Momentum Measurement

Momentum Measurement.

- Understanding on bias,
  $\Sigma E_\gamma / \Sigma E_e$ should be check.

⇩

The momentum of charged tracks from 1ry vertex have been measured ?

⇩

By using decay search DATA, momentum was measured systematically

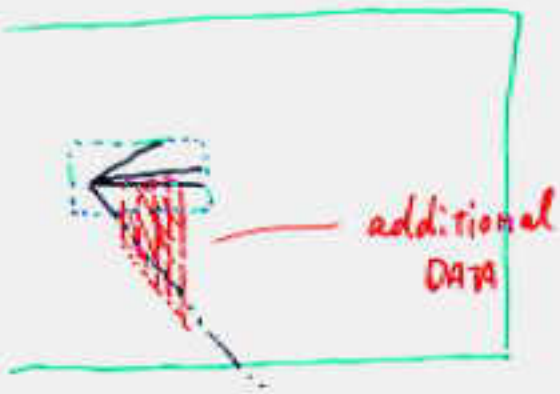
⇩

① By using electron ID DATA, momentum should be measured. Precisely.

⇨
- Online DATA TAKING : EID data.
- Offline : Already exist.

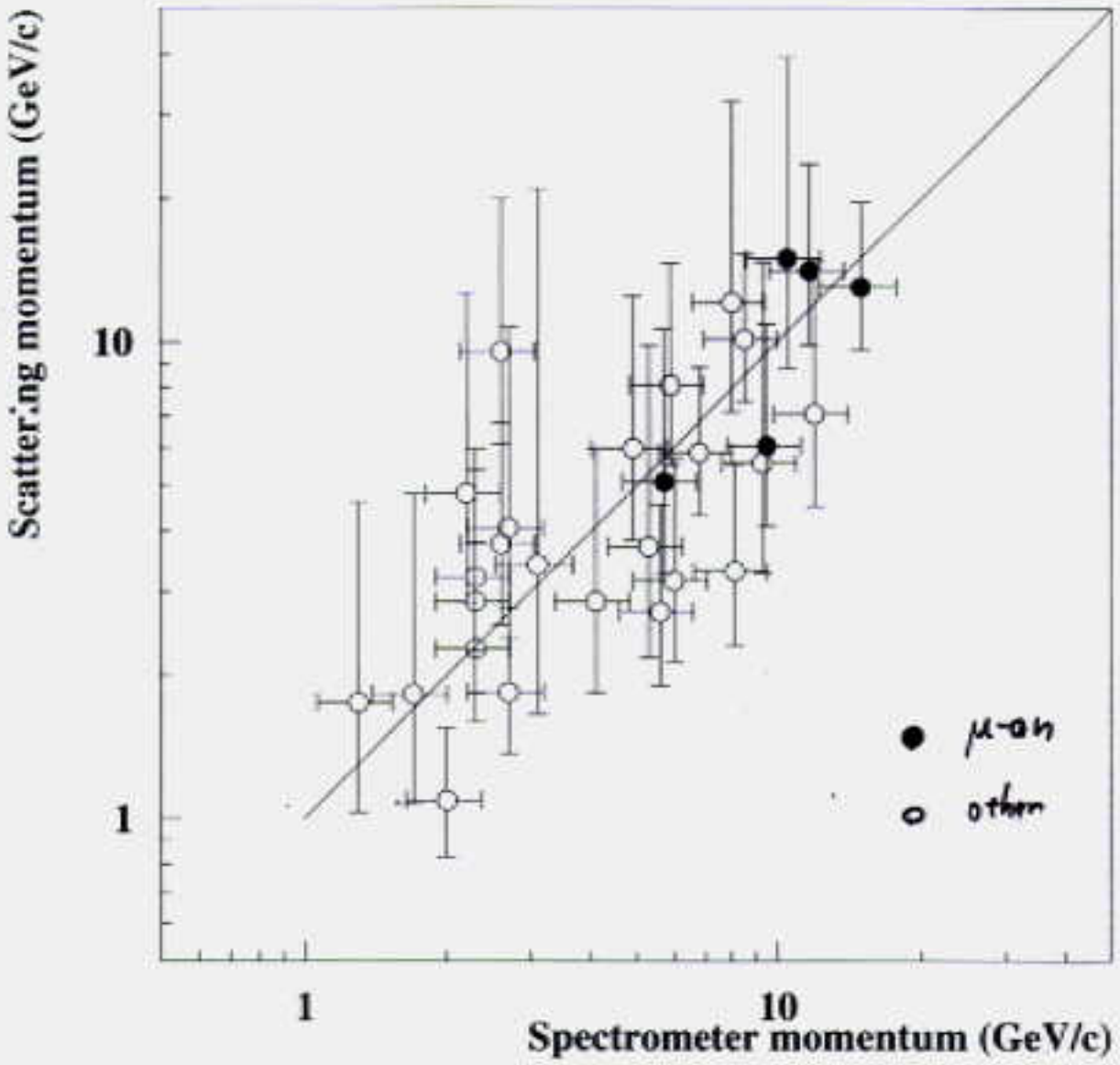
② Some tracks have not yet measured. (track slope ≥ 0.15)

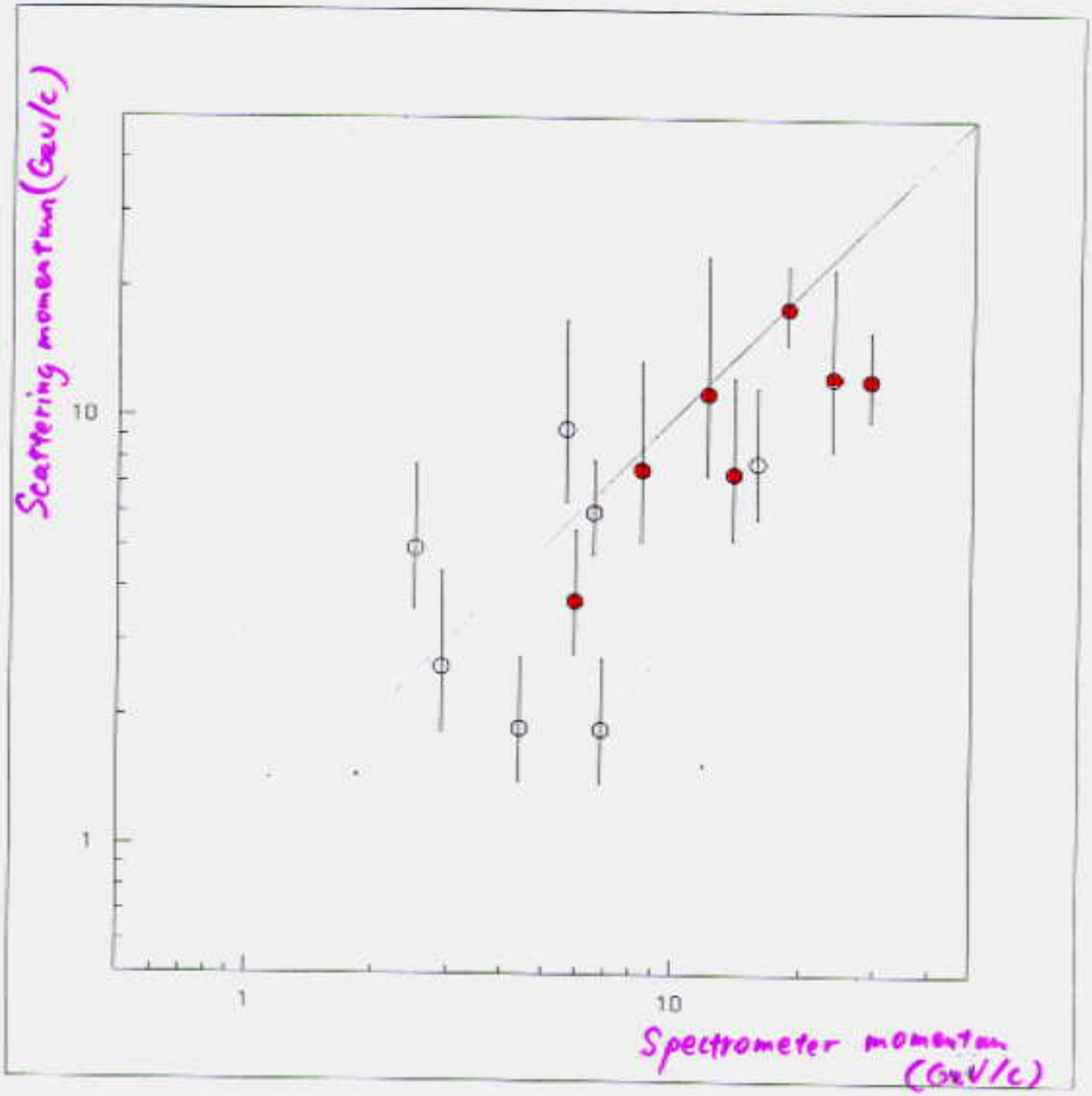
243 tracks / 1768 tracks.

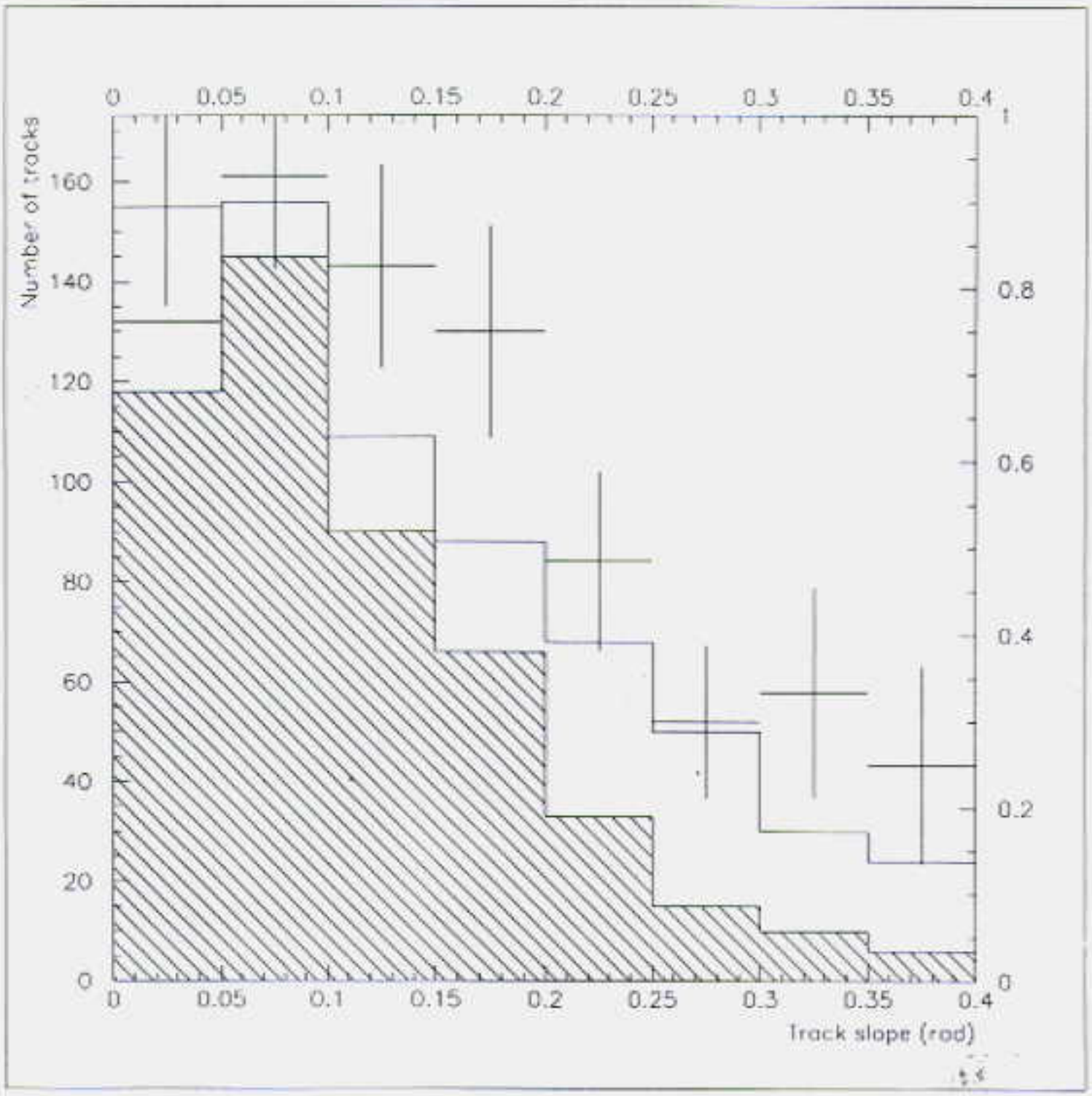


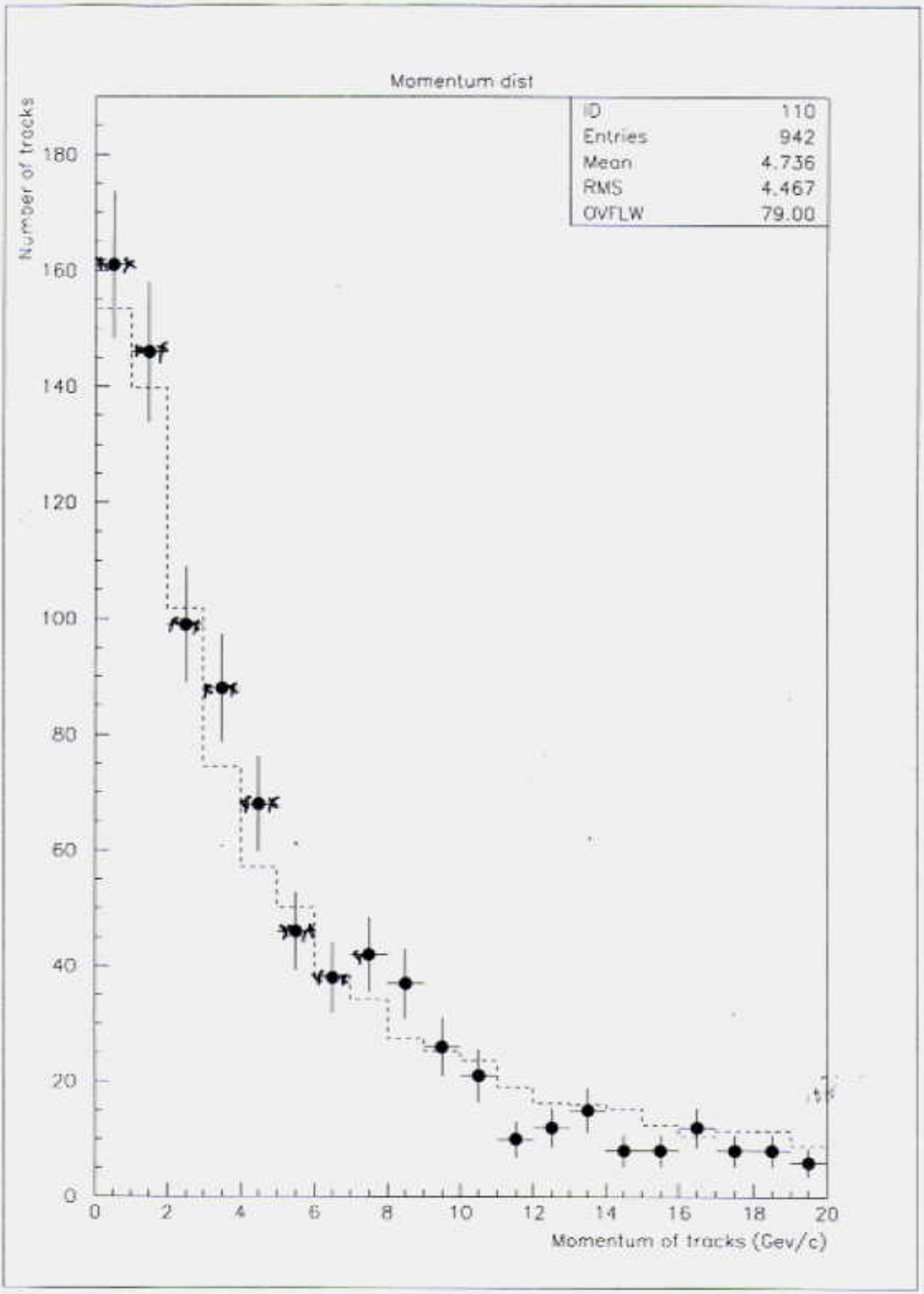
- Online DATA :
  For 120 tracks, it took 1week.

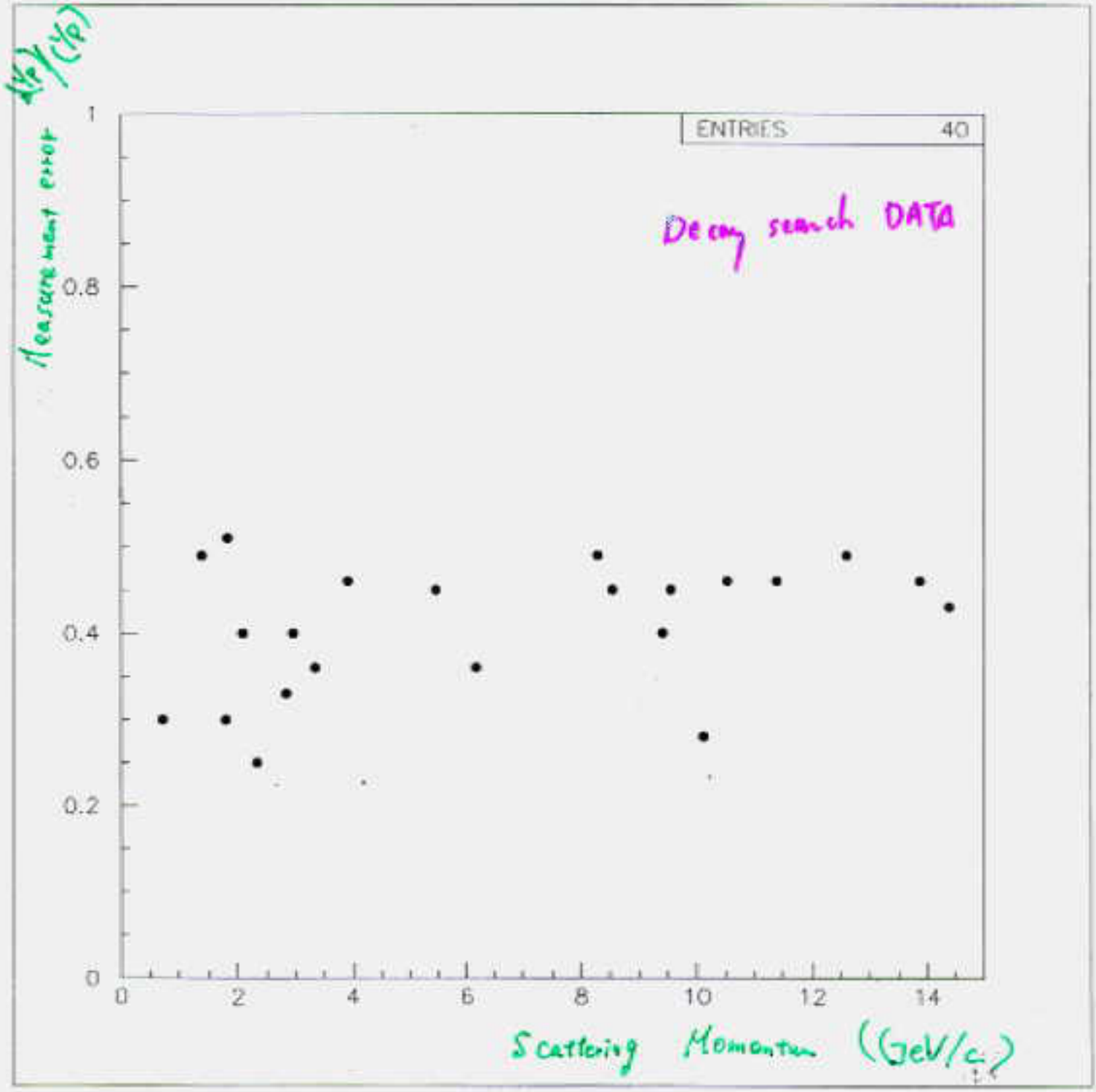
⇨ 2weeks.

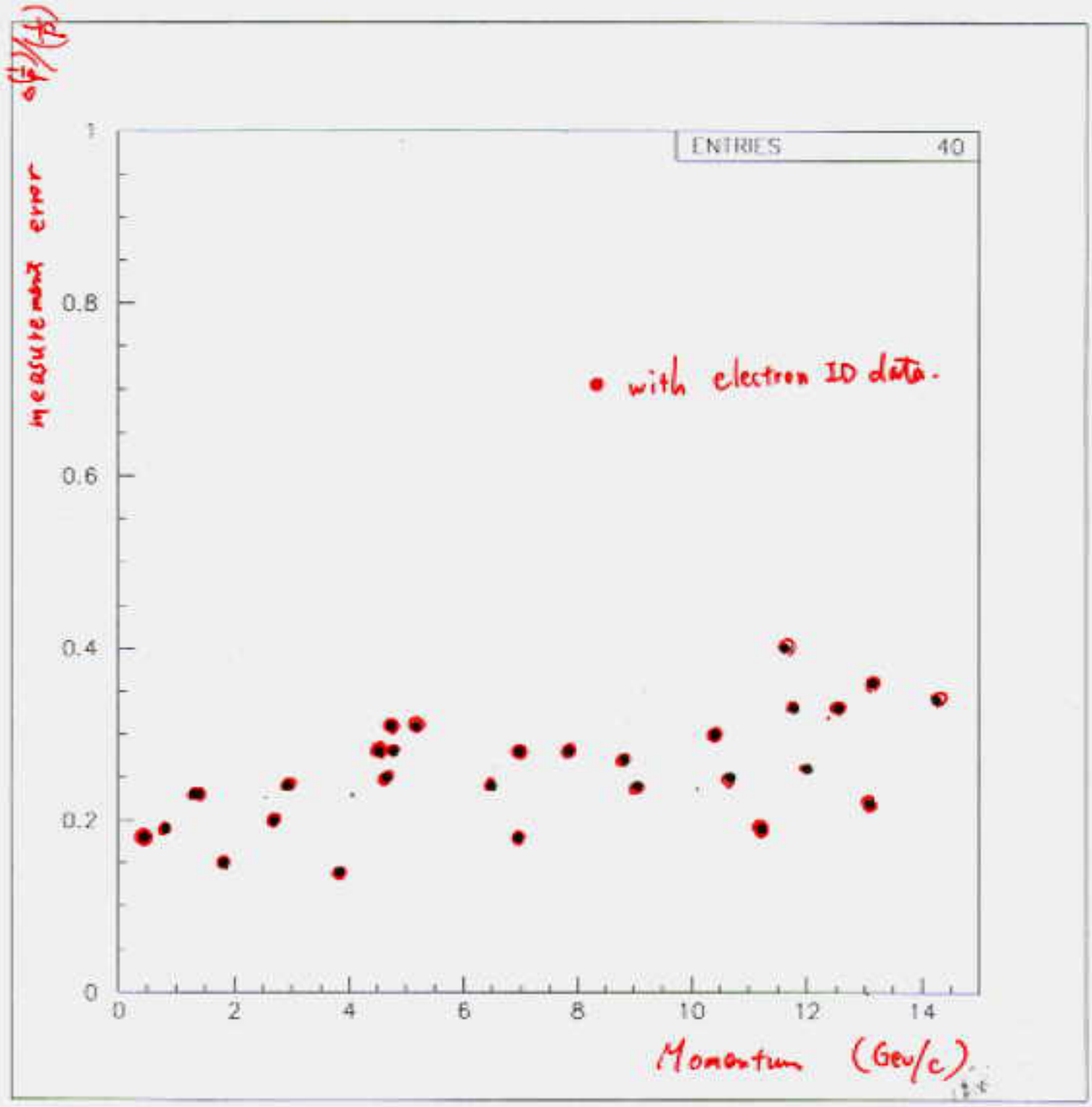

Scatter'ng momentum (GeV/c)
10
1
1
10
Spectrometer momentum (GeV/c)
μ-on
other

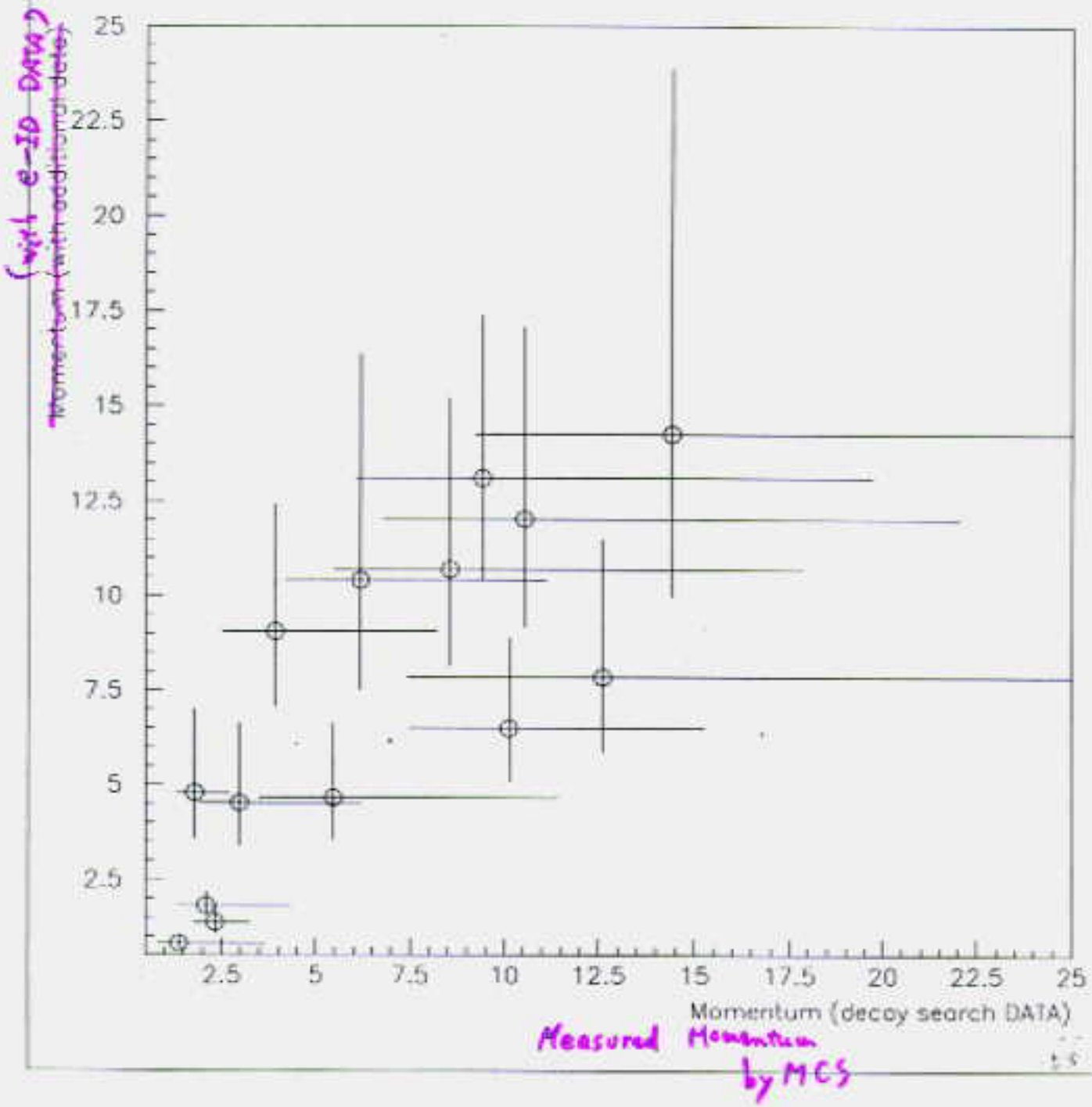

Scattering momentum (GeV/c)
10
1
1
10
Spectrometer momentum (GeV/c)


Number of tracks
0
20
40
60
80
100
120
140
160
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0
0.2
0.4
0.6
0.8
1
Track slope (rad)


Momentum dist
ID 110
Entries 942
Mean 4.736
RMS 4.467
OVFLW 79.00
Number of tracks
0
20
40
60
80
100
120
140
160
180
0
2
4
6
8
10
12
14
16
18
20
Momentum of tracks (Gev/c)


ENTRIES 40
Decay search DATA
Measurement error
Scattering Momentum (GeV/c)
0
0.2
0.4
0.6
0.8
1
0
2
4
6
8
10
12
14


ENTRIES 40
measurement error $\sigma(\frac{1}{p})/(\frac{1}{p})$
1
0.8
0.6
0.4
0.2
0
0
2
4
6
8
10
12
14
• with electron ID data.
Momentum (Gev/c)


Momentum (with e-ID DATA)
25
22.5
20
17.5
15
12.5
10
7.5
5
2.5
2.5
5
7.5
10
12.5
15
17.5
20
22.5
25
Momentum (decay search DATA)
Measured Momentum
by MCS