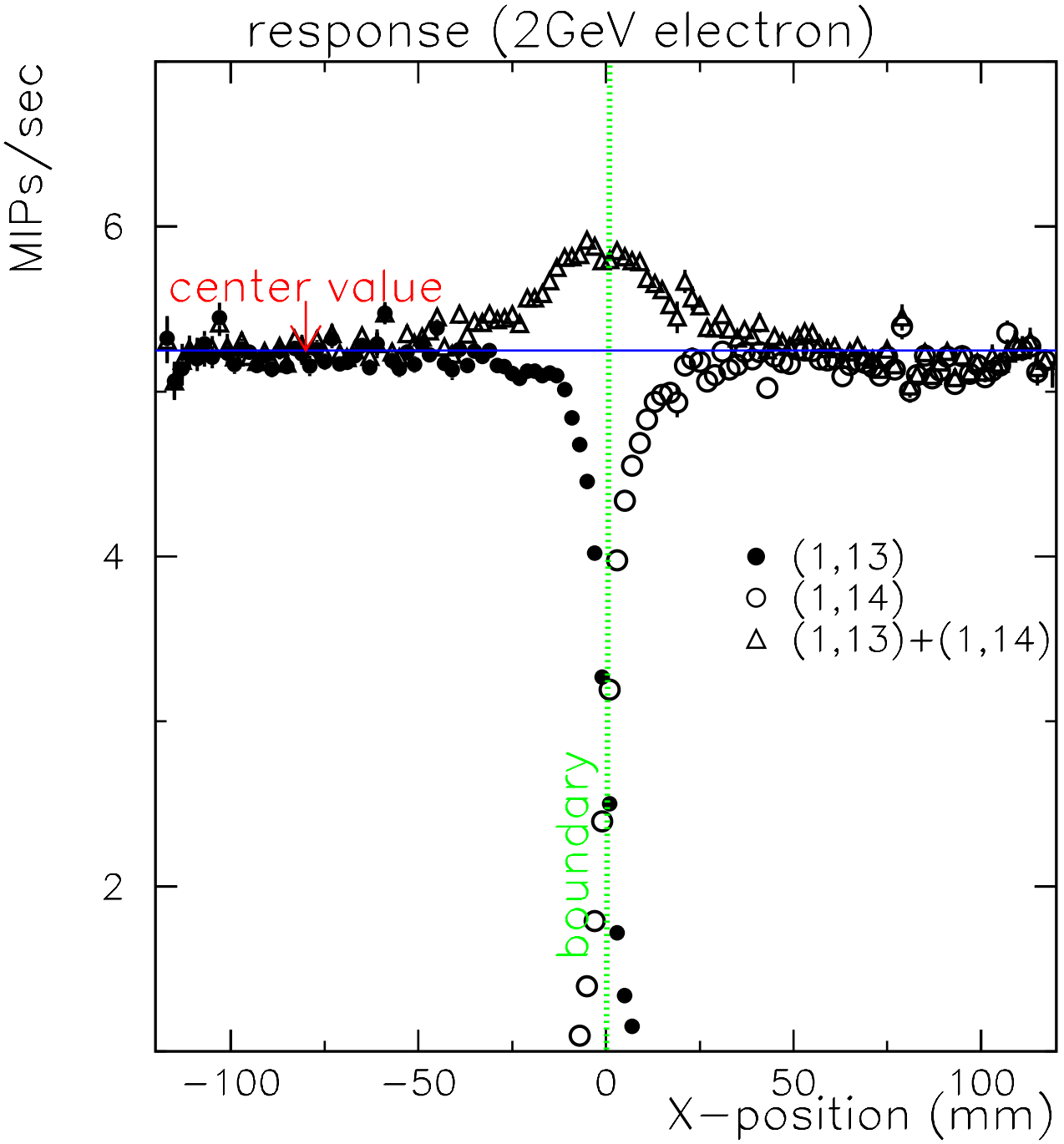

Deviation from linearity (%)
5
0
−5
no-leak sample
(c)
1
10
10^2
Beam momentum (GeV/c)

Good Linearity thanks to Hardware Compensation.

(better than 1% from 2 GeV to 150 GeV)

c) Tower Boundary Response


response (2GeV pion)
MIPs/sec
center value
boundary
all tower
9−tower(around 13)
tower13
X−position (mm)
6
5
4
3
2
1
−100
−50
0
50
100


response (2GeV electron)
MIPs/sec
6
4
2
center value
boundary
(1,13)
(1,14)
(1,13)+(1,14)
−100
−50
0
50
100
X−position (mm)

- No significant anomaly was observed at the tower boundary for pions.
- Slight anomaly was observed for electrons.

  EM module must be designed with more uniform response.