Like-sign spectra with opening angle cut

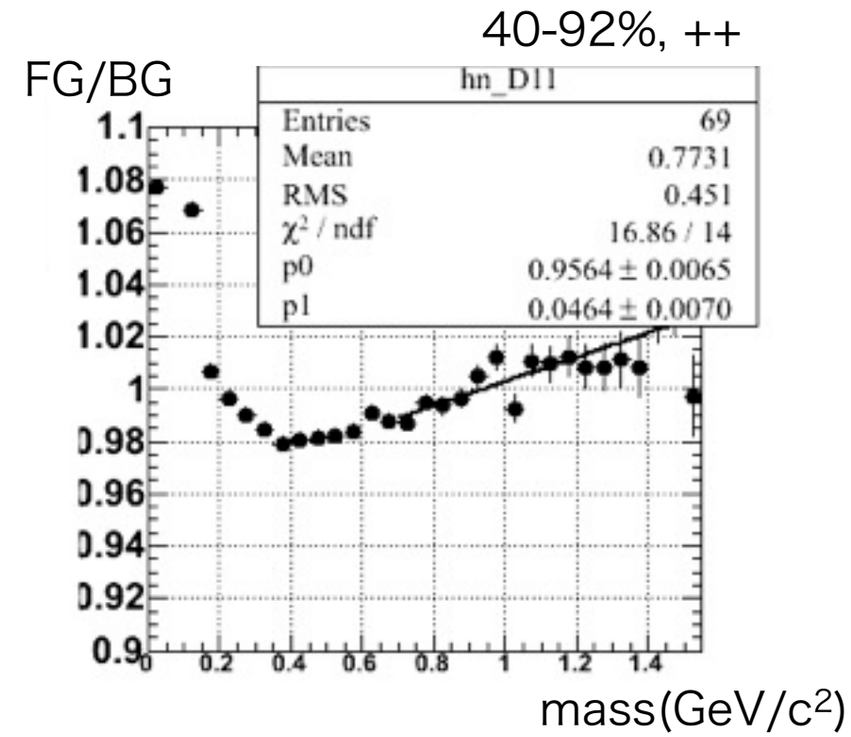
Yosuke Watanabe @ WIS
(Tokyo University)

Setup

- Cabanaboy
  - MultiAkibaPool
    - Pool (c: 10, z: 8, r: 1)
    - Pool depth 15
- elD cut
  - n0>2, disp<5, chi2/npe0<10
  - dep>-2, sqrt(semcdphi^2+semcdz^2)<3, prob>0.01
- Ghost rejection
  - DC: |phi1-phi2|<0.05 && |zed1-zed2|<0.5 randomly remove one of the tracks
  - RICH: |xphi1-xphi2|<0.08 && |xz1-xz2|<25 discard the event
- Normalization: Mee > 0.7GeV/c^2

Outline

- If the slope is due to away-side jet, the correlated pair must have a large opening angle.

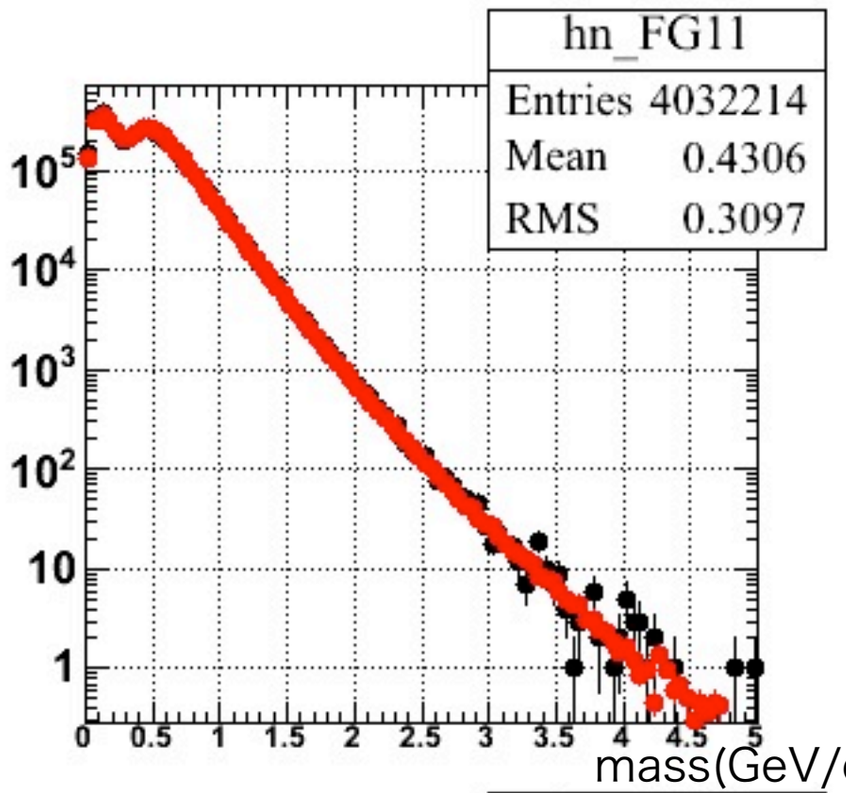


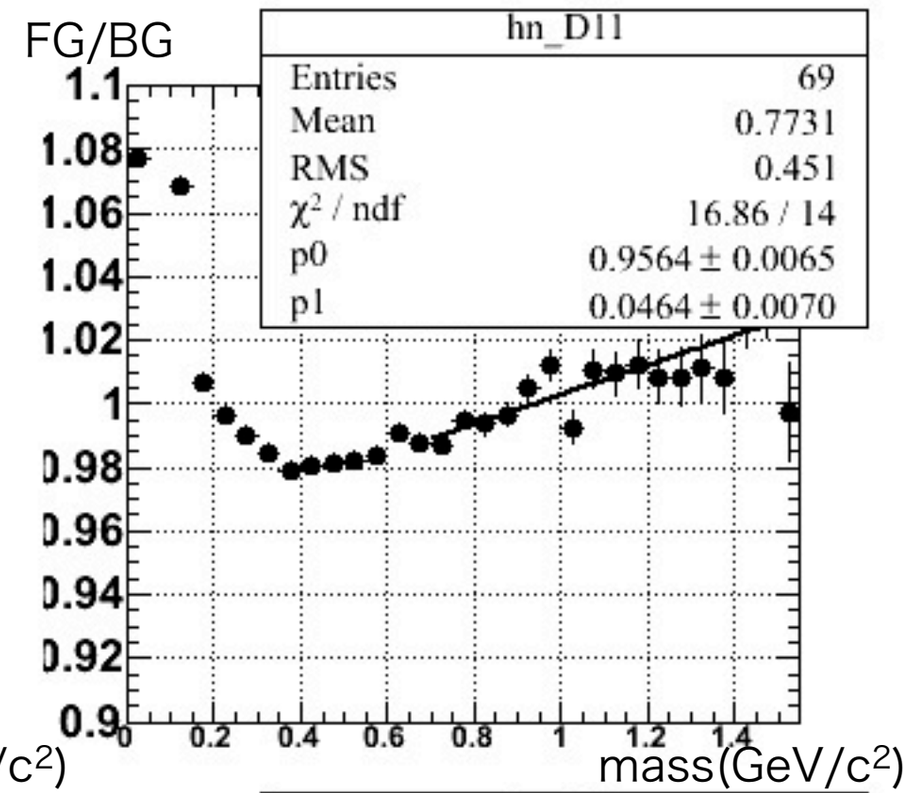
1. Like sign spectra without HBD for different opening angle cut
2. Like sign spectra with HBD for different opening angle cut

wo HBD, 40-%

Like sign

0-180 deg (all)



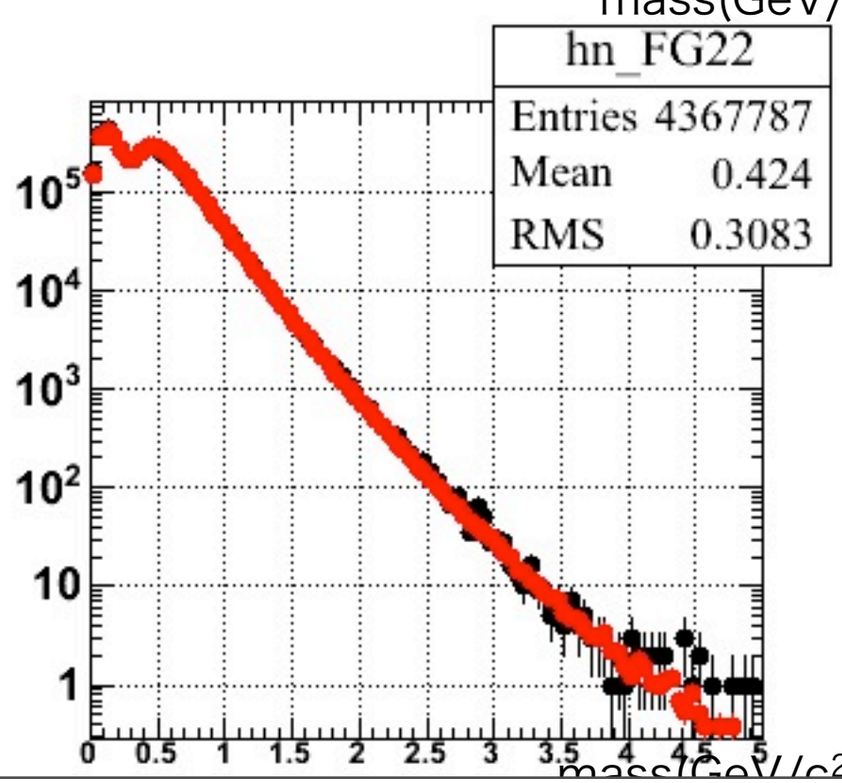


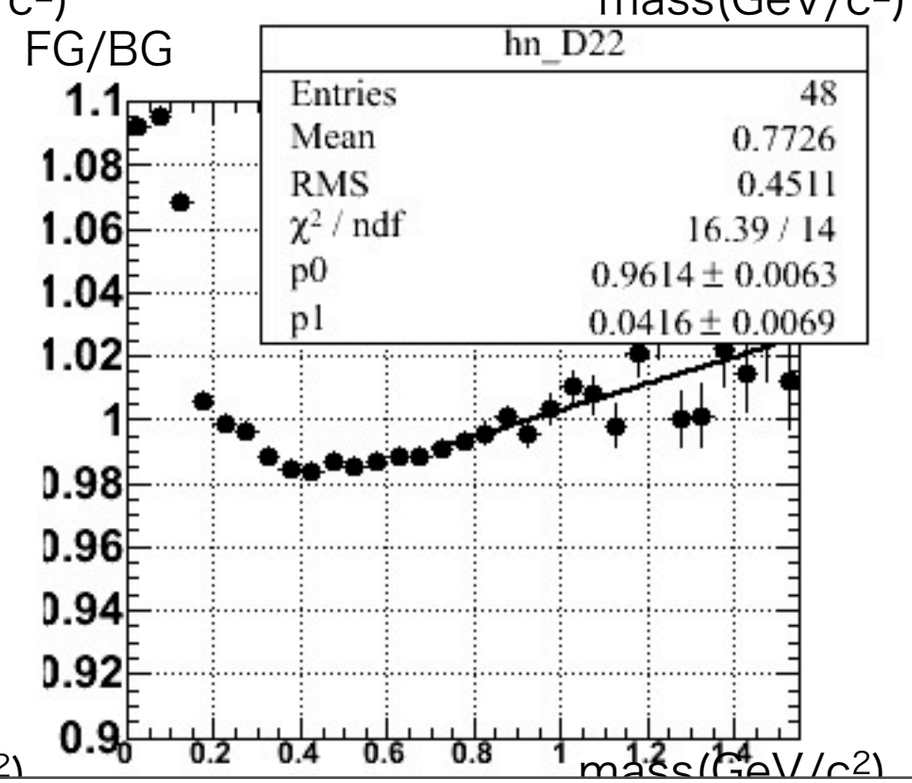
me>0.7

N: 699110

Nf: 0.03879

err: 0.00005





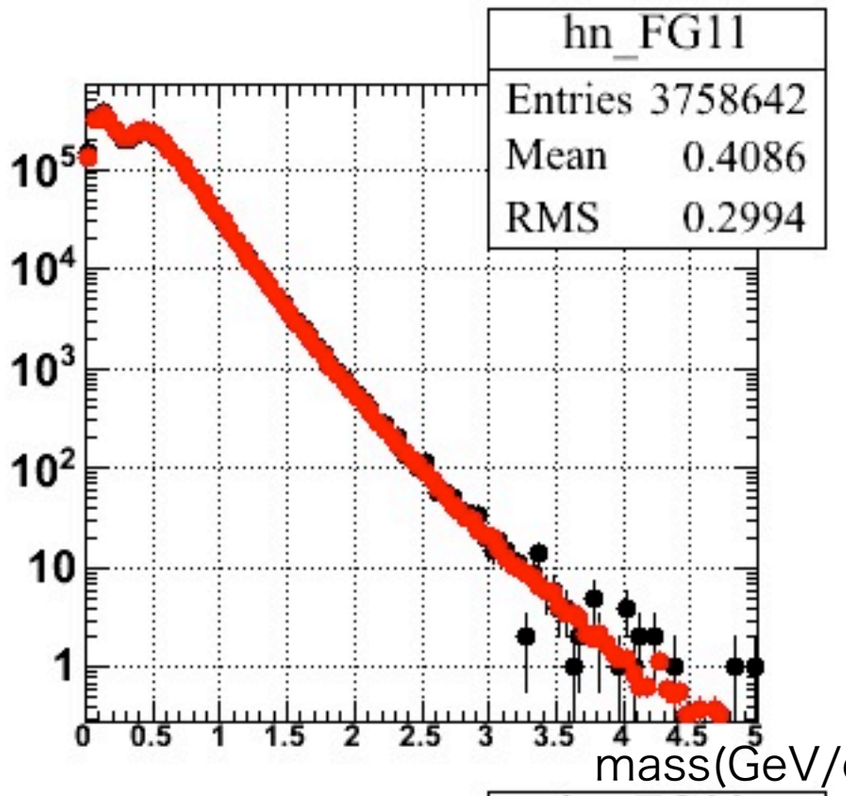
me>0.7

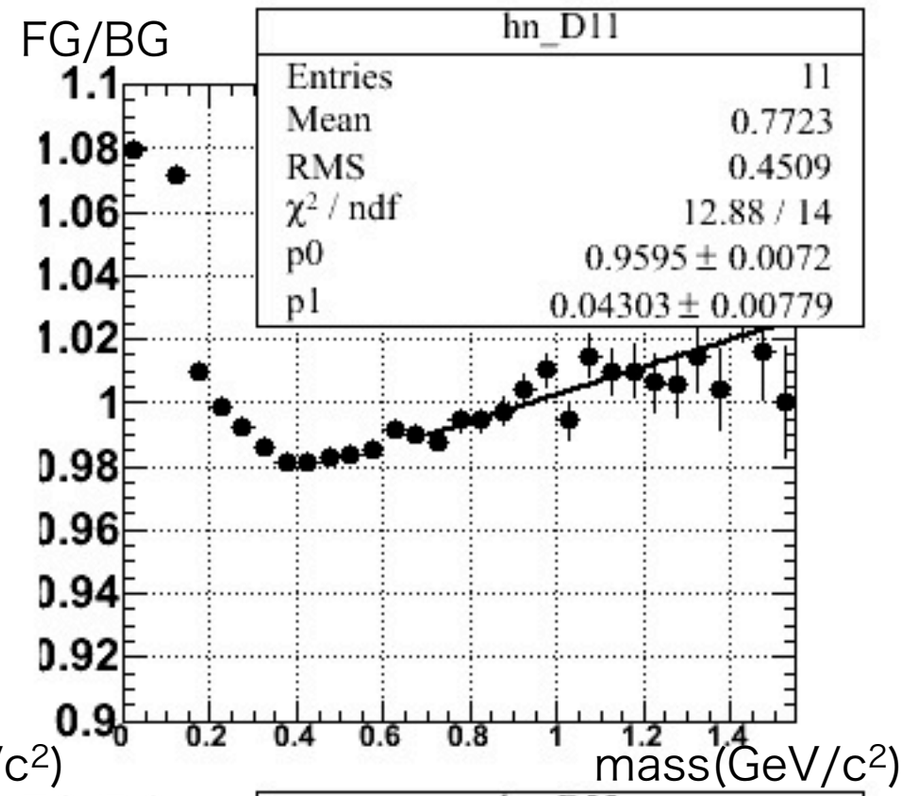
N: 735441

Nf: 0.0386559

err: 0.00005

0-160



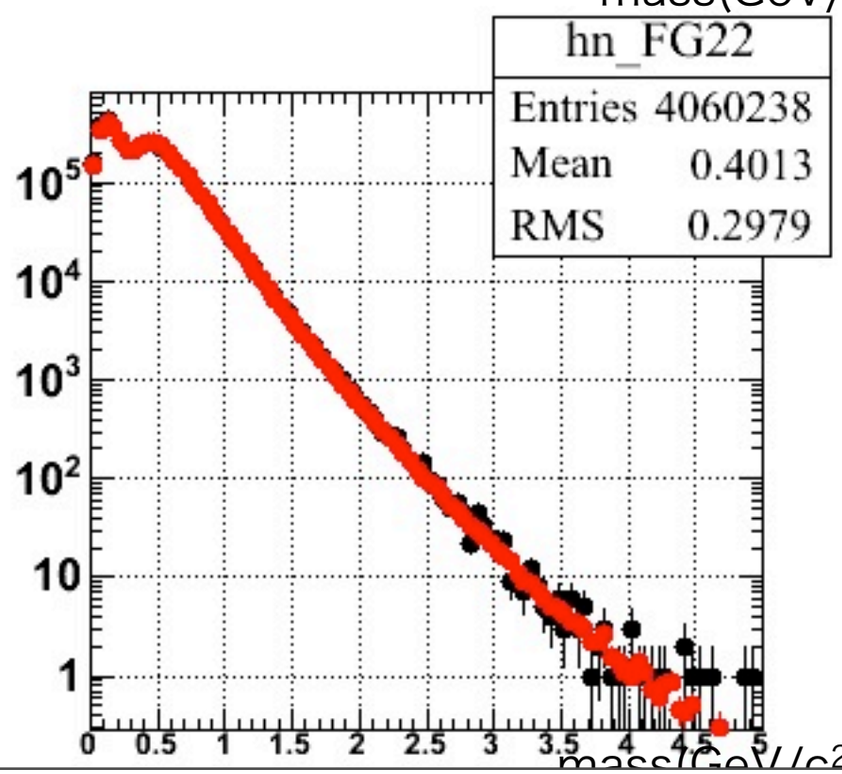


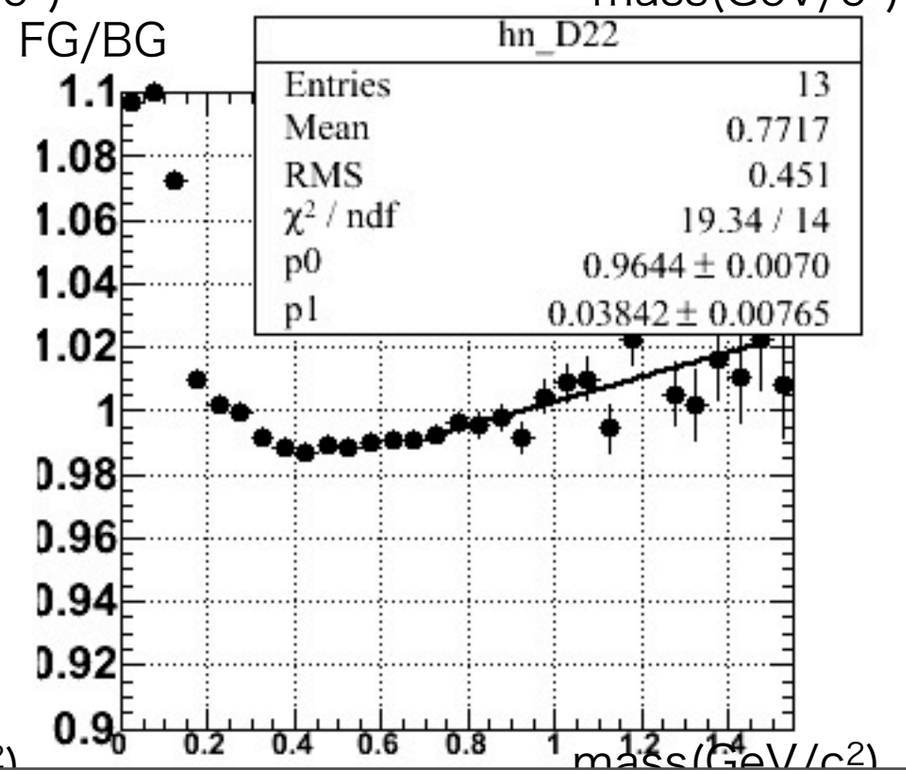
me>0.7

N: 574807

Nf: 0.03869

err: 0.00005





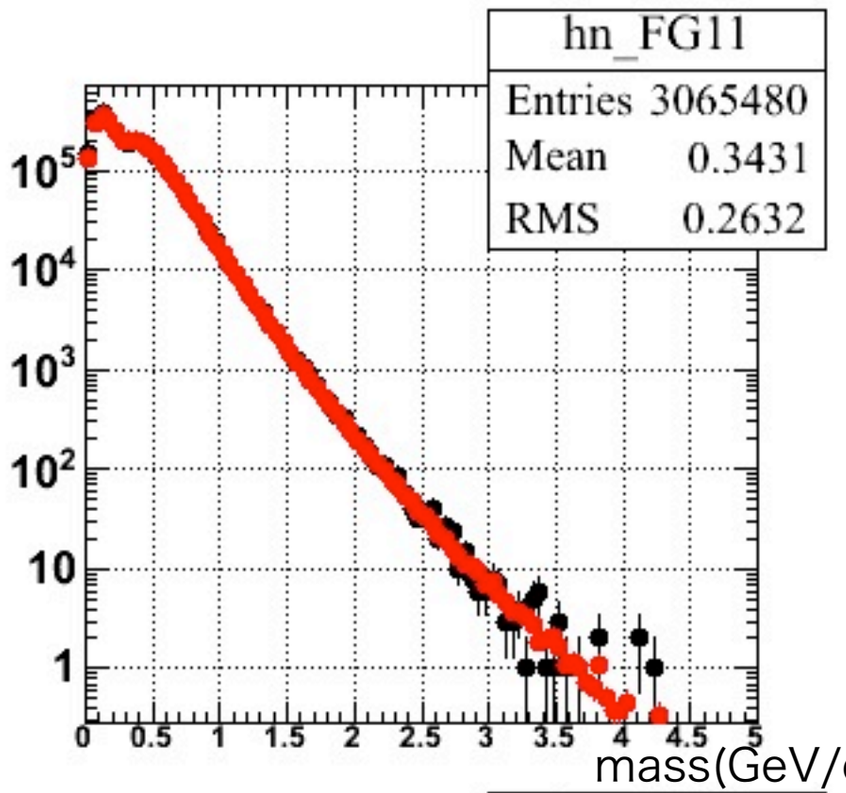
me>0.7

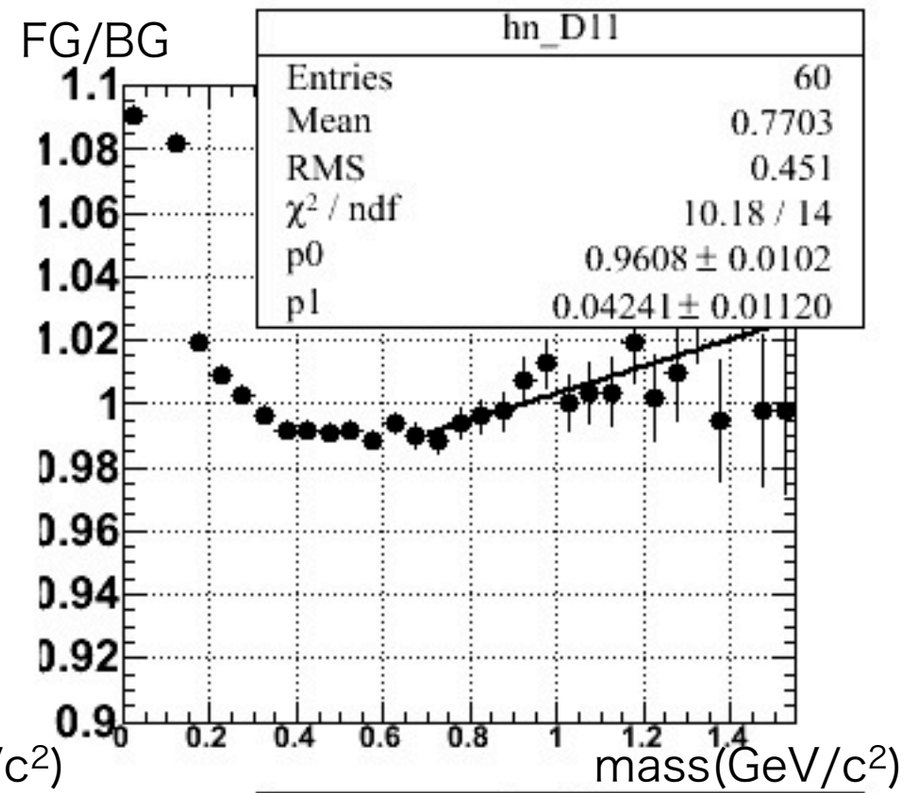
N: 600556

Nf: 0.03850

err: 0.00005

0-140



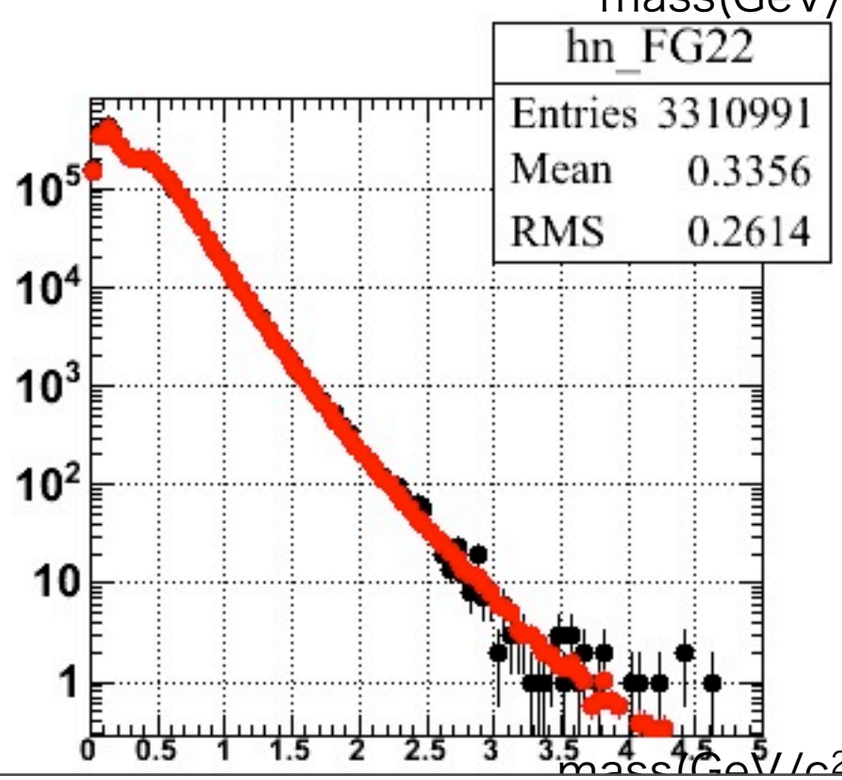


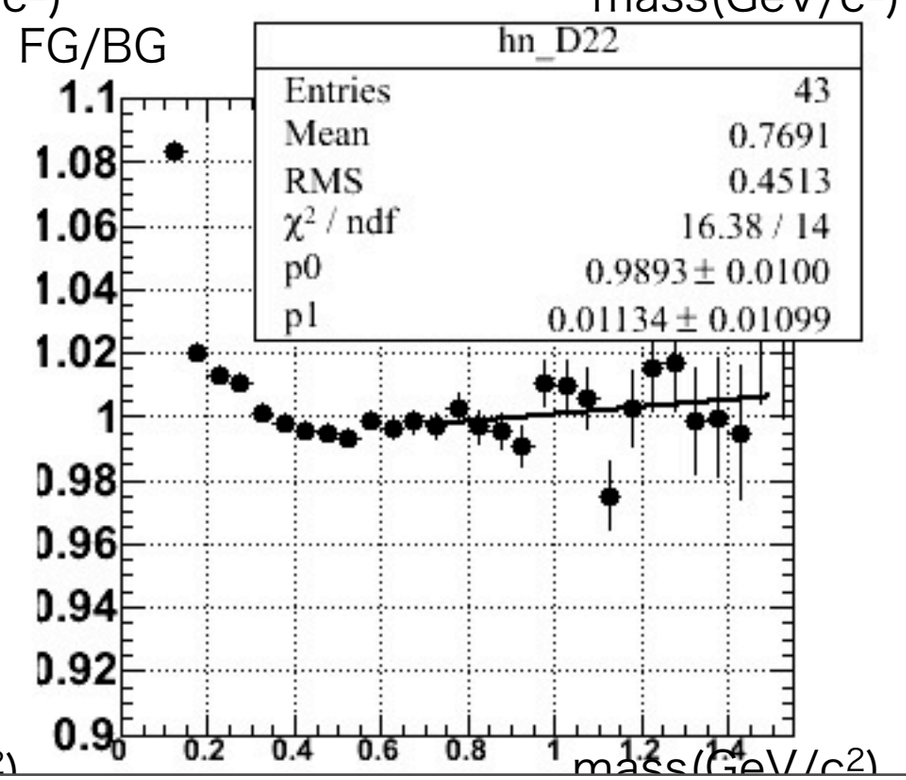
me>0.7

N: 297285

Nf: 0.038311

err: 0.00007





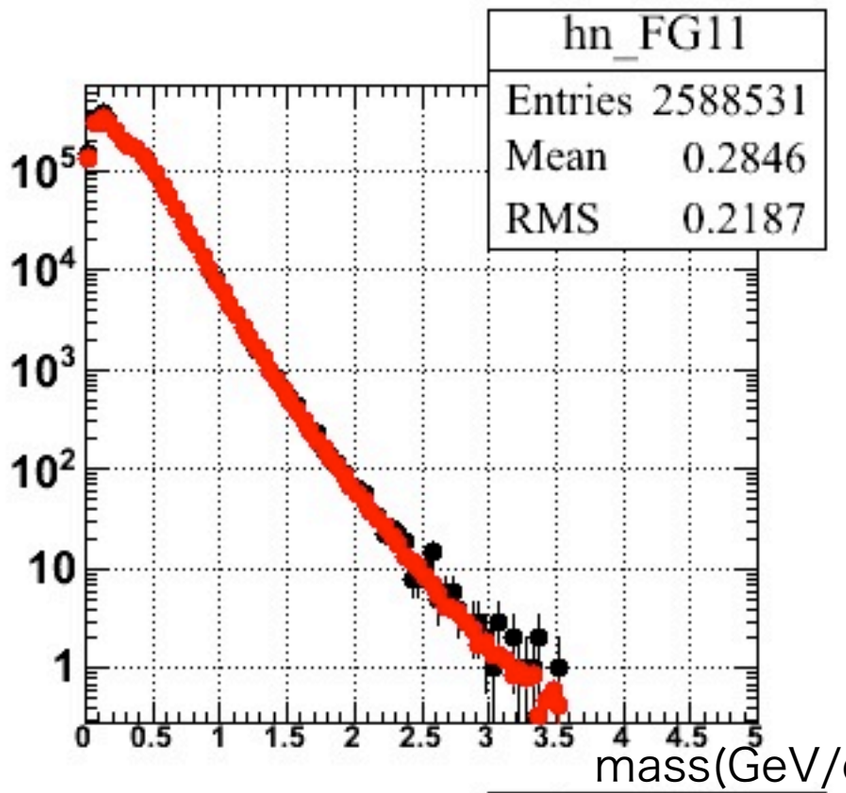
me>0.7

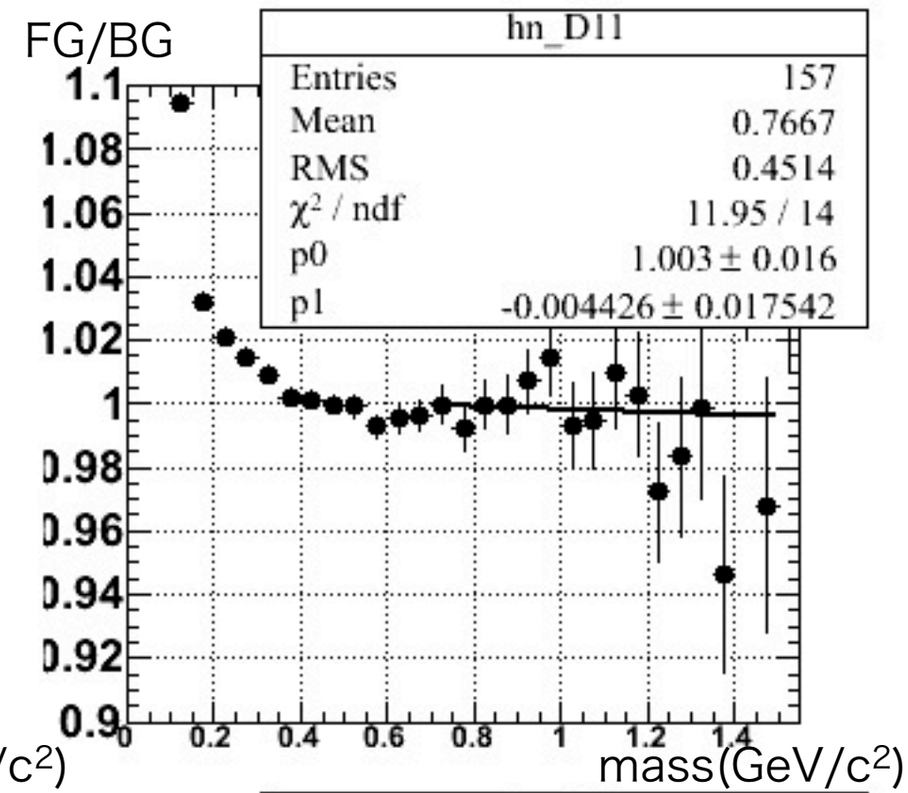
N: 309264

Nf: 0.0381067

err: 0.00007

0-120



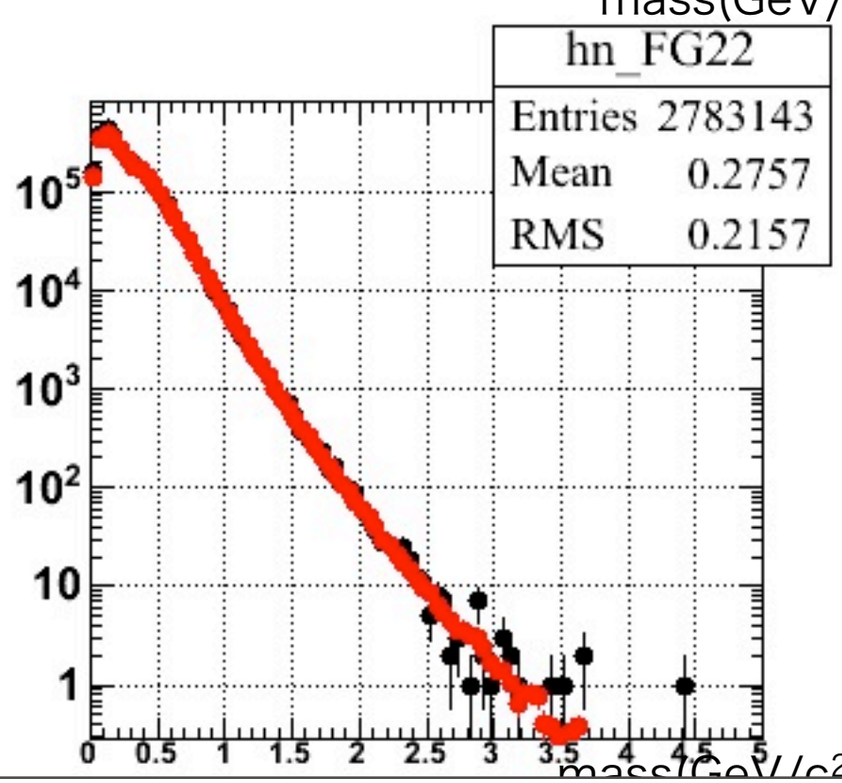


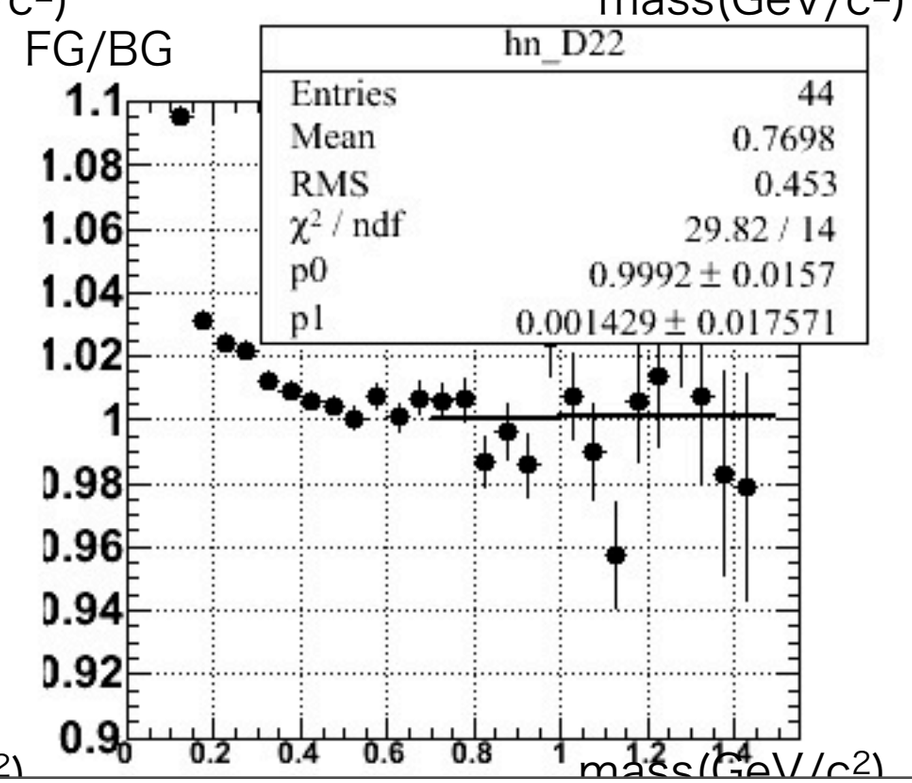
me>0.7

N: 133275

Nf: 0.03786

err: 0.0001





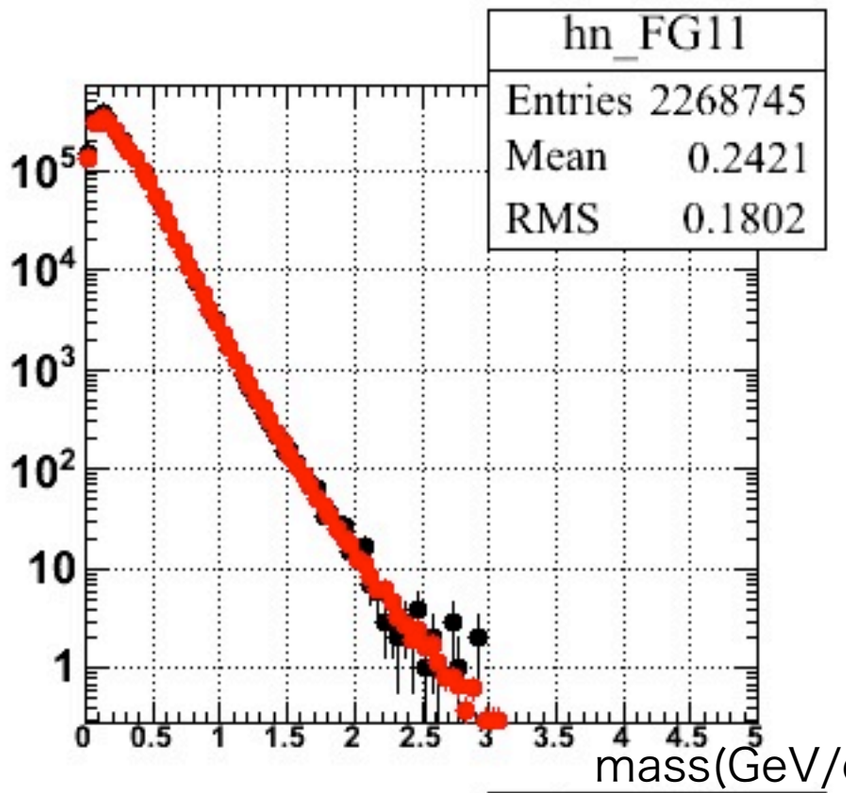
me>0.7

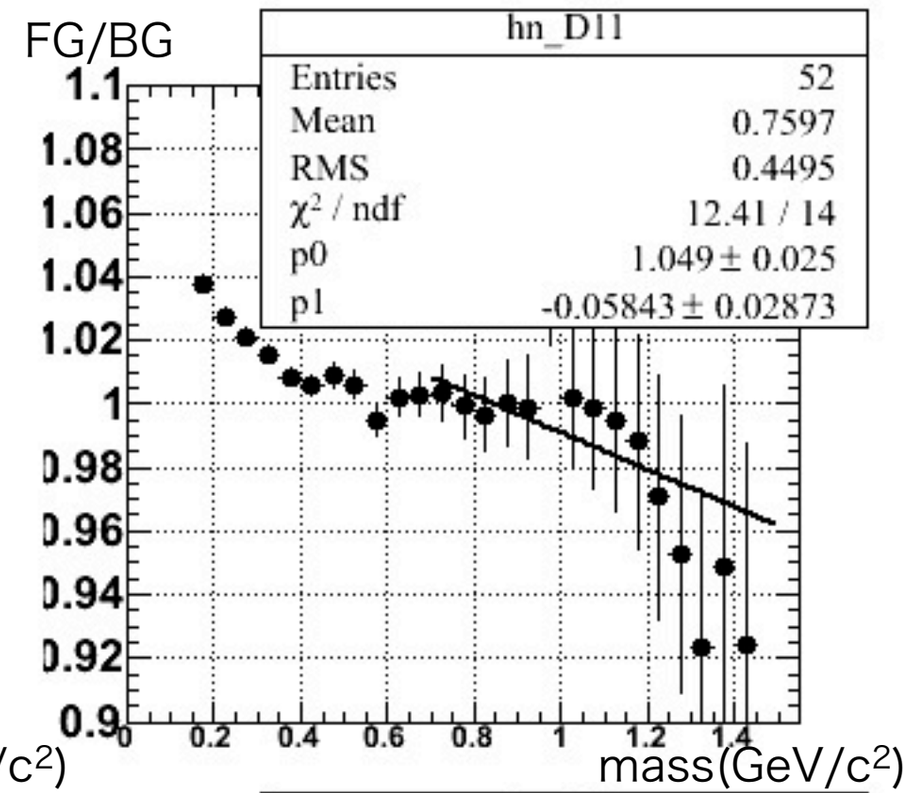
N: 134855

Nf: 0.03769

err: 0.0001

0-100



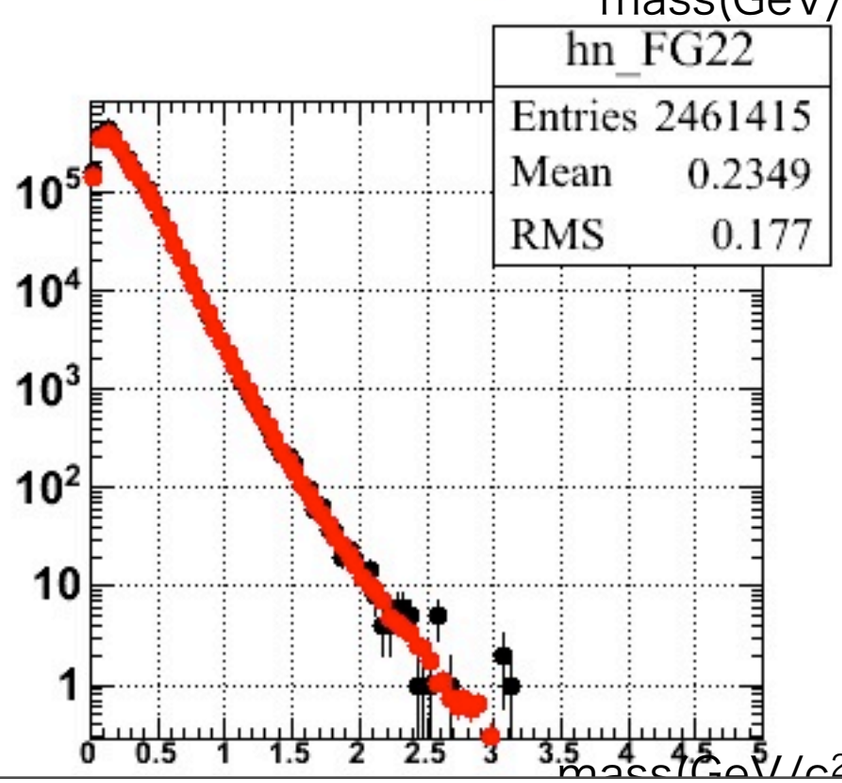


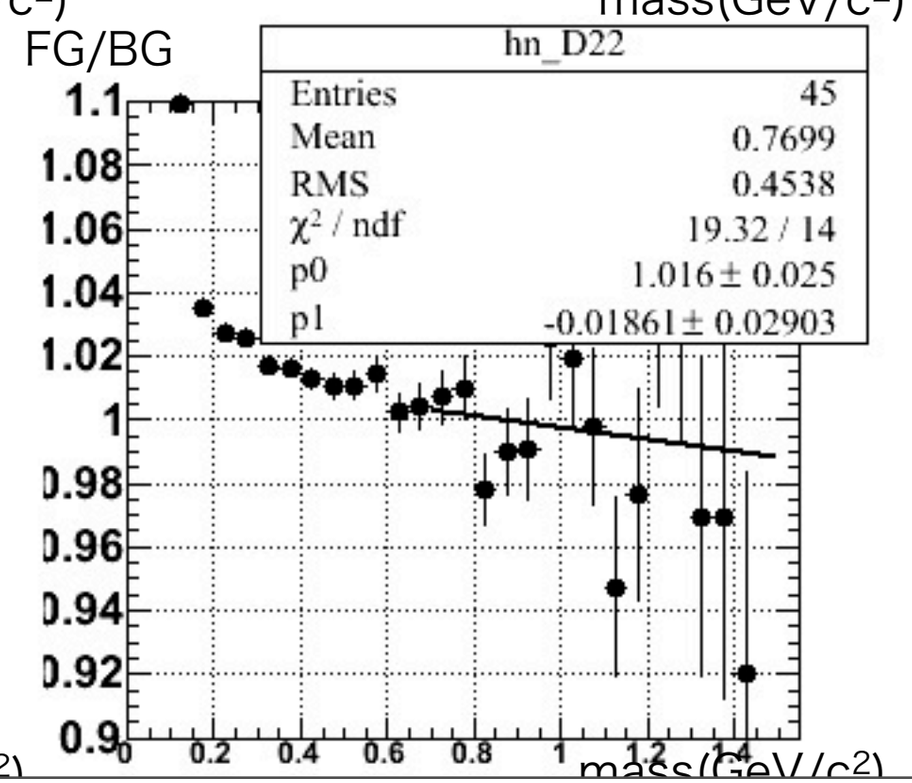
me>0.7

N: 56848

Nf: 0.03764

err: 0.00016





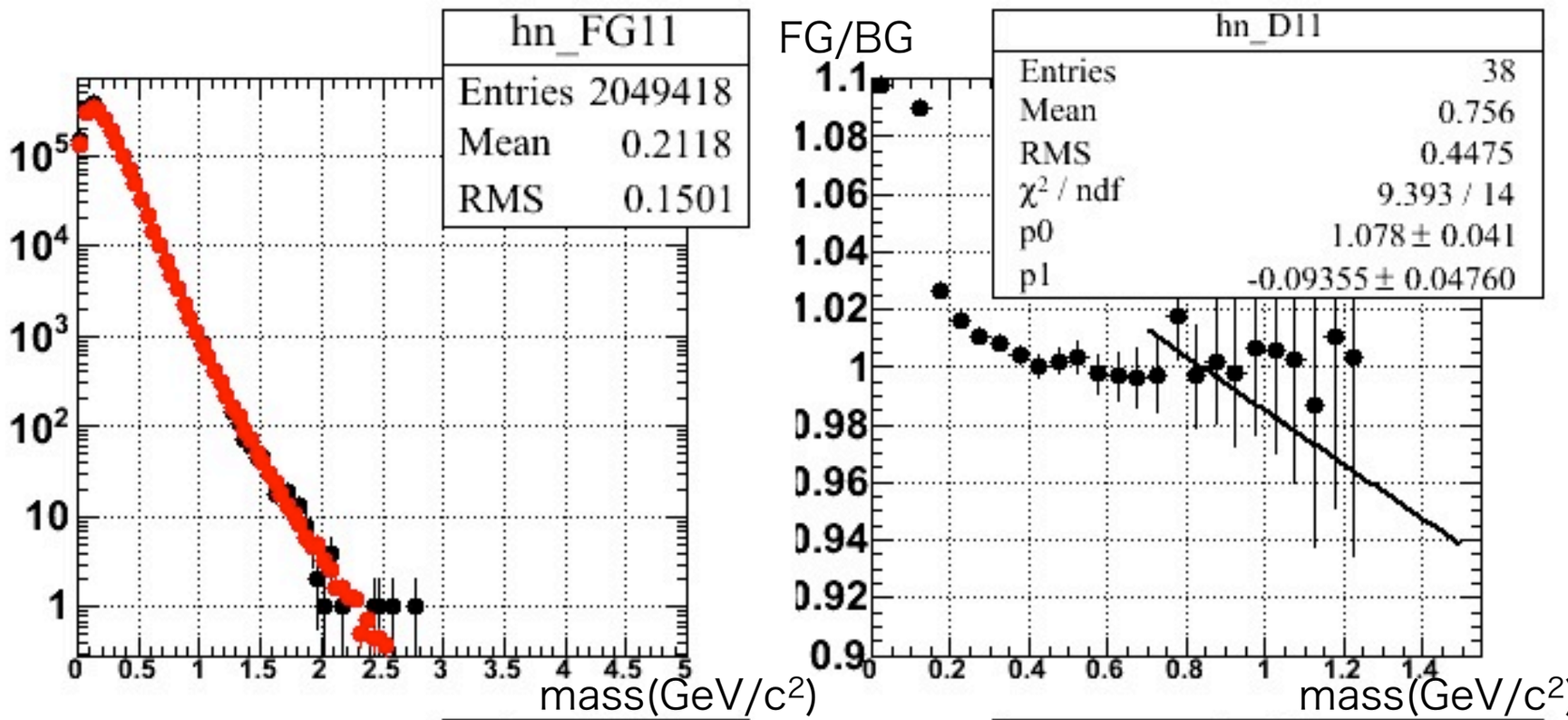
me>0.7

N: 57479

Nf: 0.03756

err: 0.00016

0-80

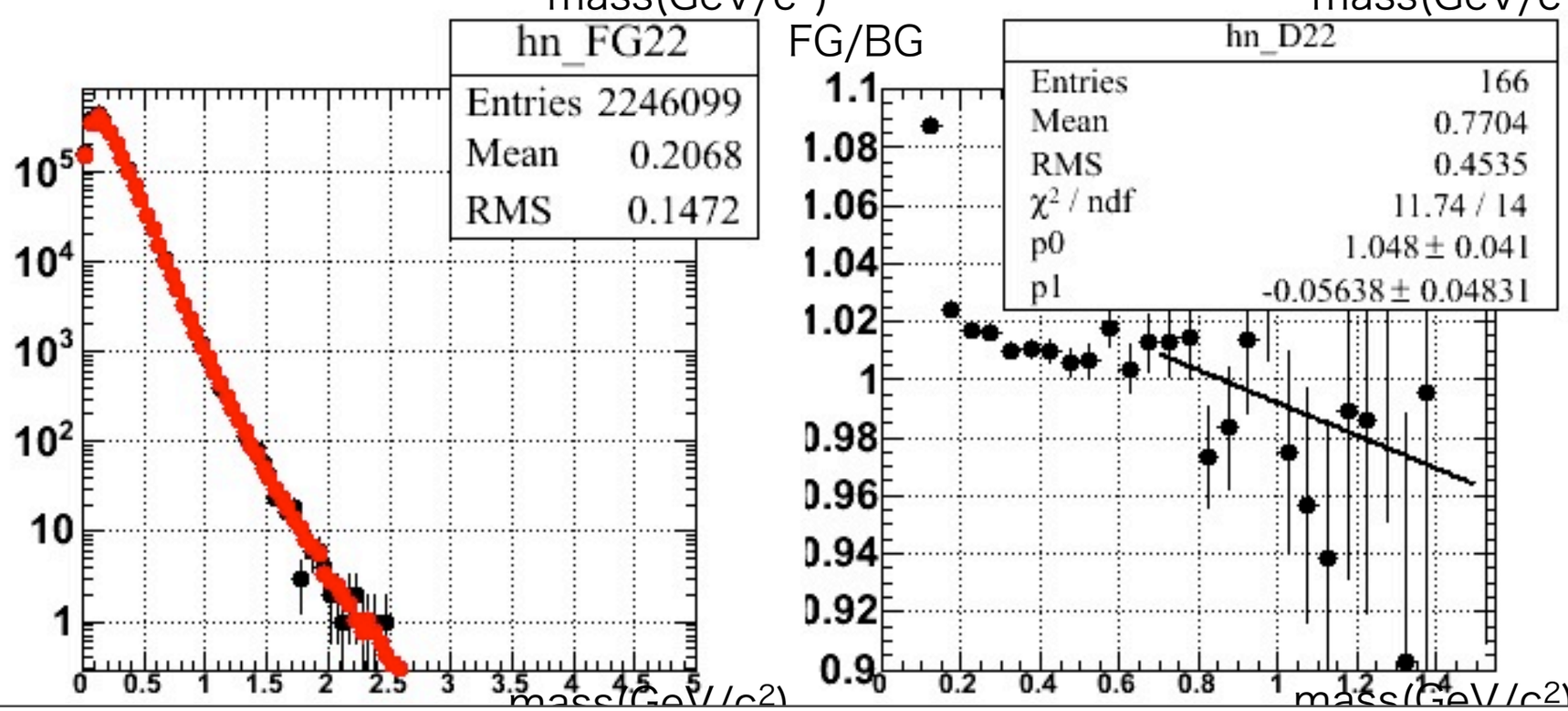


me>0.7

N: 23534

Nf: 0.03805

err: 0.00025



me>0.7

N: 23918

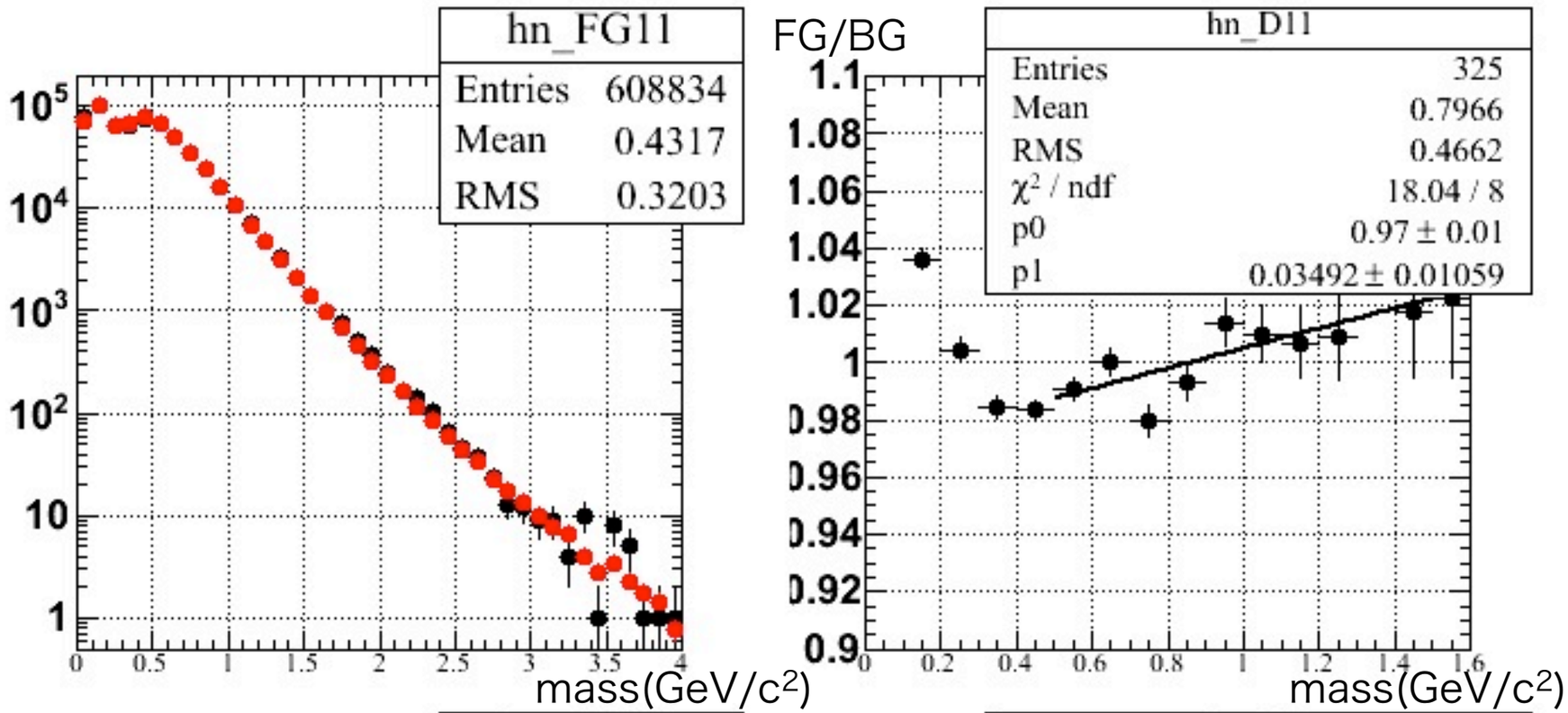
Nf: 0.03795

err: 0.00025

w HBD rej 10, 40-%

Like sign

0-180

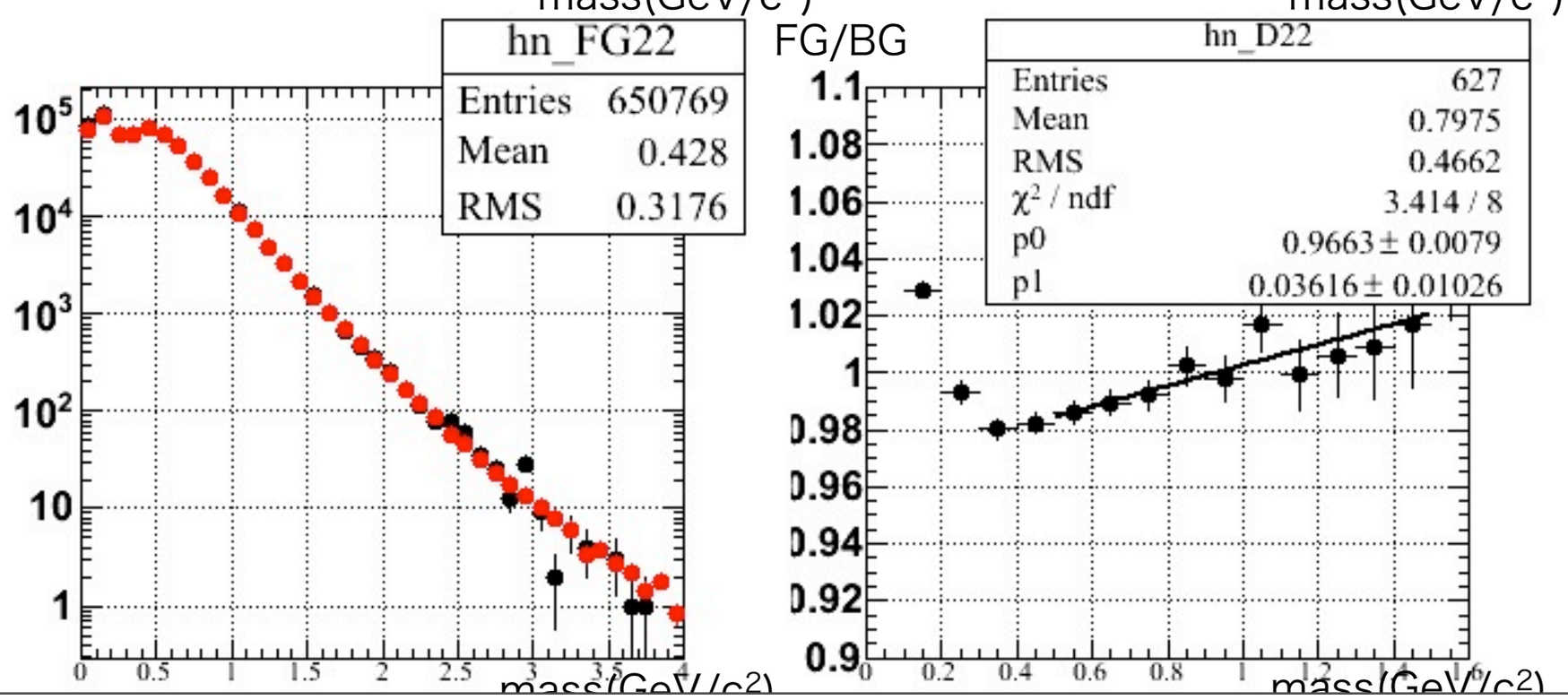


me>0.7

N: 110542

Nf: 0.03899

err: 0.00012



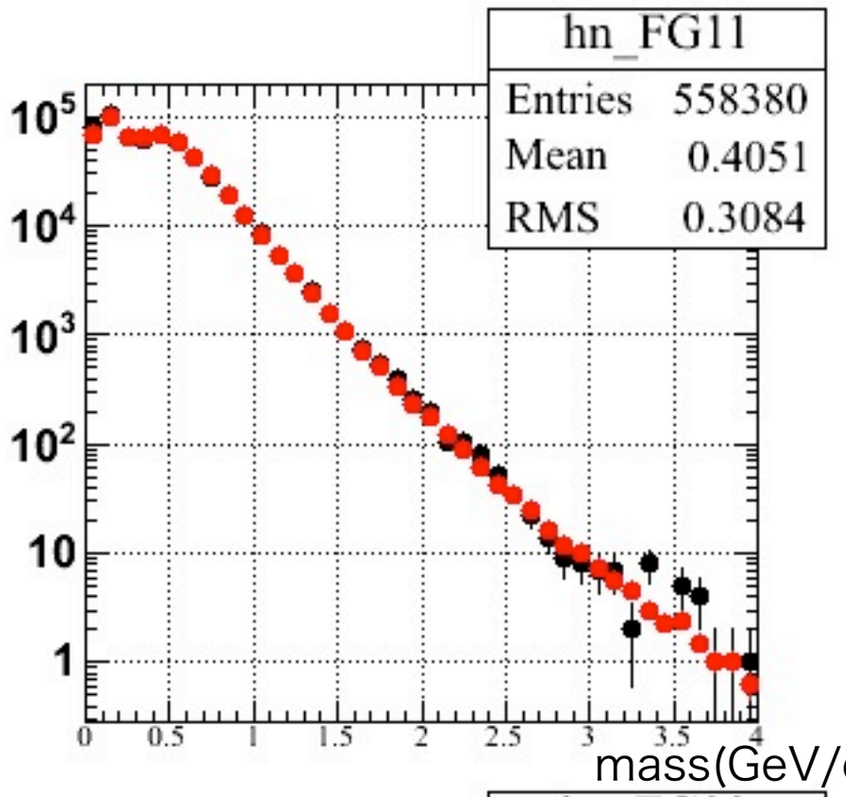
me>0.7

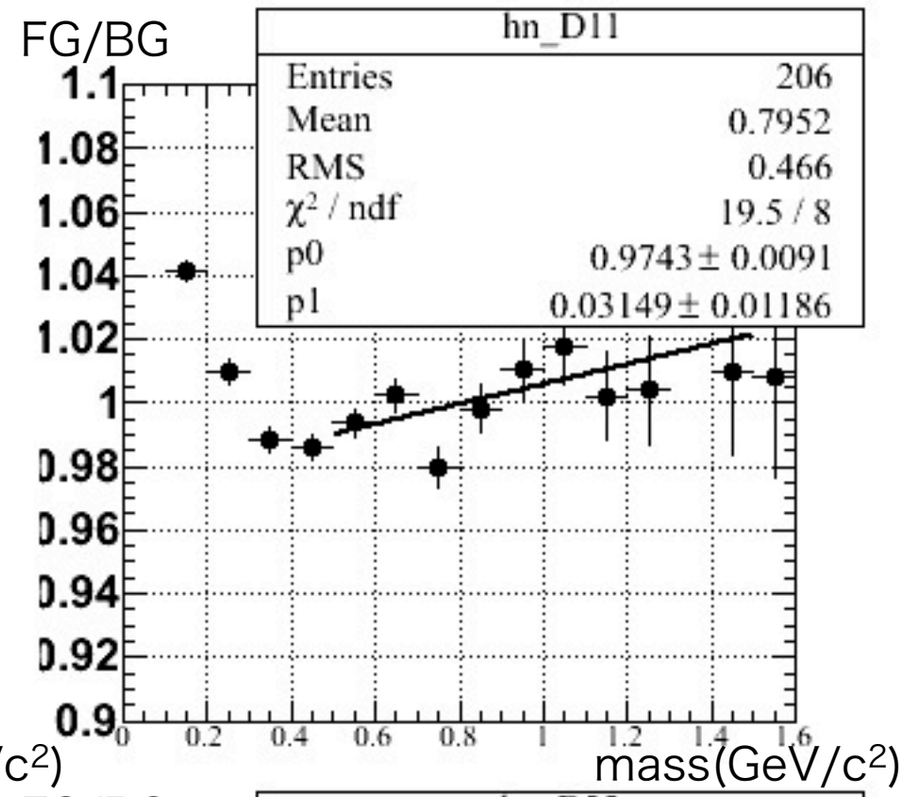
N: 116819

Nf: 0.03919

err: 0.00012

0-160



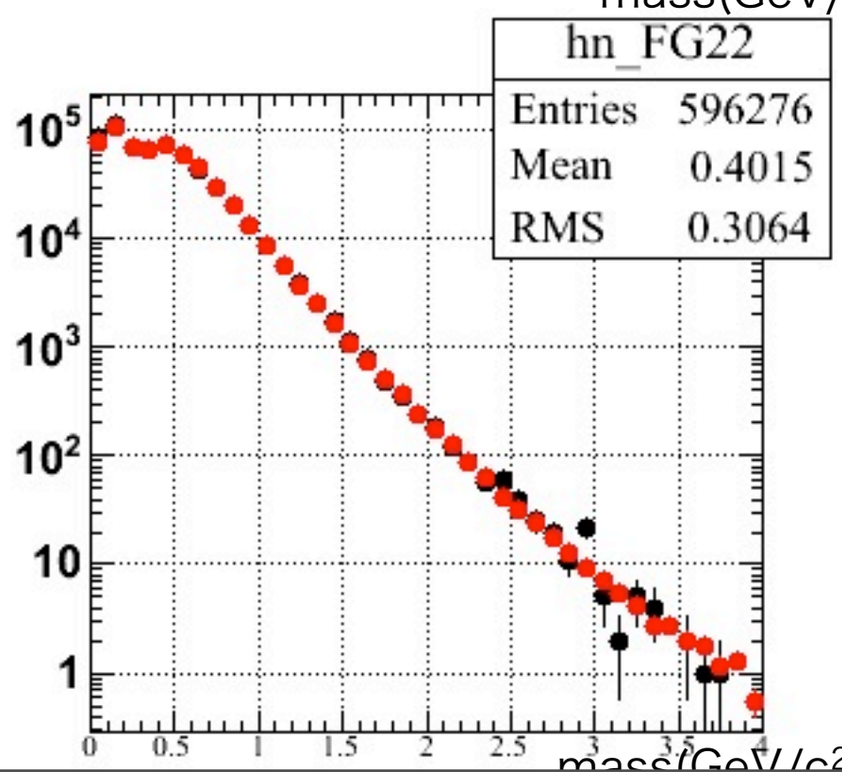


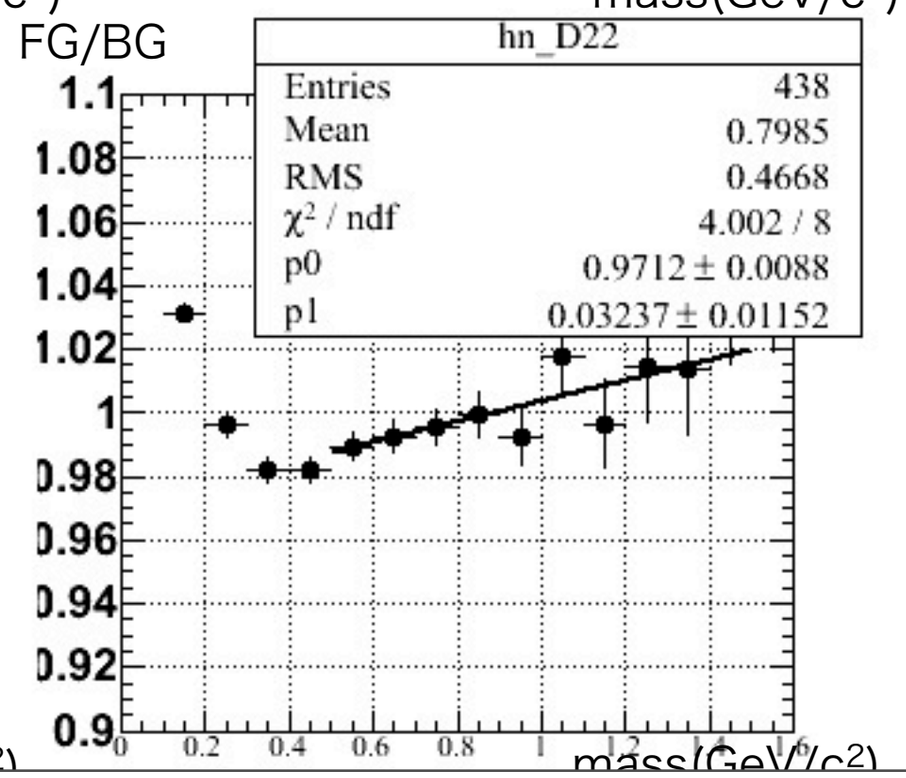
me>0.7

N: 87999

Nf: 0.03879

err: 0.00013





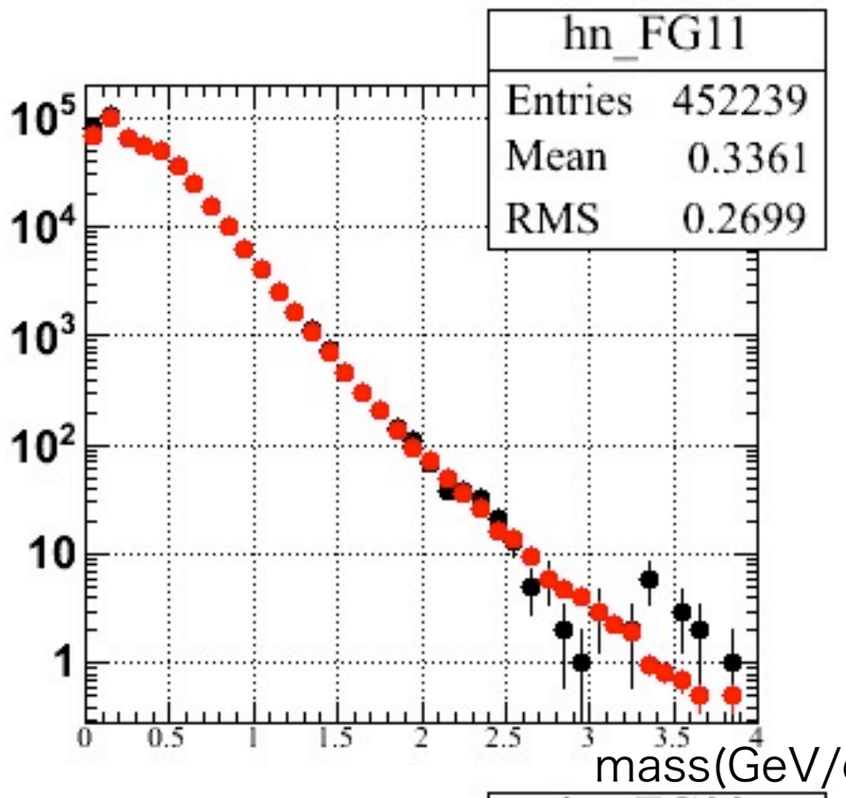
me>0.7

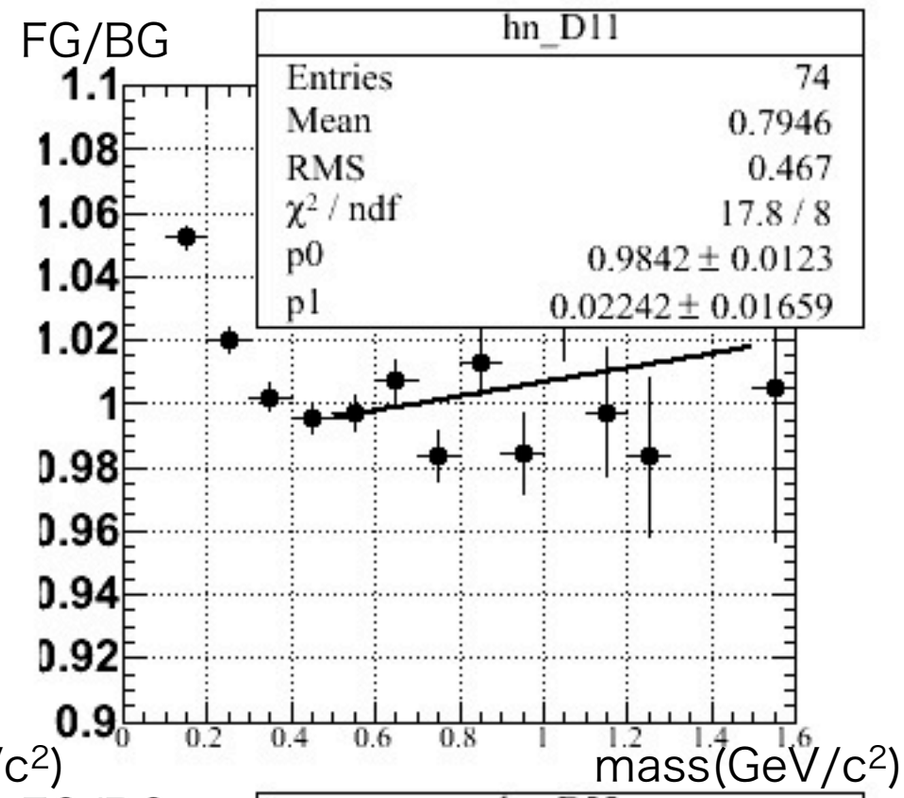
N: 92996

Nf: 0.03909

err: 0.00013

0-140



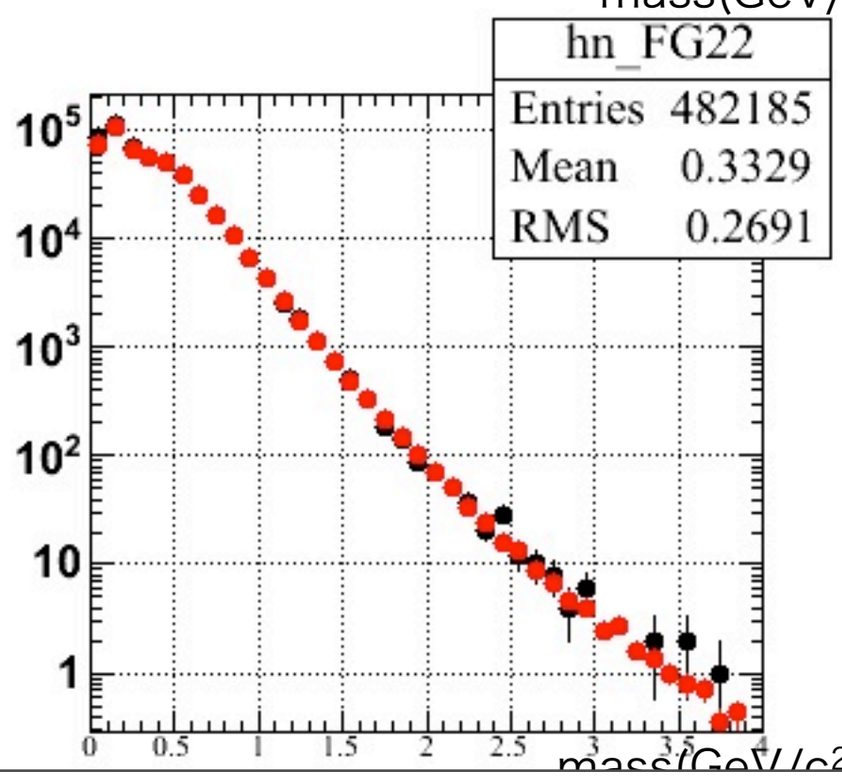


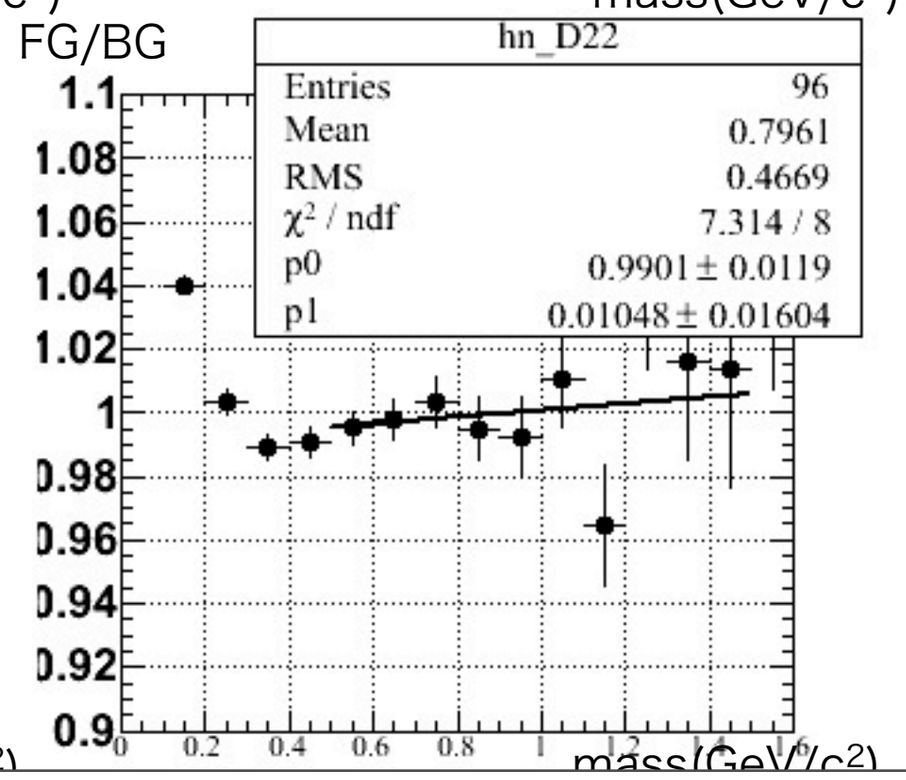
me>0.7

N: 45202

Nf: 0.03839

err: 0.00018





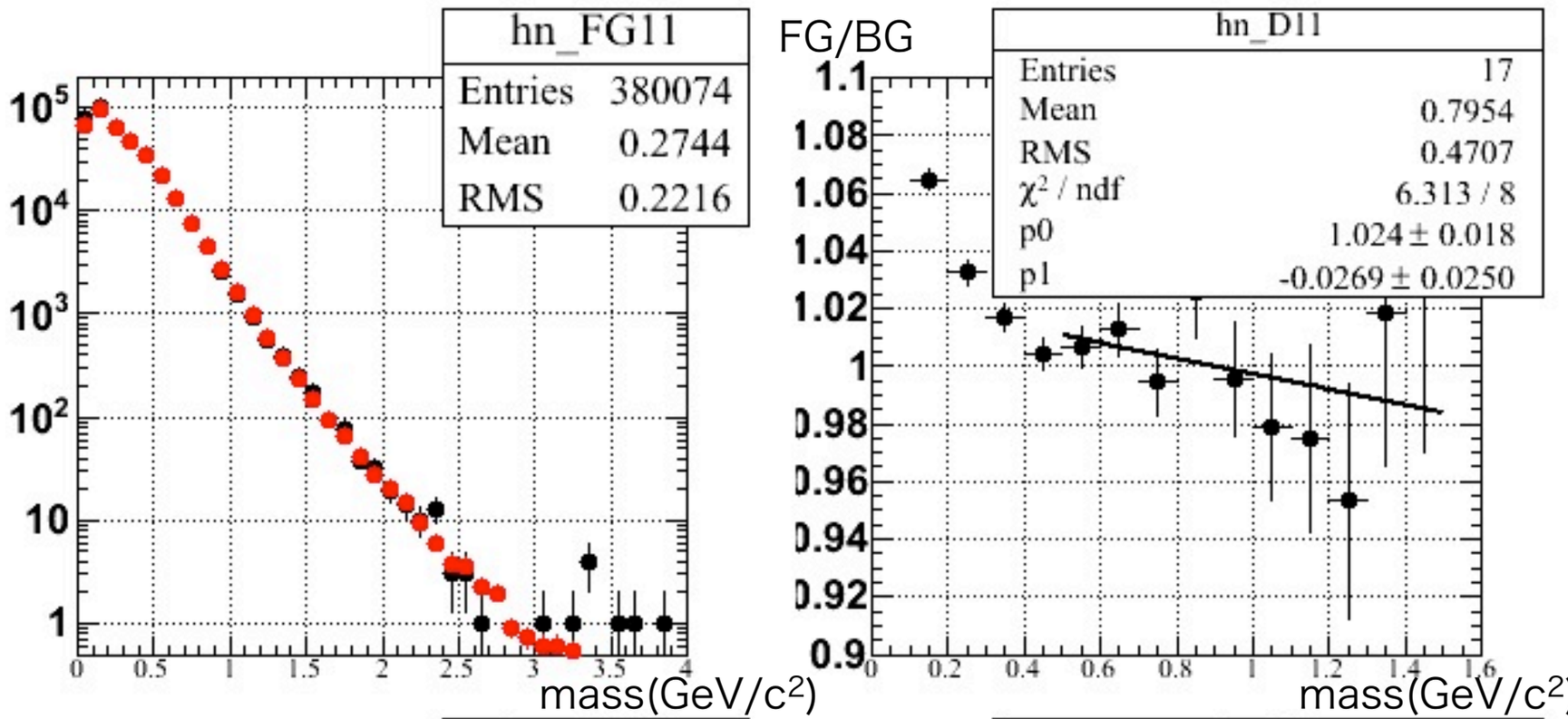
me>0.7

N: 47917

Nf: 0.03878

err: 0.00018

0-120

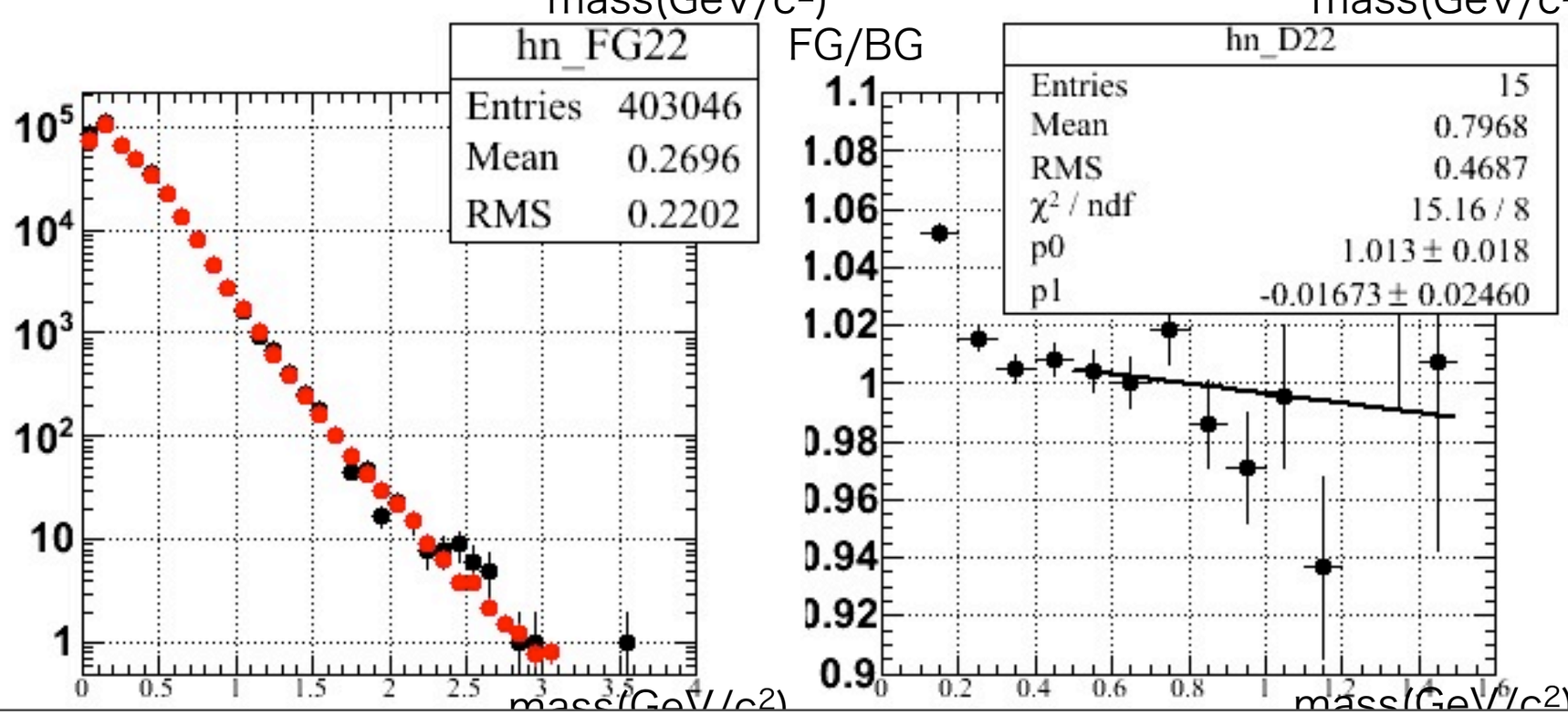


me>0.7

N: 19782

Nf: 0.03794

err: 0.00027



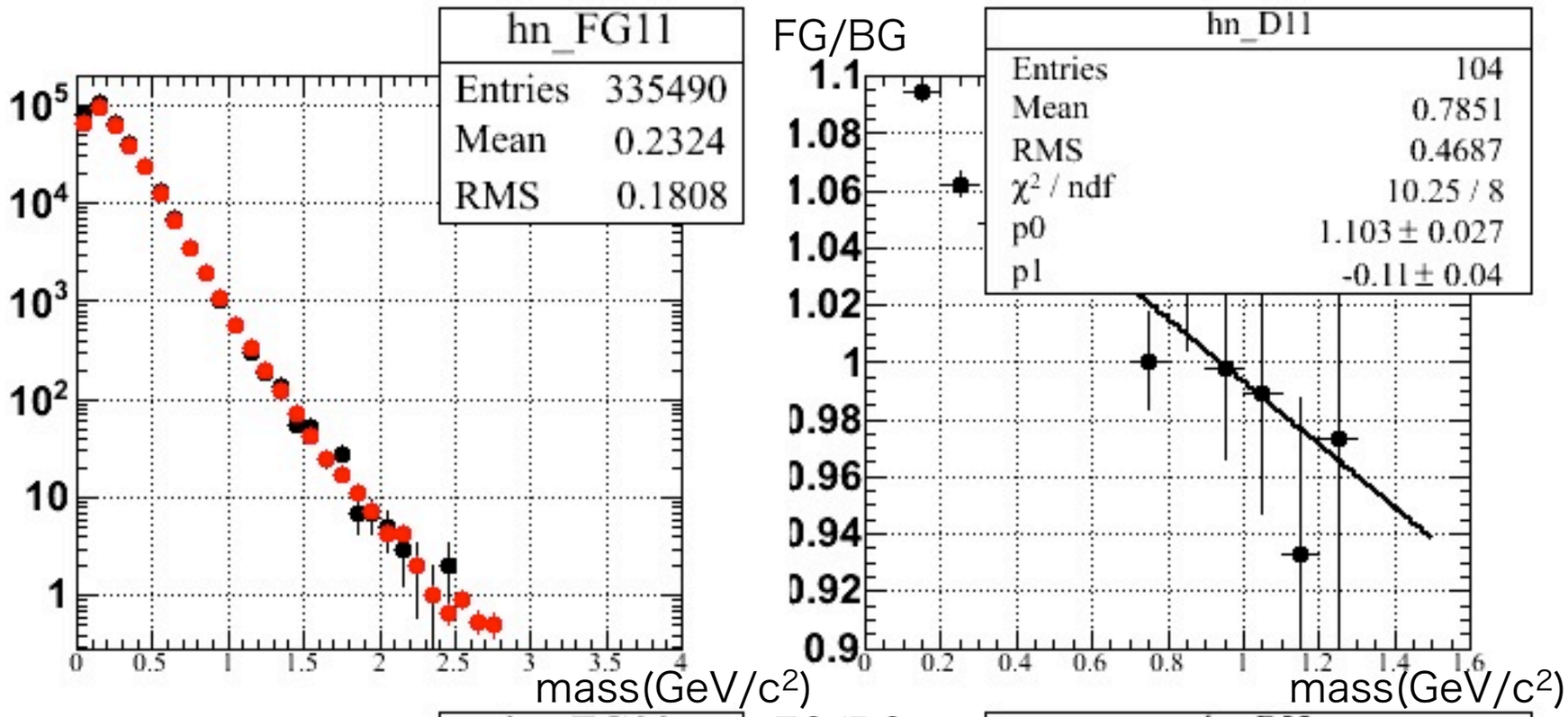
me>0.7

N: 20628

Nf: 0.03834

err: 0.00027

0-100

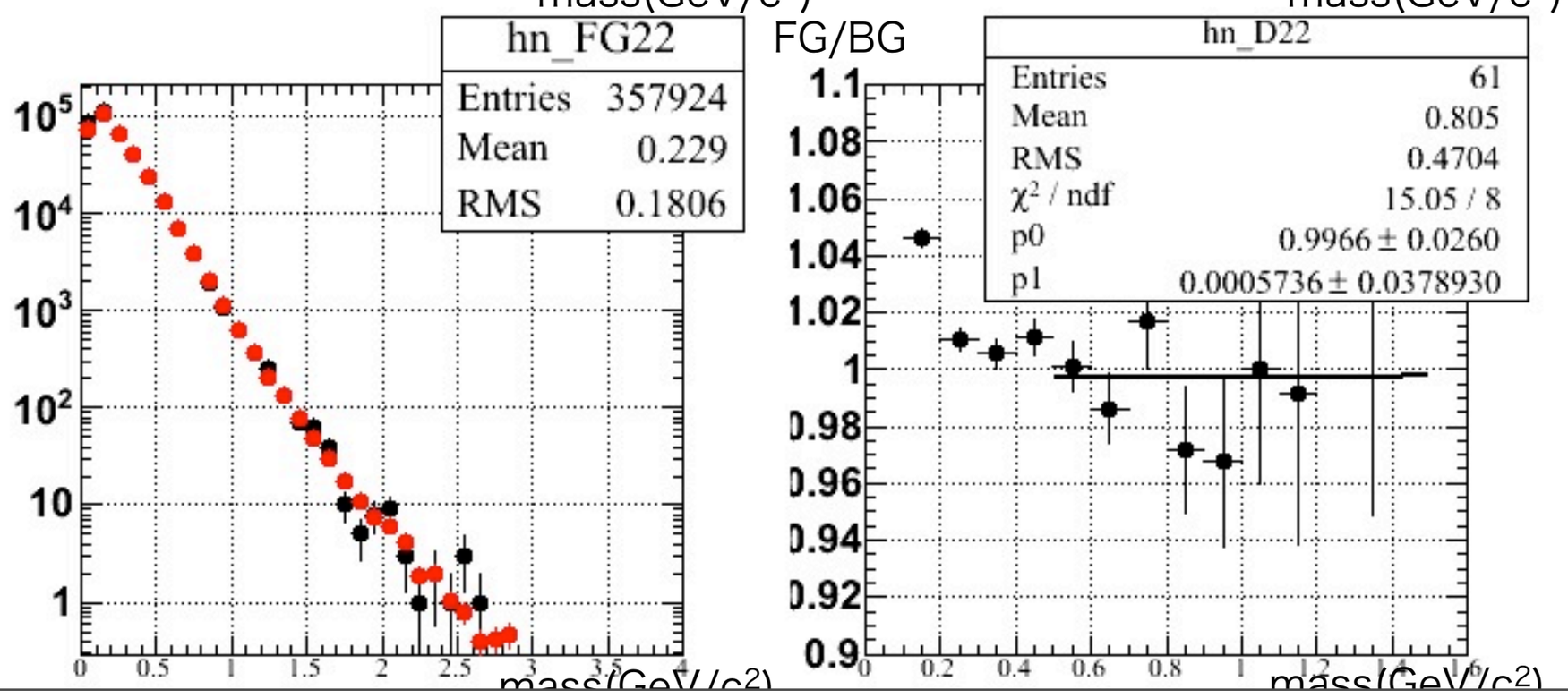


me>0.7

N: 8399

Nf: 0.03690

err: 0.0004



me>0.7

N: 9039

Nf: 0.03854

err: 0.0004

Summary

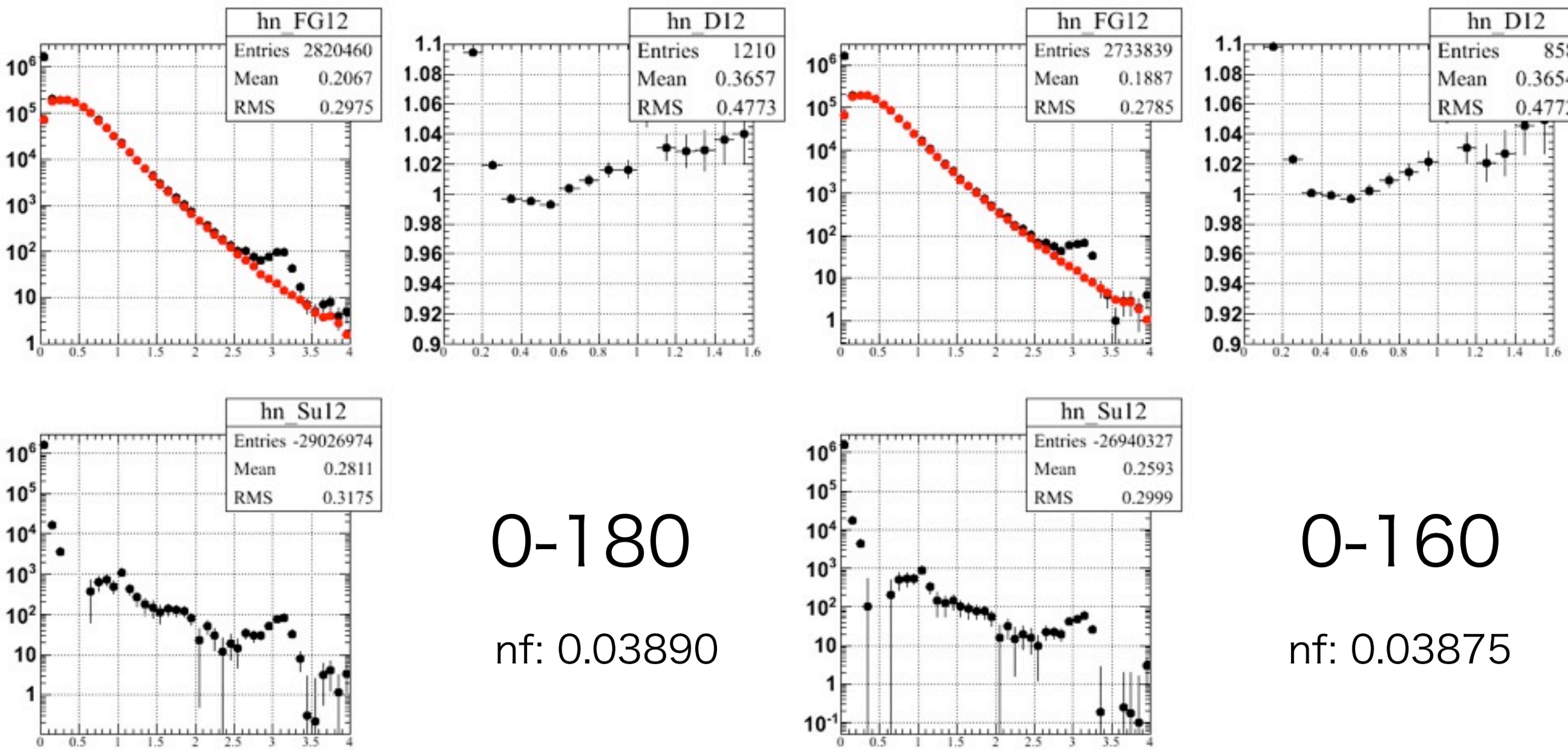
- By using opening angle cut, the correlation from away-side jet can be avoided. But it costs statistics.

backup

w HBD rej 10, 40-%

Unlike sign

opening angle cut 1



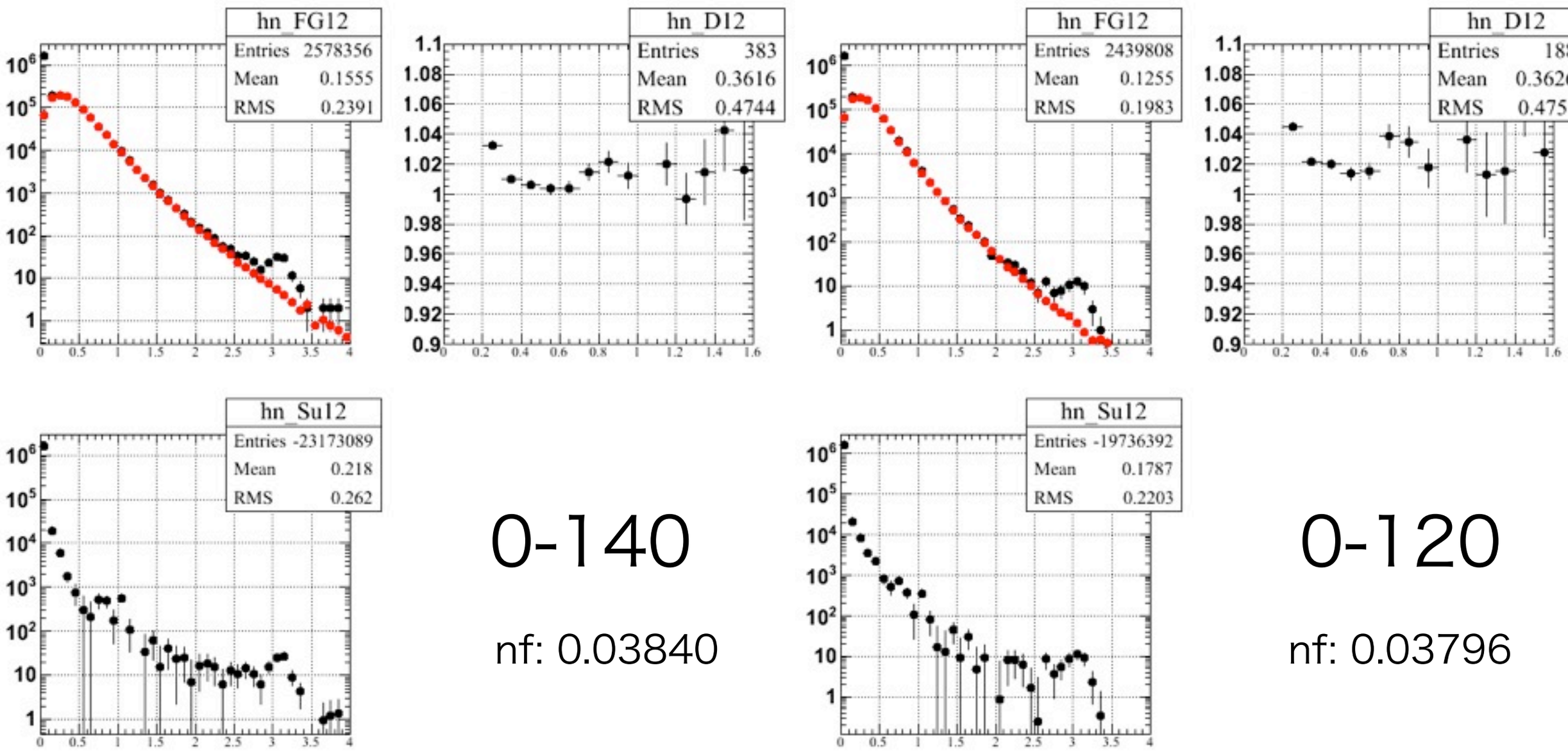
0-180

nf: 0.03890

0-160

nf: 0.03875

opening angle cut 2



0-140

nf: 0.03840

0-120

nf: 0.03796