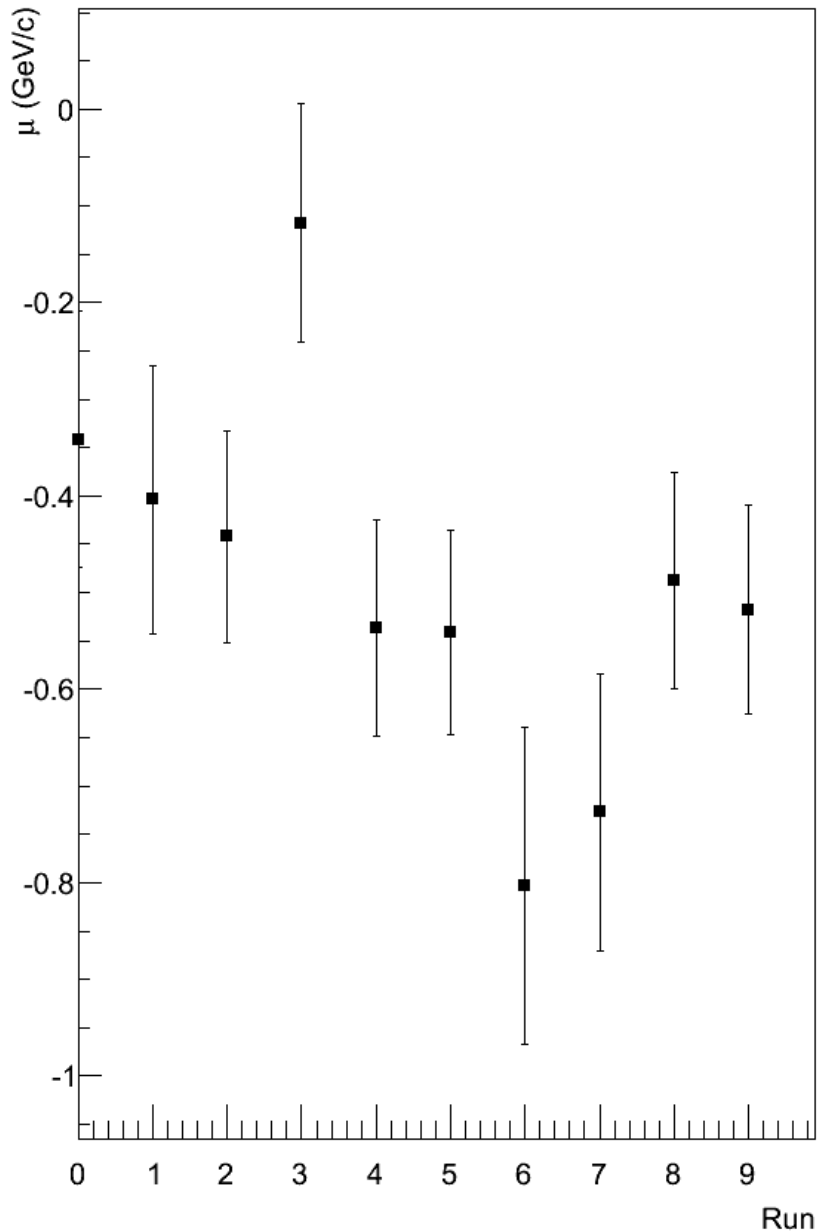


# **Run-by-run analysis**

*Centrality 0 – 10 %*

Mean values  $\mu$  (error bars = fit error) - Tracks -  $\eta$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.342 \pm 0.132$

$\rightarrow \sigma = 4.142 \pm 0.103$

**Run 1**  $\rightarrow \mu = -0.403 \pm 0.139$

$\rightarrow \sigma = 4.423 \pm 0.123$

**Run 2**  $\rightarrow \mu = -0.442 \pm 0.109$

$\rightarrow \sigma = 4.130 \pm 0.087$

**Run 3**  $\rightarrow \mu = -0.118 \pm 0.123$

$\rightarrow \sigma = 4.117 \pm 0.095$

**Run 4**  $\rightarrow \mu = -0.537 \pm 0.112$

$\rightarrow \sigma = 4.143 \pm 0.087$

**Run 5**  $\rightarrow \mu = -0.542 \pm 0.106$

$\rightarrow \sigma = 4.065 \pm 0.083$

**Run 6**  $\rightarrow \mu = -0.804 \pm 0.164$

$\rightarrow \sigma = 4.364 \pm 0.140$

**Run 7**  $\rightarrow \mu = -0.727 \pm 0.144$

$\rightarrow \sigma = 4.151 \pm 0.111$

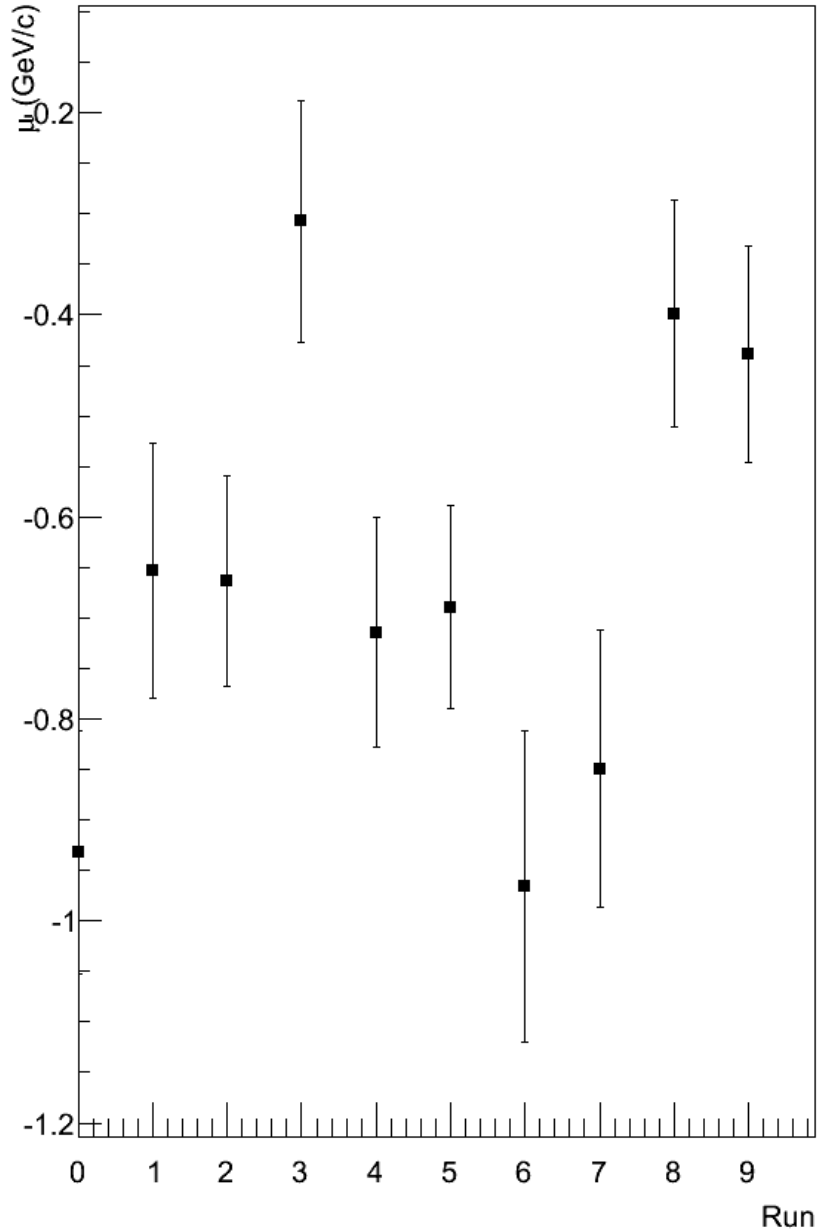
**Run 8**  $\rightarrow \mu = -0.488 \pm 0.112$

$\rightarrow \sigma = 4.318 \pm 0.090$

**Run 9**  $\rightarrow \mu = -0.518 \pm 0.108$

$\rightarrow \sigma = 4.277 \pm 0.094$

Mean values  $\mu$  (error bars = fit error) - Tracks -  $\phi$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.932 \pm 0.121$

$\rightarrow \sigma = 3.941 \pm 0.096$

**Run 1**  $\rightarrow \mu = -0.654 \pm 0.126$

$\rightarrow \sigma = 4.053 \pm 0.097$

**Run 2**  $\rightarrow \mu = -0.663 \pm 0.104$

$\rightarrow \sigma = 3.993 \pm 0.081$

**Run 3**  $\rightarrow \mu = -0.308 \pm 0.120$

$\rightarrow \sigma = 4.018 \pm 0.089$

**Run 4**  $\rightarrow \mu = -0.714 \pm 0.114$

$\rightarrow \sigma = 4.004 \pm 0.091$

**Run 5**  $\rightarrow \mu = -0.689 \pm 0.101$

$\rightarrow \sigma = 3.738 \pm 0.079$

**Run 6**  $\rightarrow \mu = -0.966 \pm 0.154$

$\rightarrow \sigma = 3.800 \pm 0.122$

**Run 7**  $\rightarrow \mu = -0.850 \pm 0.137$

$\rightarrow \sigma = 3.864 \pm 0.119$

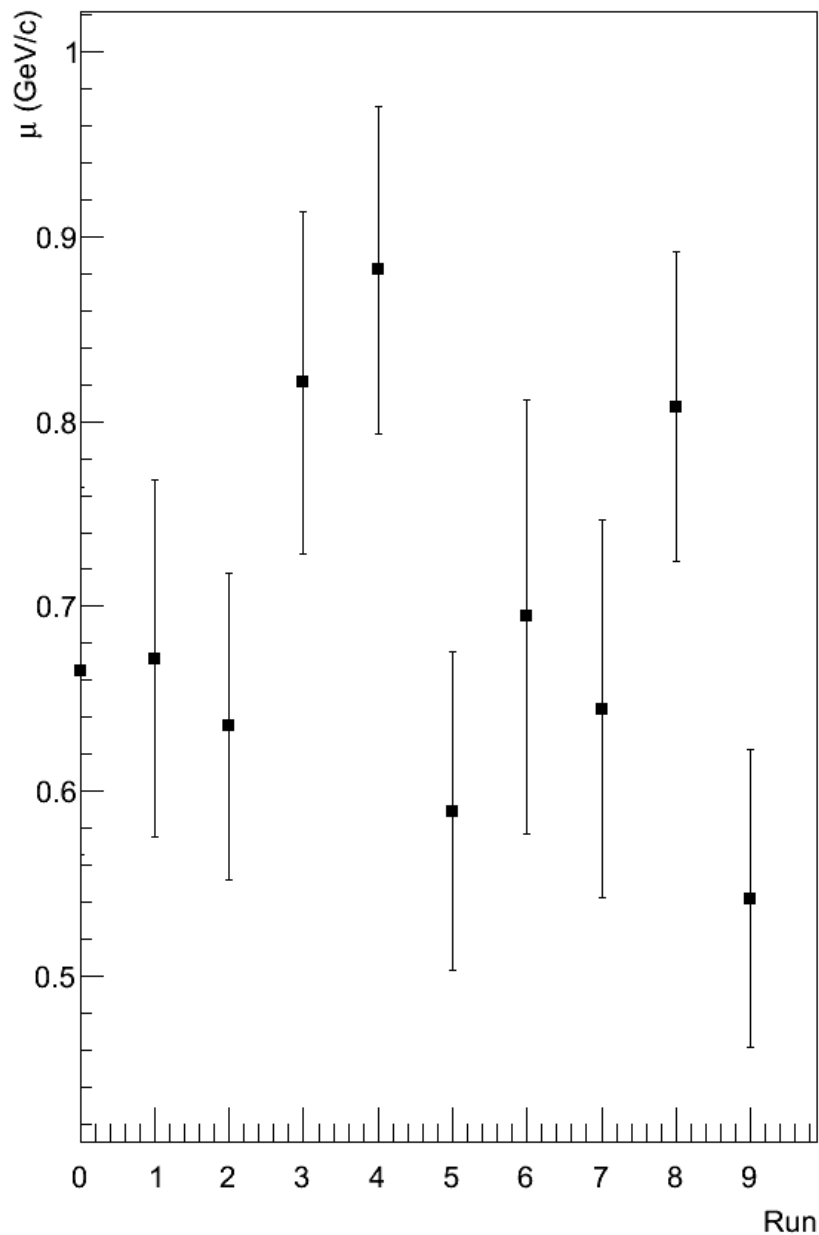
**Run 8**  $\rightarrow \mu = -0.399 \pm 0.112$

$\rightarrow \sigma = 3.937 \pm 0.085$

**Run 9**  $\rightarrow \mu = -0.439 \pm 0.108$

$\rightarrow \sigma = 4.023 \pm 0.080$

Mean values  $\mu$  (error bars = fit error) - Clusters -  $\eta$  band - R = 0.2



**Run 0**  $\rightarrow \mu=0.665 \pm 0.099$

$\rightarrow \sigma=3.116 \pm 0.084$

**Run 1**  $\rightarrow \mu=0.672 \pm 0.097$

$\rightarrow \sigma=3.067 \pm 0.079$

**Run 2**  $\rightarrow \mu=0.635 \pm 0.083$

$\rightarrow \sigma=3.259 \pm 0.068$

**Run 3**  $\rightarrow \mu=0.821 \pm 0.093$

$\rightarrow \sigma=3.119 \pm 0.066$

**Run 4**  $\rightarrow \mu=0.882 \pm 0.088$

$\rightarrow \sigma=3.180 \pm 0.063$

**Run 5**  $\rightarrow \mu=0.589 \pm 0.086$

$\rightarrow \sigma=3.328 \pm 0.063$

**Run 6**  $\rightarrow \mu=0.694 \pm 0.117$

$\rightarrow \sigma=3.080 \pm 0.094$

**Run 7**  $\rightarrow \mu=0.645 \pm 0.102$

$\rightarrow \sigma=2.944 \pm 0.080$

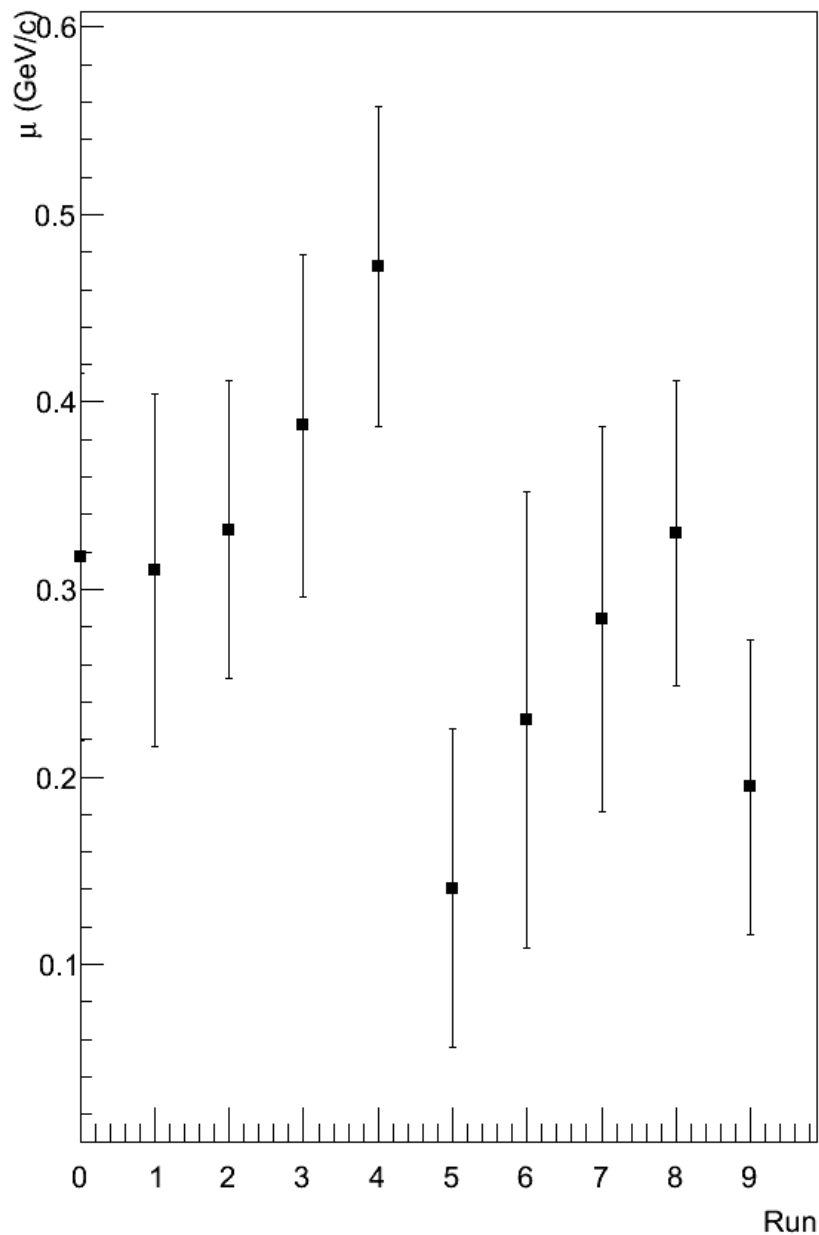
**Run 8**  $\rightarrow \mu=0.808 \pm 0.084$

$\rightarrow \sigma=3.100 \pm 0.066$

**Run 9**  $\rightarrow \mu=0.542 \pm 0.080$

$\rightarrow \sigma=3.083 \pm 0.059$

Mean values  $\mu$  (error bars = fit error) - Clusters -  $\phi$  band - R = 0.2



**Run 0**  $\rightarrow \mu=0.317 \pm 0.098$

$\rightarrow \sigma=2.866 \pm 0.079$

**Run 1**  $\rightarrow \mu=0.310 \pm 0.094$

$\rightarrow \sigma=3.036 \pm 0.075$

**Run 2**  $\rightarrow \mu=0.332 \pm 0.079$

$\rightarrow \sigma=3.058 \pm 0.061$

**Run 3**  $\rightarrow \mu=0.387 \pm 0.091$

$\rightarrow \sigma=3.088 \pm 0.073$

**Run 4**  $\rightarrow \mu=0.472 \pm 0.085$

$\rightarrow \sigma=3.102 \pm 0.058$

**Run 5**  $\rightarrow \mu=0.141 \pm 0.085$

$\rightarrow \sigma=3.159 \pm 0.062$

**Run 6**  $\rightarrow \mu=0.231 \pm 0.122$

$\rightarrow \sigma=3.159 \pm 0.097$

**Run 7**  $\rightarrow \mu=0.284 \pm 0.103$

$\rightarrow \sigma=3.007 \pm 0.086$

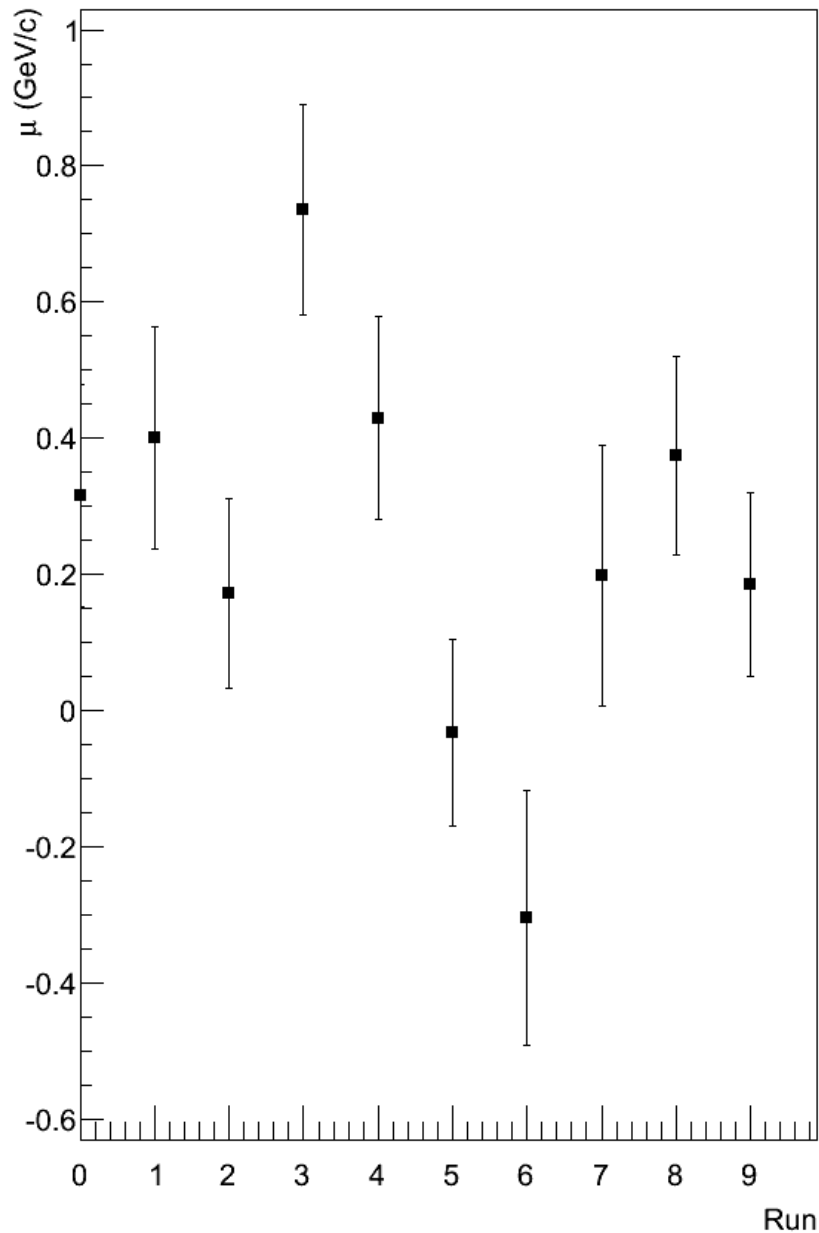
**Run 8**  $\rightarrow \mu=0.330 \pm 0.082$

$\rightarrow \sigma=3.020 \pm 0.062$

**Run 9**  $\rightarrow \mu=0.195 \pm 0.079$

$\rightarrow \sigma=3.104 \pm 0.062$

Mean values  $\mu$  (error bars = fit error) -  $\eta$  band - R = 0.2



**Run 0**  $\rightarrow \mu=0.315 \pm 0.163$

$\rightarrow \sigma=5.314 \pm 0.135$

**Run 1**  $\rightarrow \mu=0.400 \pm 0.163$

$\rightarrow \sigma=5.251 \pm 0.135$

**Run 2**  $\rightarrow \mu=0.171 \pm 0.139$

$\rightarrow \sigma=5.466 \pm 0.113$

**Run 3**  $\rightarrow \mu=0.736 \pm 0.154$

$\rightarrow \sigma=5.198 \pm 0.118$

**Run 4**  $\rightarrow \mu=0.430 \pm 0.150$

$\rightarrow \sigma=5.455 \pm 0.119$

**Run 5**  $\rightarrow \mu=-0.032 \pm 0.137$

$\rightarrow \sigma=5.136 \pm 0.102$

**Run 6**  $\rightarrow \mu=-0.305 \pm 0.187$

$\rightarrow \sigma=4.998 \pm 0.165$

**Run 7**  $\rightarrow \mu=0.199 \pm 0.192$

$\rightarrow \sigma=5.381 \pm 0.166$

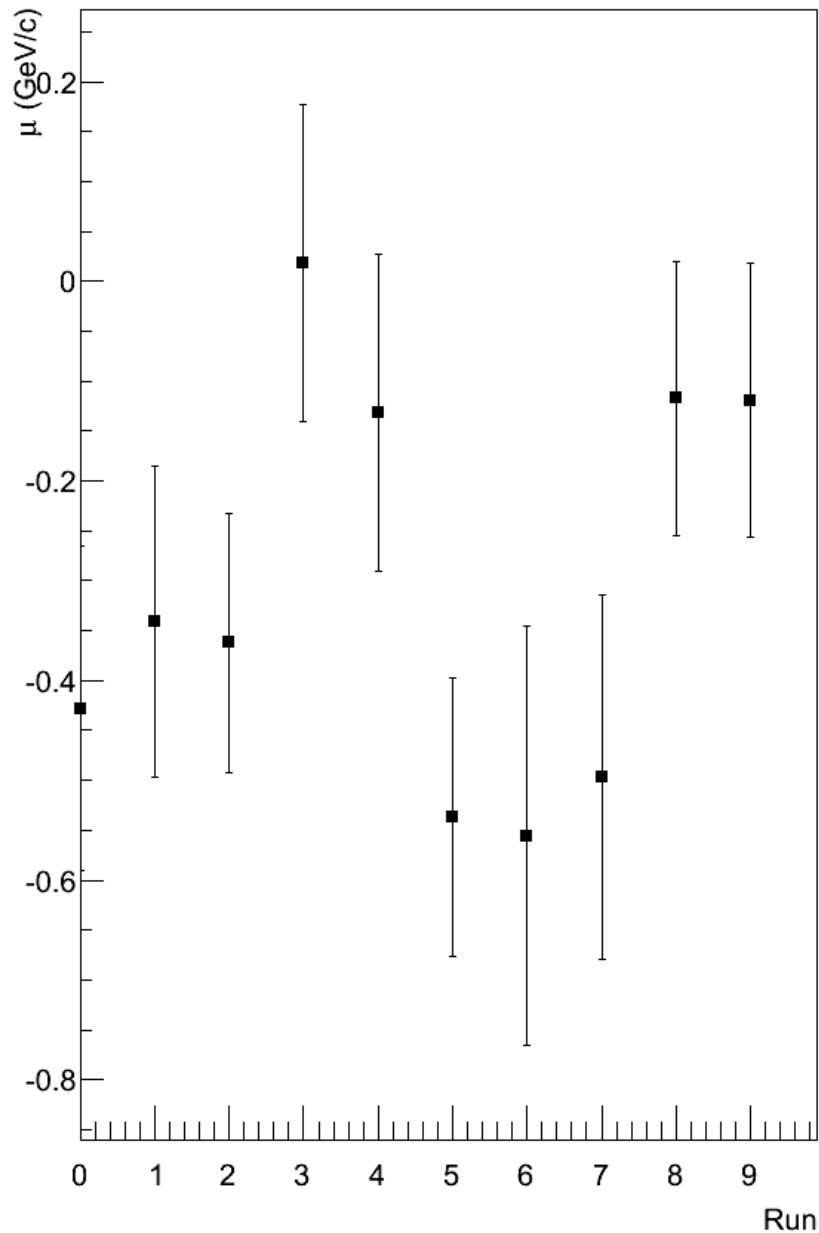
**Run 8**  $\rightarrow \mu=0.375 \pm 0.147$

$\rightarrow \sigma=5.557 \pm 0.112$

**Run 9**  $\rightarrow \mu=0.184 \pm 0.135$

$\rightarrow \sigma=5.287 \pm 0.107$

Mean values  $\mu$  (error bars = fit error) -  $\phi$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.428 \pm 0.162$

$\rightarrow \sigma = 5.164 \pm 0.141$

**Run 1**  $\rightarrow \mu = -0.341 \pm 0.155$

$\rightarrow \sigma = 5.121 \pm 0.136$

**Run 2**  $\rightarrow \mu = -0.362 \pm 0.130$

$\rightarrow \sigma = 5.071 \pm 0.096$

**Run 3**  $\rightarrow \mu = 0.019 \pm 0.159$

$\rightarrow \sigma = 5.295 \pm 0.119$

**Run 4**  $\rightarrow \mu = -0.132 \pm 0.159$

$\rightarrow \sigma = 5.332 \pm 0.124$

**Run 5**  $\rightarrow \mu = -0.537 \pm 0.139$

$\rightarrow \sigma = 4.978 \pm 0.114$

**Run 6**  $\rightarrow \mu = -0.556 \pm 0.210$

$\rightarrow \sigma = 5.402 \pm 0.194$

**Run 7**  $\rightarrow \mu = -0.497 \pm 0.182$

$\rightarrow \sigma = 5.233 \pm 0.159$

**Run 8**  $\rightarrow \mu = -0.117 \pm 0.137$

$\rightarrow \sigma = 5.125 \pm 0.109$

**Run 9**  $\rightarrow \mu = -0.119 \pm 0.138$

$\rightarrow \sigma = 5.328 \pm 0.102$



# Observations

## Background subtraction from $\eta$ band

- *Tracks*:  $\mu \in [-0.804^{(6)}; -0.118^{(3)}]$ ,  $\sigma \in [4.065^{(5)}; 4.423^{(1)}]$
- *Clusters*:  $\mu \in [0.542^{(9)}; 0.882^{(4)}]$ ,  $\sigma \in [2.944^{(7)}; 3.328^{(5)}]$
- *Global*:  $\mu \in [-0.305^{(6)}; 0.736^{(3)}]$ ,  $\sigma \in [4.998^{(6)}; 5.557^{(8)}]$

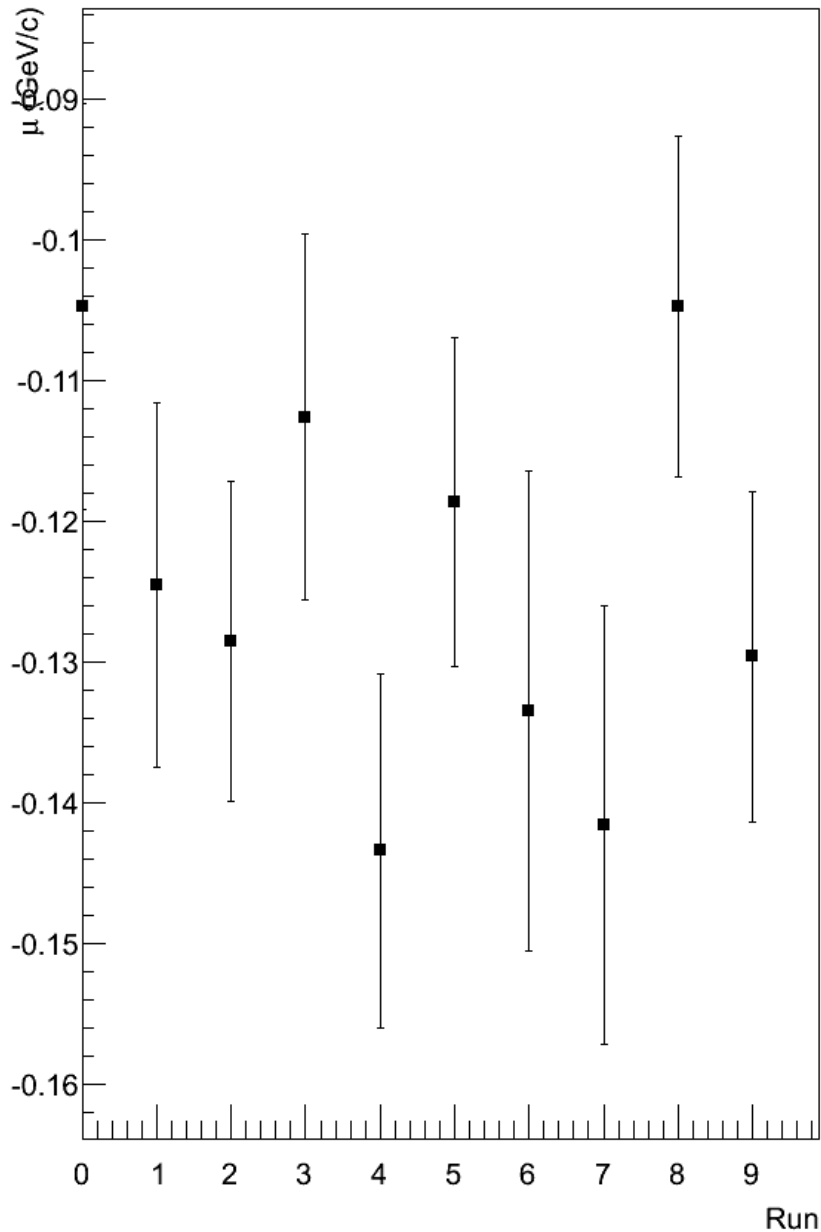
## Background subtraction from $\phi$ band

- *Tracks*:  $\mu \in [-0.966^{(6)}; -0.308^{(3)}]$ ,  $\sigma \in [3.738^{(5)}; 4.053^{(1)}]$
- *Clusters*:  $\mu \in [0.141^{(5)}; 0.472^{(4)}]$ ,  $\sigma \in [2.866^{(0)}; 3.159^{(5),(6)}]$
- *Global*:  $\mu \in [-0.556^{(6)}; 0.019^{(3)}]$ ,  $\sigma \in [4.978^{(5)}; 5.402^{(6)}]$

\*\*On the right upper side of each number the corresponding run is indicated.\*\*

*Centrality 60 – 80 %*

Mean values  $\mu$  (error bars = fit error) - Tracks -  $\eta$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.105 \pm 0.014$

$\rightarrow \sigma = 0.607 \pm 0.016$

**Run 1**  $\rightarrow \mu = -0.125 \pm 0.013$

$\rightarrow \sigma = 0.571 \pm 0.014$

**Run 2**  $\rightarrow \mu = -0.129 \pm 0.011$

$\rightarrow \sigma = 0.585 \pm 0.013$

**Run 3**  $\rightarrow \mu = -0.113 \pm 0.013$

$\rightarrow \sigma = 0.583 \pm 0.016$

**Run 4**  $\rightarrow \mu = -0.143 \pm 0.013$

$\rightarrow \sigma = 0.582 \pm 0.014$

**Run 5**  $\rightarrow \mu = -0.119 \pm 0.012$

$\rightarrow \sigma = 0.594 \pm 0.013$

**Run 6**  $\rightarrow \mu = -0.134 \pm 0.017$

$\rightarrow \sigma = 0.607 \pm 0.018$

**Run 7**  $\rightarrow \mu = -0.142 \pm 0.016$

$\rightarrow \sigma = 0.601 \pm 0.018$

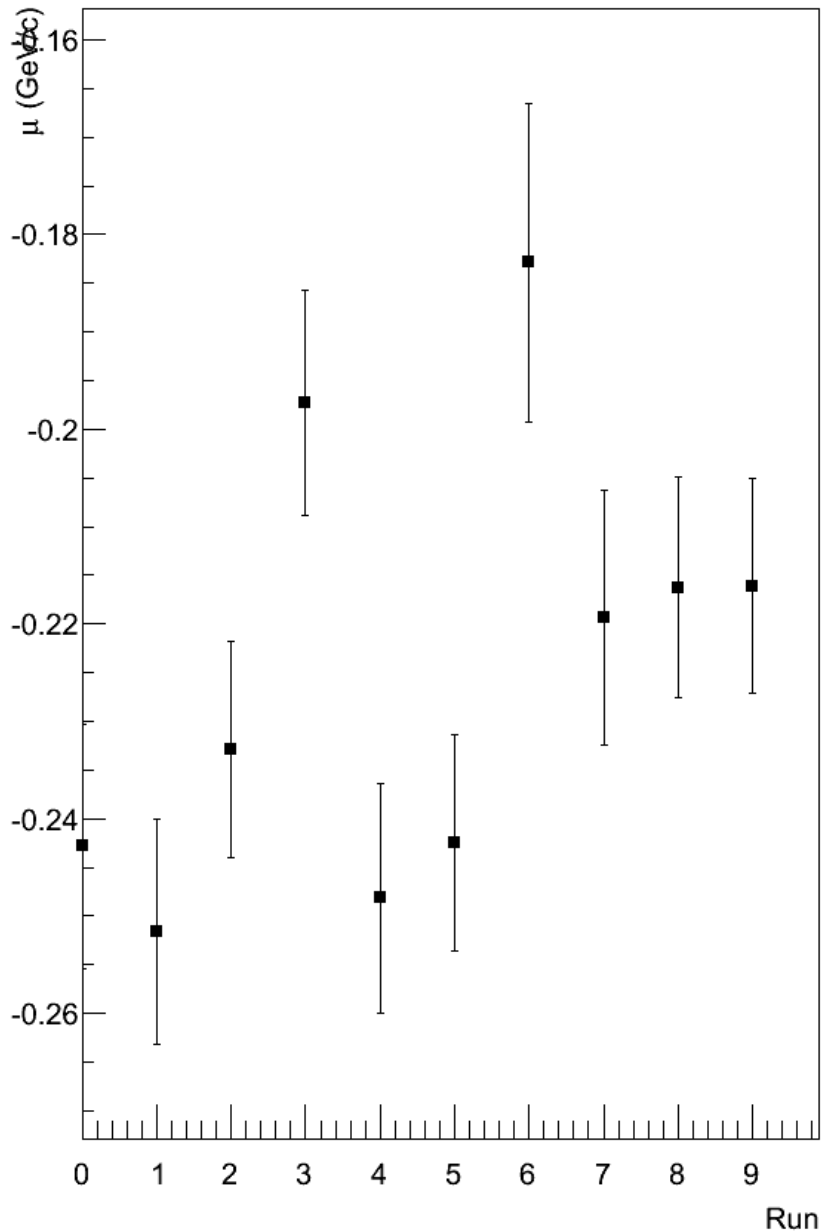
**Run 8**  $\rightarrow \mu = -0.105 \pm 0.012$

$\rightarrow \sigma = 0.609 \pm 0.014$

**Run 9**  $\rightarrow \mu = -0.130 \pm 0.012$

$\rightarrow \sigma = 0.597 \pm 0.013$

Mean values  $\mu$  (error bars = fit error) - Tracks -  $\phi$  band - R = 0.2



**Run 0** →  $\mu=-0.243 \pm 0.013$

→  $\sigma=0.428 \pm 0.012$

**Run 1** →  $\mu=-0.252 \pm 0.012$

→  $\sigma=0.421 \pm 0.013$

**Run 2** →  $\mu=-0.233 \pm 0.011$

→  $\sigma=0.454 \pm 0.012$

**Run 3** →  $\mu=-0.197 \pm 0.012$

→  $\sigma=0.464 \pm 0.011$

**Run 4** →  $\mu=-0.248 \pm 0.012$

→  $\sigma=0.445 \pm 0.012$

**Run 5** →  $\mu=-0.242 \pm 0.011$

→  $\sigma=0.450 \pm 0.012$

**Run 6** →  $\mu=-0.183 \pm 0.016$

→  $\sigma=0.474 \pm 0.014$

**Run 7** →  $\mu=-0.219 \pm 0.013$

→  $\sigma=0.463 \pm 0.014$

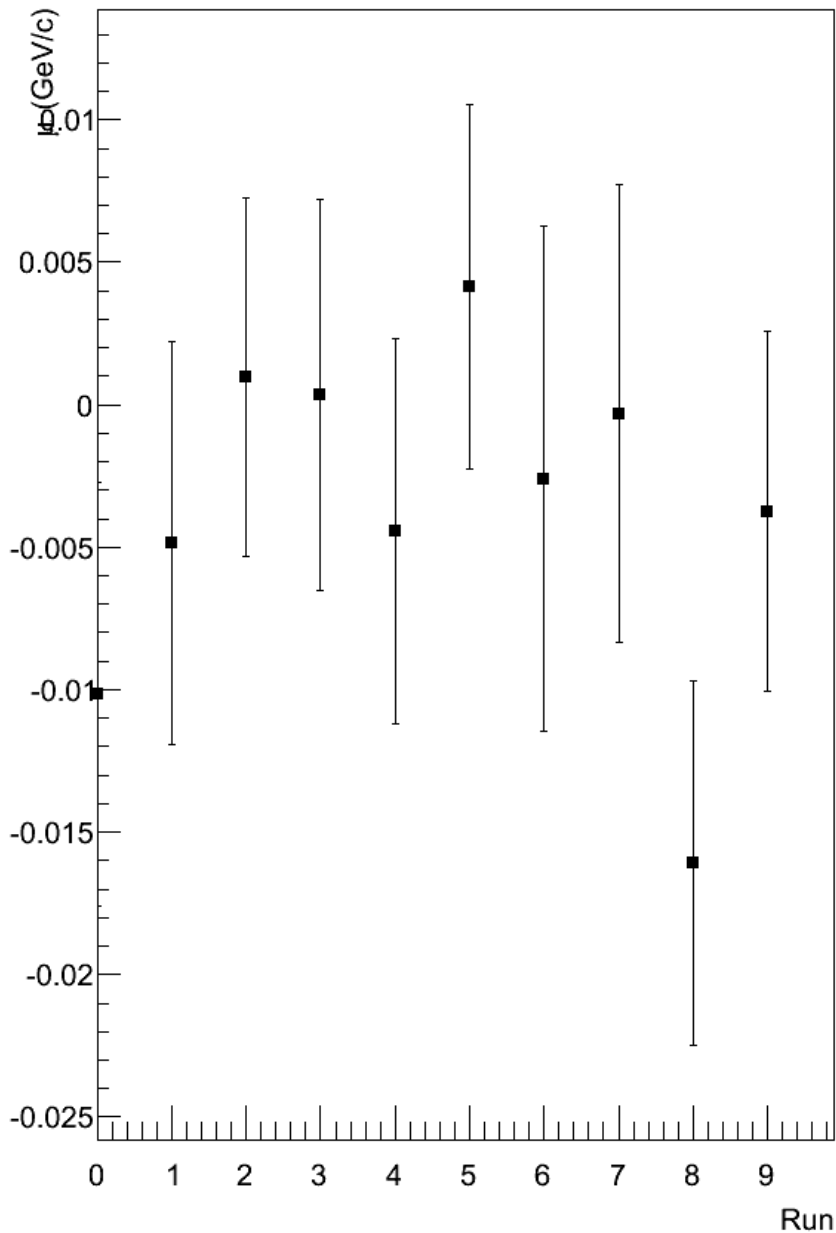
**Run 8** →  $\mu=-0.216 \pm 0.011$

→  $\sigma=0.434 \pm 0.013$

**Run 9** →  $\mu=-0.216 \pm 0.011$

→  $\sigma=0.454 \pm 0.010$

Mean values  $\mu$  (error bars = fit error) - Clusters -  $\eta$  band - R = 0.2



**Run 0** →  $\mu=-0.010 \pm 0.007$

→  $\sigma=0.330 \pm 0.007$

**Run 1** →  $\mu=-0.005 \pm 0.007$

→  $\sigma=0.334 \pm 0.007$

**Run 2** →  $\mu=0.001 \pm 0.006$

→  $\sigma=0.348 \pm 0.006$

**Run 3** →  $\mu=0.000 \pm 0.007$

→  $\sigma=0.328 \pm 0.006$

**Run 4** →  $\mu=-0.004 \pm 0.007$

→  $\sigma=0.337 \pm 0.006$

**Run 5** →  $\mu=0.004 \pm 0.006$

→  $\sigma=0.343 \pm 0.006$

**Run 6** →  $\mu=-0.003 \pm 0.009$

→  $\sigma=0.334 \pm 0.008$

**Run 7** →  $\mu=-0.000 \pm 0.008$

→  $\sigma=0.333 \pm 0.008$

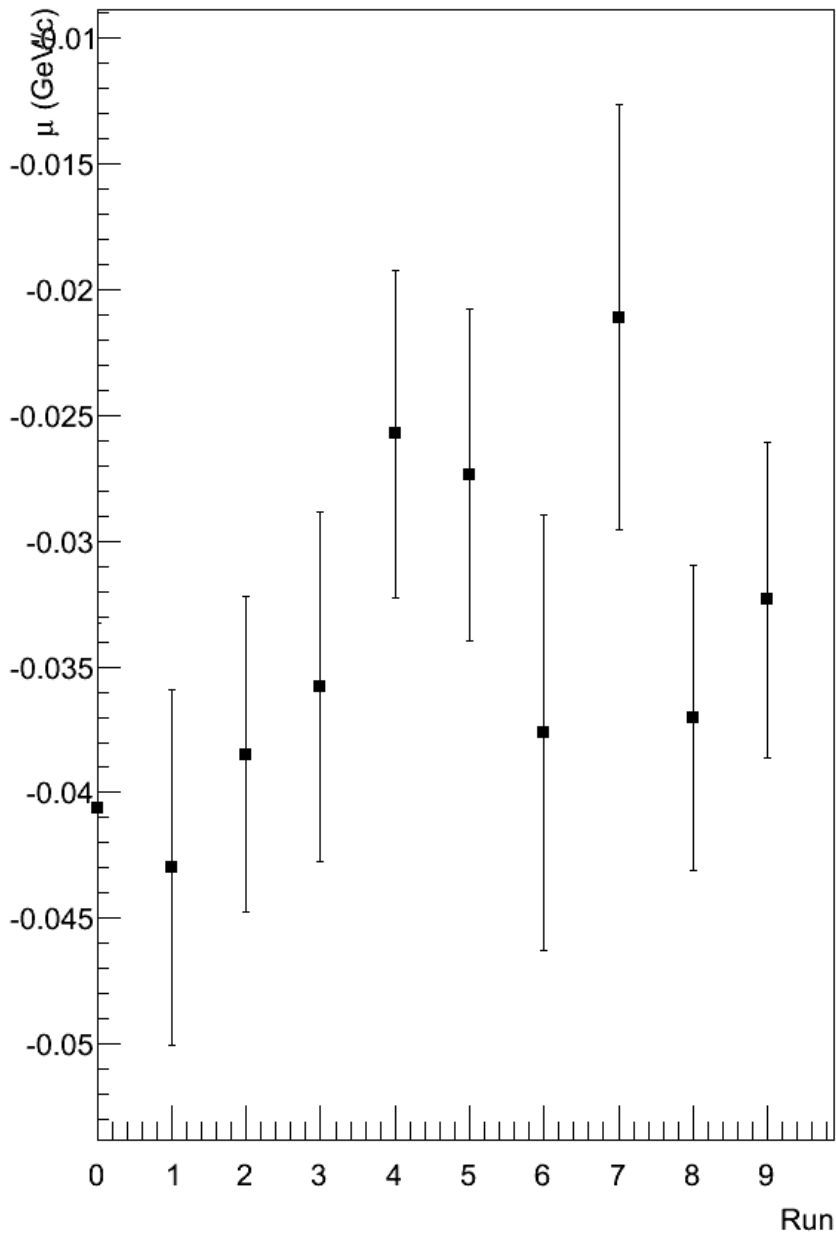
**Run 8** →  $\mu=-0.016 \pm 0.006$

→  $\sigma=0.340 \pm 0.006$

**Run 9** →  $\mu=-0.004 \pm 0.006$

→  $\sigma=0.340 \pm 0.006$

Mean values  $\mu$  (error bars = fit error) - Clusters -  $\phi$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.041 \pm 0.007$

$\rightarrow \sigma = 0.321 \pm 0.007$

**Run 1**  $\rightarrow \mu = -0.043 \pm 0.007$

$\rightarrow \sigma = 0.330 \pm 0.007$

**Run 2**  $\rightarrow \mu = -0.038 \pm 0.006$

$\rightarrow \sigma = 0.342 \pm 0.006$

**Run 3**  $\rightarrow \mu = -0.036 \pm 0.007$

$\rightarrow \sigma = 0.332 \pm 0.006$

**Run 4**  $\rightarrow \mu = -0.026 \pm 0.007$

$\rightarrow \sigma = 0.329 \pm 0.006$

**Run 5**  $\rightarrow \mu = -0.027 \pm 0.007$

$\rightarrow \sigma = 0.348 \pm 0.006$

**Run 6**  $\rightarrow \mu = -0.038 \pm 0.009$

$\rightarrow \sigma = 0.326 \pm 0.008$

**Run 7**  $\rightarrow \mu = -0.021 \pm 0.008$

$\rightarrow \sigma = 0.346 \pm 0.007$

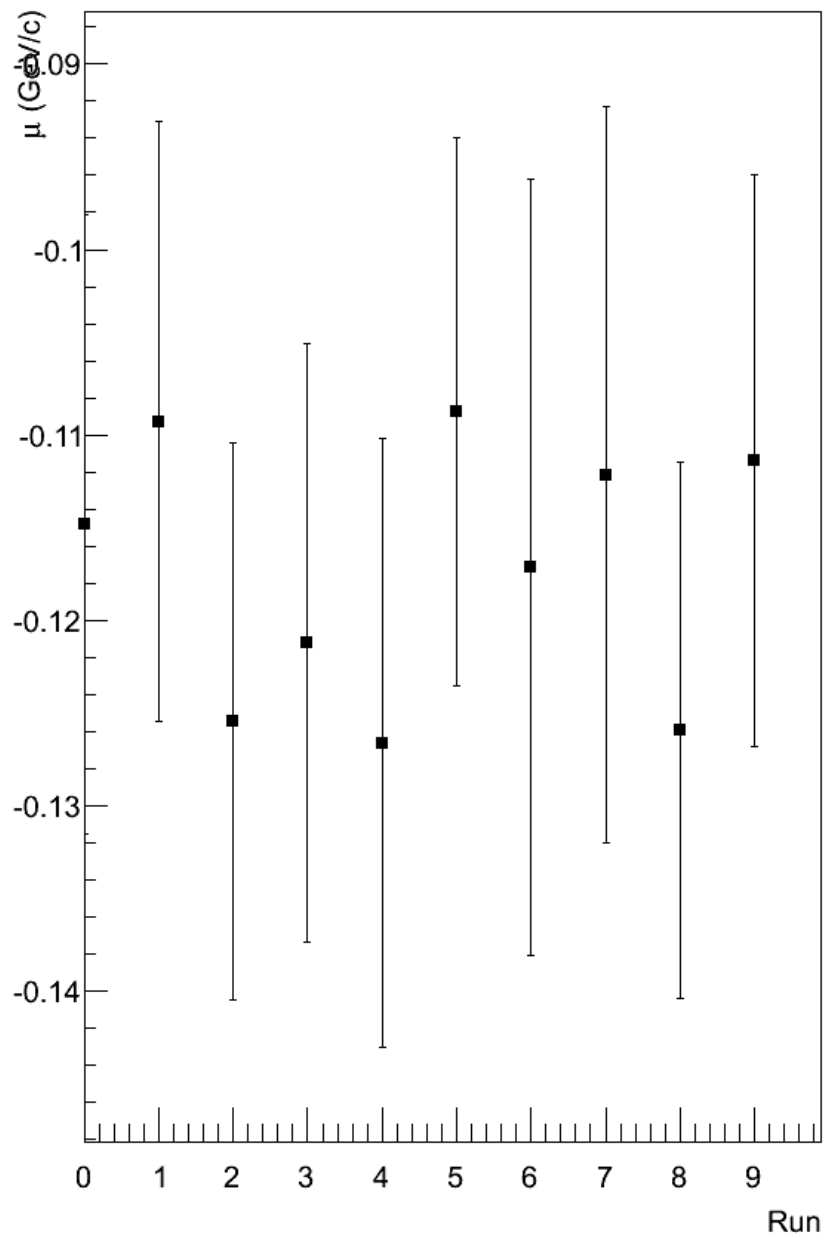
**Run 8**  $\rightarrow \mu = -0.037 \pm 0.006$

$\rightarrow \sigma = 0.323 \pm 0.006$

**Run 9**  $\rightarrow \mu = -0.032 \pm 0.006$

$\rightarrow \sigma = 0.329 \pm 0.006$

Mean values  $\mu$  (error bars = fit error) -  $\eta$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.115 \pm 0.017$

$\rightarrow \sigma = 0.709 \pm 0.018$

**Run 1**  $\rightarrow \mu = -0.109 \pm 0.016$

$\rightarrow \sigma = 0.699 \pm 0.017$

**Run 2**  $\rightarrow \mu = -0.125 \pm 0.015$

$\rightarrow \sigma = 0.726 \pm 0.015$

**Run 3**  $\rightarrow \mu = -0.121 \pm 0.016$

$\rightarrow \sigma = 0.691 \pm 0.017$

**Run 4**  $\rightarrow \mu = -0.127 \pm 0.016$

$\rightarrow \sigma = 0.745 \pm 0.018$

**Run 5**  $\rightarrow \mu = -0.109 \pm 0.015$

$\rightarrow \sigma = 0.716 \pm 0.015$

**Run 6**  $\rightarrow \mu = -0.117 \pm 0.021$

$\rightarrow \sigma = 0.727 \pm 0.023$

**Run 7**  $\rightarrow \mu = -0.112 \pm 0.020$

$\rightarrow \sigma = 0.739 \pm 0.020$

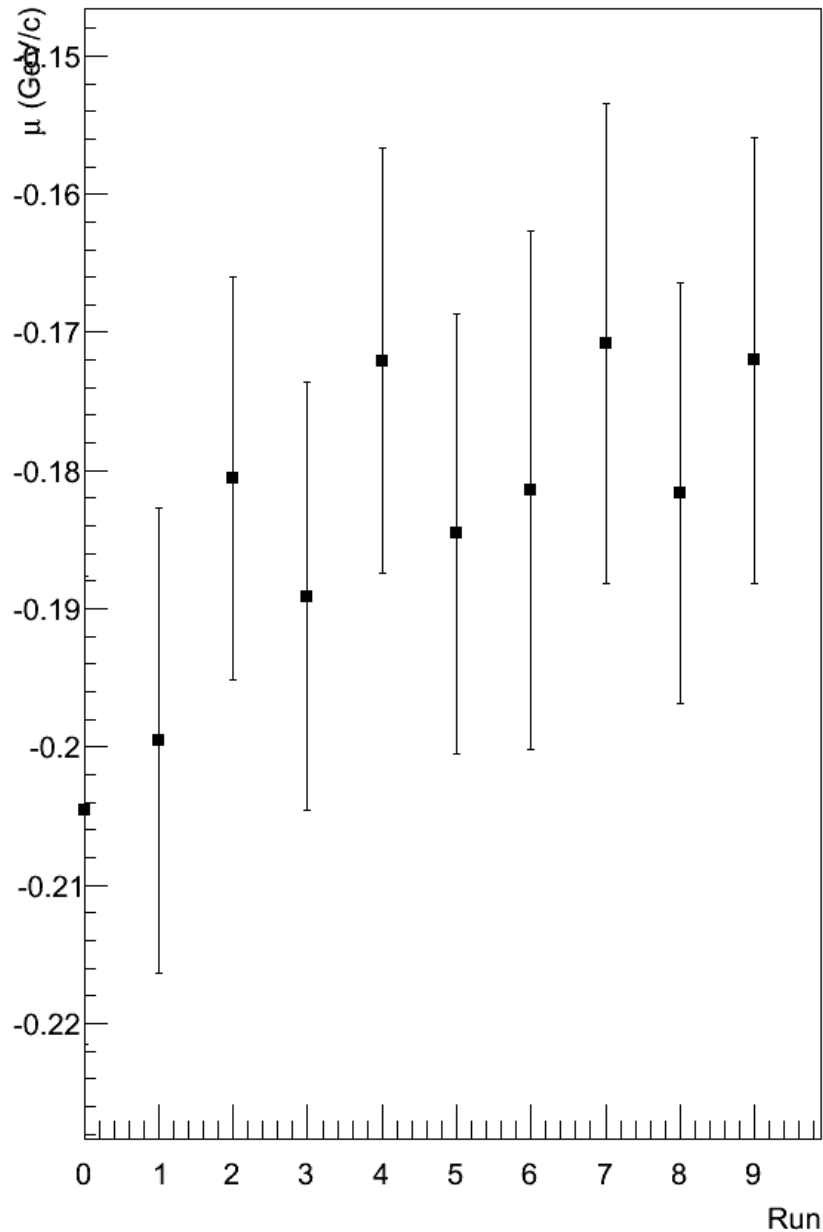
**Run 8**  $\rightarrow \mu = -0.126 \pm 0.014$

$\rightarrow \sigma = 0.719 \pm 0.017$

**Run 9**  $\rightarrow \mu = -0.111 \pm 0.015$

$\rightarrow \sigma = 0.740 \pm 0.016$

Mean values  $\mu$  (error bars = fit error) -  $\phi$  band - R = 0.2



**Run 0**  $\rightarrow \mu = -0.205 \pm 0.017$

$\rightarrow \sigma = 0.594 \pm 0.015$

**Run 1**  $\rightarrow \mu = -0.200 \pm 0.017$

$\rightarrow \sigma = 0.631 \pm 0.016$

**Run 2**  $\rightarrow \mu = -0.181 \pm 0.015$

$\rightarrow \sigma = 0.648 \pm 0.014$

**Run 3**  $\rightarrow \mu = -0.189 \pm 0.015$

$\rightarrow \sigma = 0.613 \pm 0.015$

**Run 4**  $\rightarrow \mu = -0.172 \pm 0.015$

$\rightarrow \sigma = 0.649 \pm 0.014$

**Run 5**  $\rightarrow \mu = -0.185 \pm 0.016$

$\rightarrow \sigma = 0.640 \pm 0.014$

**Run 6**  $\rightarrow \mu = -0.181 \pm 0.019$

$\rightarrow \sigma = 0.621 \pm 0.019$

**Run 7**  $\rightarrow \mu = -0.171 \pm 0.017$

$\rightarrow \sigma = 0.605 \pm 0.016$

**Run 8**  $\rightarrow \mu = -0.182 \pm 0.015$

$\rightarrow \sigma = 0.613 \pm 0.015$

**Run 9**  $\rightarrow \mu = -0.172 \pm 0.016$

$\rightarrow \sigma = 0.632 \pm 0.015$



# Observations

## Background subtraction from $\eta$ band

- *Tracks*:  $\mu \in [-0.143^{(4)}; -0.105^{(0)}]$ ,  $\sigma \in [0.571^{(1)}; 0.609^{(8)}]$
- *Clusters*:  $\mu \in [-0.016^{(8)}; 0.004^{(5)}]$ ,  $\sigma \in [0.328^{(3)}; 0.348^{(2)}]$
- *Global*:  $\mu \in [-0.127^{(4)}; -0.109^{(1),(5)}]$ ,  $\sigma \in [0.691^{(3)}; 0.745^{(4)}]$

## Background subtraction from $\phi$ band

- *Tracks*:  $\mu \in [-0.252^{(1)}; -0.183^{(6)}]$ ,  $\sigma \in [0.421^{(1)}; 0.474^{(6)}]$
- *Clusters*:  $\mu \in [-0.043^{(1)}; -0.026^{(4)}]$ ,  $\sigma \in [0.321^{(0)}; 0.348^{(5)}]$
- *Global*:  $\mu \in [-0.205^{(0)}; -0.171^{(7)}]$ ,  $\sigma \in [0.594^{(0)}; 0.649^{(4)}]$

\*\*On the right upper side of each number the corresponding run is indicated.\*\*