confronto v6.05/01 - v6.05/02

muoni e pioni

germano - frascati (29/07/2008)

frascati 29/07/2008

v 6.05/01 - produzione MAY08

Tagli usati per i Mu+: Extrplu==1&&Normplu<80
################## K- ########################
Bersaglio #1: K- 6361808
Bersaglio #2: K- 7152013
Bersaglio #3: K- 5551428
Bersaglio #4: K- 6788342
Bersaglio #5: K- 8586108
Bersaglio #6: K- 7787488
Bersaglio #7: K- 6385541
Bersaglio #8: K- 5662103
################## K+, Mu+ ####################
Bersaglio #1: K+ 6757759 Mu+ 1903059 (28.16%)
Bersaglio #2: K+ 7525326 Mu+ 2186207 (29.05%)
Bersaglio #3: K+ 6968260 Mu+ 1826384 (26.21%)
Bersaglio #4: K+ 7688478 Mu+ 2026206 (26.35%)
Bersaglio #5: K+ 8577500 Mu+ 2297882 (26.79%)
Bersaglio #6: K+ 7189623 Mu+ 1809956 (25.17%)
Bersaglio #7: K+ 6559925 Mu+ 1891955 (28.84%)
Bersaglio #8: K+ 7057322 Mu+ 1975149 (27.99%)
Number of entries: 64.386.707 **➥(entries h127) 77.4%**
Totale: K- 54.274.831 (**84.3%**)
Totale: K+ 58.324.193 (**90.6%**), Mu+ 15.916.798 (**27.29%**)

v 6.05/02 - produzione JUL08

Tagli usati per i Mu+: Extrplu==1&&Normplu<80
################## K- ########################
Bersaglio #1: K- 4704052
Bersaglio #2: K- 5542567
Bersaglio #3: K- 4831441
Bersaglio #4: K- 4984769
Bersaglio #5: K- 6429777
Bersaglio #6: K- 5698511
Bersaglio #7: K- 4769711
Bersaglio #8: K- 3971439
################## K+, Mu+ ####################
Bersaglio #1: K+ 5067808 Mu+ 1546150 (30.51%)
Bersaglio #2: K+ 5627403 Mu+ 1851447 (32.90%)
Bersaglio #3: K+ 5494436 Mu+ 1603394 (29.18%)
Bersaglio #4: K+ 6204424 Mu+ 1808904 (29.16%)
Bersaglio #5: K+ 7261547 Mu+ 2120521 (29.20%)
Bersaglio #6: K+ 5738054 Mu+ 1588060 (27.68%)
Bersaglio #7: K+ 5389234 Mu+ 1657221 (30.75%)
Bersaglio #8: K+ 5422928 Mu+ 1670490 (30.80%)
Number of entries: 49.819.955
Totale: K- 40.932.267 (**82.2%**)
Totale: K+ 46.205.834 (**92.7%**), Mu+ 13846187 (**29.97%**)

➥(K^-) 75.4%

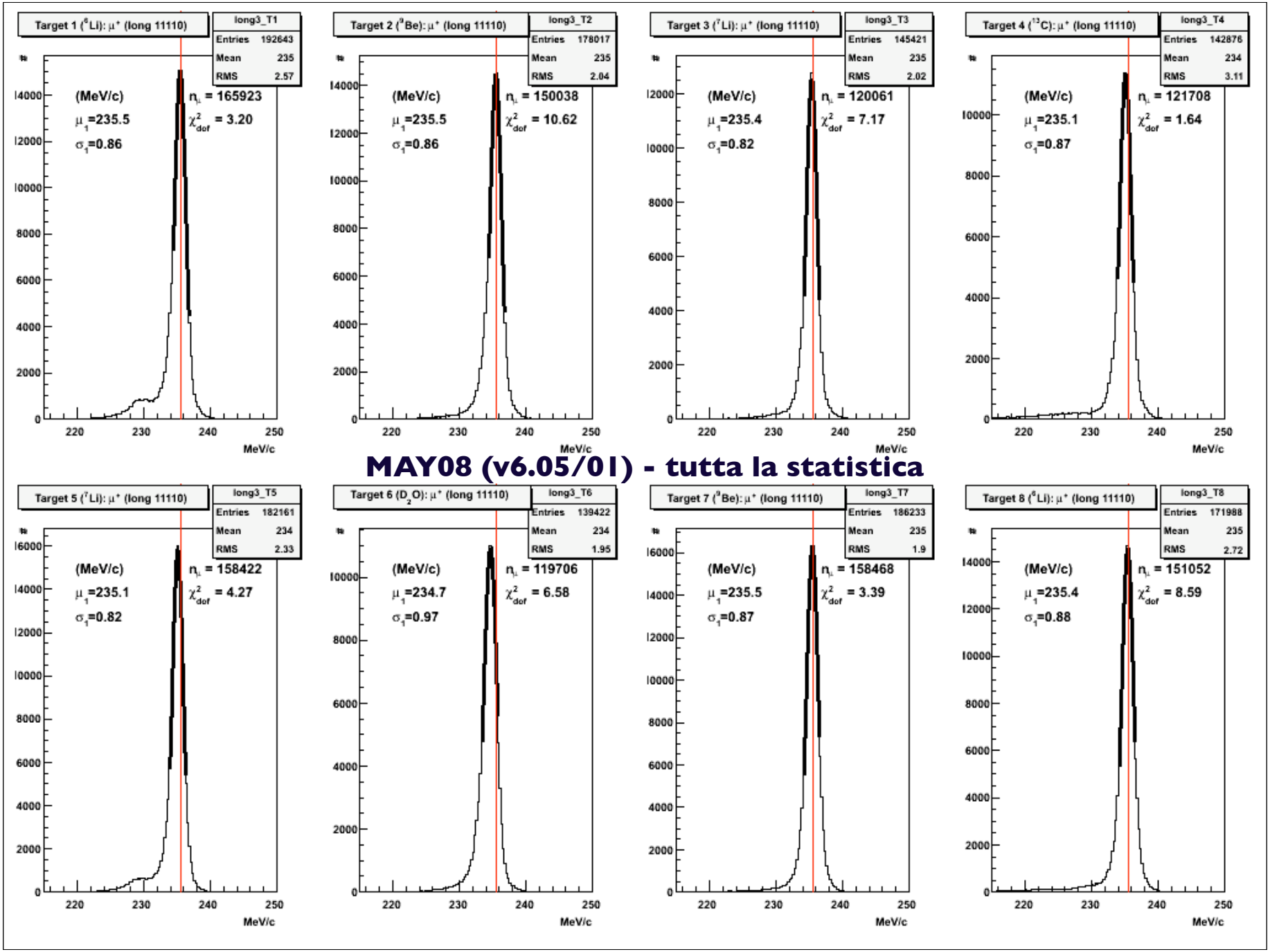
germano

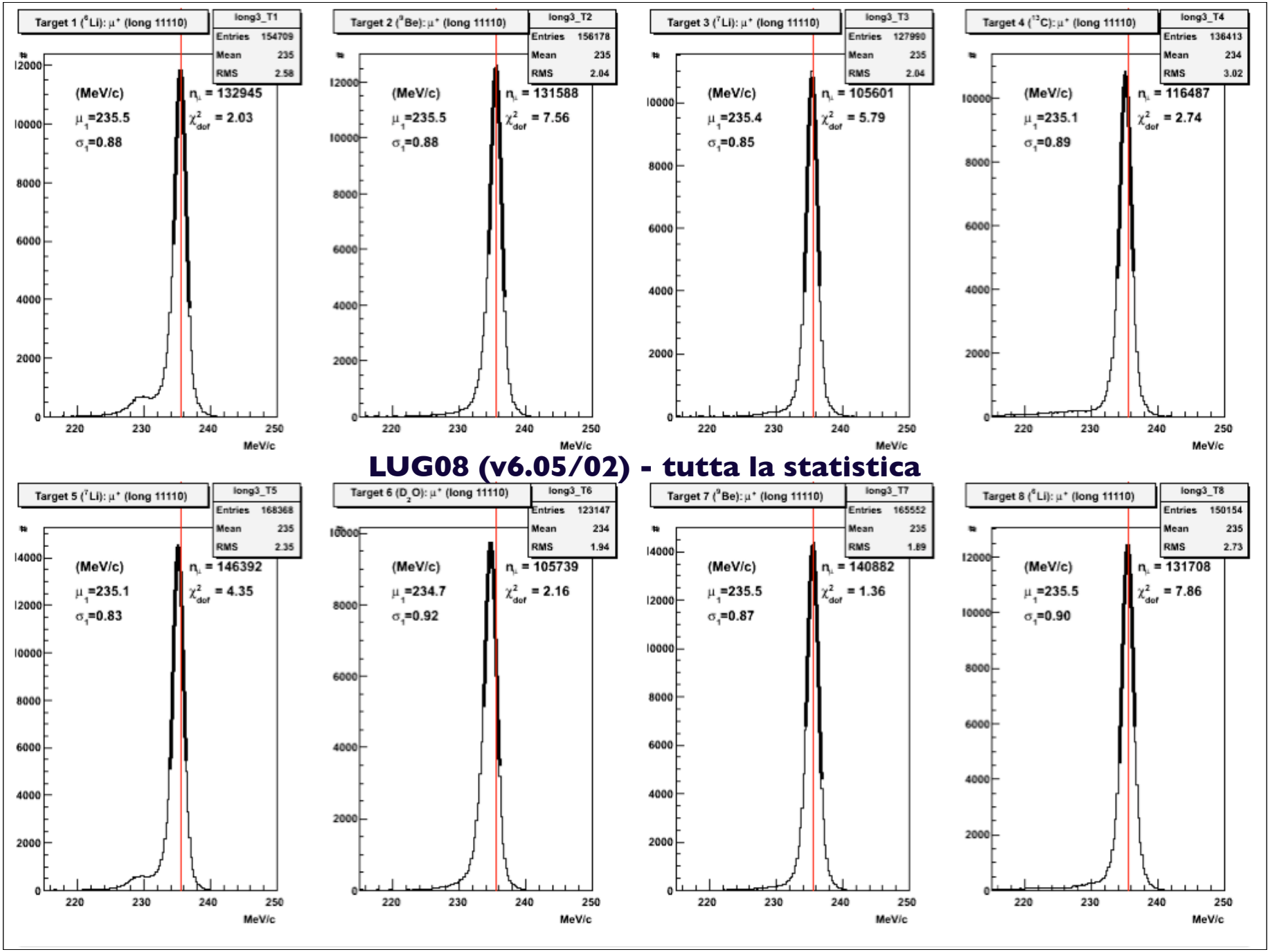
tagli x muoni

```
if(Prercod==0&&Stopplu==1) { // K+ stop in target - INIT
 itarg  = Ntarplu-1;  //Ntarplu goes from 1 to 8
 for(int itrk=0; itrk<Ntkplu; itrk++) { // Loop over tracks - INIT
   itarg2 = Vmktplu[itrk]-20; //Target calculated crossing kaon and track

    if(Extrplu[itrk]!=1)   continue; // Extrapolation
    if(Fiteplu[itrk]!=0)   continue; // Fit
    if(Chrgplu[itrk]!=1)   continue; // Positive tracks
    if(Pidplu[itrk]!=8)    continue; // Positive mips (8=pi+,mu+)
    if(Disvplu[itrk]>0.5)  continue; // Quality cut
    if(Dev2plu[itrk]>1.0)  continue; // Quality cut
    if(Resdplu[itrk]>0.15) continue; // Quality cut
    if(Vdktplu[itrk]>0.1)  continue; // Quality cut
    if(itarg2!=Ntarplu)    continue; // Coincidence between target number
    if(fabs(Xextrplu[itrk])>tLim[itarg]) continue; // Extrapolation out of geometrical boundaries
    salva = true;

   // Long tracks backtracked
   if(Typeplu[itrk]==11111&&Sterplu[itrk]<200) hLB1[itarg]->Fill(muMom);
   if(Typeplu[itrk]==11112&&Sterplu[itrk]<200) hLB2[itarg]->Fill(muMom);
   // From now on -> only forward tracks
   if(Normplu[itrk]>90) continue;
   if(Longplu[itrk]==0) hS[itarg]->Fill(muMom); // Short tracks
   // From now on Sterplu<200
   if(Sterplu[itrk]>200) continue;
```


Target 1 (^{6}Li): μ^+ (long 11110)
long3_T1
Entries 192643
Mean 235
RMS 2.57
(MeV/c)
μ_1=235.5
σ_1=0.86
n_μ = 165923
χ^2_{dof} = 3.20
Target 2 (^{9}Be): μ^+ (long 11110)
long3_T2
Entries 178017
Mean 235
RMS 2.04
(MeV/c)
μ_1=235.5
σ_1=0.86
n_μ = 150038
χ^2_{dof} = 10.62
Target 3 (^{7}Li): μ^+ (long 11110)
long3_T3
Entries 145421
Mean 235
RMS 2.02
(MeV/c)
μ_1=235.4
σ_1=0.82
n_μ = 120061
χ^2_{dof} = 7.17
Target 4 (^{13}C): μ^+ (long 11110)
long3_T4
Entries 142876
Mean 234
RMS 3.11
(MeV/c)
μ_1=235.1
σ_1=0.87
n_μ = 121708
χ^2_{dof} = 1.64
MeV/c
MAY08 (v6.05/01) - tutta la statistica
Target 5 (^{7}Li): μ^+ (long 11110)
long3_T5
Entries 182161
Mean 234
RMS 2.33
(MeV/c)
μ_1=235.1
σ_1=0.82
n_μ = 158422
χ^2_{dof} = 4.27
Target 6 (D_2O): μ^+ (long 11110)
long3_T6
Entries 139422
Mean 234
RMS 1.95
(MeV/c)
μ_1=234.7
σ_1=0.97
n_μ = 119706
χ^2_{dof} = 6.58
Target 7 (^{9}Be): μ^+ (long 11110)
long3_T7
Entries 186233
Mean 235
RMS 1.9
(MeV/c)
μ_1=235.5
σ_1=0.87
n_μ = 158468
χ^2_{dof} = 3.39
Target 8 (^{6}Li): μ^+ (long 11110)
long3_T8
Entries 171988
Mean 235
RMS 2.72
(MeV/c)
μ_1=235.4
σ_1=0.88
n_μ = 151052
χ^2_{dof} = 8.59
MeV/c

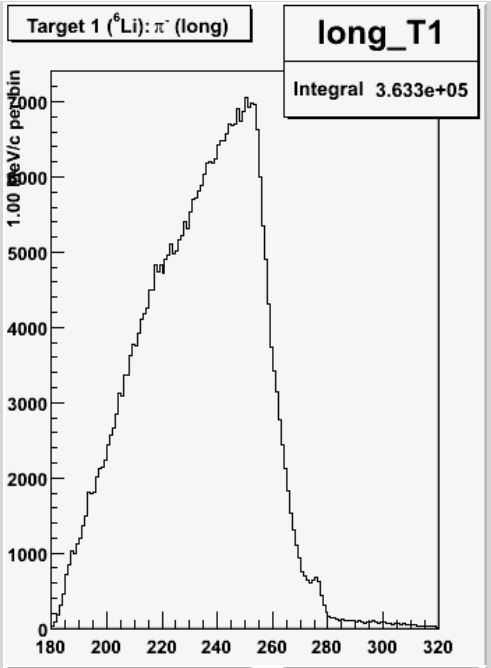

Target 1 (^{6}Li): μ^+ (long 11110)
long3_T1
Entries 154709
Mean 235
RMS 2.58
(MeV/c)
μ_1=235.5
σ_1=0.88
$n_\perp$ = 132945
χ^2_{dof} = 2.03
Target 2 (^{9}Be): μ^+ (long 11110)
long3_T2
Entries 156178
Mean 235
RMS 2.04
(MeV/c)
μ_1=235.5
σ_1=0.88
$n_\perp$ = 131588
χ^2_{dof} = 7.56
Target 3 (^{7}Li): μ^+ (long 11110)
long3_T3
Entries 127990
Mean 235
RMS 2.04
(MeV/c)
μ_1=235.4
σ_1=0.85
$n_\perp$ = 105601
χ^2_{dof} = 5.79
Target 4 (^{12}C): μ^+ (long 11110)
long3_T4
Entries 136413
Mean 234
RMS 3.02
(MeV/c)
μ_1=235.1
σ_1=0.89
$n_\perp$ = 116487
χ^2_{dof} = 2.74
LUG08 (v6.05/02) - tutta la statistica
Target 5 (^{7}Li): μ^+ (long 11110)
long3_T5
Entries 168368
Mean 235
RMS 2.35
(MeV/c)
μ_1=235.1
σ_1=0.83
$n_\perp$ = 146392
χ^2_{dof} = 4.35
Target 6 (D_2O): μ^+ (long 11110)
long3_T6
Entries 123147
Mean 234
RMS 1.94
(MeV/c)
μ_1=234.7
σ_1=0.92
$n_\perp$ = 105739
χ^2_{dof} = 2.16
Target 7 (^{9}Be): μ^+ (long 11110)
long3_T7
Entries 165552
Mean 235
RMS 1.89
(MeV/c)
μ_1=235.5
σ_1=0.87
$n_\perp$ = 140882
χ^2_{dof} = 1.36
Target 8 (^{6}Li): μ^+ (long 11110)
long3_T8
Entries 150154
Mean 235
RMS 2.73
(MeV/c)
μ_1=235.5
σ_1=0.90
$n_\perp$ = 131708
χ^2_{dof} = 7.86
MeV/c

tagli x pioni

set minimo

```
if(Prercod==0&&Stopmin==1) { // K- stop in target - INIT
   for(int itrk=0; itrk<Ntkmin; itrk++) { // Loop over tracks - INIT
      //pion- track fitted and extrapolated to vertex - INIT
      if(Extrmin[itrk]==1&&Fitemin[itrk]==0&&Chrgmin[itrk]==-1) {
         //quality cuts for track - INIT
         if(Dispmin[itrk]>1.)  continue;
         if(Disvmin[itrk]>2.)  continue;
         if(Dev2min[itrk]>8.)  continue;
         if(Resdmin[itrk]>0.3) continue;
         if(Vdktmin[itrk]>0.6) continue;
         salva = true;
      } //pion- track fitted and extrapolated to vertex - INIT
   } // Loop over tracks - END
} // K- stop in target - END
```

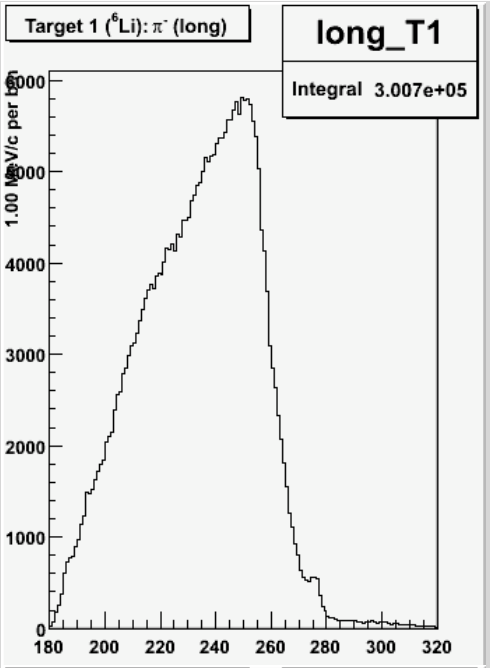
frascati 29/07/2008



(K$^-$) ➥75.4%

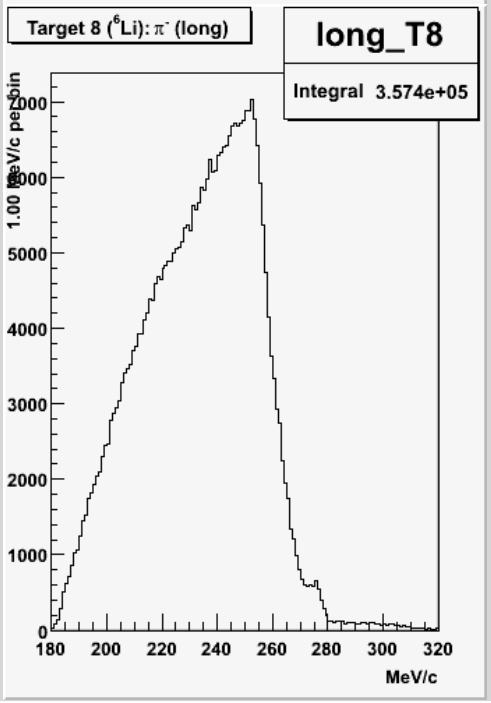
v 6.05/01

➥82.8%
(migliore eff. π)



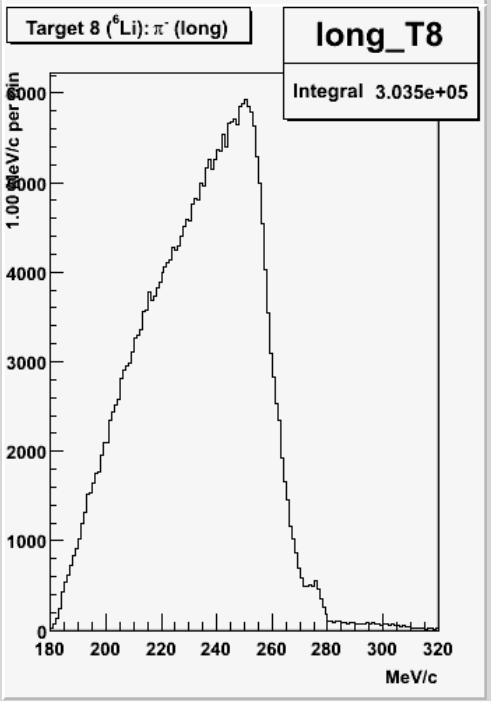
+ 10 %

set minimo



➥84.9%
(migliore eff. π)

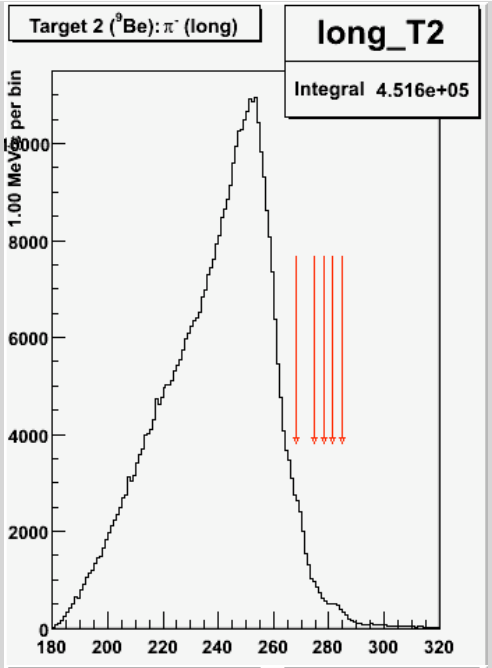
v 6.05/02



+ 13 %

germano

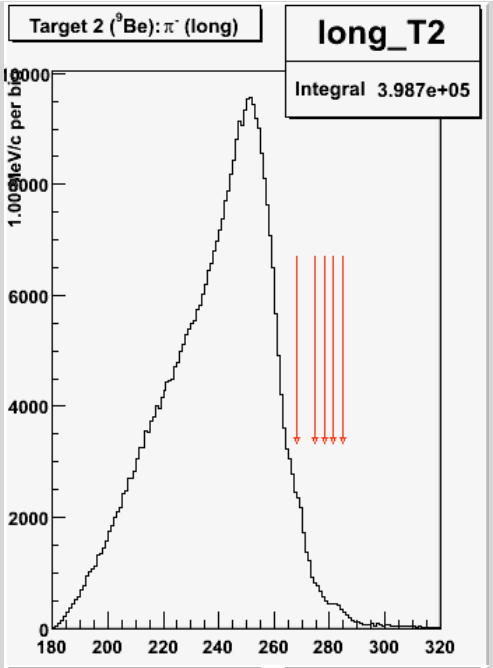
frascati 29/07/2008



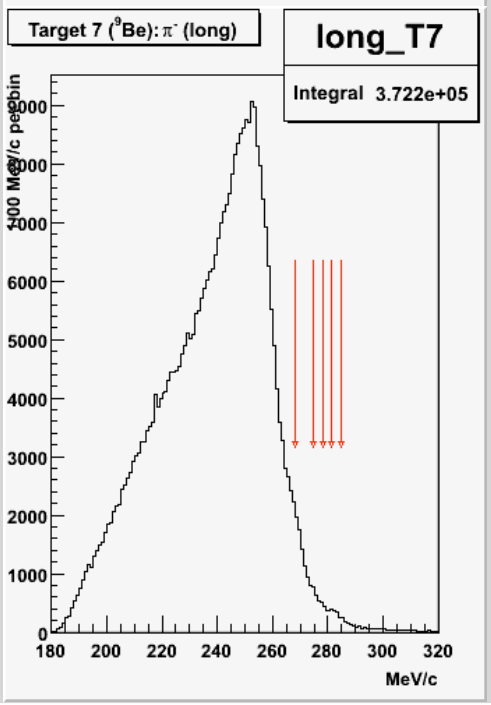
(K⁻) ➥75.4%

v 6.05/01

➥88.3%
(migliore eff. π)



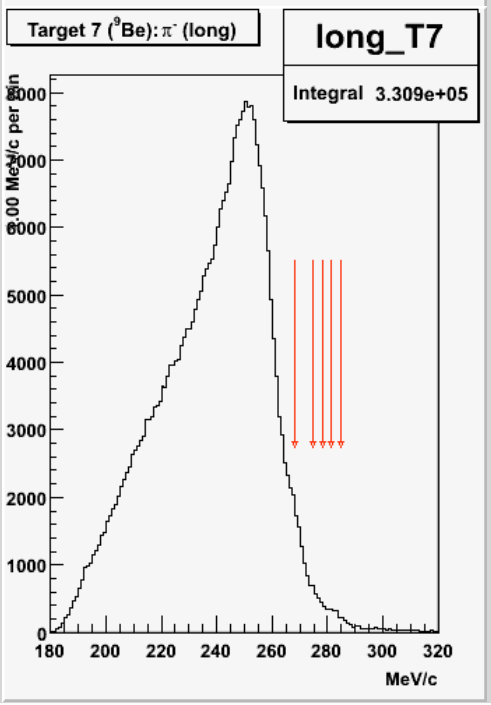
+ 17 %



set minimo

➥88.9%
(migliore eff. π)

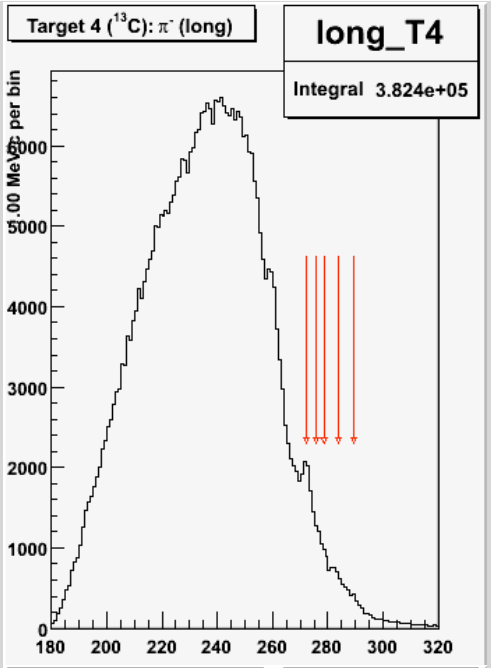
v 6.05/02



+ 18 %

germano

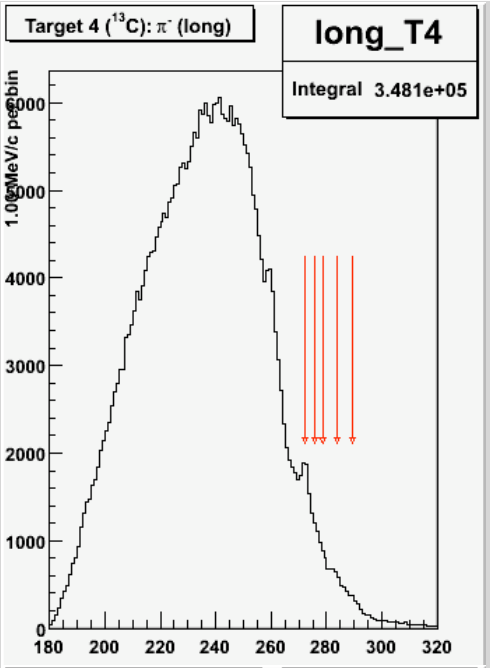
frascati 29/07/2008



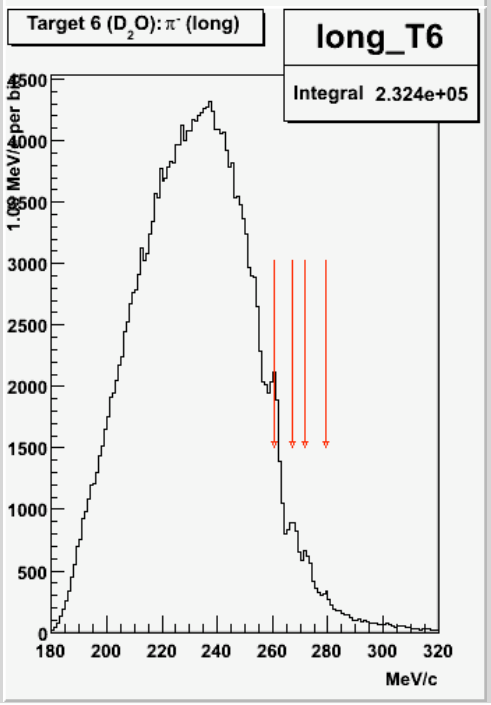
(K⁻) ➥75.4%

v 6.05/01

➥91.0%
(migliore eff. π)



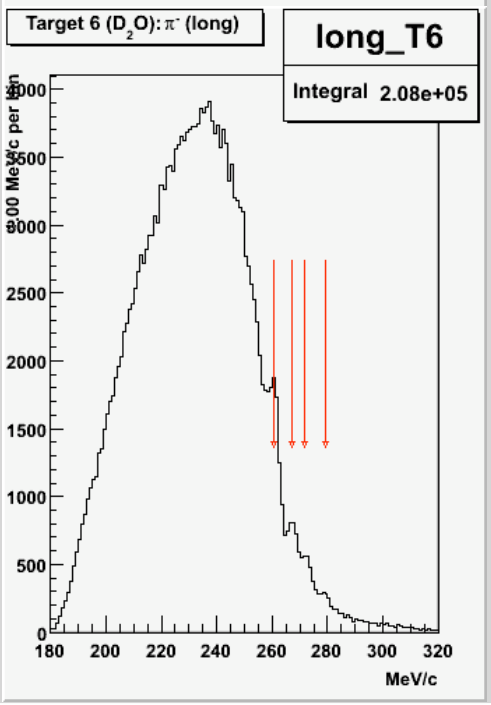
+ 21 %



set minimo

➥89.5%
(migliore eff. π)

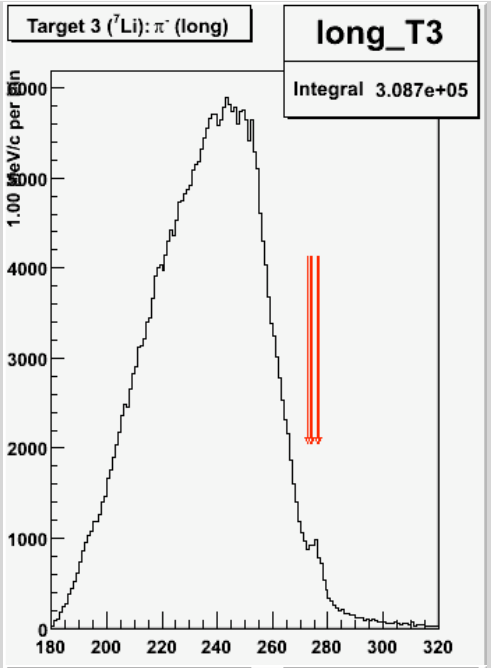
v 6.05/02



+ 19 %

germano

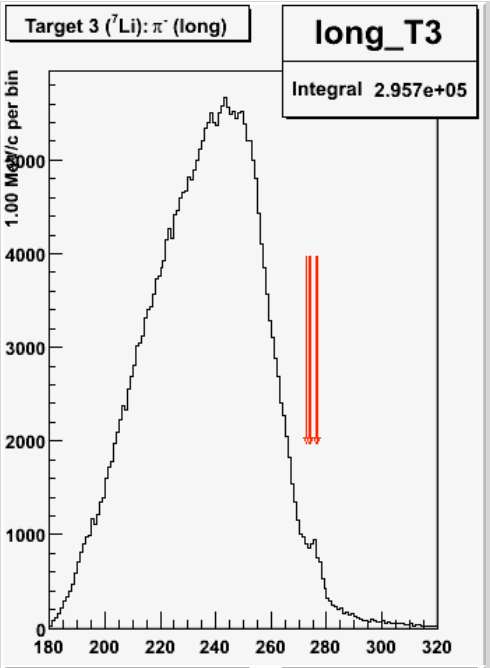
frascati 29/07/2008



(K$^-$) ➥75.4%

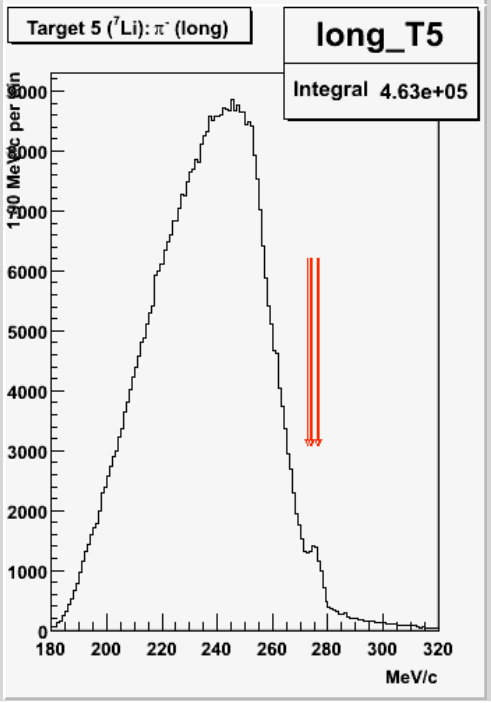
v 6.05/01

➥95.8%
(migliore eff. π)



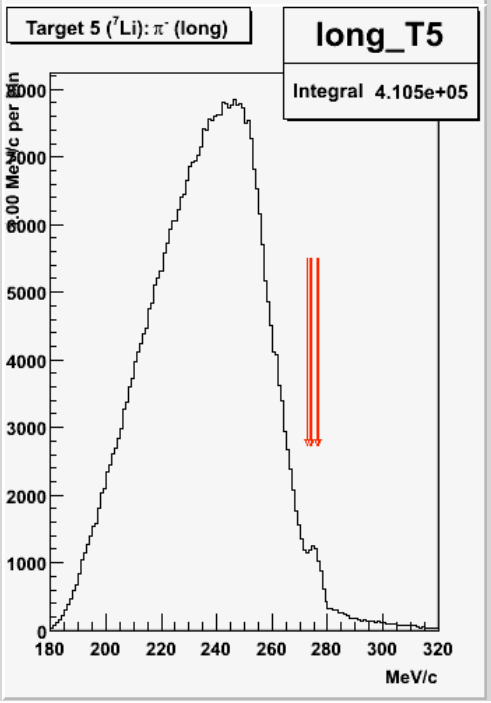
+ 27 %

set minimo



➥88.7%
(migliore eff. π)

v 6.05/02



+ 18 %

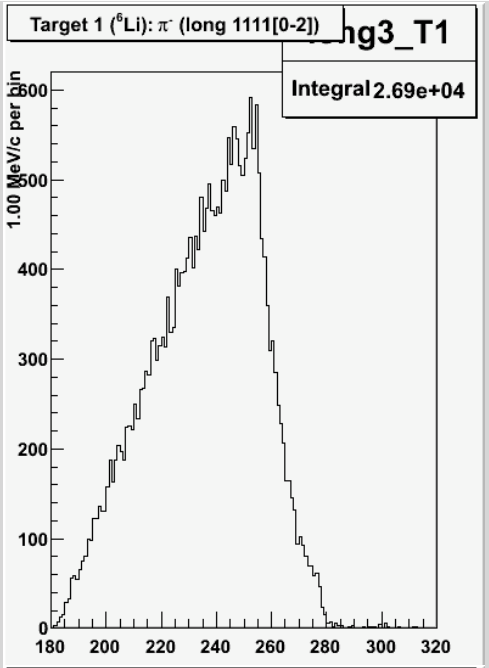
germano

qualità dei picchi

Dispmin<1.
Dev2min<8.
Resdmin<0.3
Vdktmin<0.6
Disvmin<0.04
|Xextrmin|<(Spessore bersaglio/2)*1.5

frascati 29/07/2008

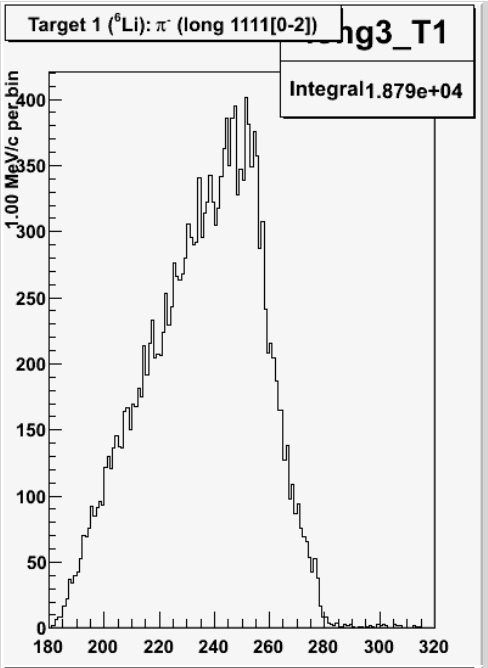
germano



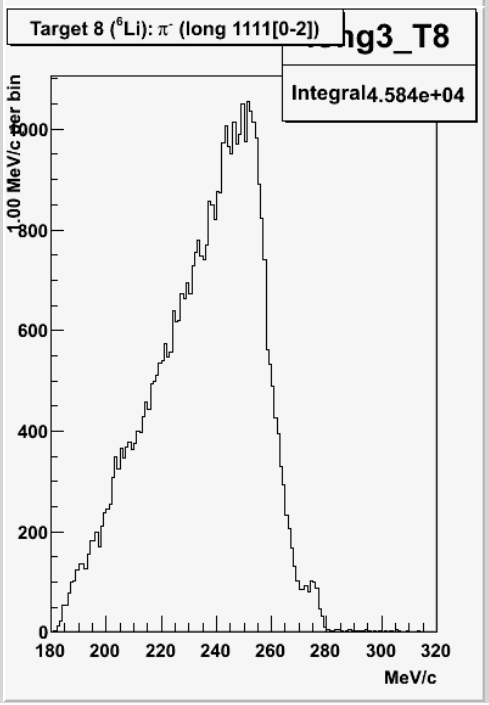
(K$^-$) ➥75.4%

v 6.05/01

➥69.9%
(migliore eff. π)



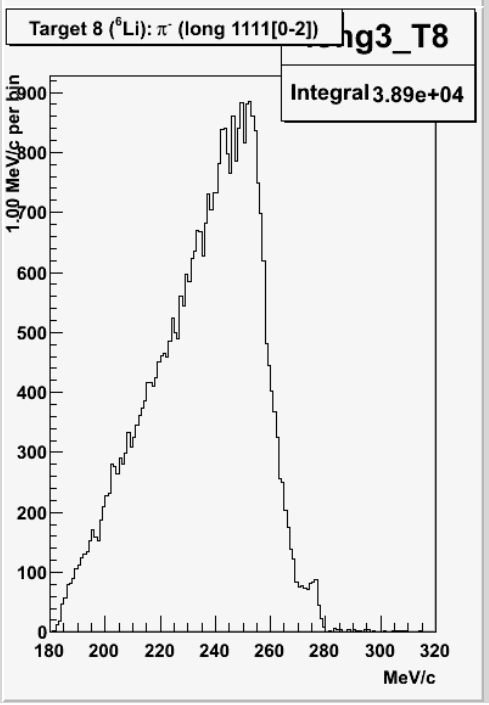
- 7 %



set minimo

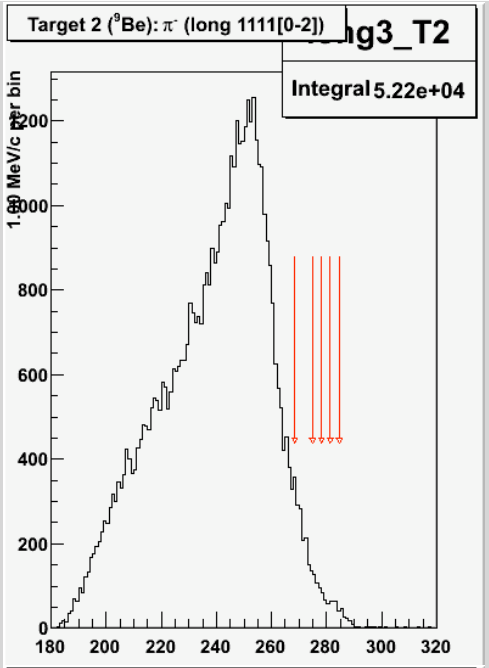
➥84.8%
(migliore eff. π)

v 6.05/02



+ 13 %

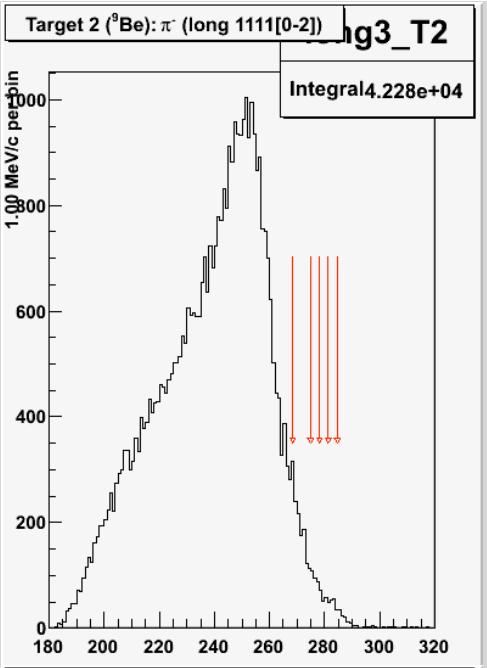
frascati 29/07/2008



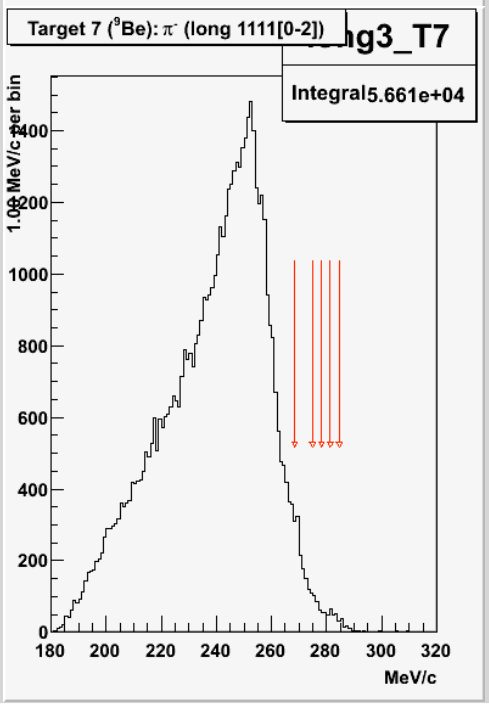
(K⁻) ➥75.4%

v 6.05/01

➥81.0%
(migliore eff. π)



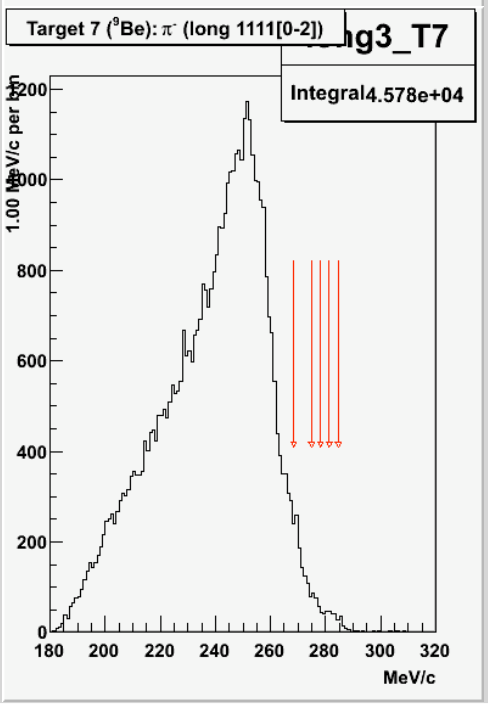
+ 7 %



set minimo

➥80.9%
(migliore eff. π)

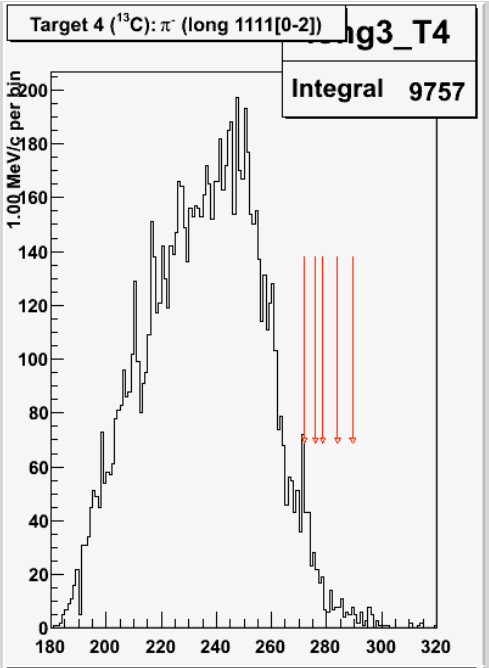
v 6.05/02



+ 7 %

germano

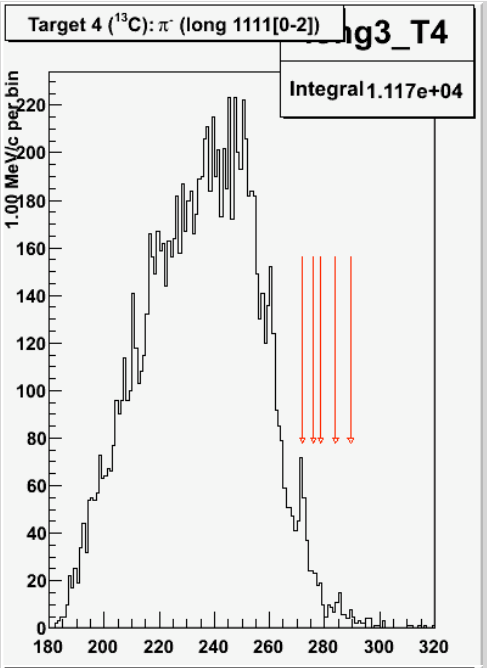
frascati 29/07/2008



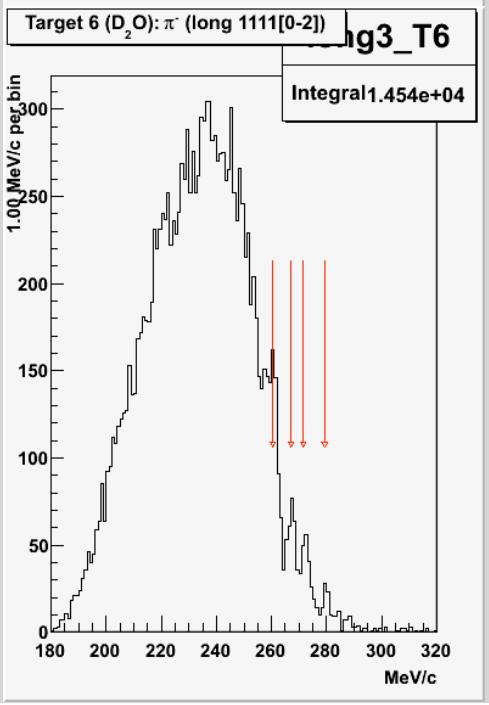
(K⁻) ➥75.4%

v 6.05/01

➥114%
(migliore eff. π)



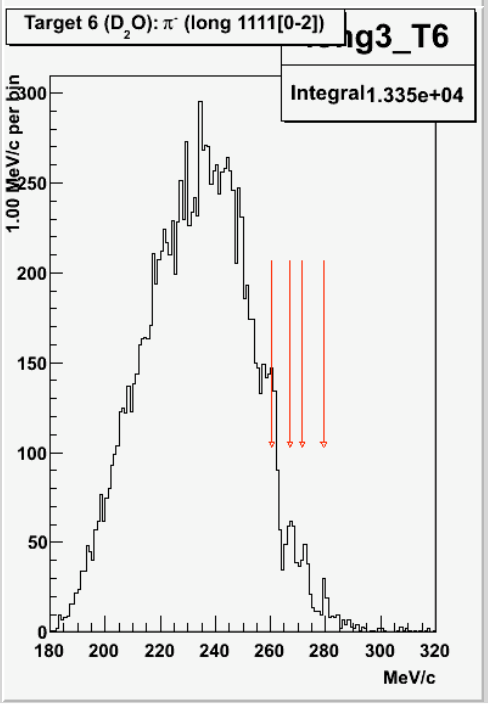
+ 51 %



set minimo

➥91.8%
(migliore eff. π)

v 6.05/02

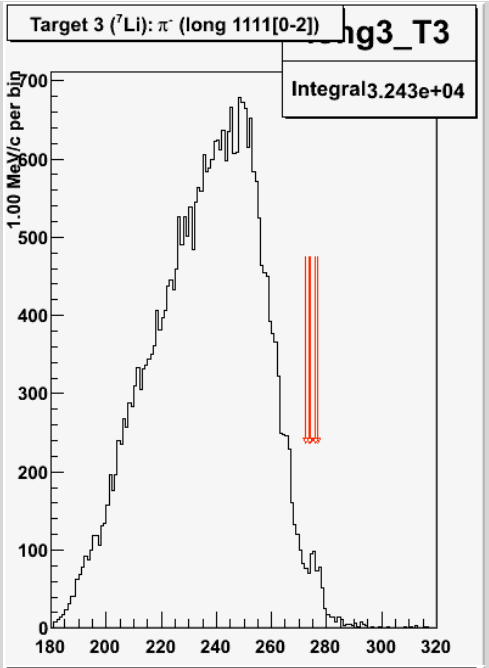


+ 22 %

germano

frascati 29/07/2008

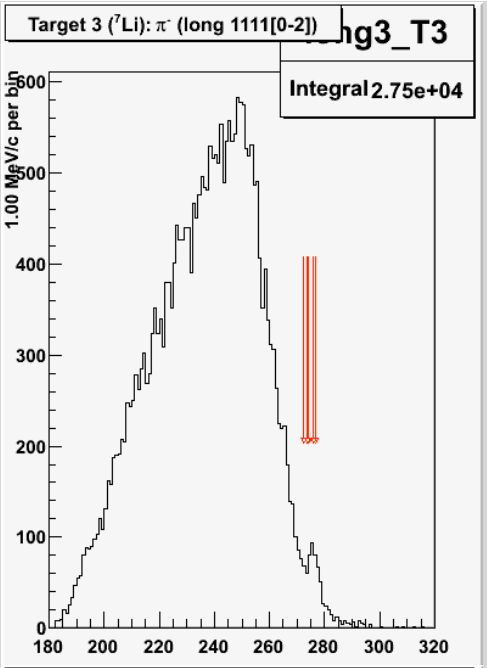
germano



(K$^-$) ➥75.4%

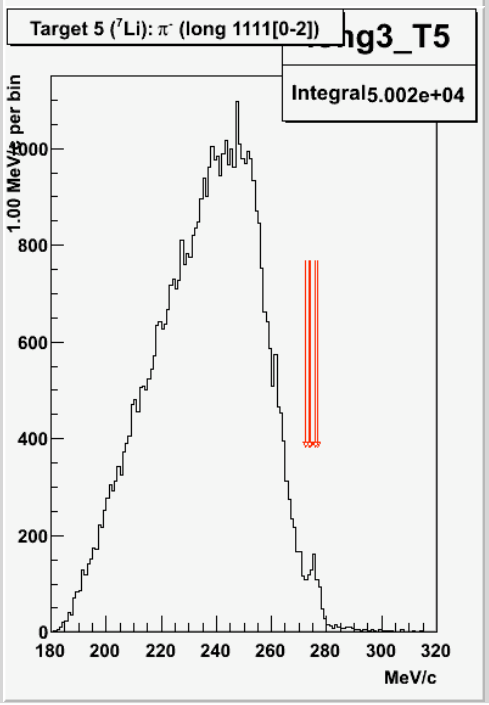
v 6.05/01

➥84.8%
(migliore eff. π)



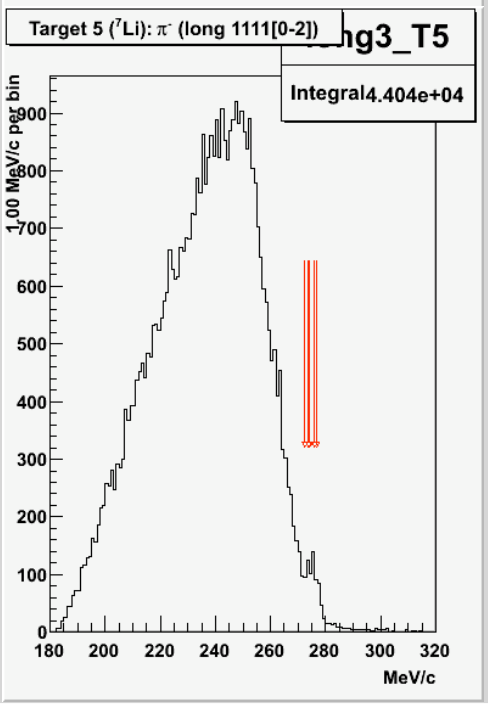
+ 12 %

set minimo



➥88.0%
(migliore eff. π)

v 6.05/02



+ 17 %