Branch	压缩前(MB)	压缩后(MB)	压缩比(%)	占比（%）
MCParticleCol1.momentumAtEndpoint.z	0.547	0.449	17.88	9.24
MCParticleCol1.momentum.z	0.547	0.449	17.87	9.24
MCParticleCol1.momentumAtEndpoint.x	0.547	0.423	22.77	8.69
MCParticleCol1.momentum.x	0.547	0.422	22.76	8.69
MCParticleCol1.mass	1.055	0.381	63.9	7.83
MCParticleCol1.momentumAtEndpoint.y	0.547	0.339	38	6.97
MCParticleCol1.momentum.y	0.547	0.339	37.99	6.97
MCParticleCol1.trackID	0.547	0.043	92.13	0.89
MCParticleCol1.daughters_begin	0.547	0.037	93.16	0.77
MCParticleCol1.daughters_end	0.547	0.037	93.19	0.77
MCParticleCol1.parents_begin	0.547	0.036	93.35	0.75

数据类型： float

momentumAtEndpoint设置为0；

```
MCParticleCol1  = (vector<MCParticleData>*)0x55db35d6f4d0
MCParticleCol1.trackID = 0, 0, 0, 0, 0, 0, 0, 0, 1, 2, 0, 3, 4
MCParticleCol1.PDG = -11, 11, 23, 4, -4, 91, 443, 113, 211, -211, 111, 22, 22
MCParticleCol1.generatorStatus = 3, 3, 2, 2, 2, 2, 999, 999, 1, 1, 999, 1, 1
MCParticleCol1.simulatorStatus = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.type = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.charge = 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000
MCParticleCol1.time = 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000, 999.000000
MCParticleCol1.mass = 0.510999, 0.510999, 3096.82, 1300, 1300, 3096.82, 3096.82, 717.788, 139.57, 139.57, 134.977, 1.05367e-05, -1.49012e-05
MCParticleCol1.vertex.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.vertex.y = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.vertex.z = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.endpoint.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.endpoint.y = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.endpoint.z = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.momentum.x = 0.000000, 0.046458, 0.092932, -0.775061, 0.867994, 0.092932, 0.092932, -0.727651, -0.384014, -0.343637, 0.820583, 0.343610, 0.476973
MCParticleCol1.momentum.y = 0.000000, 0.000000, 0.000000, 0.177544, -0.177544, 0.000000, 0.000000, -0.720708, -0.149748, -0.570960, 0.720708, 0.319371, 0.401337
MCParticleCol1.momentum.z = 1.548674, -1.548145, 0.000529, -0.041578, 0.042107, 0.000529, 0.000529, 1.007957, 0.060213, 0.947743, -1.007428, -0.344816, -0.662611
MCParticleCol1.momentumAtEndpoint.x = 0.000000, 0.046458, 0.092932, -0.775061, 0.867994, 0.092932, 0.092932, -0.727651, -0.384014, -0.343637, 0.820583, 0.343610, 0.476973
MCParticleCol1.momentumAtEndpoint.y = 0.000000, 0.000000, 0.000000, 0.177544, -0.177544, 0.000000, 0.000000, -0.720708, -0.149748, -0.570960, 0.720708, 0.319371, 0.401337
MCParticleCol1.momentumAtEndpoint.z = 1.548674, -1.548145, 0.000529, -0.041578, 0.042107, 0.000529, 0.000529, 1.007957, 0.060213, 0.947743, -1.007428, -0.344816, -0.662611
MCParticleCol1.spin.x = 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000
MCParticleCol1.spin.y = 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000
MCParticleCol1.spin.z = 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000, 1.000000
MCParticleCol1.ecalPosition.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.ecalPosition.y = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.ecalPosition.z = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.ITKEntryPosition.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.ITKEntryPosition.y = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.ITKEntryPosition.z = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.MDCEntryPosition.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.MDCEntryPosition.y = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.MDCEntryPosition.z = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
MCParticleCol1.DTOFEntryPosition.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
```

- 重新产生20W事例的文件
- 对比MCParticleCol1.momentumAtEndpoint 替换为0前后的数据

```
*Br   19 :MCParticleCol1.momentum.y : Float_t y[MCParticleCol1_]             *
*Entries :   200000 : Total  Size=   11437841 bytes  File Size  =    7049286 *
*Baskets :       42 : Basket Size=    1142272 bytes  Compression=   1.62     *
*.............................................................................*
*Br   20 :MCParticleCol1.momentum.z : Float_t z[MCParticleCol1_]             *
*Entries :   200000 : Total  Size=   11437841 bytes  File Size  =    9322177 *
*Baskets :       42 : Basket Size=    1142272 bytes  Compression=   1.23     *
*.............................................................................*
*Br   21 :MCParticleCol1.momentumAtEndpoint.x : Float_t x[MCParticleCol1_]   *
*Entries :   200000 : Total  Size=   11438281 bytes  File Size  =    8762731 *
*Baskets :       42 : Basket Size=    1142272 bytes  Compression=   1.31     *
```

24MB

```
*Br    0 :momumentEndpoint_x1 : ROOT::VecOps::RVec<float>                    *
*Entries :   200000 : Total  Size=   13484482 bytes  File Size  =     760277 *
*Baskets :      451 : Basket Size=      32000 bytes  Compression=  17.72     *
*.............................................................................*
*Br    1 :momumentEndpoint_y1 : ROOT::VecOps::RVec<float>                    *
*Entries :   200000 : Total  Size=   13484482 bytes  File Size  =     760277 *
*Baskets :      451 : Basket Size=      32000 bytes  Compression=  17.72     *
*.............................................................................*
*Br    2 :momumentEndpoint_z1 : ROOT::VecOps::RVec<float>                    *
*Entries :   200000 : Total  Size=   13484482 bytes  File Size  =     760277 *
*Baskets :      451 : Basket Size=      32000 bytes  Compression=  17.72     *
```

2MB

- TrackerHypoTrack 数据删除复制项，由于ROOT文件存储的压缩函数，并没有很大效果
- 内存减少11.5%,没有达到预期的减少80%

分类	未压缩大小(MB)	压缩后大小(MB)	压缩率(%)
TrackerHypoTrack1	205.93	109.082	47.03
TrackerHypoTrackCol	882.88	123.259	86.04

```
TrackerHypoTrackCol.PDGHypo = 11, 13, -211, -321, -2212, -11, -13, 211, 321, 2212
TrackerHypoTrackCol.ndf = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.numIterations = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.isFitted = 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
TrackerHypoTrackCol.isFitConvergedFully = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.isFitConvergedPartially = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.nFailedPoints = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.fitChi2 = 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000
 0.000000, 0.000000, 0.000000, 0.000000
TrackerHypoTrackCol.fitFlag = 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
TrackerHypoTrackCol.d0 = -0.022874, -0.022874, -0.022874, -0.022874, -0.022874, 5.416117
 5.416117, 5.416117, 5.416117, 5.416117
TrackerHypoTrackCol.phi0 = 0.919211, 0.919211, 0.919211, 0.919211, 0.919211, 0.228817, 0
228817, 0.228817, 0.228817, 0.228817
TrackerHypoTrackCol.kap = -1.150715, -1.150715, -1.150715, -1.150715, -1.150715, 3.11656
, 3.116568, 3.116568, 3.116568, 3.116568
TrackerHypoTrackCol.tanlamda = 0.194111, 0.194111, 0.194111, 0.194111, 0.194111, -0.7928
9, -0.792829, -0.792829, -0.792829, -0.792829
TrackerHypoTrackCol.z0 = 0.043978, 0.043978, 0.043978, 0.043978, 0.043978, -0.080823, -0
080823, -0.080823, -0.080823, -0.080823
TrackerHypoTrackCol.dEdXMea = 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000
 0.000000, 0.000000, 0.000000, 0.000000
TrackerHypoTrackCol.dEdXExp = 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000
 0.000000, 0.000000, 0.000000, 0.000000
TrackerHypoTrackCol.dEdXErr = 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000
 0.000000, 0.000000, 0.000000, 0.000000
TrackerHypoTrackCol.posFirst.x = -0.0211182, -0.0211182, -0.0211182, -0.0211182, -0.0211
82, -2.48217, -2.48217, -2.48217, -2.48217, -2.48217
TrackerHypoTrackCol.posFirst.y = -0.00878939, -0.00878939, -0.00878939, -0.00878939, -0.
00878939, 4.81385, 4.81385, 4.81385, 4.81385, 4.81385
TrackerHypoTrackCol.posFirst.z = 0.043978, 0.043978, 0.043978, 0.043978, 0.043978, -0.08
08227, -0.0808227, -0.0808227, -0.0808227, -0.0808227
TrackerHypoTrackCol.momFirst.x = -0.690982, -0.690982, -0.690982, -0.690982, -0.690982,
0.0727807, -0.0727807, -0.0727807, -0.0727807, -0.0727807
TrackerHypoTrackCol.momFirst.y = 0.527018, 0.527018, 0.527018, 0.527018, 0.527018, 0.312
02, 0.312502, 0.312502, 0.312502, 0.312502
TrackerHypoTrackCol.momFirst.z = 0.168687, 0.168687, 0.168687, 0.168687, 0.168687, -0.25
392, -0.254392, -0.254392, -0.254392, -0.254392
TrackerHypoTrackCol.posLast.x = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.posLast.y = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
TrackerHypoTrackCol.posLast.z = 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
```

```
root [3] track->Show(1)
======> EVENT:1
 TrackerHypoTrack1 = (ROOT::VecOps::RVec<TrackerHypoTrackData>*)0x386bfd0
 TrackerHypoTrack1.PDGHypo = 11, -11
 TrackerHypoTrack1.ndf = 0, 0
 TrackerHypoTrack1.numIterations = 0, 0
 TrackerHypoTrack1.isFitted = 1, 1
 TrackerHypoTrack1.isFitConvergedFully = 0, 0
 TrackerHypoTrack1.isFitConvergedPartially = 0, 0
 TrackerHypoTrack1.nFailedPoints = 0, 0
 TrackerHypoTrack1.fitChi2 = 0.000000, 0.000000
 TrackerHypoTrack1.fitFlag = 1, 1
 TrackerHypoTrack1.d0 = -0.022874, 5.416117
 TrackerHypoTrack1.phi0 = 0.919211, 0.228817
 TrackerHypoTrack1.kap = -1.150715, 3.116568
 TrackerHypoTrack1.tanlamda = 0.194111, -0.792829
 TrackerHypoTrack1.z0 = 0.043978, -0.080823
 TrackerHypoTrack1.dEdXMea = 0.000000, 0.000000
 TrackerHypoTrack1.dEdXExp = 0.000000, 0.000000
 TrackerHypoTrack1.dEdXErr = 0.000000, 0.000000
 TrackerHypoTrack1.posFirst.x = -0.0211182, -2.48217
 TrackerHypoTrack1.posFirst.y = -0.00878939, 4.81385
 TrackerHypoTrack1.posFirst.z = 0.043978, -0.0808227
 TrackerHypoTrack1.momFirst.x = -0.690982, -0.0727807
 TrackerHypoTrack1.momFirst.y = 0.527018, 0.312502
 TrackerHypoTrack1.momFirst.z = 0.168687, -0.254392
 TrackerHypoTrack1.posLast.x = 0, 0
 TrackerHypoTrack1.posLast.y = 0, 0
 TrackerHypoTrack1.posLast.z = 0, 0
 TrackerHypoTrack1.momLast.x = 0, 0
 TrackerHypoTrack1.momLast.y = 0, 0
 TrackerHypoTrack1.momLast.z = 0, 0
 TrackerHypoTrack1.posPOCA.x = -0.013872, 5.27495
 TrackerHypoTrack1.posPOCA.y = -0.0181879, 1.22852
 TrackerHypoTrack1.posPOCA.z = 0.043978, -0.0808227
 TrackerHypoTrack1.momPOCA.x = -0.690982, -0.0727807
 TrackerHypoTrack1.momPOCA.y = 0.527018, 0.312502
 TrackerHypoTrack1.momPOCA.z = 0.168687, -0.254392
```

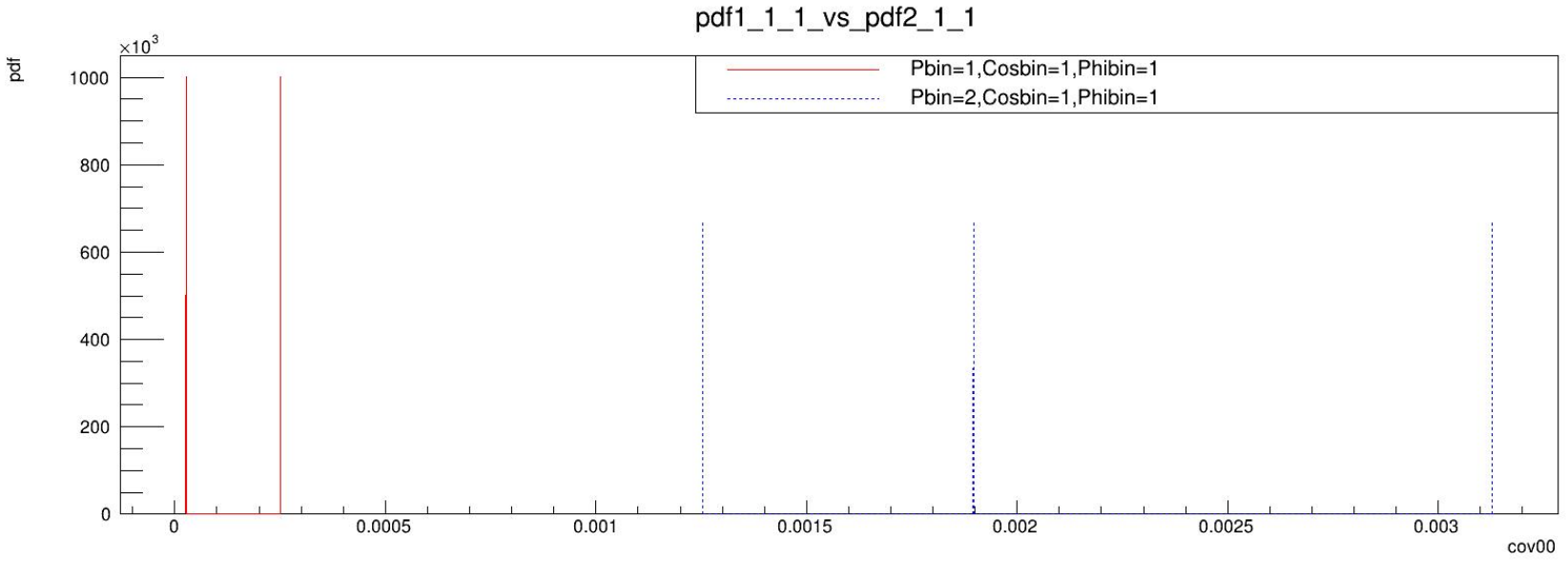
cov00

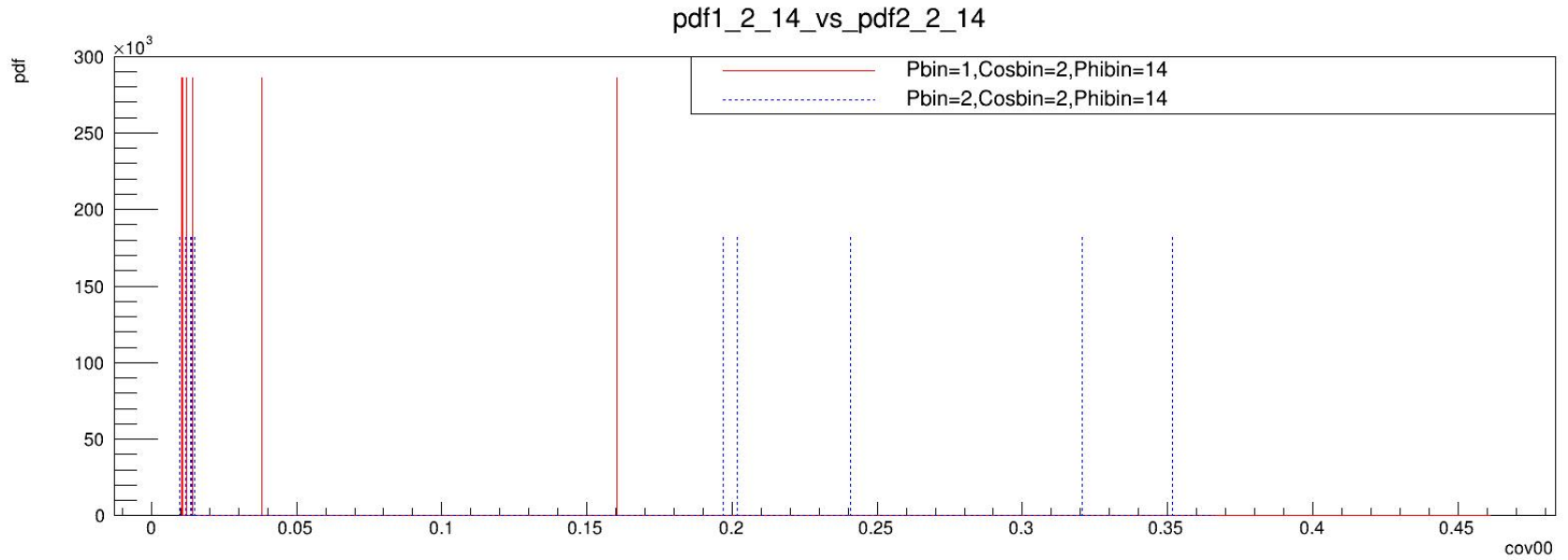
```
cov00 less than 1: pass=1306925    all=1308630    -- eff=99.87 % cumulative eff=99.87 %
cov00 less than 0.5: pass=1306392    all=1306925    -- eff=99.96 % cumulative eff=99.83 %
cov00 less than 0.1: pass=1302597    all=1306392    -- eff=99.71 % cumulative eff=99.54 %
cov00 less than 0.01: pass=1292868    all=1302597    -- eff=99.25 % cumulative eff=98.80 %
cov00 less than 0.0075: pass=1290540    all=1292868    -- eff=99.82 % cumulative eff=98.62 %
cov00 less than 0.005: pass=1286643    all=1290540    -- eff=99.70 % cumulative eff=98.32 %
cov00 less than 0.0025: pass=1277405    all=1286643    -- eff=99.28 % cumulative eff=97.61 %
cov00 less than 0.002: pass=1272978    all=1277405    -- eff=99.65 % cumulative eff=97.28 %
cov00 less than 0.0015: pass=1267119    all=1272978    -- eff=99.54 % cumulative eff=96.83 %
cov00 less than 0.001: pass=1256330    all=1267119    -- eff=99.15 % cumulative eff=96.00 %
cov00 less than 0.0005: pass=1227202    all=1256330    -- eff=97.68 % cumulative eff=93.78 %
```

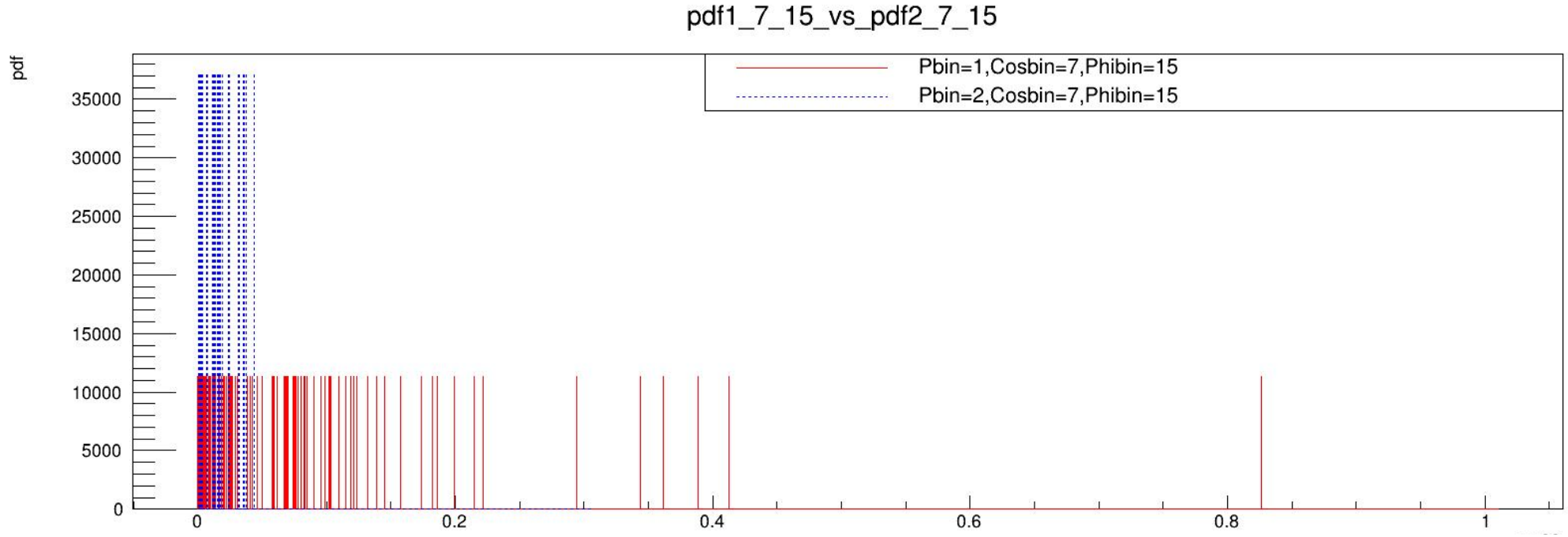
- 画图主要关注<1的部分
- 使用Integral 去除过大的数据，保留98%的数据
- bin_wideth=5e-7

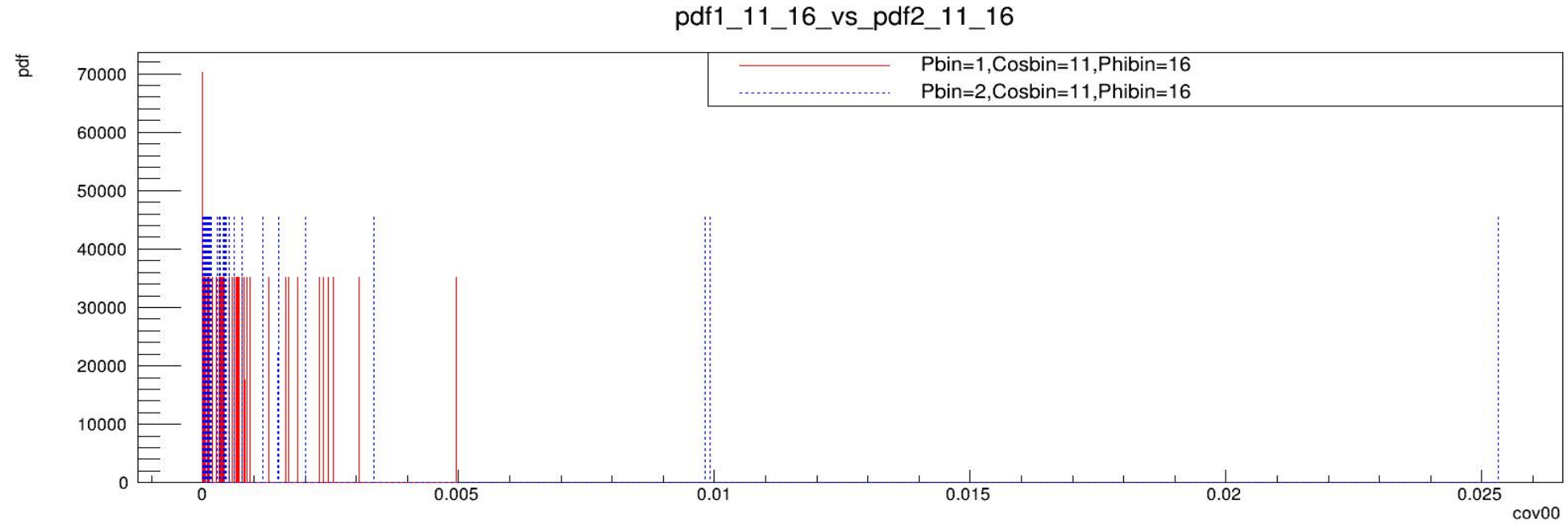
对比Pbin

低动量

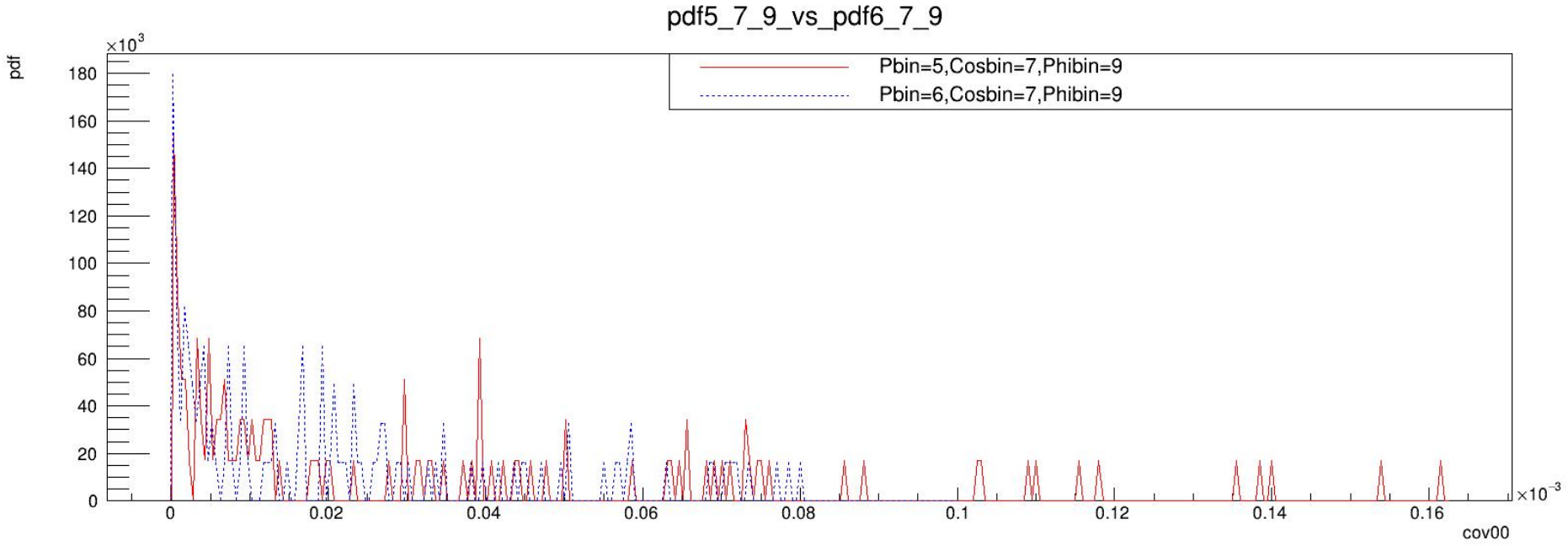

pdf1_1_1_vs_pdf2_1_1
pdf
×10^3
1000
800
600
400
200
0
0
0.0005
0.001
0.0015
0.002
0.0025
0.003
cov00
Pbin=1,Cosbin=1,Phibin=1
Pbin=2,Cosbin=1,Phibin=1

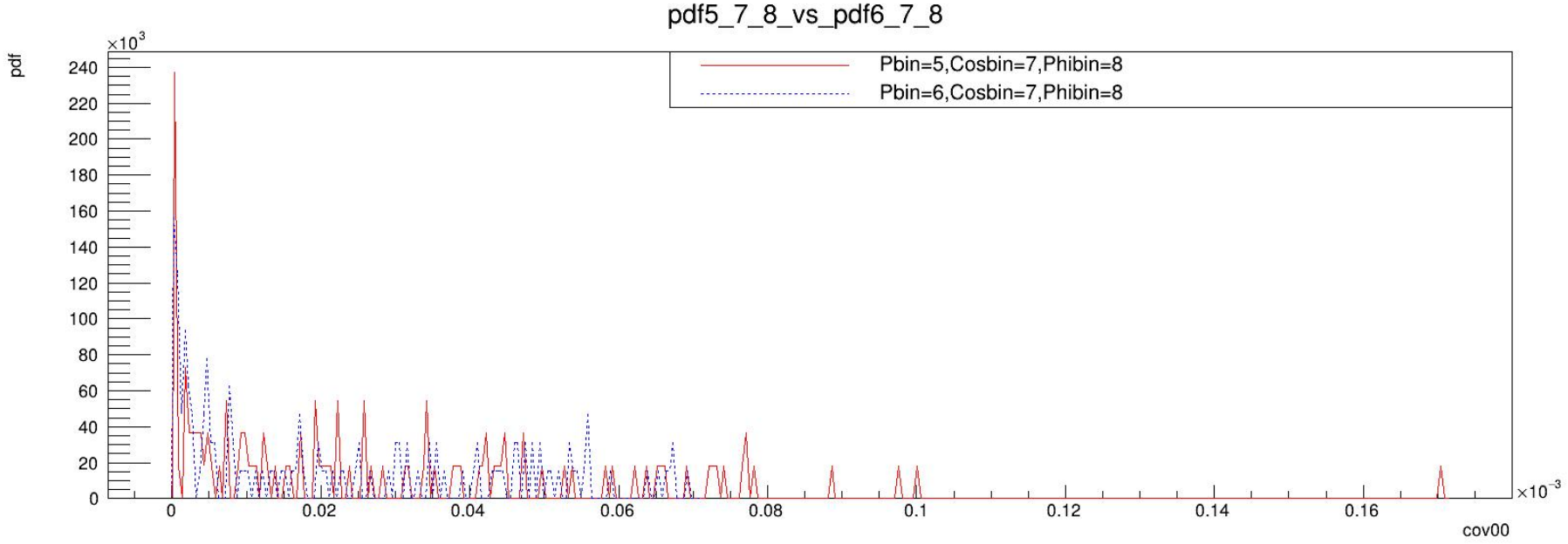

pdf1_2_14_vs_pdf2_2_14
pdf
×10^3
300
250
200
150
100
50
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
cov00
Pbin=1,Cosbin=2,Phibin=14
Pbin=2,Cosbin=2,Phibin=14


pdf1_7_15_vs_pdf2_7_15
pdf
Pbin=1,Cosbin=7,Phibin=15
Pbin=2,Cosbin=7,Phibin=15
35000
30000
25000
20000
15000
10000
5000
0
0
0.2
0.4
0.6
0.8
1

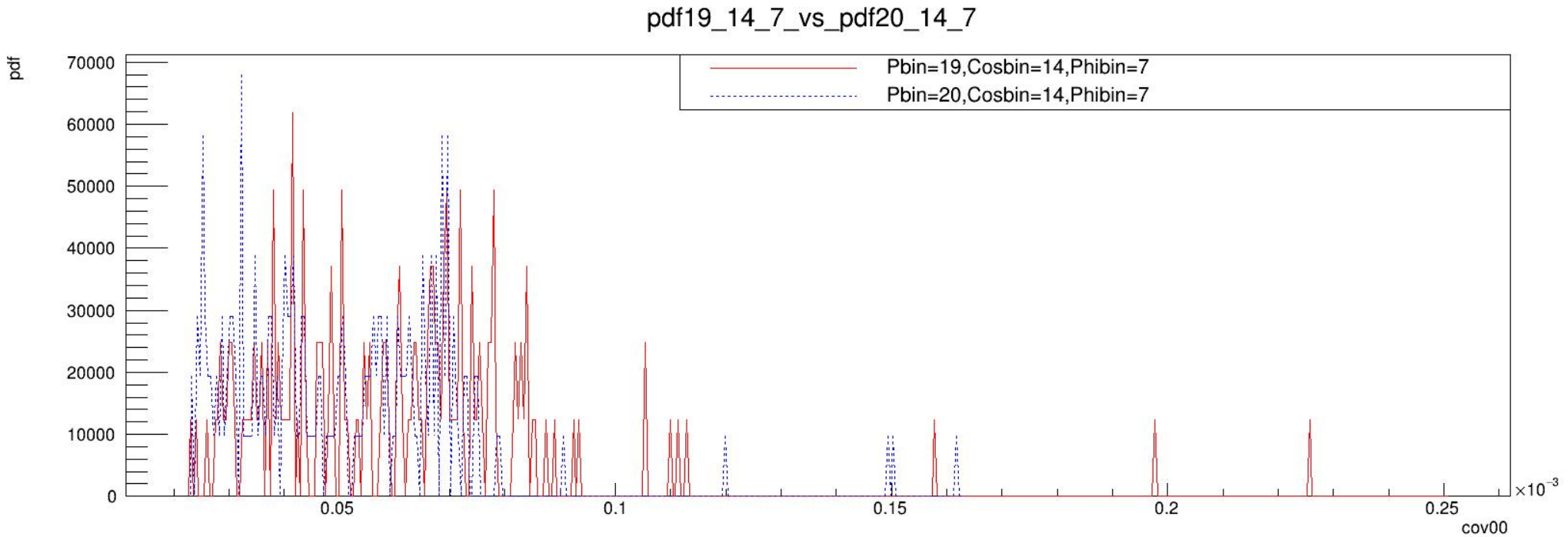

pdf1_11_16_vs_pdf2_11_16
pdf
Pbin=1,Cosbin=11,Phibin=16
Pbin=2,Cosbin=11,Phibin=16
70000
60000
50000
40000
30000
20000
10000
0
0
0.005
0.01
0.015
0.02
0.025
cov00

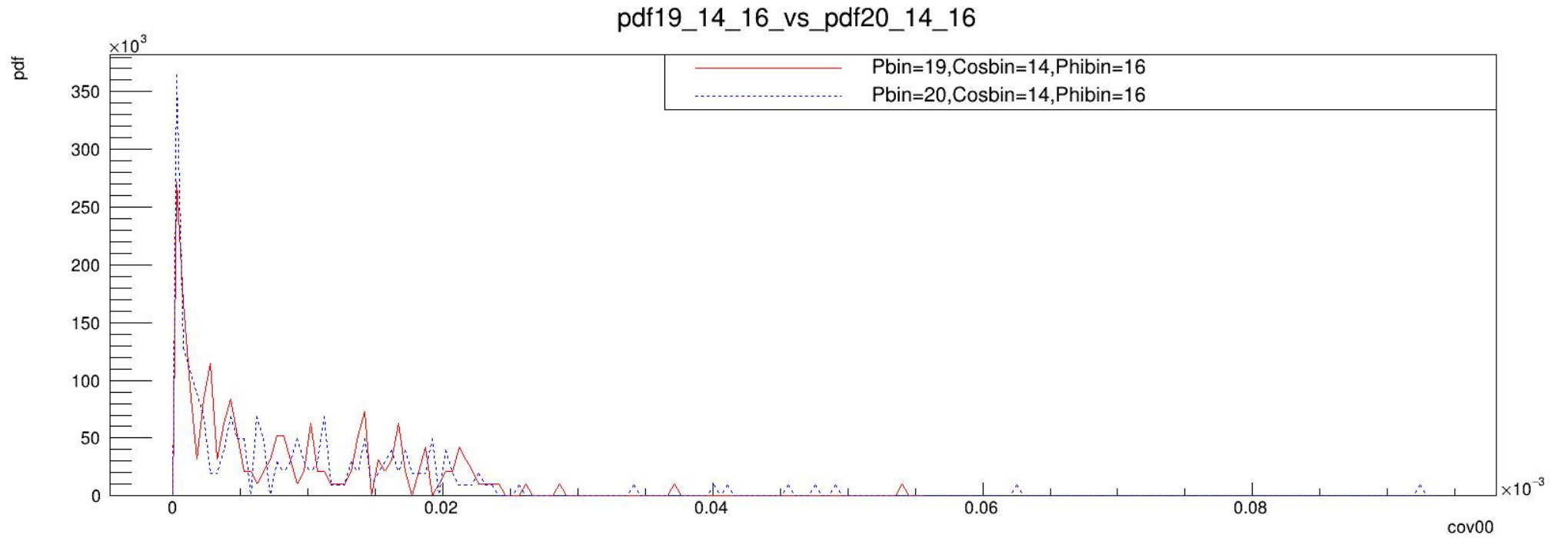
动量增加

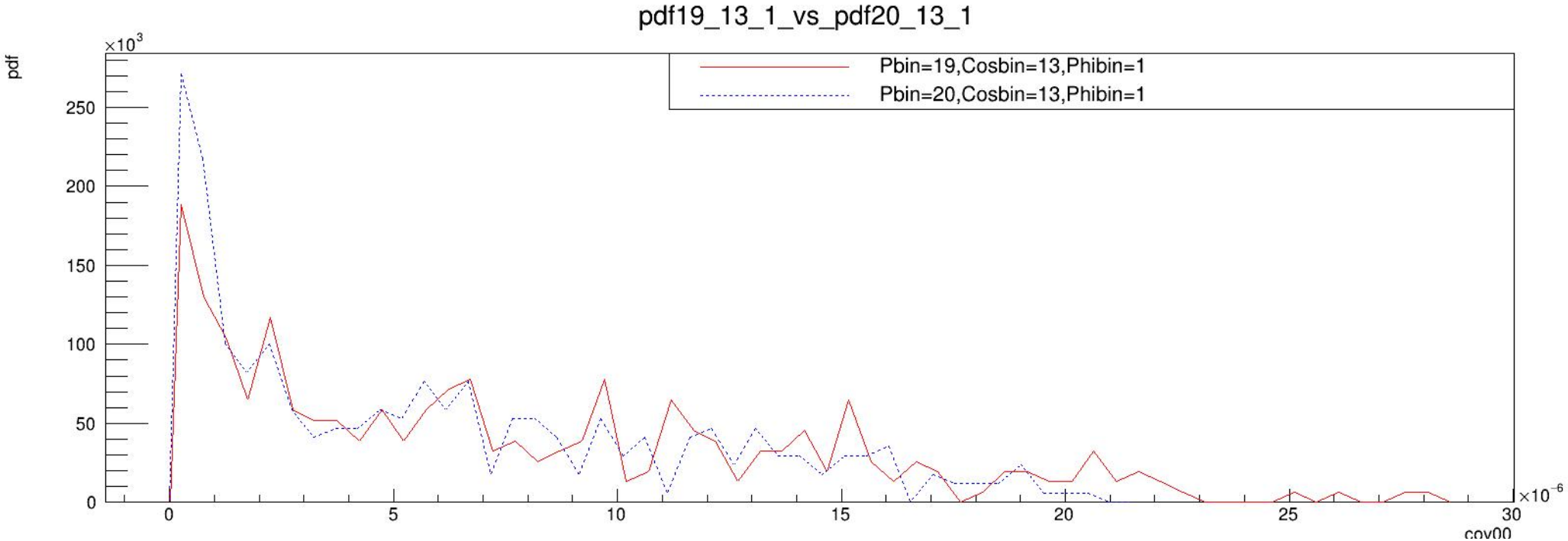

pdf5_7_9_vs_pdf6_7_9
pdf
×10^3
Pbin=5,Cosbin=7,Phibin=9
Pbin=6,Cosbin=7,Phibin=9
×10^-3
cov00

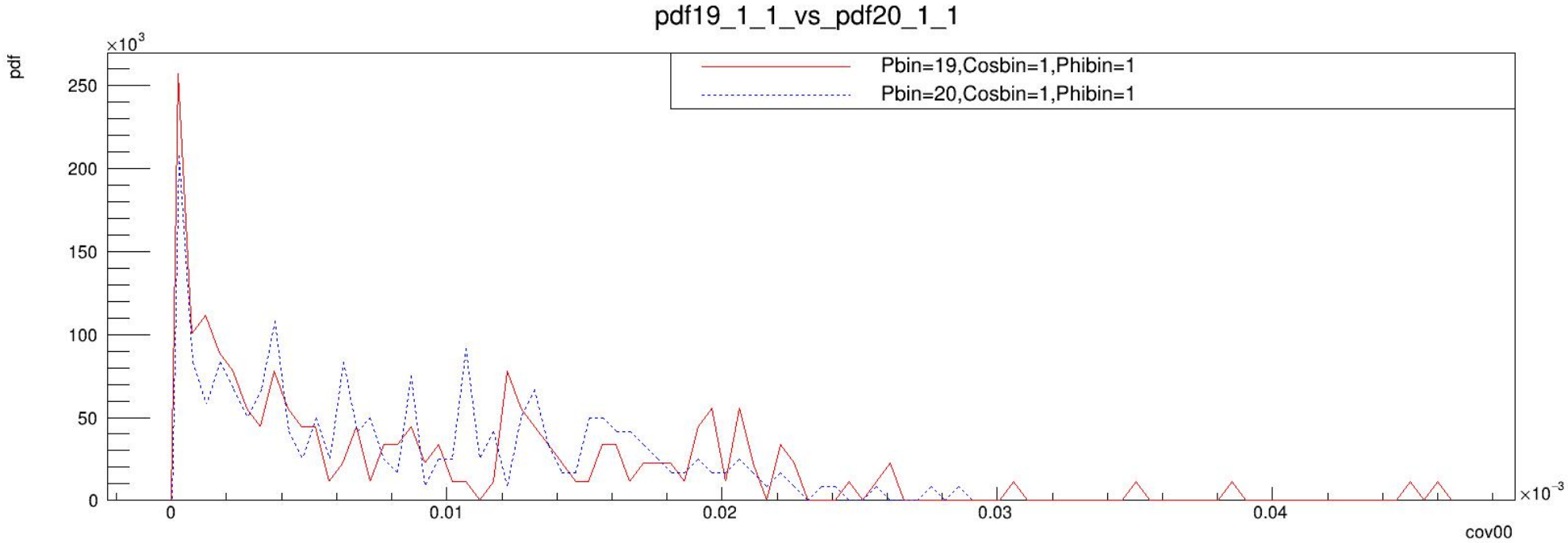

pdf5_7_8_vs_pdf6_7_8
pdf
×10^3
Pbin=5,Cosbin=7,Phibin=8
Pbin=6,Cosbin=7,Phibin=8
×10^-3
cov00

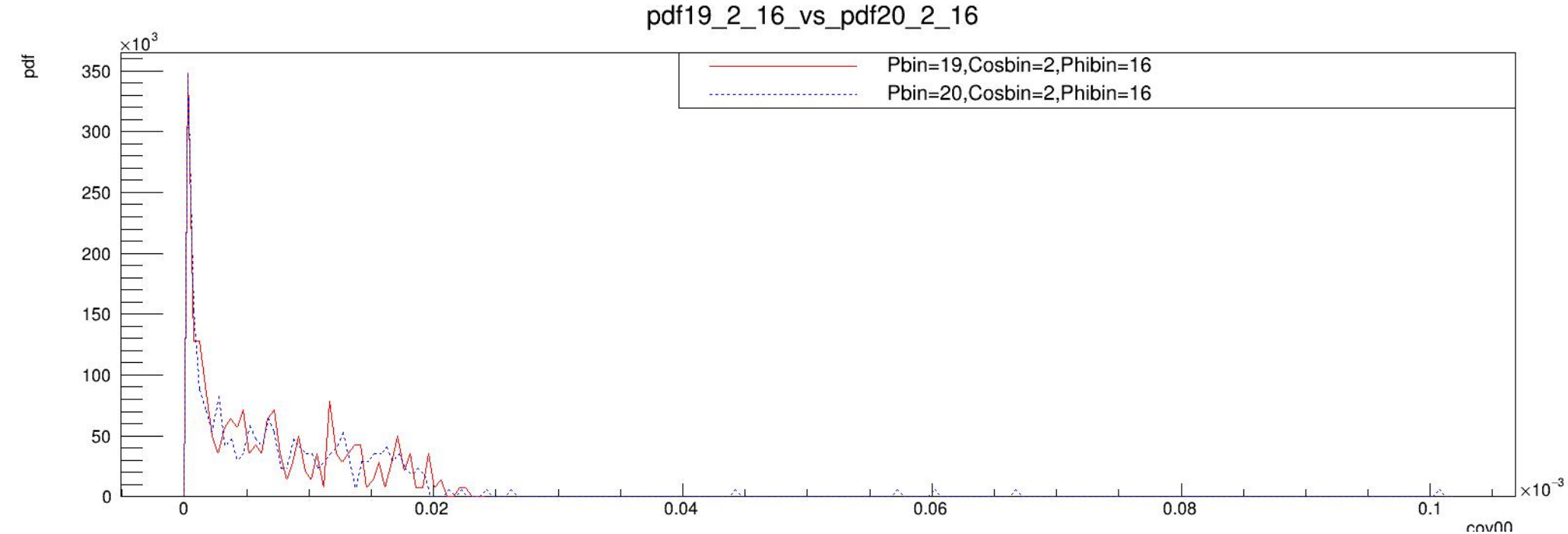
高动量

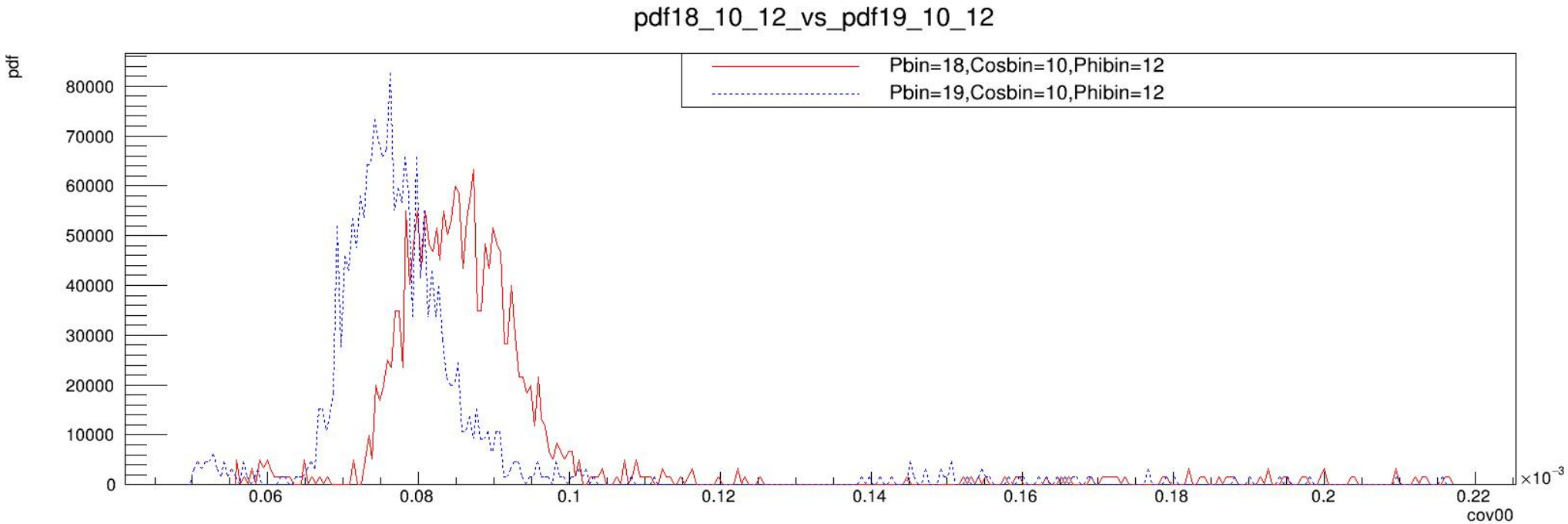

pdf19_14_7_vs_pdf20_14_7
pdf
Pbin=19,Cosbin=14,Phibin=7
Pbin=20,Cosbin=14,Phibin=7
70000
60000
50000
40000
30000
20000
10000
0
0.05
0.1
0.15
0.2
0.25
×10⁻³
cov00

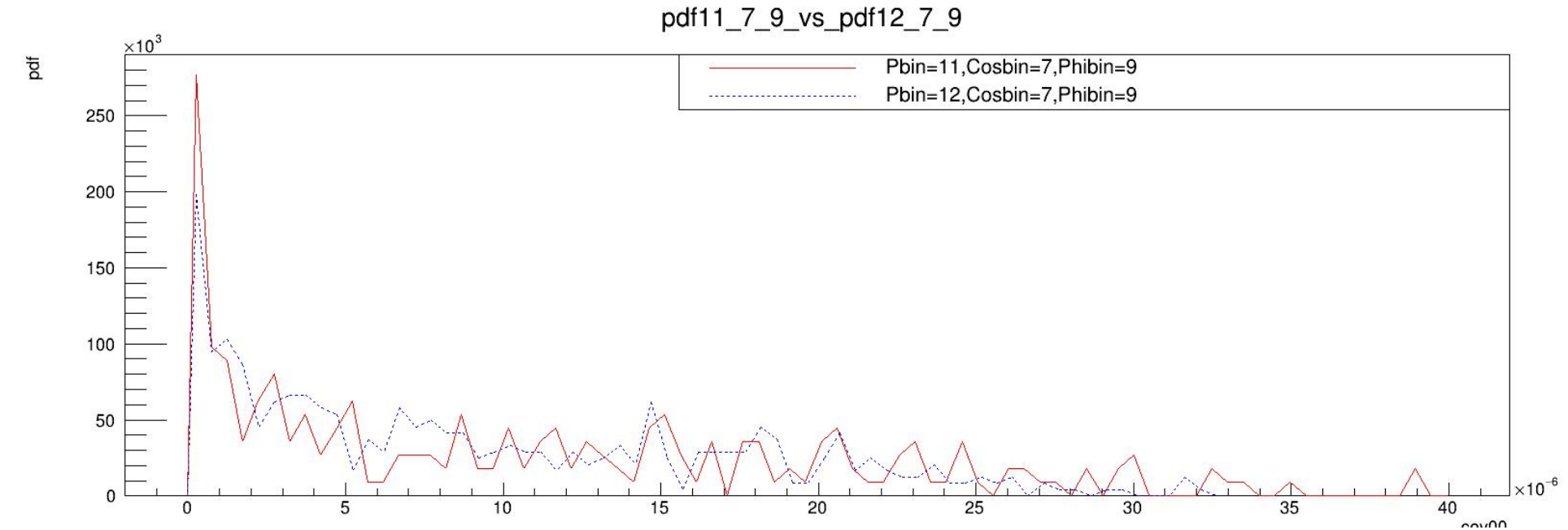

pdf19_14_16_vs_pdf20_14_16
pdf
×10³
Pbin=19,Cosbin=14,Phibin=16
Pbin=20,Cosbin=14,Phibin=16
350
300
250
200
150
100
50
0
0
0.02
0.04
0.06
0.08
×10⁻³
cov00

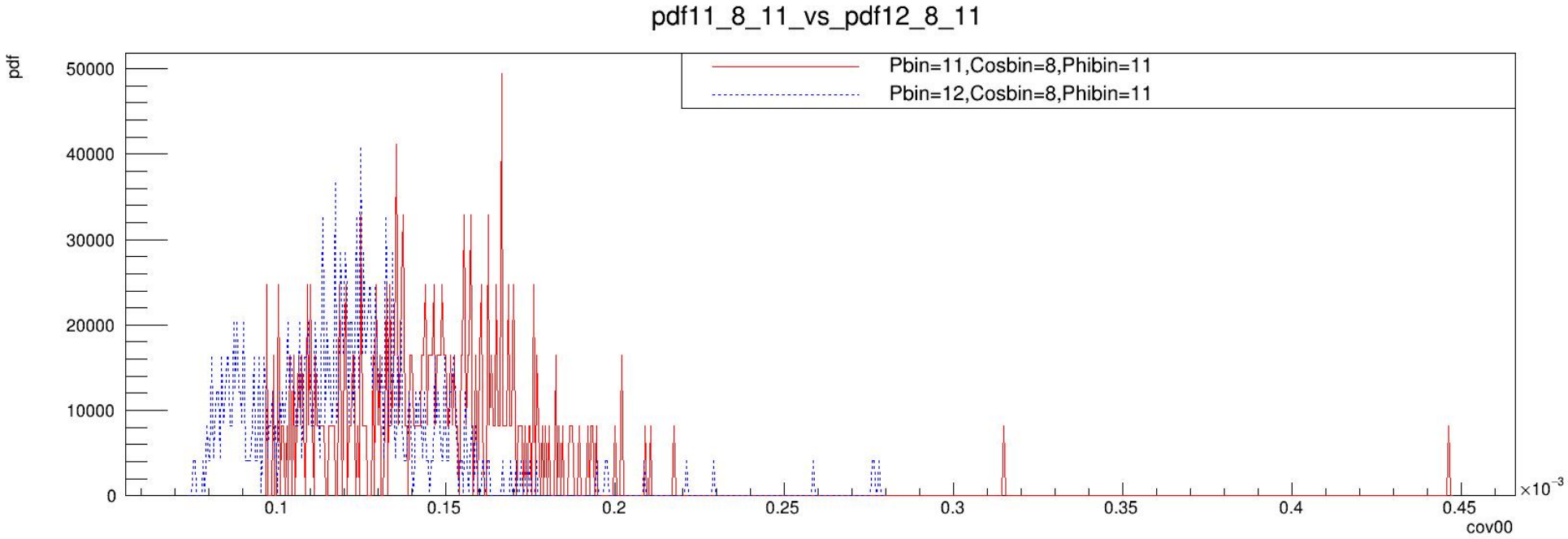

pdf19_13_1_vs_pdf20_13_1
pdf
×10^3
Pbin=19,Cosbin=13,Phibin=1
Pbin=20,Cosbin=13,Phibin=1
0
50
100
150
200
250
0
5
10
15
20
25
30
×10^-6
cov00


pdf19_1_1_vs_pdf20_1_1
pdf
×10^3
Pbin=19,Cosbin=1,Phibin=1
Pbin=20,Cosbin=1,Phibin=1
0
50
100
150
200
250
0
0.01
0.02
0.03
0.04
×10^-3
cov00

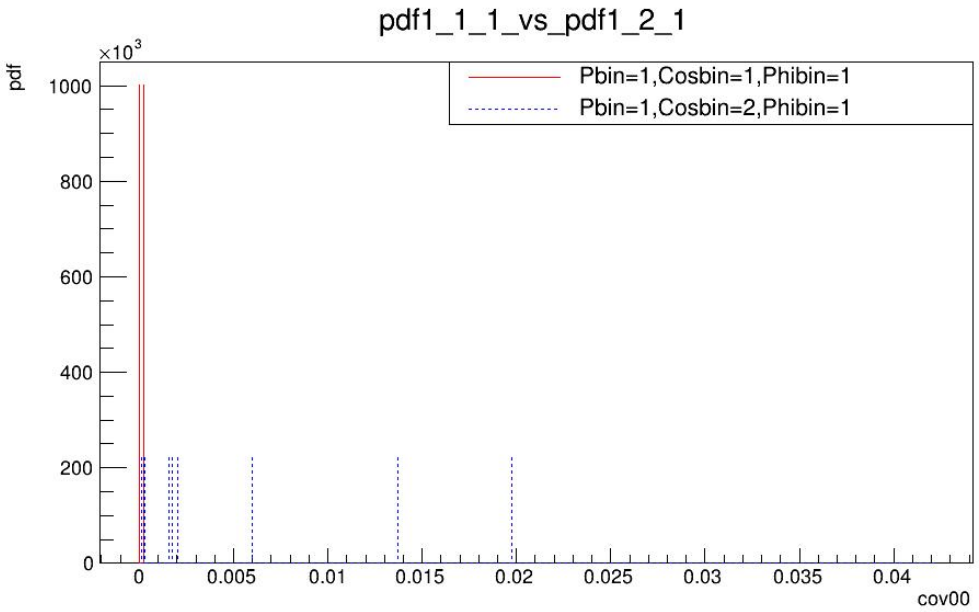

pdf19_2_16_vs_pdf20_2_16
pdf
×10^3
350
300
250
200
150
100
50
0
0
0.02
0.04
0.06
0.08
0.1
×10^-3
Pbin=19,Cosbin=2,Phibin=16
Pbin=20,Cosbin=2,Phibin=16

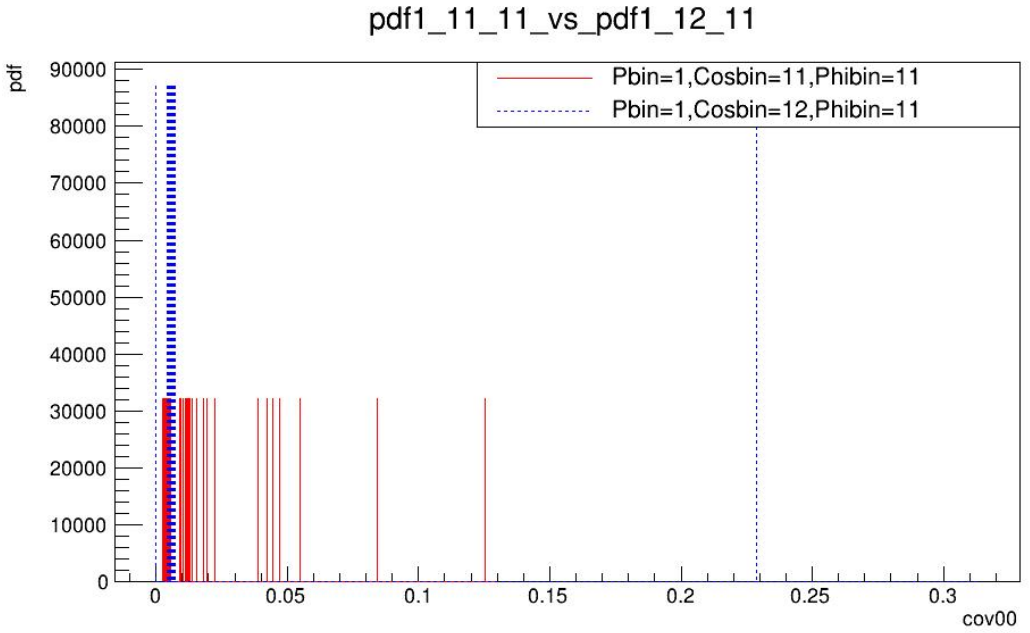

pdf18_10_12_vs_pdf19_10_12
pdf
80000
70000
60000
50000
40000
30000
20000
10000
0
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
0.22
×10^-3
cov00
Pbin=18,Cosbin=10,Phibin=12
Pbin=19,Cosbin=10,Phibin=12

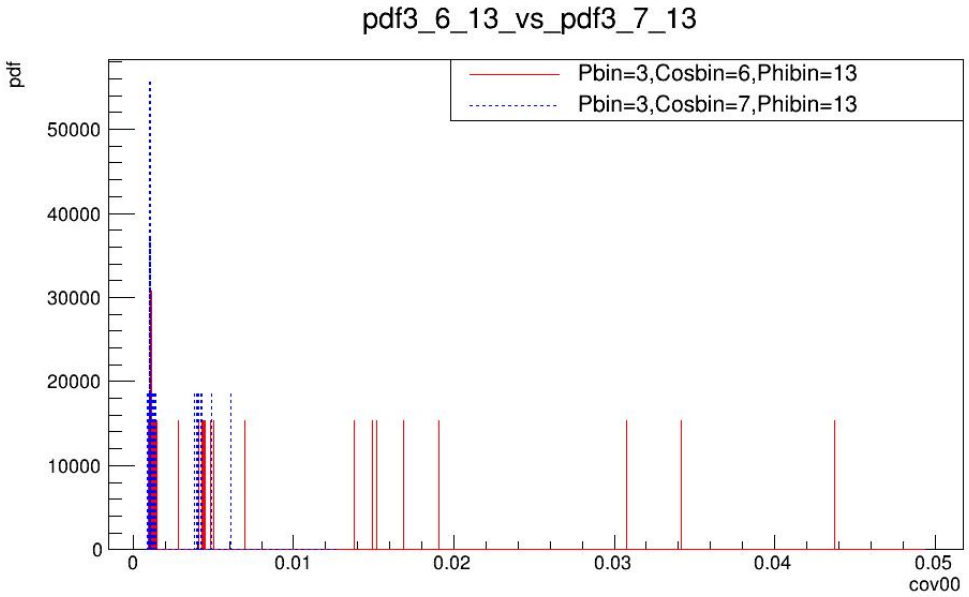

pdf11_7_9_vs_pdf12_7_9
pdf
×10^3
Pbin=11,Cosbin=7,Phibin=9
Pbin=12,Cosbin=7,Phibin=9
250
200
150
100
50
0
0
5
10
15
20
25
30
35
40
×10^-6

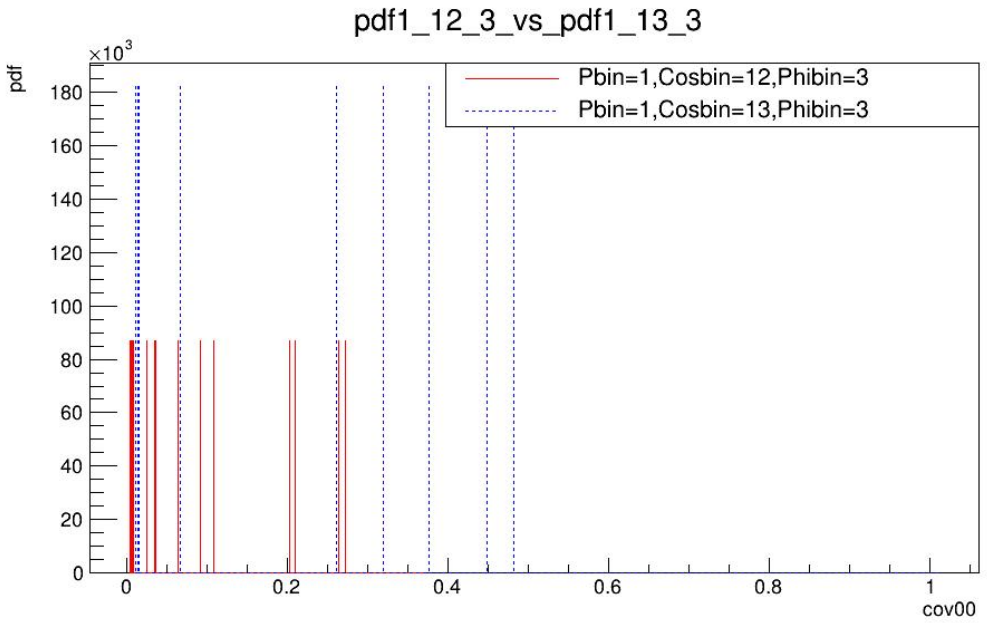

pdf11_8_11_vs_pdf12_8_11
pdf
Pbin=11,Cosbin=8,Phibin=11
Pbin=12,Cosbin=8,Phibin=11
50000
40000
30000
20000
10000
0
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
×10^-3
cov00

对比COSbin
低动量

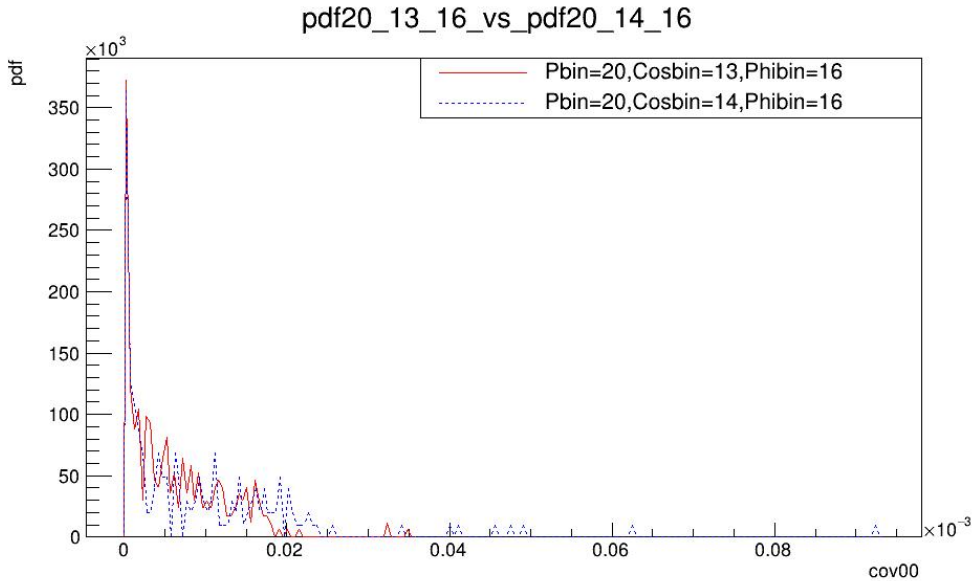


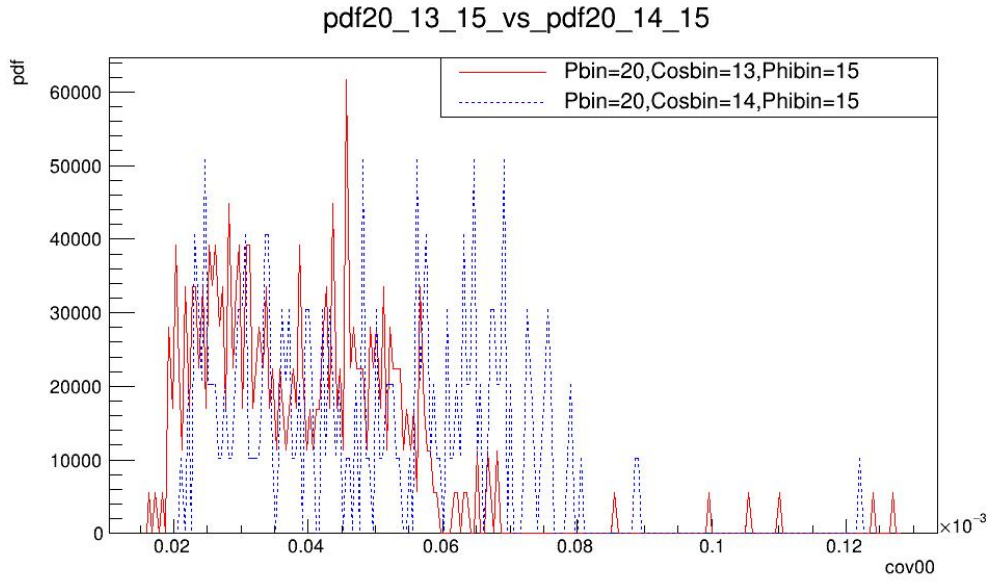






高动量


pdf20_13_16_vs_pdf20_14_16
pdf
×10^3
Pbin=20,Cosbin=13,Phibin=16
Pbin=20,Cosbin=14,Phibin=16
350
300
250
200
150
100
50
0
0
0.02
0.04
0.06
0.08
×10^-3
cov00


pdf20_13_15_vs_pdf20_14_15
pdf
Pbin=20,Cosbin=13,Phibin=15
Pbin=20,Cosbin=14,Phibin=15
60000
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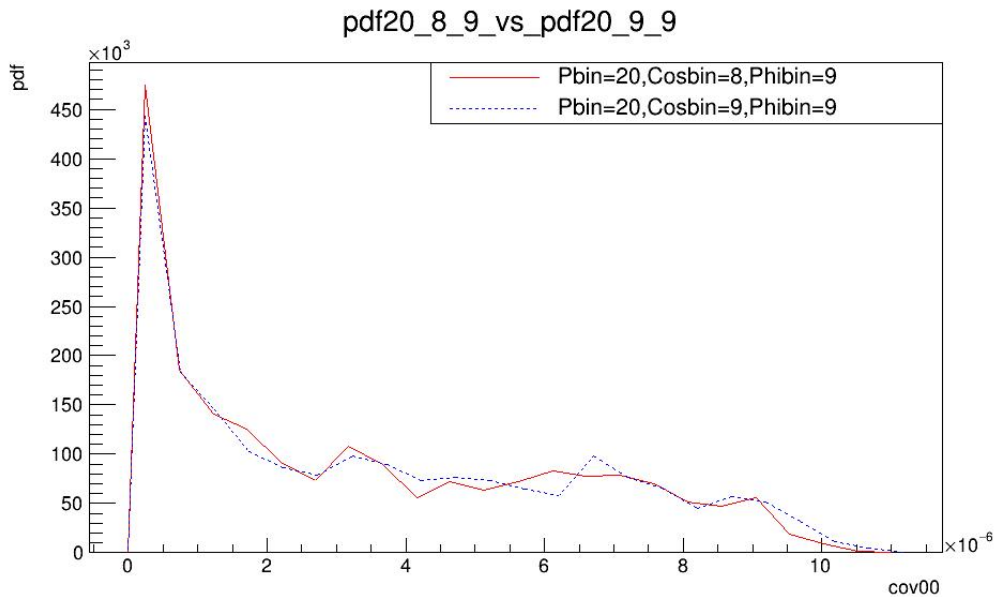
40000
30000
20000
10000
0
0.02
0.04
0.06
0.08
0.1
0.12
×10^-3
cov00


pdf20_8_9_vs_pdf20_9_9
pdf
×10^3
Pbin=20,Cosbin=8,Phibin=9
Pbin=20,Cosbin=9,Phibin=9
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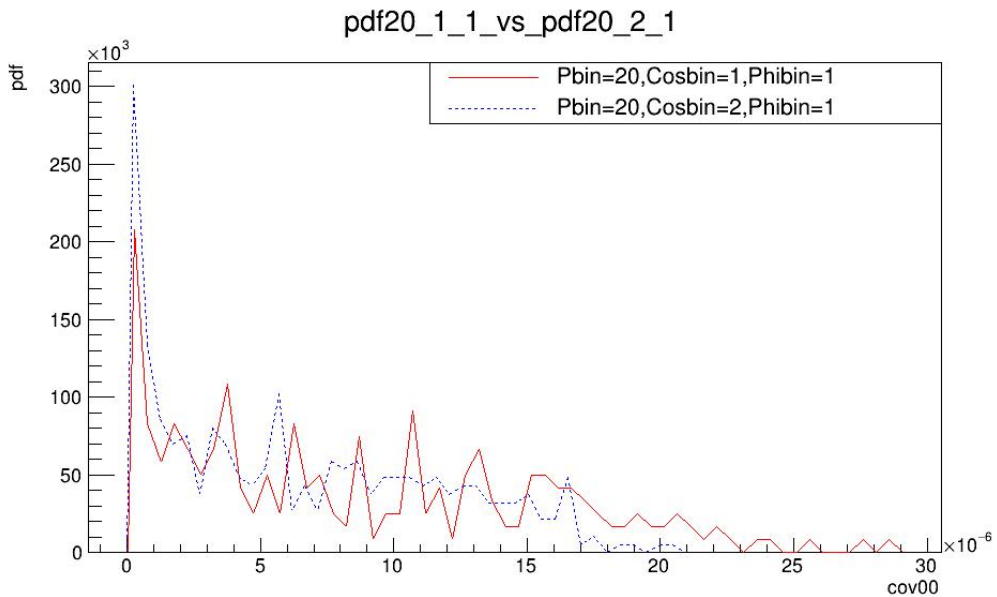
300
250
200
150
100
50
0
0
2
4
6
8
10
×10^-6
cov00


pdf20_1_1_vs_pdf20_2_1
pdf
×10^3
Pbin=20,Cosbin=1,Phibin=1
Pbin=20,Cosbin=2,Phibin=1
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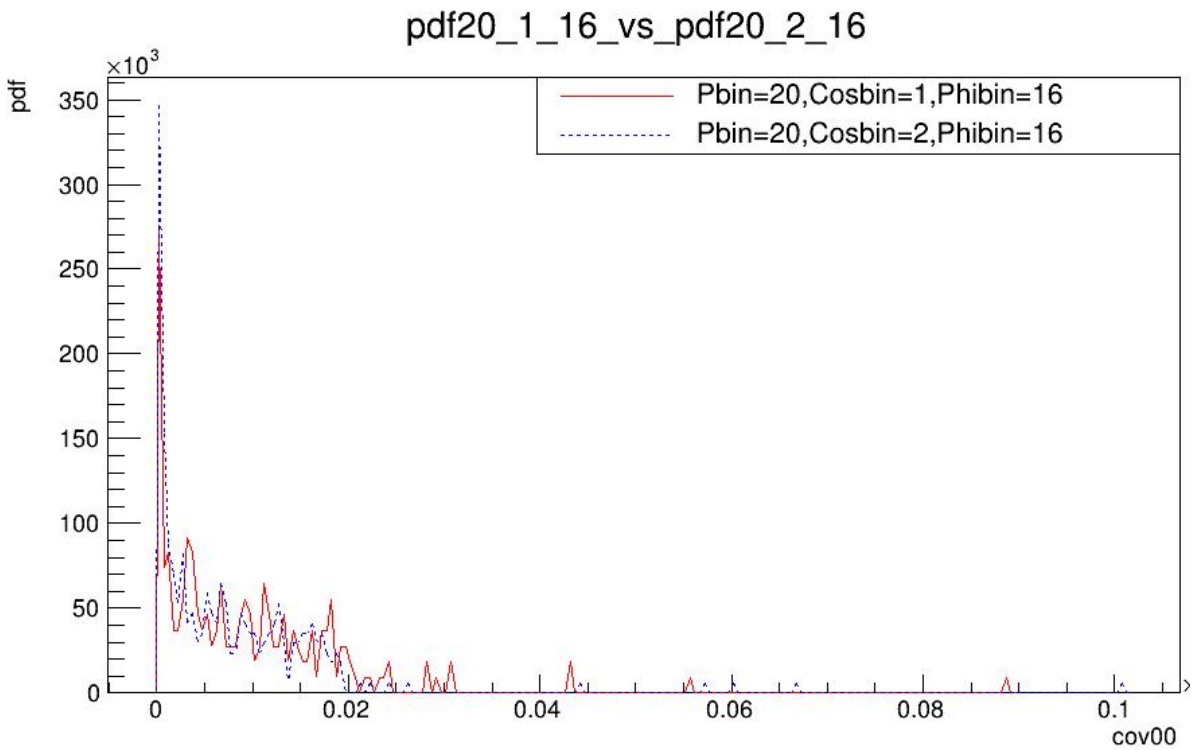
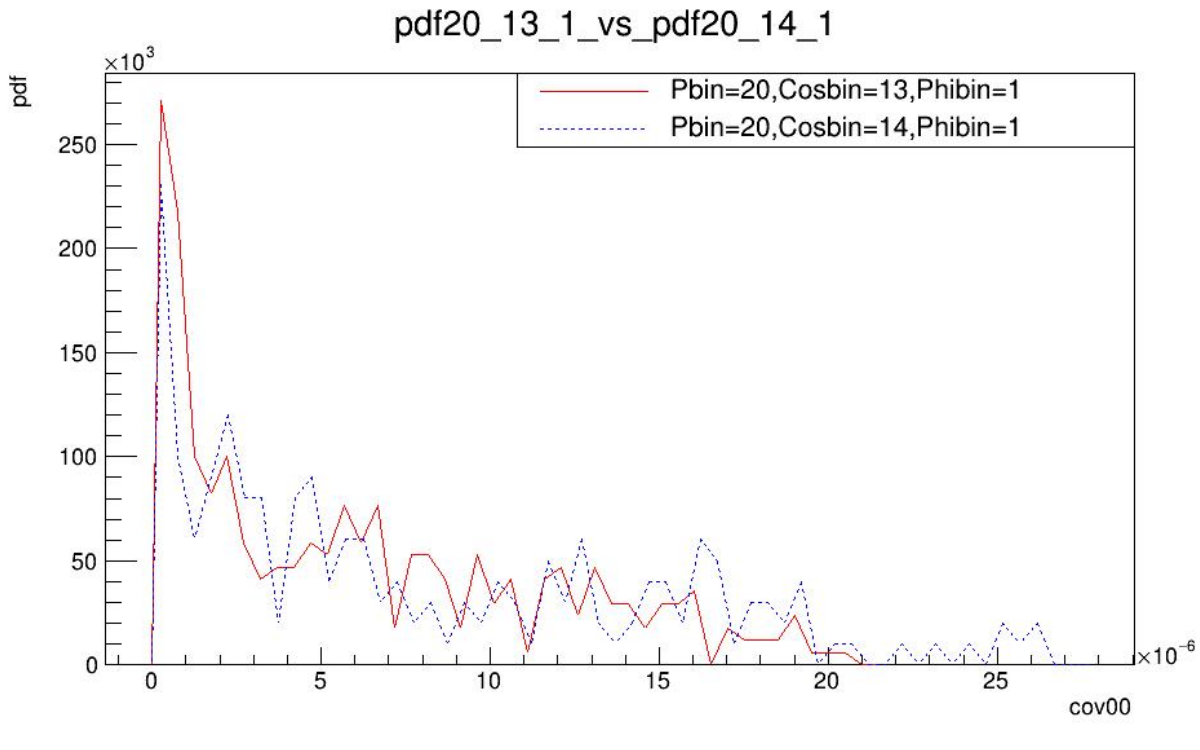
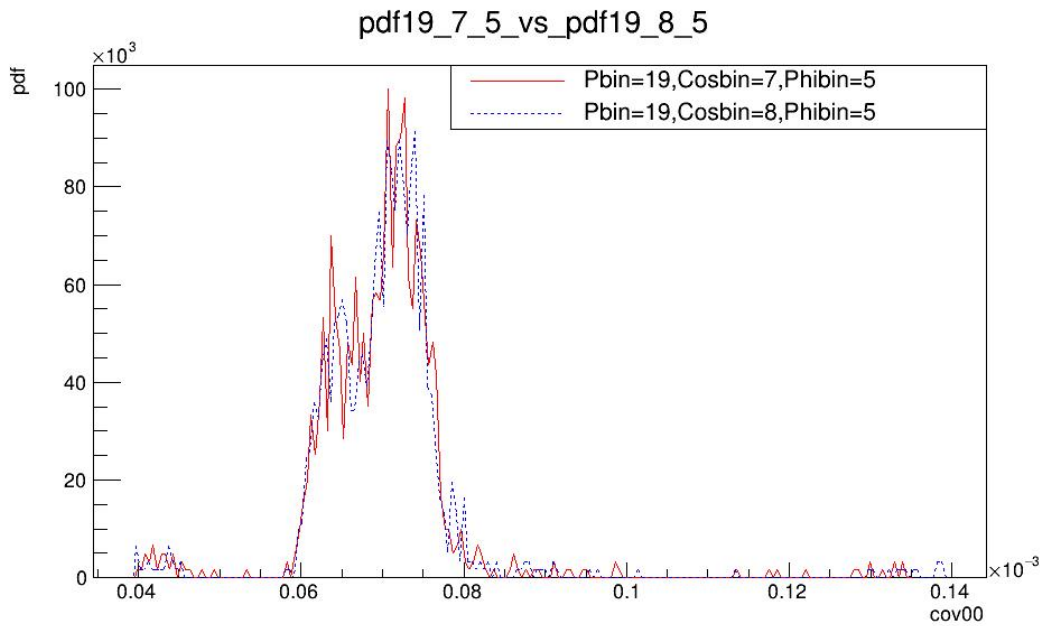
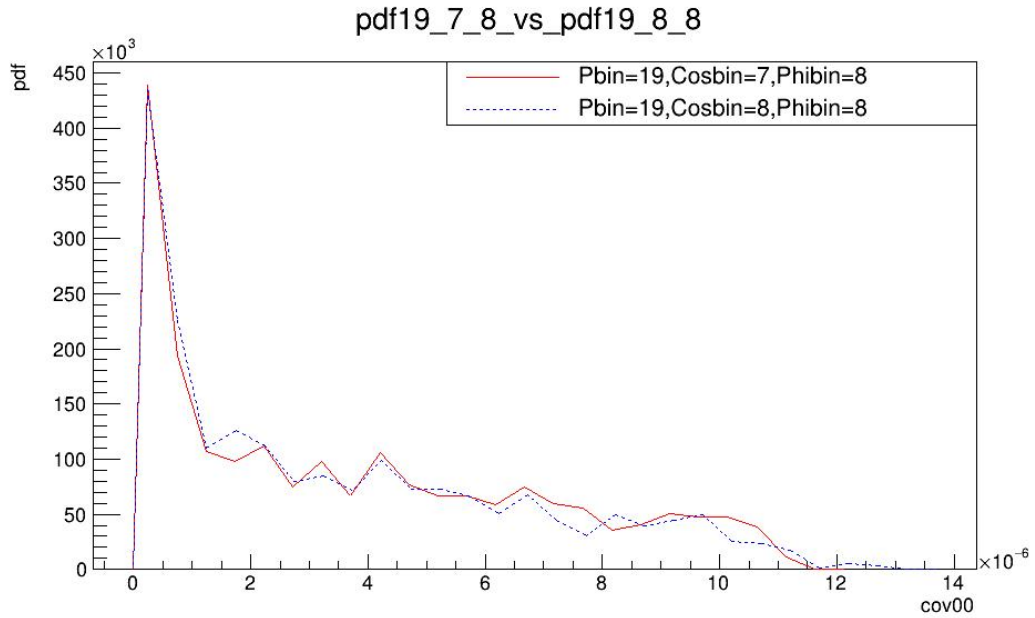
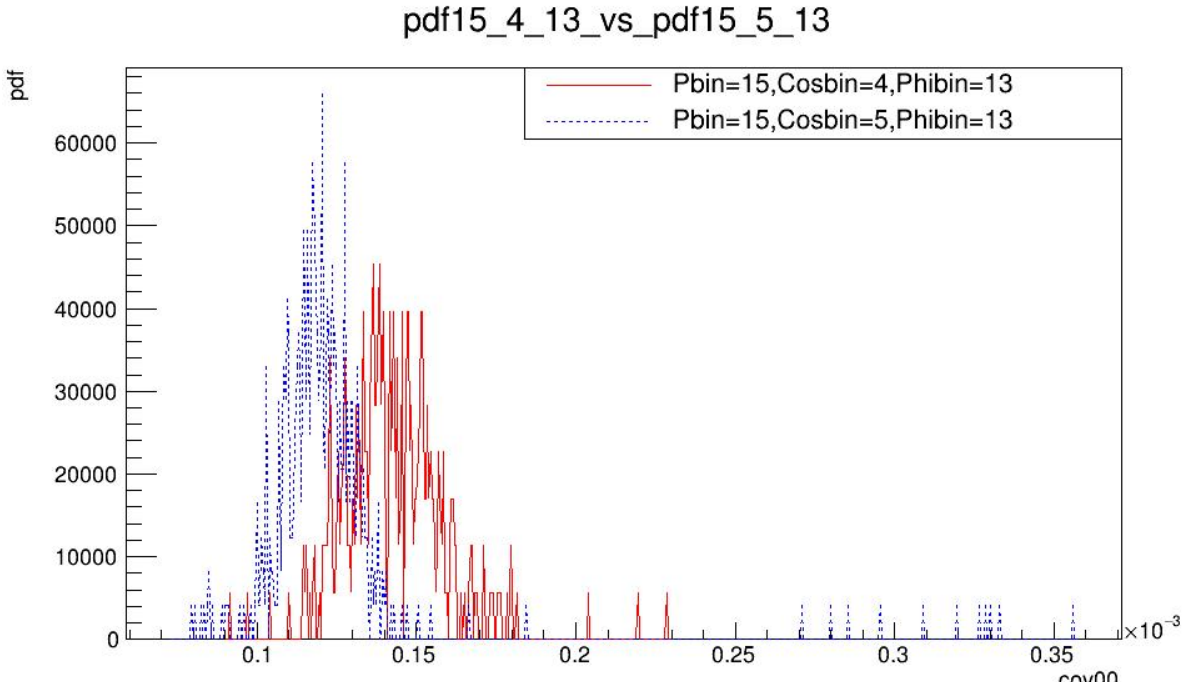
250
200
150
100
50
0
0
5
10
15
20
25
30
×10^-6
cov00

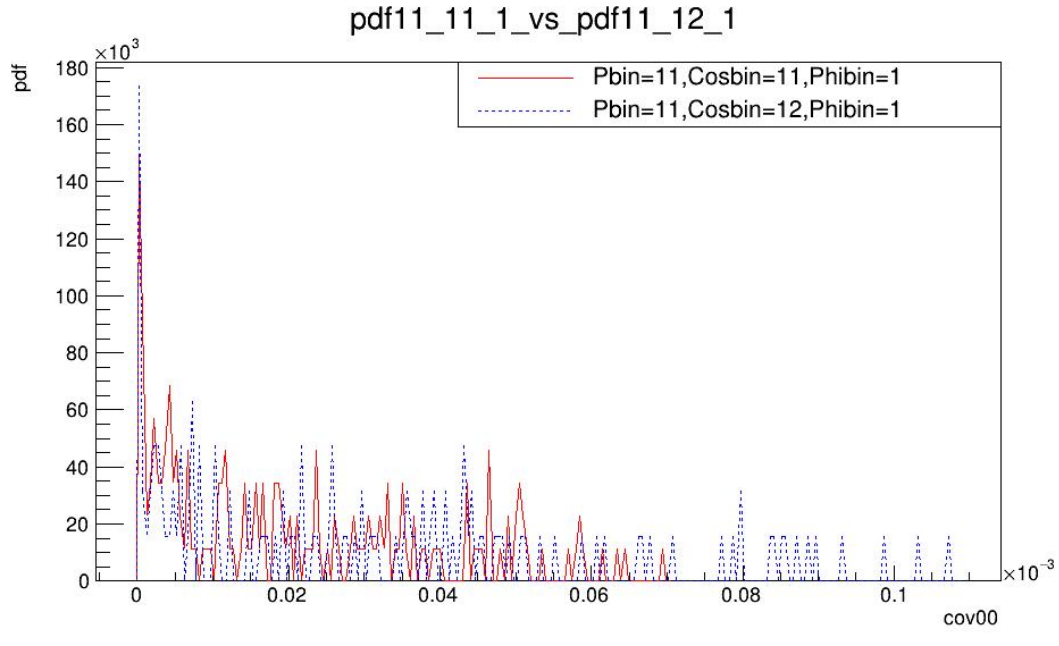

pdf20_1_16_vs_pdf20_2_16
pdf
×10^3
Pbin=20,Cosbin=1,Phibin=16
Pbin=20,Cosbin=2,Phibin=16
cov00

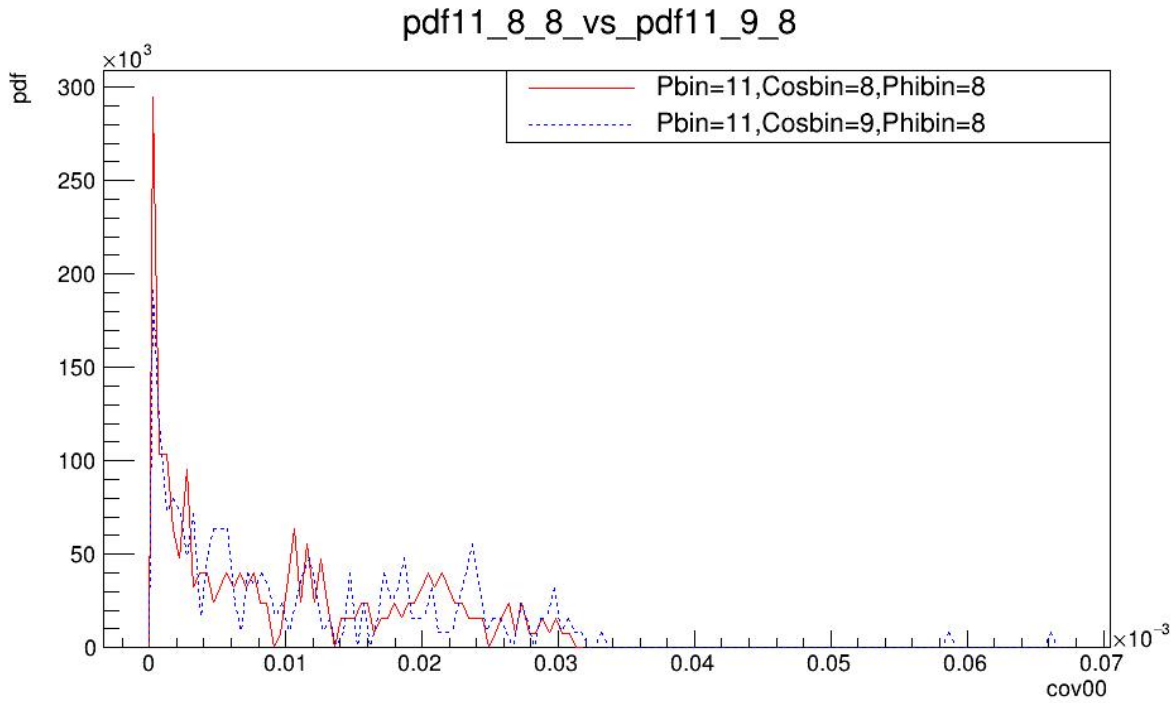

pdf20_13_1_vs_pdf20_14_1
pdf
×10^3
Pbin=20,Cosbin=13,Phibin=1
Pbin=20,Cosbin=14,Phibin=1
×10^-6
cov00

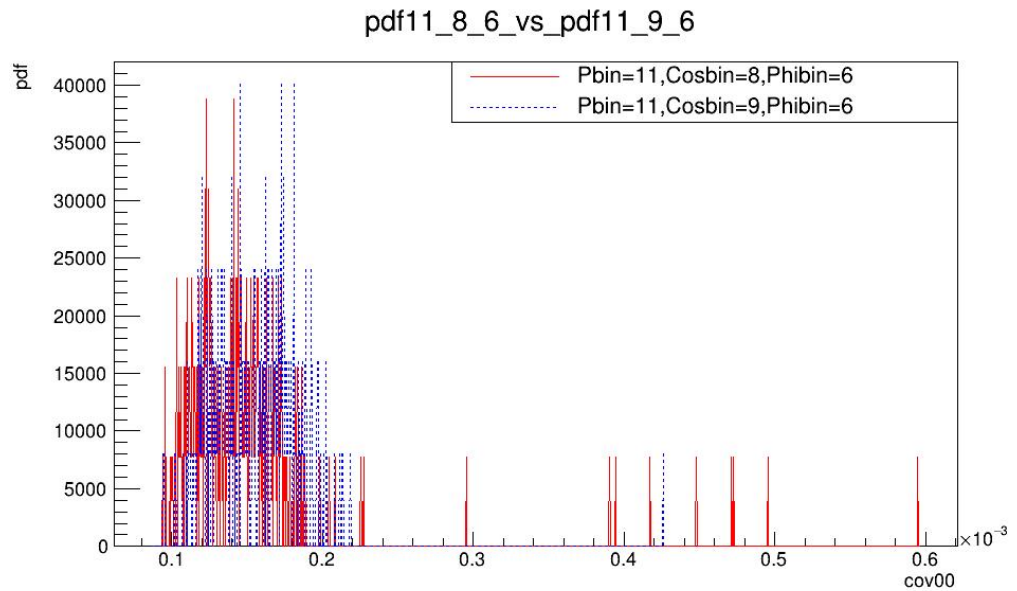

pdf19_7_5_vs_pdf19_8_5
pdf
×10^3
Pbin=19,Cosbin=7,Phibin=5
Pbin=19,Cosbin=8,Phibin=5
×10^-3
cov00


pdf19_7_8_vs_pdf19_8_8
pdf
×10^3
Pbin=19,Cosbin=7,Phibin=8
Pbin=19,Cosbin=8,Phibin=8
×10^-6
cov00


pdf15_4_13_vs_pdf15_5_13
pdf
Pbin=15,Cosbin=4,Phibin=13
Pbin=15,Cosbin=5,Phibin=13
60000
50000
40000
30000
20000
10000
0
0.1
0.15
0.2
0.25
0.3
0.35
×10⁻³
cov00

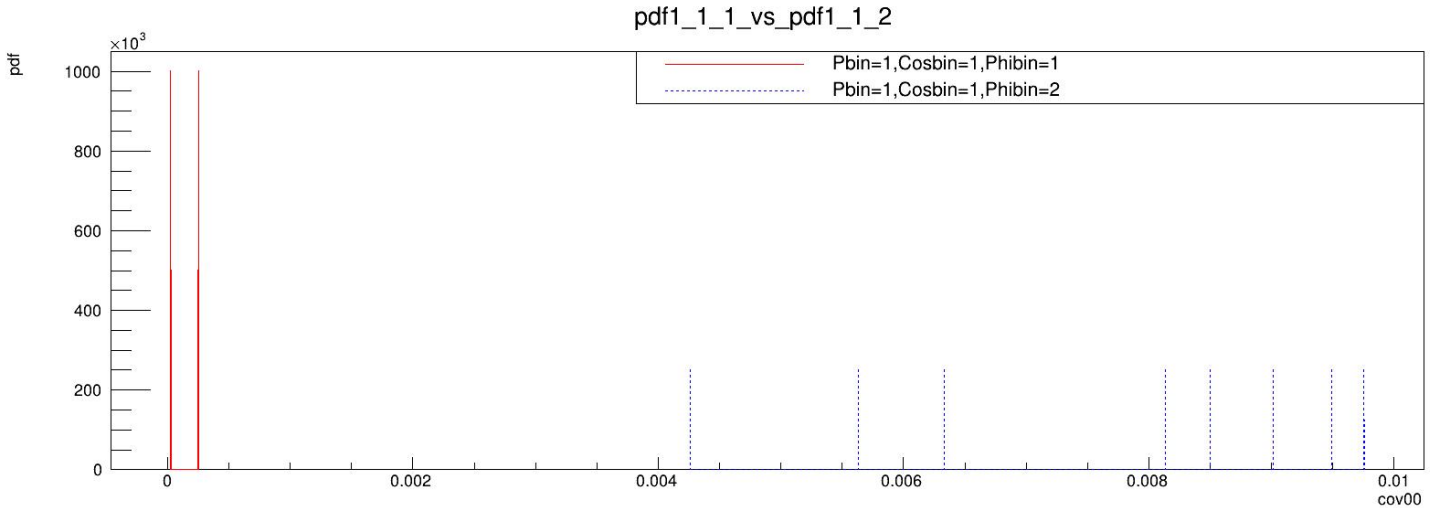

pdf11_11_1_vs_pdf11_12_1
pdf
×10³
Pbin=11,Cosbin=11,Phibin=1
Pbin=11,Cosbin=12,Phibin=1
180
160
140
120
100
80
60
40
20
0
0
0.02
0.04
0.06
0.08
0.1
×10⁻³
cov00

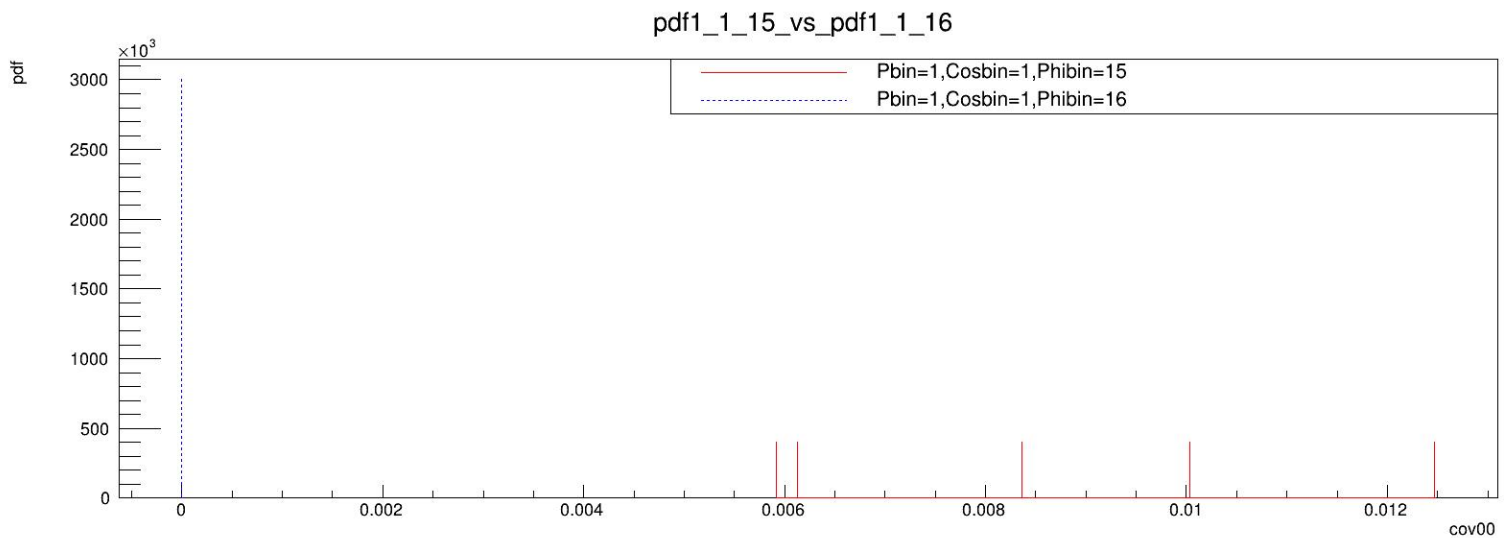

pdf11_8_8_vs_pdf11_9_8
pdf
×10³
Pbin=11,Cosbin=8,Phibin=8
Pbin=11,Cosbin=9,Phibin=8
300
250
200
150
100
50
0
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
×10⁻³
cov00

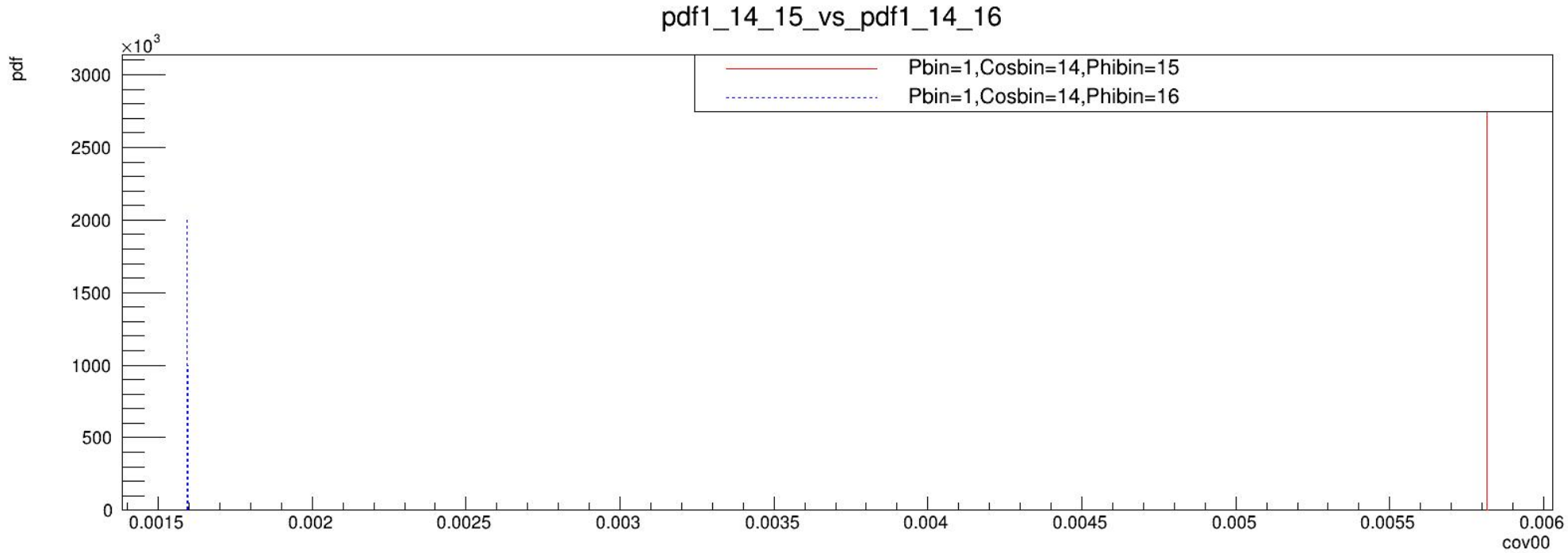

pdf11_8_6_vs_pdf11_9_6
pdf
Pbin=11,Cosbin=8,Phibin=6
Pbin=11,Cosbin=9,Phibin=6
40000
35000
30000
25000
20000
15000
10000
5000
0
0.1
0.2
0.3
0.4
0.5
0.6
×10⁻³
cov00

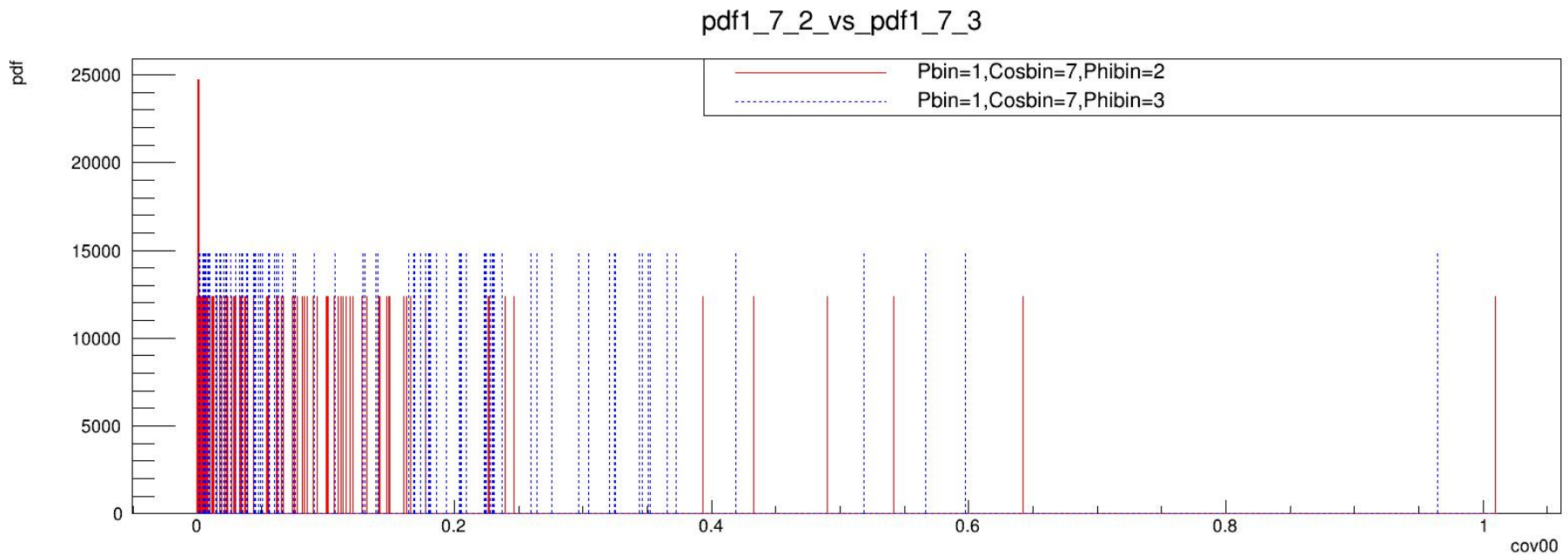
对比Phibin

低Pbin

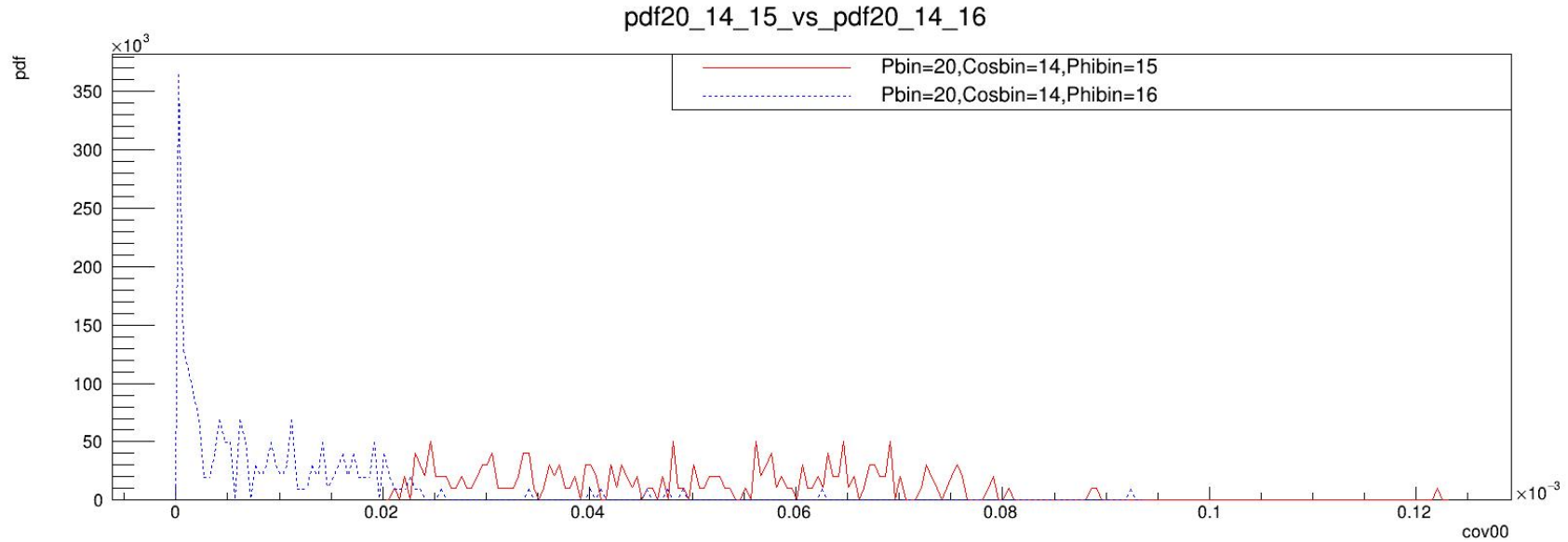


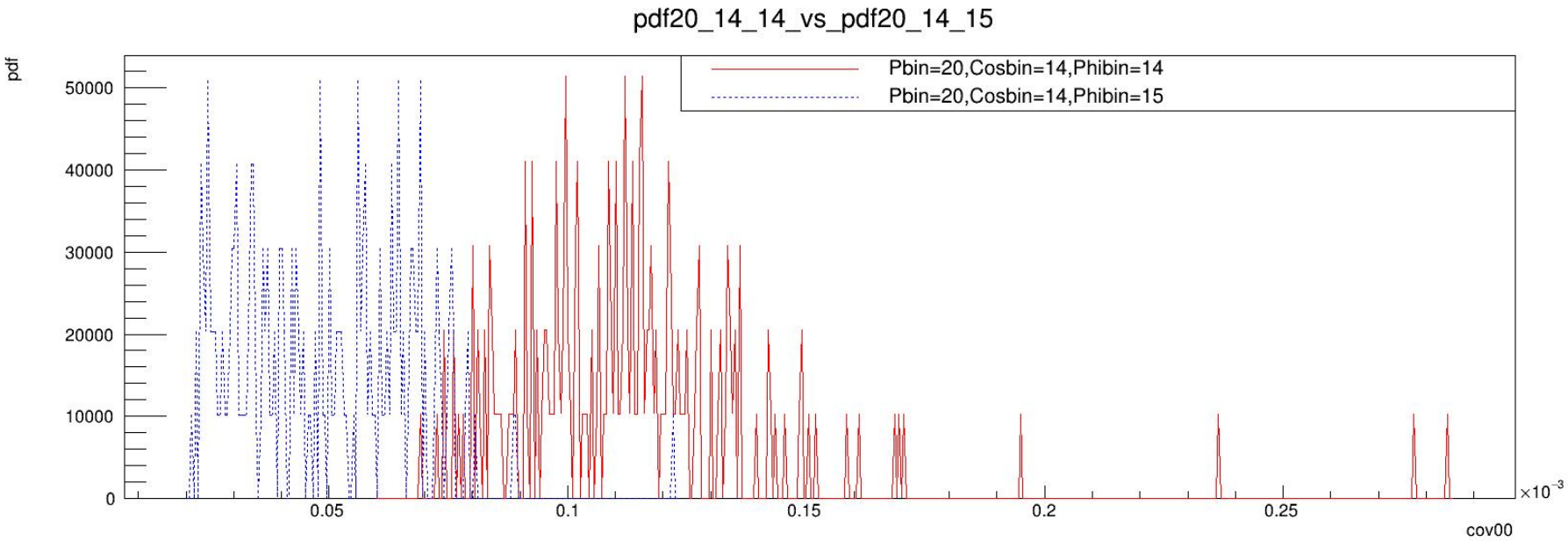


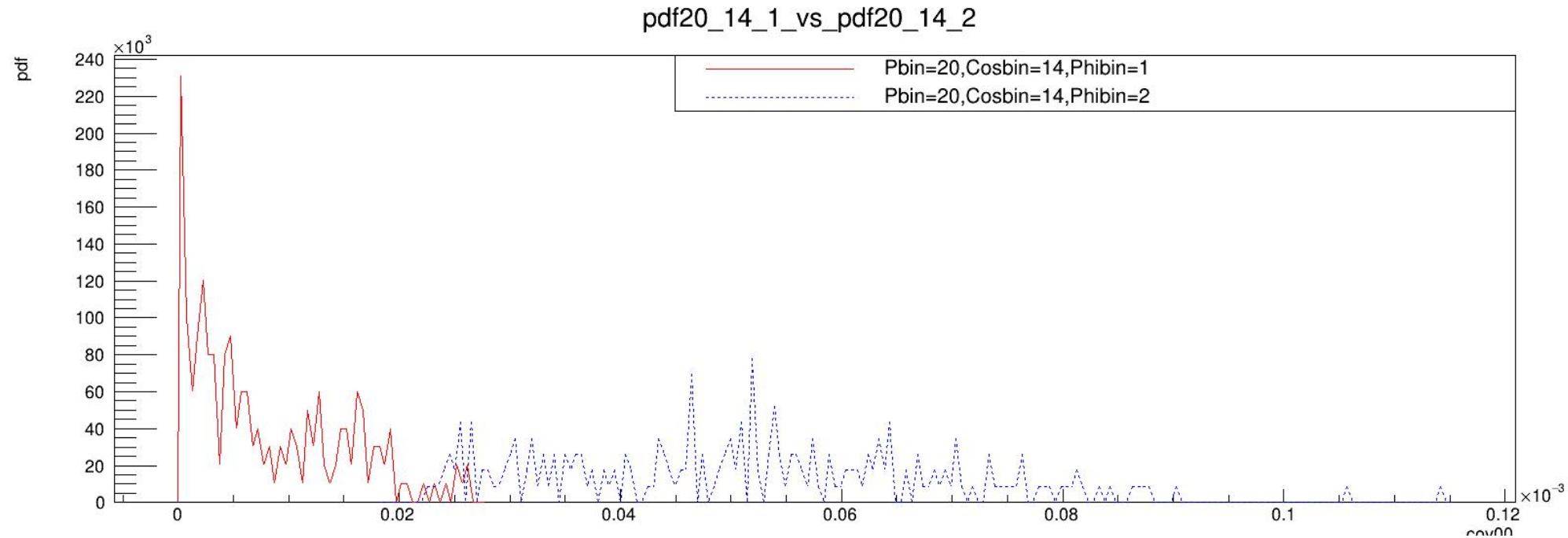

pdf1_14_15_vs_pdf1_14_16
pdf
×10^3
3000
2500
2000
1500
1000
500
0
0.0015
0.002
0.0025
0.003
0.0035
0.004
0.0045
0.005
0.0055
0.006
cov00
Pbin=1,Cosbin=14,Phibin=15
Pbin=1,Cosbin=14,Phibin=16

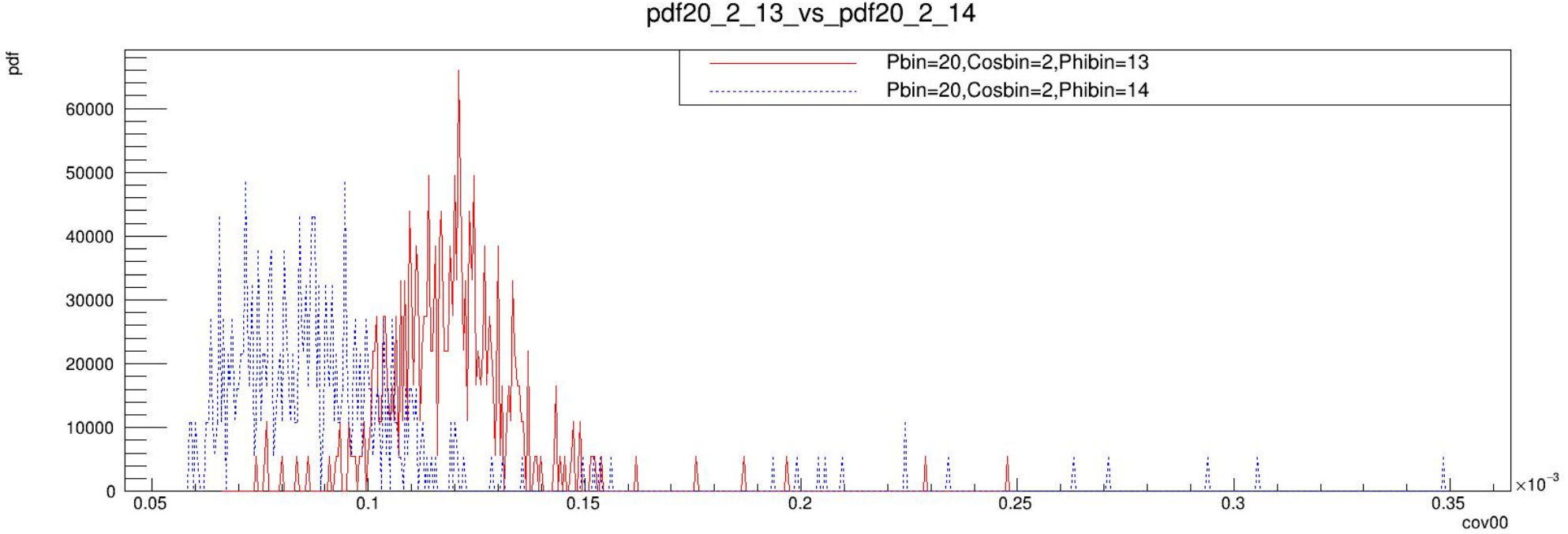

pdf1_7_2_vs_pdf1_7_3
pdf
25000
20000
15000
10000
5000
0
0
0.2
0.4
0.6
0.8
1
cov00
Pbin=1,Cosbin=7,Phibin=2
Pbin=1,Cosbin=7,Phibin=3

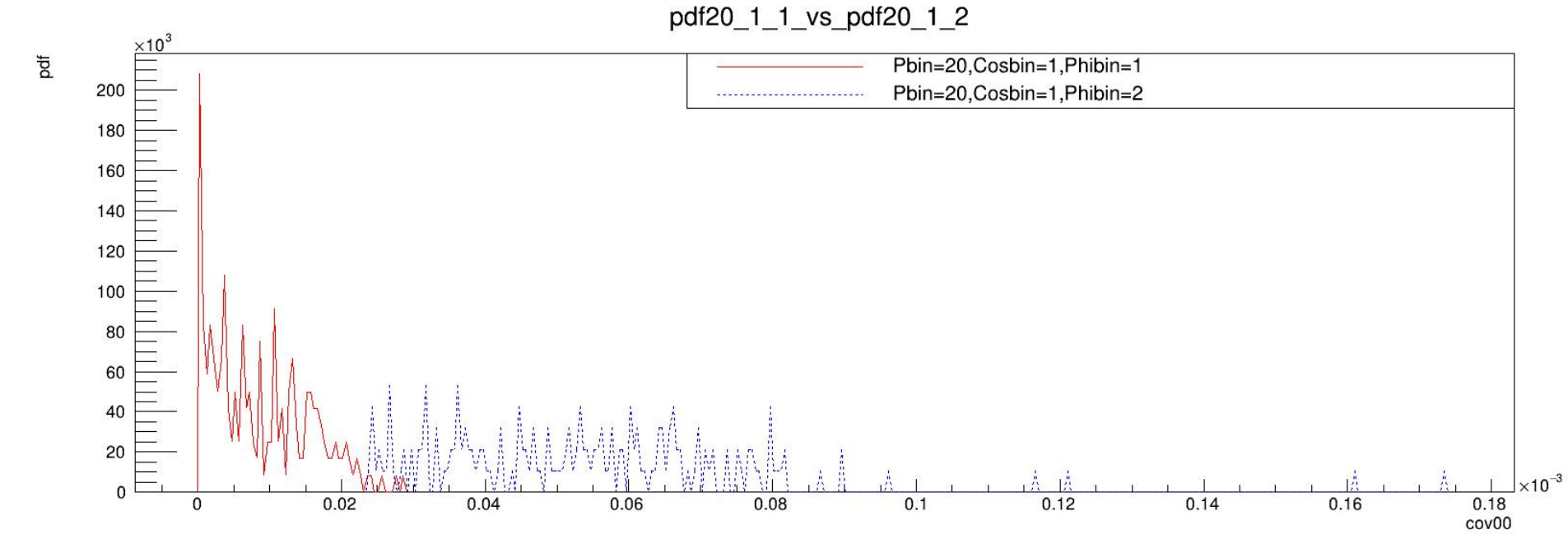
对比Phibin 高动量

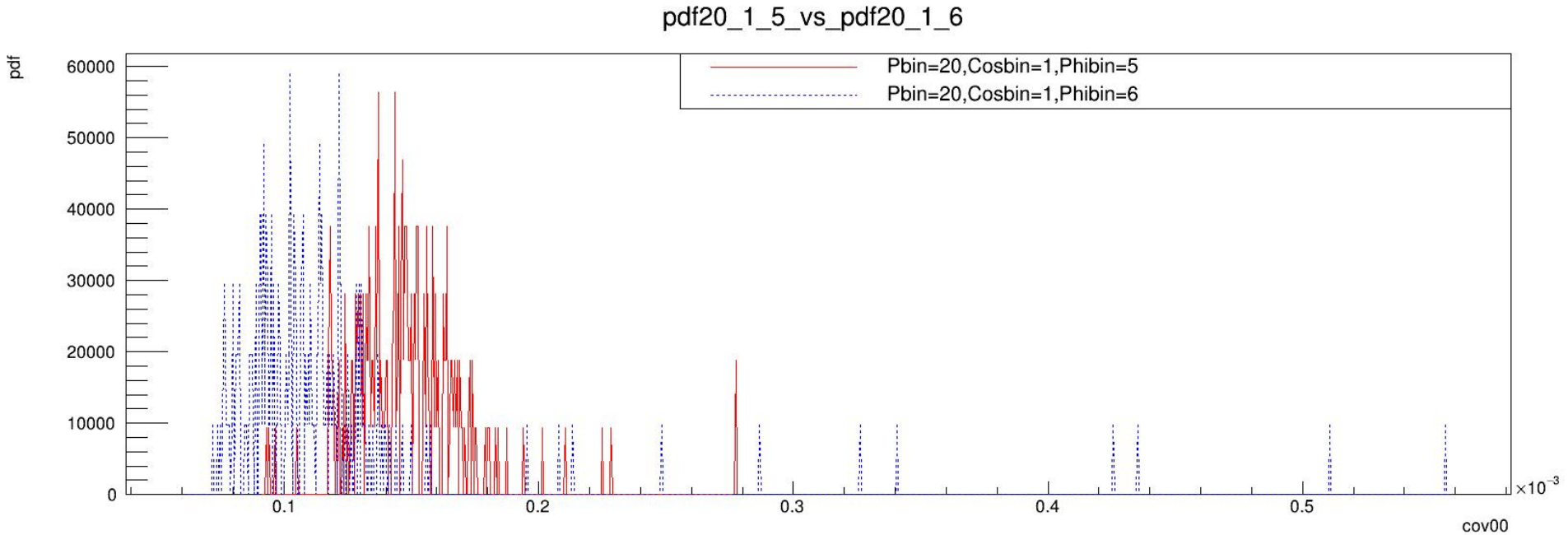


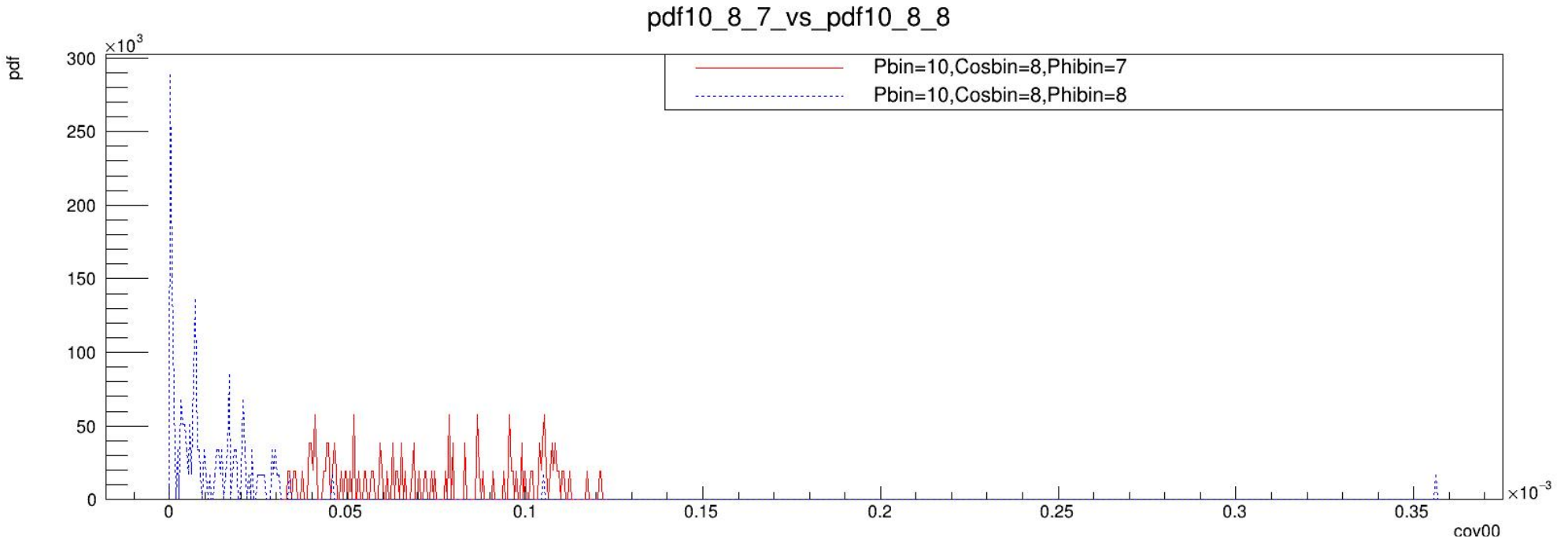


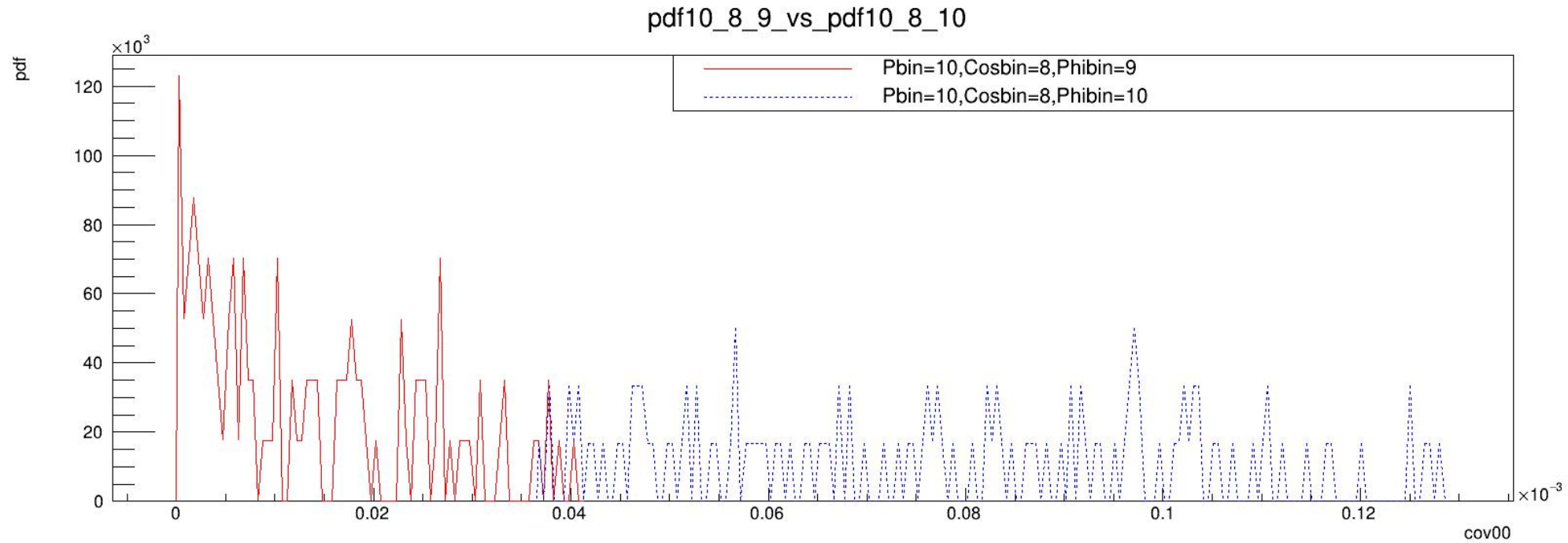

pdf20_14_1_vs_pdf20_14_2
pdf
×10^3
240
220
200
180
160
140
120
100
80
60
40
20
0
0
0.02
0.04
0.06
0.08
0.1
0.12
×10^-3
Pbin=20,Cosbin=14,Phibin=1
Pbin=20,Cosbin=14,Phibin=2


pdf20_2_13_vs_pdf20_2_14
pdf
60000
50000
40000
30000
20000
10000
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
×10^-3
cov00
Pbin=20,Cosbin=2,Phibin=13
Pbin=20,Cosbin=2,Phibin=14


pdf20_1_1_vs_pdf20_1_2
pdf
×10^3
200
180
160
140
120
100
80
60
40
20
0
Pbin=20,Cosbin=1,Phibin=1
Pbin=20,Cosbin=1,Phibin=2
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
×10^-3
cov00


pdf20_1_5_vs_pdf20_1_6
pdf
60000
50000
40000
30000
20000
10000
0
Pbin=20,Cosbin=1,Phibin=5
Pbin=20,Cosbin=1,Phibin=6
0.1
0.2
0.3
0.4
0.5
×10^-3
cov00


pdf10_8_7_vs_pdf10_8_8
pdf
×10^3
300
250
200
150
100
50
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
×10^-3
cov00
Pbin=10,Cosbin=8,Phibin=7
Pbin=10,Cosbin=8,Phibin=8


pdf10_8_9_vs_pdf10_8_10
pdf
×10^3
120
100
80
60
40
20
0
0
0.02
0.04
0.06
0.08
0.1
0.12
×10^-3
cov00
Pbin=10,Cosbin=8,Phibin=9
Pbin=10,Cosbin=8,Phibin=10

边缘处事例较少，低动量高cos数据少