In[76]:=
$$f[c\_, pt\_, q\_, T\_, \mu\_, y\_, mo\_] := c\, pt\, \text{Sqrt}\left[pt^2 + mo^2\right] \text{Cosh}[y] \left(1 + (q-1)\, \frac{1}{T} \left(\text{Sqrt}\left[pt^2 + mo^2\right] \text{Cosh}[y] - \mu\right)\right)^{1/(1-q)}$$

In[77]:=
```
ptau200c1 = {{0.2`, 315.`}, {0.30000000000000004`, 194.`},
   {0.4`, 119.`}, {0.5`, 73.7`}, {0.6`, 45.7`}, {0.7`, 28.6`},
   {0.7999999999999999`, 18.6`}, {0.8999999999999999`, 12.2`},
   {0.9999999999999999`, 8.02`}, {1.0999999999999999`, 5.55`},
   {1.2`, 3.53`}, {1.3`, 2.55`}, {1.4000000000000001`, 1.71`},
   {1.5000000000000002`, 1.2`}, {1.6000000000000003`, 0.802`},
   {1.7000000000000004`, 0.565`}, {1.8000000000000005`, 0.405`},
   {1.9000000000000006`, 0.285`}, {2.0000000000000004`, 0.189`}}
```

Out[77]=
```
{{0.2, 315.}, {0.3, 194.}, {0.4, 119.}, {0.5, 73.7},
 {0.6, 45.7}, {0.7, 28.6}, {0.8, 18.6}, {0.9, 12.2}, {1., 8.02},
 {1.1, 5.55}, {1.2, 3.53}, {1.3, 2.55}, {1.4, 1.71}, {1.5, 1.2},
 {1.6, 0.802}, {1.7, 0.565}, {1.8, 0.405}, {1.9, 0.285}, {2., 0.189}}
```

In[78]:=
```
ptau200c2 = {{0.2`, 271.`}, {0.30000000000000004`, 164.`},
   {0.4`, 99.3`}, {0.5`, 61.7`}, {0.6`, 38.2`}, {0.7`, 24.`},
   {0.7999999999999999`, 15.6`}, {0.8999999999999999`, 10.2`},
   {0.9999999999999999`, 6.75`}, {1.0999999999999999`, 4.64`},
   {1.2`, 2.94`}, {1.3`, 2.19`}, {1.4000000000000001`, 1.48`},
   {1.5000000000000002`, 1.02`}, {1.6000000000000003`, 0.694`},
   {1.7000000000000004`, 0.491`}, {1.8000000000000005`, 0.348`},
   {1.9000000000000006`, 0.253`}, {2.0000000000000004`, 0.164`}}
```

Out[78]=
```
{{0.2, 271.}, {0.3, 164.}, {0.4, 99.3}, {0.5, 61.7},
 {0.6, 38.2}, {0.7, 24.}, {0.8, 15.6}, {0.9, 10.2}, {1., 6.75},
 {1.1, 4.64}, {1.2, 2.94}, {1.3, 2.19}, {1.4, 1.48}, {1.5, 1.02},
 {1.6, 0.694}, {1.7, 0.491}, {1.8, 0.348}, {1.9, 0.253}, {2., 0.164}}
```

In[79]:=
```
ptau200c3 = {{0.2`, 227.`}, {0.30000000000000004`, 135.`},
   {0.4`, 81.8`}, {0.5`, 50.4`}, {0.6`, 31.5`}, {0.7`, 19.6`},
   {0.7999999999999999`, 12.8`}, {0.8999999999999999`, 8.47`},
   {0.9999999999999999`, 5.57`}, {1.0999999999999999`, 3.83`},
   {1.2`, 2.46`}, {1.3`, 1.8`}, {1.4000000000000001`, 1.22`},
   {1.5000000000000002`, 0.863`}, {1.6000000000000003`, 0.586`},
   {1.7000000000000004`, 0.41`}, {1.8000000000000005`, 0.3`},
   {1.9000000000000006`, 0.212`}, {2.0000000000000004`, 0.142`}}
```

Out[79]=
```
{{0.2, 227.}, {0.3, 135.}, {0.4, 81.8}, {0.5, 50.4},
 {0.6, 31.5}, {0.7, 19.6}, {0.8, 12.8}, {0.9, 8.47}, {1., 5.57},
 {1.1, 3.83}, {1.2, 2.46}, {1.3, 1.8}, {1.4, 1.22}, {1.5, 0.863},
 {1.6, 0.586}, {1.7, 0.41}, {1.8, 0.3}, {1.9, 0.212}, {2., 0.142}}
```

In[80]:=
```
ptau200c4 = {{0.2`, 195.`}, {0.30000000000000004`, 113.`},
   {0.4`, 68.6`}, {0.5`, 42.2`}, {0.6`, 26.1`}, {0.7`, 16.3`},
   {0.7999999999999999`, 10.6`}, {0.8999999999999999`, 7.01`},
   {0.9999999999999999`, 4.68`}, {1.0999999999999999`, 3.19`},
   {1.2`, 2.05`}, {1.3`, 1.49`}, {1.4000000000000001`, 0.99`},
   {1.5000000000000002`, 0.711`}, {1.6000000000000003`, 0.485`},
   {1.7000000000000004`, 0.343`}, {1.8000000000000005`, 0.238`},
   {1.9000000000000006`, 0.174`}, {2.0000000000000004`, 0.116`}}
```

Out[80]=
```
{{0.2, 195.}, {0.3, 113.}, {0.4, 68.6}, {0.5, 42.2},
 {0.6, 26.1}, {0.7, 16.3}, {0.8, 10.6}, {0.9, 7.01}, {1., 4.68},
 {1.1, 3.19}, {1.2, 2.05}, {1.3, 1.49}, {1.4, 0.99}, {1.5, 0.711},
 {1.6, 0.485}, {1.7, 0.343}, {1.8, 0.238}, {1.9, 0.174}, {2., 0.116}}
```

In[81]:=
```
ptau200c5 = {{0.2`, 151.`}, {0.30000000000000004`, 86.2`},
   {0.4`, 51.8`}, {0.5`, 31.7`}, {0.6`, 19.5`}, {0.7`, 12.2`},
   {0.7999999999999999`, 7.96`}, {0.8999999999999999`, 5.31`},
   {0.9999999999999999`, 3.45`}, {1.0999999999999999`, 2.36`},
   {1.2`, 1.55`}, {1.3`, 1.1`}, {1.4000000000000001`, 0.755`},
   {1.5000000000000002`, 0.541`}, {1.6000000000000003`, 0.371`},
   {1.7000000000000004`, 0.256`}, {1.8000000000000005`, 0.193`},
   {1.9000000000000006`, 0.136`}, {2.0000000000000004`, 0.0965`}}
```

Out[81]=
```
{{0.2, 151.}, {0.3, 86.2}, {0.4, 51.8}, {0.5, 31.7},
 {0.6, 19.5}, {0.7, 12.2}, {0.8, 7.96}, {0.9, 5.31}, {1., 3.45},
 {1.1, 2.36}, {1.2, 1.55}, {1.3, 1.1}, {1.4, 0.755}, {1.5, 0.541},
 {1.6, 0.371}, {1.7, 0.256}, {1.8, 0.193}, {1.9, 0.136}, {2., 0.0965}}
```

In[82]:=
```
ptau200c6 = {{0.2`, 102.`}, {0.30000000000000004`, 56.8`},
   {0.4`, 33.6`}, {0.5`, 20.4`}, {0.6`, 12.6`}, {0.7`, 7.81`},
   {0.7999999999999999`, 5.06`}, {0.8999999999999999`, 3.37`},
   {0.9999999999999999`, 2.18`}, {1.0999999999999999`, 1.52`},
   {1.2`, 0.975`}, {1.3`, 0.711`}, {1.4000000000000001`, 0.476`},
   {1.5000000000000002`, 0.342`}, {1.6000000000000003`, 0.237`},
   {1.7000000000000004`, 0.168`}, {1.8000000000000005`, 0.12`},
   {1.9000000000000006`, 0.0873`}, {2.0000000000000004`, 0.0646`}}
```

Out[82]=
```
{{0.2, 102.}, {0.3, 56.8}, {0.4, 33.6}, {0.5, 20.4},
 {0.6, 12.6}, {0.7, 7.81}, {0.8, 5.06}, {0.9, 3.37}, {1., 2.18},
 {1.1, 1.52}, {1.2, 0.975}, {1.3, 0.711}, {1.4, 0.476}, {1.5, 0.342},
 {1.6, 0.237}, {1.7, 0.168}, {1.8, 0.12}, {1.9, 0.0873}, {2., 0.0646}}
```

In[83]:=
```
ptau200c7 = {{0.2`, 65.3`}, {0.30000000000000004`, 35.6`},
   {0.4`, 20.8`}, {0.5`, 12.4`}, {0.6`, 7.57`}, {0.7`, 4.67`},
   {0.7999999999999999`, 3.04`}, {0.8999999999999999`, 1.99`},
   {0.9999999999999999`, 1.3`}, {1.0999999999999999`, 0.896`},
   {1.2`, 0.568`}, {1.3`, 0.418`}, {1.4000000000000001`, 0.275`},
   {1.5000000000000002`, 0.201`}, {1.6000000000000003`, 0.14`},
   {1.7000000000000004`, 0.096`}, {1.8000000000000005`, 0.0736`},
   {1.9000000000000006`, 0.0534`}, {2.0000000000000004`, 0.0364`}}
```

Out[83]=
```
{{0.2, 65.3}, {0.3, 35.6}, {0.4, 20.8}, {0.5, 12.4}, {0.6, 7.57},
 {0.7, 4.67}, {0.8, 3.04}, {0.9, 1.99}, {1., 1.3}, {1.1, 0.896},
 {1.2, 0.568}, {1.3, 0.418}, {1.4, 0.275}, {1.5, 0.201}, {1.6, 0.14},
 {1.7, 0.096}, {1.8, 0.0736}, {1.9, 0.0534}, {2., 0.0364}}
```

In[84]:=
```
ptau200c8 = {{0.2`, 39.2`}, {0.30000000000000004`, 21.`},
   {0.4`, 12.1`}, {0.5`, 7.13`}, {0.6`, 4.3`}, {0.7`, 2.61`},
   {0.7999999999999999`, 1.68`}, {0.8999999999999999`, 1.1`},
   {0.9999999999999999`, 0.713`}, {1.0999999999999999`, 0.488`},
   {1.2`, 0.312`}, {1.3`, 0.229`}, {1.4000000000000001`, 0.151`},
   {1.5000000000000002`, 0.11`}, {1.6000000000000003`, 0.0711`},
   {1.7000000000000004`, 0.0538`}, {1.8000000000000005`, 0.04`},
   {1.9000000000000006`, 0.0288`}, {2.0000000000000004`, 0.0204`}}
```

Out[84]=
```
{{0.2, 39.2}, {0.3, 21.}, {0.4, 12.1}, {0.5, 7.13}, {0.6, 4.3},
 {0.7, 2.61}, {0.8, 1.68}, {0.9, 1.1}, {1., 0.713}, {1.1, 0.488},
 {1.2, 0.312}, {1.3, 0.229}, {1.4, 0.151}, {1.5, 0.11}, {1.6, 0.0711},
 {1.7, 0.0538}, {1.8, 0.04}, {1.9, 0.0288}, {2., 0.0204}}
```

In[85]:=
```
ptau200c9 = {{0.2`, 20.7`}, {0.30000000000000004`, 10.9`},
   {0.4`, 6.21`}, {0.5`, 3.59`}, {0.6`, 2.16`}, {0.7`, 1.3`},
   {0.7999999999999999`, 0.83`}, {0.8999999999999999`, 0.526`},
   {0.9999999999999999`, 0.345`}, {1.0999999999999999`, 0.232`},
   {1.2`, 0.147`}, {1.3`, 0.105`}, {1.4000000000000001`, 0.0732`},
   {1.5000000000000002`, 0.0515`}, {1.6000000000000003`, 0.0383`},
   {1.7000000000000004`, 0.0251`}, {1.8000000000000005`, 0.0187`},
   {1.9000000000000006`, 0.013`}, {2.0000000000000004`, 0.00863`}}
```

Out[85]=
```
{{0.2, 20.7}, {0.3, 10.9}, {0.4, 6.21}, {0.5, 3.59}, {0.6, 2.16},
 {0.7, 1.3}, {0.8, 0.83}, {0.9, 0.526}, {1., 0.345}, {1.1, 0.232},
 {1.2, 0.147}, {1.3, 0.105}, {1.4, 0.0732}, {1.5, 0.0515}, {1.6, 0.0383},
 {1.7, 0.0251}, {1.8, 0.0187}, {1.9, 0.013}, {2., 0.00863}}
```

In[86]:=
```
ptau200c10 = {{0.2`, 9.77`}, {0.30000000000000004`, 5.19`},
   {0.4`, 2.84`}, {0.5`, 1.62`}, {0.6`, 0.932`}, {0.7`, 0.561`},
   {0.7999999999999999`, 0.352`}, {0.8999999999999999`, 0.227`},
   {0.9999999999999999`, 0.141`}, {1.0999999999999999`, 0.0975`},
   {1.2`, 0.0631`}, {1.3`, 0.0417`}, {1.4000000000000001`, 0.0281`},
   {1.5000000000000002`, 0.0211`}, {1.6000000000000003`, 0.0153`},
   {1.7000000000000004`, 0.0108`}, {1.8000000000000005`, 0.00806`},
   {1.9000000000000006`, 0.00603`}, {2.0000000000000004`, 0.00423`}}
```

Out[86]=
```
{{0.2, 9.77}, {0.3, 5.19}, {0.4, 2.84}, {0.5, 1.62}, {0.6, 0.932},
 {0.7, 0.561}, {0.8, 0.352}, {0.9, 0.227}, {1., 0.141}, {1.1, 0.0975},
 {1.2, 0.0631}, {1.3, 0.0417}, {1.4, 0.0281}, {1.5, 0.0211}, {1.6, 0.0153},
 {1.7, 0.0108}, {1.8, 0.00806}, {1.9, 0.00603}, {2., 0.00423}}
```

In[87]:=
```
ptau200c11 = {{0.2`, 5.03`}, {0.30000000000000004`, 2.67`},
   {0.4`, 1.45`}, {0.5`, 0.813`}, {0.6`, 0.454`}, {0.7`, 0.27`},
   {0.7999999999999999`, 0.159`}, {0.8999999999999999`, 0.107`},
   {0.9999999999999999`, 0.0663`}, {1.0999999999999999`, 0.0446`},
   {1.2`, 0.0265`}, {1.3`, 0.0202`}, {1.4000000000000001`, 0.0128`},
   {1.5000000000000002`, 0.00927`}, {1.6000000000000003`, 0.00656`},
   {1.7000000000000004`, 0.00514`}, {1.8000000000000005`, 0.00351`},
   {1.9000000000000006`, 0.0027`}, {2.0000000000000004`, 0.0014`}}
```

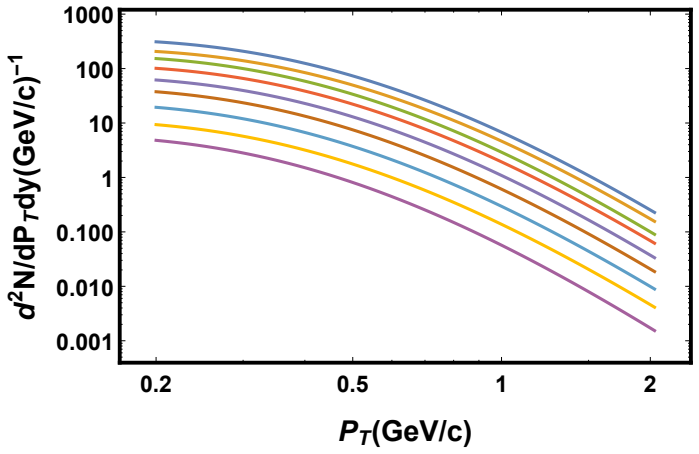
Out[87]=
```
{{0.2, 5.03}, {0.3, 2.67}, {0.4, 1.45}, {0.5, 0.813}, {0.6, 0.454},
 {0.7, 0.27}, {0.8, 0.159}, {0.9, 0.107}, {1., 0.0663}, {1.1, 0.0446},
 {1.2, 0.0265}, {1.3, 0.0202}, {1.4, 0.0128}, {1.5, 0.00927},
 {1.6, 0.00656}, {1.7, 0.00514}, {1.8, 0.00351}, {1.9, 0.0027}, {2., 0.0014}}
```

In[88]:=
```
ptau200c12 = {{0.2`, 12.1`}, {0.30000000000000004`, 6.42`},
   {0.4`, 3.59`}, {0.5`, 2.06`}, {0.6`, 1.21`}, {0.7`, 0.731`},
   {0.7999999999999999`, 0.46`}, {0.8999999999999999`, 0.295`},
   {0.9999999999999999`, 0.189`}, {1.0999999999999999`, 0.128`},
   {1.2`, 0.0812`}, {1.3`, 0.0571`}, {1.4000000000000001`, 0.0391`},
   {1.5000000000000002`, 0.0281`}, {1.6000000000000003`, 0.0207`},
   {1.7000000000000004`, 0.0141`}, {1.8000000000000005`, 0.0104`},
   {1.9000000000000006`, 0.00742`}, {2.0000000000000004`, 0.00487`}}
```

Out[88]=
```
{{0.2, 12.1}, {0.3, 6.42}, {0.4, 3.59}, {0.5, 2.06}, {0.6, 1.21},
 {0.7, 0.731}, {0.8, 0.46}, {0.9, 0.295}, {1., 0.189}, {1.1, 0.128},
 {1.2, 0.0812}, {1.3, 0.0571}, {1.4, 0.0391}, {1.5, 0.0281}, {1.6, 0.0207},
 {1.7, 0.0141}, {1.8, 0.0104}, {1.9, 0.00742}, {2., 0.00487}}
```

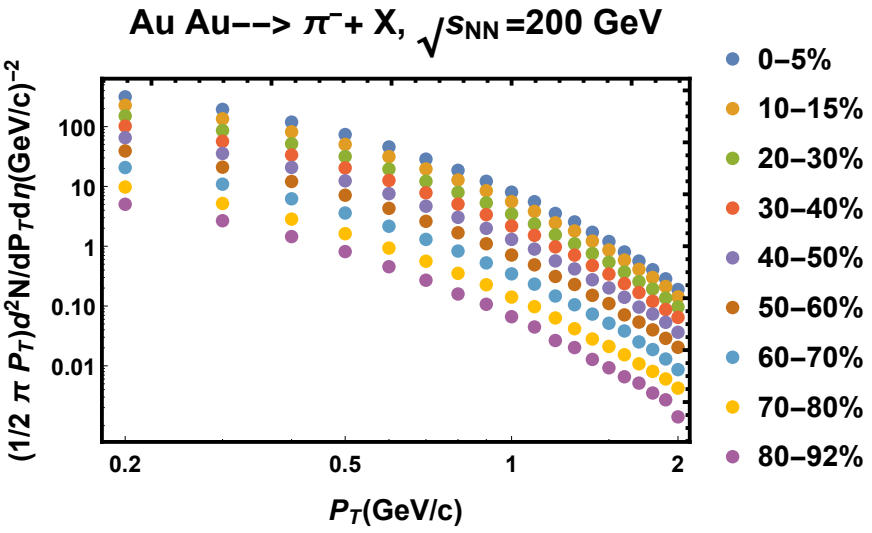
In[89]:=
```
Fau = LogLogPlot[{f[c, pt, 1.1145, T, μ, 0.0, 0.13957018`] /.
    {c → 0.189831, T → 0.242537, μ → 1.71963},
   f[c, pt, 1.114, T, μ, 0.0`, 0.13957018`] /.
    {c → 0.210872, T → 0.229463, μ → 1.605994},
   f[c, pt, 1.113, T, μ, 0.0, 0.13957018`] /.
    {c → 0.2283, T → 0.210985, μ → 1.47468},
   f[c, pt, 1.1145`, T, μ, 0.0, 0.13957018`] /. {c → 0.225019, T → 0.20343,
     μ → 1.3958}, f[c, pt, 1.114, T, μ, 0.0, 0.13957018`] /.
    {c → 0.2755481, T → 0.184339, μ → 1.2425}, f[c, pt, 1.115, T, μ,
     0.0, 0.13957018`] /. {c → 0.17269, T → 0.1814, μ → 1.22103},
   f[c, pt, 1.1155, T, μ, 0.0, 0.13957018`] /. {c → 0.10305`, T → 0.17638,
     μ → 1.18272}, f[c, pt, 1.1155`, T, μ, 0.0, 0.13957018`] /.
    {c → 0.06051, T → 0.17138, μ → 1.14272}, f[c, pt, 1.114`, T, μ, 0.0,
     0.13957018`] /. {c → 0.026051, T → 0.16638, μ → 1.13272}},
  {pt, 0.2`, 2.04}, Frame → {{True, True}, {True, True}},
  PlotStyle → (PointSize[#] & /@ {Large}),
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameLabel → {"P_T (GeV/c)", "d^2N/dP_T dy (GeV/c)^-1"},
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLabel → "",
  PlotLabel → "Au Au--> π⁻+ X, √s_NN =200 GeV"]
```

Out[89]=



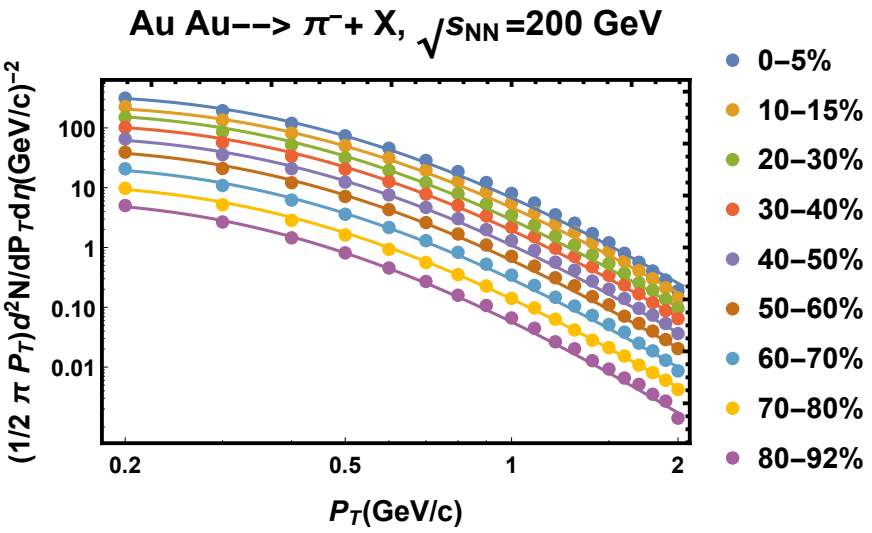
In[90]:=
```
dau200 = ListLogLogPlot[{ptau200c1, ptau200c3, ptau200c5,
   ptau200c6, ptau200c7, ptau200c8, ptau200c9, ptau200c10, ptau200c11},
  PlotStyle → (PointSize[#] & /@ {Large}), FrameTicksStyle →
   Directive[Bold, Dashed, 12], Frame → {{True, True}, {True, True}},
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLegends → Placed[{"0-5%", "10-15%", "20-30%",
     "30-40%", "40-50%", "50-60%", "60-70%", "70-80%", "80-92%"}, Right],
  FrameLabel → {"PT (GeV/c)", "(1/2 π PT) d2N/dPTdη (GeV/c)-2"},
  PlotLabel → "Au Au--> π- + X, √sNN =200 GeV"]
```

Out[90]=



In[91]:=
```
Show[dau200, Fau]
```

Out[91]=



In[92]:=
```
(*/-distributions of pions (+) at pd pd AT 2.67 TeV"
"0-5 pct"/*)
```

In[93]:=
```
pd27tc1 = {{0.15`, 1900.9`}, {0.2`, 2081.83`}, {0.25`, 2089.521`},
   {0.3`, 2001.694`}, {0.35`, 1875.999`}, {0.4`, 1738.595`},
   {0.45`, 1595.057`}, {0.5`, 1454.62`}, {0.55`, 1323.343`}, {0.6`, 1203.148`},
   {0.65`, 1094.434`}, {0.7`, 995.618`}, {0.75`, 904.533`}, {0.8`, 819.934`},
   {0.85`, 742.907`}, {0.9`, 673.253`}, {0.95`, 609.749`}, {1.`, 524.273`},
   {1.1`, 430.063`}, {1.2`, 351.045`}, {1.3`, 292.274`}, {1.4`, 237.697`},
   {1.5`, 197.63`}, {1.6`, 161.777`}, {1.7`, 133.973`}, {1.8`, 109.936`},
   {1.9`, 90.861`}, {2.`, 68.23807`}, {2.2`, 46.35203`}, {2.4`, 31.36032`},
   {2.6`, 21.22846`}, {2.8`, 14.32658`}, {3.`, 9.821356`}, {3.2`, 6.70412`},
   {3.4`, 4.648514`}, {3.6`, 3.200068`}, {3.8`, 2.259614`}, {4.`, 1.282867`},
   {4.5`, 0.6097952`}, {5.`, 0.3028185`}, {5.5`, 0.173344`}, {6.`, 0.103802`},
   {6.5`, 0.06759131`}, {7.`, 0.04010453`}, {8.`, 0.02102919`},
   {9.`, 0.01237296`}, {10.`, 0.00749349`}, {11.`, 0.004929428`},
   {12.`, 0.00330964`}, {13.`, 0.002296331`}, {14.`, 0.001660896`}}
```

Out[93]=
```
{{0.15, 1900.9}, {0.2, 2081.83}, {0.25, 2089.52}, {0.3, 2001.69}, {0.35, 1876.},
 {0.4, 1738.6}, {0.45, 1595.06}, {0.5, 1454.62}, {0.55, 1323.34}, {0.6, 1203.15},
 {0.65, 1094.43}, {0.7, 995.618}, {0.75, 904.533}, {0.8, 819.934},
 {0.85, 742.907}, {0.9, 673.253}, {0.95, 609.749}, {1., 524.273}, {1.1, 430.063},
 {1.2, 351.045}, {1.3, 292.274}, {1.4, 237.697}, {1.5, 197.63}, {1.6, 161.777},
 {1.7, 133.973}, {1.8, 109.936}, {1.9, 90.861}, {2., 68.2381}, {2.2, 46.352},
 {2.4, 31.3603}, {2.6, 21.2285}, {2.8, 14.3266}, {3., 9.82136}, {3.2, 6.70412},
 {3.4, 4.64851}, {3.6, 3.20007}, {3.8, 2.25961}, {4., 1.28287}, {4.5, 0.609795},
 {5., 0.302819}, {5.5, 0.173344}, {6., 0.103802}, {6.5, 0.0675913},
 {7., 0.0401045}, {8., 0.0210292}, {9., 0.012373}, {10., 0.00749349},
 {11., 0.00492943}, {12., 0.00330964}, {13., 0.00229633}, {14., 0.0016609}}
```

In[94]:=
```
pd27tc2 = {{0.15`, 1558.104`}, {0.2`, 1682.95`}, {0.25`, 1682.545`},
  {0.3`, 1612.418`}, {0.35`, 1511.63`}, {0.4`, 1400.869`}, {0.45`, 1285.027`},
  {0.5`, 1172.783`}, {0.55`, 1067.853`}, {0.6`, 970.326`}, {0.65`, 882.91`},
  {0.7`, 803.4`}, {0.75`, 730.321`}, {0.8`, 662.245`}, {0.85`, 599.935`},
  {0.9`, 543.586`}, {0.95`, 492.636`}, {1.`, 424.184`}, {1.1`, 348.211`},
  {1.2`, 284.663`}, {1.3`, 237.242`}, {1.4`, 193.092`}, {1.5`, 160.824`},
  {1.6`, 131.736`}, {1.7`, 109.172`}, {1.8`, 89.697`}, {1.9`, 74.163`},
  {2.`, 55.77349`}, {2.2`, 37.97797`}, {2.4`, 25.67787`}, {2.6`, 17.55844`},
  {2.8`, 11.95669`}, {3.`, 8.211704`}, {3.2`, 5.674873`}, {3.4`, 3.957338`},
  {3.6`, 2.749626`}, {3.8`, 1.968017`}, {4.`, 1.127202`}, {4.5`, 0.5430419`},
  {5.`, 0.2756688`}, {5.5`, 0.1606143`}, {6.`, 0.09471981`},
  {6.5`, 0.06302836`}, {7.`, 0.03683854`}, {8.`, 0.01889479`},
  {9.`, 0.01132434`}, {10.`, 0.006823603`}, {11.`, 0.004373787`},
  {12.`, 0.002925319`}, {13.`, 0.00202187`}, {14.`, 0.00145395`}}
```

Out[94]=
```
{{0.15, 1558.1}, {0.2, 1682.95}, {0.25, 1682.55}, {0.3, 1612.42}, {0.35, 1511.63},
 {0.4, 1400.87}, {0.45, 1285.03}, {0.5, 1172.78}, {0.55, 1067.85},
 {0.6, 970.326}, {0.65, 882.91}, {0.7, 803.4}, {0.75, 730.321}, {0.8, 662.245},
 {0.85, 599.935}, {0.9, 543.586}, {0.95, 492.636}, {1., 424.184}, {1.1, 348.211},
 {1.2, 284.663}, {1.3, 237.242}, {1.4, 193.092}, {1.5, 160.824}, {1.6, 131.736},
 {1.7, 109.172}, {1.8, 89.697}, {1.9, 74.163}, {2., 55.7735}, {2.2, 37.978},
 {2.4, 25.6779}, {2.6, 17.5584}, {2.8, 11.9567}, {3., 8.2117}, {3.2, 5.67487},
 {3.4, 3.95734}, {3.6, 2.74963}, {3.8, 1.96802}, {4., 1.1272}, {4.5, 0.543042},
 {5., 0.275669}, {5.5, 0.160614}, {6., 0.0947198}, {6.5, 0.0630284},
 {7., 0.0368385}, {8., 0.0188948}, {9., 0.0113243}, {10., 0.0068236},
 {11., 0.00437379}, {12., 0.00292532}, {13., 0.00202187}, {14., 0.00145395}}
```

In[95]:=
```
pd27tc3 = {{0.15`, 1182.519`}, {0.2`, 1262.51`}, {0.25`, 1257.703`},
   {0.3`, 1204.491`}, {0.35`, 1128.354`}, {0.4`, 1045.017`}, {0.45`, 957.236`},
   {0.5`, 874.028`}, {0.55`, 794.868`}, {0.6`, 722.775`}, {0.65`, 657.502`},
   {0.7`, 597.875`}, {0.75`, 543.08`}, {0.8`, 492.408`}, {0.85`, 446.371`},
   {0.9`, 403.976`}, {0.95`, 366.484`}, {1.`, 315.55`}, {1.1`, 259.1`},
   {1.2`, 211.852`}, {1.3`, 176.738`}, {1.4`, 143.709`}, {1.5`, 119.82`},
   {1.6`, 98.117`}, {1.7`, 81.463`}, {1.8`, 66.928`}, {1.9`, 55.365`},
   {2.`, 41.78154`}, {2.2`, 28.51323`}, {2.4`, 19.47198`}, {2.6`, 13.3068`},
   {2.8`, 9.122584`}, {3.`, 6.341017`}, {3.2`, 4.385358`}, {3.4`, 3.080999`},
   {3.6`, 2.174019`}, {3.8`, 1.560099`}, {4.`, 0.9140884`}, {4.5`, 0.4508589`},
   {5.`, 0.2327551`}, {5.5`, 0.1354585`}, {6.`, 0.08114444`},
   {6.5`, 0.05366401`}, {7.`, 0.03155556`}, {8.`, 0.0164372`},
   {9.`, 0.009399609`}, {10.`, 0.005810991`}, {11.`, 0.00373386`},
   {12.`, 0.002562037`}, {13.`, 0.001682592`}, {14.`, 0.001214283`}}
```

Out[95]=
```
{{0.15, 1182.52}, {0.2, 1262.51}, {0.25, 1257.7}, {0.3, 1204.49}, {0.35, 1128.35},
 {0.4, 1045.02}, {0.45, 957.236}, {0.5, 874.028}, {0.55, 794.868},
 {0.6, 722.775}, {0.65, 657.502}, {0.7, 597.875}, {0.75, 543.08}, {0.8, 492.408},
 {0.85, 446.371}, {0.9, 403.976}, {0.95, 366.484}, {1., 315.55}, {1.1, 259.1},
 {1.2, 211.852}, {1.3, 176.738}, {1.4, 143.709}, {1.5, 119.82}, {1.6, 98.117},
 {1.7, 81.463}, {1.8, 66.928}, {1.9, 55.365}, {2., 41.7815}, {2.2, 28.5132},
 {2.4, 19.472}, {2.6, 13.3068}, {2.8, 9.12258}, {3., 6.34102}, {3.2, 4.38536},
 {3.4, 3.081}, {3.6, 2.17402}, {3.8, 1.5601}, {4., 0.914088}, {4.5, 0.450859},
 {5., 0.232755}, {5.5, 0.135459}, {6., 0.0811444}, {6.5, 0.053664},
 {7., 0.0315556}, {8., 0.0164372}, {9., 0.00939961}, {10., 0.00581099},
 {11., 0.00373386}, {12., 0.00256204}, {13., 0.00168259}, {14., 0.00121428}}
```

In[96]:=
```
pd27tc4 = {{0.15`, 809.189`}, {0.2`, 854.526`}, {0.25`, 848.377`},
   {0.3`, 810.281`}, {0.35`, 757.169`}, {0.4`, 699.757`}, {0.45`, 639.37`},
   {0.5`, 582.832`}, {0.55`, 529.463`}, {0.6`, 480.834`}, {0.65`, 436.925`},
   {0.7`, 396.92`}, {0.75`, 360.115`}, {0.8`, 326.117`}, {0.85`, 295.056`},
   {0.9`, 267.085`}, {0.95`, 241.942`}, {1.`, 207.855`}, {1.1`, 170.511`},
   {1.2`, 139.266`}, {1.3`, 116.089`}, {1.4`, 94.385`}, {1.5`, 78.659`},
   {1.6`, 64.265`}, {1.7`, 53.298`}, {1.8`, 43.697`}, {1.9`, 36.255`},
   {2.`, 27.26901`}, {2.2`, 18.63253`}, {2.4`, 12.78015`}, {2.6`, 8.798573`},
   {2.8`, 6.049132`}, {3.`, 4.22463`}, {3.2`, 2.970177`}, {3.4`, 2.113949`},
   {3.6`, 1.504839`}, {3.8`, 1.094291`}, {4.`, 0.6559144`}, {4.5`, 0.333277`},
   {5.`, 0.1763437`}, {5.5`, 0.1037212`}, {6.`, 0.06320812`},
   {6.5`, 0.04190848`}, {7.`, 0.02472392`}, {8.`, 0.01264701`},
   {9.`, 0.007383407`}, {10.`, 0.004470568`}, {11.`, 0.002884775`},
   {12.`, 0.001920788`}, {13.`, 0.001321391`}, {14.`, 0.000998`}}
```

Out[96]=
```
{{0.15, 809.189}, {0.2, 854.526}, {0.25, 848.377}, {0.3, 810.281}, {0.35, 757.169},
 {0.4, 699.757}, {0.45, 639.37}, {0.5, 582.832}, {0.55, 529.463}, {0.6, 480.834},
 {0.65, 436.925}, {0.7, 396.92}, {0.75, 360.115}, {0.8, 326.117}, {0.85, 295.056},
 {0.9, 267.085}, {0.95, 241.942}, {1., 207.855}, {1.1, 170.511}, {1.2, 139.266},
 {1.3, 116.089}, {1.4, 94.385}, {1.5, 78.659}, {1.6, 64.265}, {1.7, 53.298},
 {1.8, 43.697}, {1.9, 36.255}, {2., 27.269}, {2.2, 18.6325}, {2.4, 12.7802},
 {2.6, 8.79857}, {2.8, 6.04913}, {3., 4.22463}, {3.2, 2.97018}, {3.4, 2.11395},
 {3.6, 1.50484}, {3.8, 1.09429}, {4., 0.655914}, {4.5, 0.333277},
 {5., 0.176344}, {5.5, 0.103721}, {6., 0.0632081}, {6.5, 0.0419085},
 {7., 0.0247239}, {8., 0.012647}, {9., 0.00738341}, {10., 0.00447057},
 {11., 0.00288478}, {12., 0.00192079}, {13., 0.00132139}, {14., 0.000998}}
```

In[97]:=
```
pd27tc5 = {{0.15`, 540.038`}, {0.2`, 564.9`}, {0.25`, 557.846`},
   {0.3`, 530.579`}, {0.35`, 494.076`}, {0.4`, 454.713`}, {0.45`, 414.`},
   {0.5`, 376.287`}, {0.55`, 340.875`}, {0.6`, 308.775`}, {0.65`, 280.097`},
   {0.7`, 253.78`}, {0.75`, 229.775`}, {0.8`, 207.613`}, {0.85`, 187.438`},
   {0.9`, 169.326`}, {0.95`, 153.085`}, {1.`, 131.238`}, {1.1`, 107.174`},
   {1.2`, 87.415`}, {1.3`, 72.647`}, {1.4`, 58.92`}, {1.5`, 49.023`},
   {1.6`, 39.974`}, {1.7`, 33.143`}, {1.8`, 27.202`}, {1.9`, 22.506`},
   {2.`, 16.95305`}, {2.2`, 11.62343`}, {2.4`, 8.013993`}, {2.6`, 5.545818`},
   {2.8`, 3.838913`}, {3.`, 2.719659`}, {3.2`, 1.923358`}, {3.4`, 1.383032`},
   {3.6`, 0.9966164`}, {3.8`, 0.7356694`}, {4.`, 0.4479685`}, {4.5`, 0.233302`},
   {5.`, 0.1262584`}, {5.5`, 0.07533607`}, {6.`, 0.04620878`},
   {6.5`, 0.03058608`}, {7.`, 0.01804828`}, {8.`, 0.009330173`},
   {9.`, 0.005329721`}, {10.`, 0.003246946`}, {11.`, 0.002008539`},
   {12.`, 0.001374279`}, {13.`, 0.00089`}, {14.`, 0.000662`}}
```

Out[97]=
```
{{0.15, 540.038}, {0.2, 564.9}, {0.25, 557.846}, {0.3, 530.579}, {0.35, 494.076},
 {0.4, 454.713}, {0.45, 414.}, {0.5, 376.287}, {0.55, 340.875}, {0.6, 308.775},
 {0.65, 280.097}, {0.7, 253.78}, {0.75, 229.775}, {0.8, 207.613}, {0.85, 187.438},
 {0.9, 169.326}, {0.95, 153.085}, {1., 131.238}, {1.1, 107.174}, {1.2, 87.415},
 {1.3, 72.647}, {1.4, 58.92}, {1.5, 49.023}, {1.6, 39.974}, {1.7, 33.143},
 {1.8, 27.202}, {1.9, 22.506}, {2., 16.9531}, {2.2, 11.6234}, {2.4, 8.01399},
 {2.6, 5.54582}, {2.8, 3.83891}, {3., 2.71966}, {3.2, 1.92336}, {3.4, 1.38303},
 {3.6, 0.996616}, {3.8, 0.735669}, {4., 0.447969}, {4.5, 0.233302},
 {5., 0.126258}, {5.5, 0.0753361}, {6., 0.0462088}, {6.5, 0.0305861},
 {7., 0.0180483}, {8., 0.00933017}, {9., 0.00532972}, {10., 0.00324695},
 {11., 0.00200854}, {12., 0.00137428}, {13., 0.00089}, {14., 0.000662}}
```

In[98]:=
```
pd27tc6 = {{0.15`, 344.152`}, {0.2`, 357.223`}, {0.25`, 350.806`},
   {0.3`, 331.875`}, {0.35`, 307.488`}, {0.4`, 281.405`}, {0.45`, 254.982`},
   {0.5`, 230.687`}, {0.55`, 208.153`}, {0.6`, 187.765`}, {0.65`, 169.903`},
   {0.7`, 153.138`}, {0.75`, 138.265`}, {0.8`, 124.536`}, {0.85`, 112.169`},
   {0.9`, 100.9`}, {0.95`, 91.055`}, {1.`, 77.802`}, {1.1`, 63.207`},
   {1.2`, 51.258`}, {1.3`, 42.469`}, {1.4`, 34.341`}, {1.5`, 28.495`},
   {1.6`, 23.121`}, {1.7`, 19.128`}, {1.8`, 15.593`}, {1.9`, 12.925`},
   {2.`, 9.727605`}, {2.2`, 6.636296`}, {2.4`, 4.582778`}, {2.6`, 3.188731`},
   {2.8`, 2.234335`}, {3.`, 1.591217`}, {3.2`, 1.137307`}, {3.4`, 0.8301433`},
   {3.6`, 0.6018277`}, {3.8`, 0.4469336`}, {4.`, 0.2791305`}, {4.5`, 0.1490707`},
   {5.`, 0.08203243`}, {5.5`, 0.0499933`}, {6.`, 0.03123262`}, {6.5`, 0.02084224`},
   {7.`, 0.01230883`}, {8.`, 0.006292279`}, {9.`, 0.003525`}, {10.`, 0.002095787`},
   {11.`, 0.001341273`}, {12.`, 0.000866`}, {13.`, 0.000597`}, {14.`, 0.000424`}}
```

Out[98]=
```
{{0.15, 344.152}, {0.2, 357.223}, {0.25, 350.806}, {0.3, 331.875}, {0.35, 307.488},
 {0.4, 281.405}, {0.45, 254.982}, {0.5, 230.687}, {0.55, 208.153}, {0.6, 187.765},
 {0.65, 169.903}, {0.7, 153.138}, {0.75, 138.265}, {0.8, 124.536}, {0.85, 112.169},
 {0.9, 100.9}, {0.95, 91.055}, {1., 77.802}, {1.1, 63.207}, {1.2, 51.258},
 {1.3, 42.469}, {1.4, 34.341}, {1.5, 28.495}, {1.6, 23.121}, {1.7, 19.128},
 {1.8, 15.593}, {1.9, 12.925}, {2., 9.72761}, {2.2, 6.6363}, {2.4, 4.58278},
 {2.6, 3.18873}, {2.8, 2.23434}, {3., 1.59122}, {3.2, 1.13731}, {3.4, 0.830143},
 {3.6, 0.601828}, {3.8, 0.446934}, {4., 0.279131}, {4.5, 0.149071},
 {5., 0.0820324}, {5.5, 0.0499933}, {6., 0.0312326}, {6.5, 0.0208422},
 {7., 0.0123088}, {8., 0.00629228}, {9., 0.003525}, {10., 0.00209579},
 {11., 0.00134127}, {12., 0.000866}, {13., 0.000597}, {14., 0.000424}}
```

In[99]:=
```
pd27tc7 = {{0.15`, 204.509`}, {0.2`, 210.733`}, {0.25`, 205.256`},
   {0.3`, 192.841`}, {0.35`, 177.354`}, {0.4`, 161.227`}, {0.45`, 145.149`},
   {0.5`, 130.588`}, {0.55`, 117.24`}, {0.6`, 105.303`}, {0.65`, 94.643`},
   {0.7`, 85.044`}, {0.75`, 76.472`}, {0.8`, 68.529`}, {0.85`, 61.444`},
   {0.9`, 55.148`}, {0.95`, 49.491`}, {1.`, 42.085`}, {1.1`, 34.017`},
   {1.2`, 27.433`}, {1.3`, 22.613`}, {1.4`, 18.219`}, {1.5`, 15.048`},
   {1.6`, 12.17`}, {1.7`, 10.073`}, {1.8`, 8.218`}, {1.9`, 6.787`},
   {2.`, 5.112891`}, {2.2`, 3.501309`}, {2.4`, 2.430577`}, {2.6`, 1.707171`},
   {2.8`, 1.203317`}, {3.`, 0.8613599`}, {3.2`, 0.6278149`}, {3.4`, 0.4607483`},
   {3.6`, 0.3382703`}, {3.8`, 0.2542045`}, {4.`, 0.1614481`},
   {4.5`, 0.08746152`}, {5.`, 0.04940508`}, {5.5`, 0.02971598`},
   {6.`, 0.01861889`}, {6.5`, 0.01269754`}, {7.`, 0.007333616`},
   {8.`, 0.003748458`}, {9.`, 0.002101253`}, {10.`, 0.001273626`},
   {11.`, 0.000753`}, {12.`, 0.000544`}, {13.`, 0.000369`}, {14.`, 0.000236`}}
```

Out[99]=
```
{{0.15, 204.509}, {0.2, 210.733}, {0.25, 205.256}, {0.3, 192.841}, {0.35, 177.354},
 {0.4, 161.227}, {0.45, 145.149}, {0.5, 130.588}, {0.55, 117.24}, {0.6, 105.303},
 {0.65, 94.643}, {0.7, 85.044}, {0.75, 76.472}, {0.8, 68.529}, {0.85, 61.444},
 {0.9, 55.148}, {0.95, 49.491}, {1., 42.085}, {1.1, 34.017}, {1.2, 27.433},
 {1.3, 22.613}, {1.4, 18.219}, {1.5, 15.048}, {1.6, 12.17}, {1.7, 10.073},
 {1.8, 8.218}, {1.9, 6.787}, {2., 5.11289}, {2.2, 3.50131}, {2.4, 2.43058},
 {2.6, 1.70717}, {2.8, 1.20332}, {3., 0.86136}, {3.2, 0.627815}, {3.4, 0.460748},
 {3.6, 0.33827}, {3.8, 0.254205}, {4., 0.161448}, {4.5, 0.0874615},
 {5., 0.0494051}, {5.5, 0.029716}, {6., 0.0186189}, {6.5, 0.0126975},
 {7., 0.00733362}, {8., 0.00374846}, {9., 0.00210125}, {10., 0.00127363},
 {11., 0.000753}, {12., 0.000544}, {13., 0.000369}, {14., 0.000236}}
```

In[100]:=
```
pd27tc8 = {{0.15`, 110.954`}, {0.2`, 113.259`}, {0.25`, 109.408`},
  {0.3`, 101.817`}, {0.35`, 92.975`}, {0.4`, 83.817`}, {0.45`, 74.926`},
  {0.5`, 66.987`}, {0.55`, 59.685`}, {0.6`, 53.263`}, {0.65`, 47.62`},
  {0.7`, 42.545`}, {0.75`, 38.101`}, {0.8`, 33.935`}, {0.85`, 30.295`},
  {0.9`, 27.086`}, {0.95`, 24.218`}, {1.`, 20.469`}, {1.1`, 16.402`},
  {1.2`, 13.149`}, {1.3`, 10.798`}, {1.4`, 8.647`}, {1.5`, 7.135`},
  {1.6`, 5.743`}, {1.7`, 4.73`}, {1.8`, 3.853`}, {1.9`, 3.187`},
  {2.`, 2.394326`}, {2.2`, 1.6477`}, {2.4`, 1.147946`}, {2.6`, 0.8115173`},
  {2.8`, 0.5763694`}, {3.`, 0.4151517`}, {3.2`, 0.3035806`}, {3.4`, 0.2278969`},
  {3.6`, 0.1685617`}, {3.8`, 0.1294025`}, {4.`, 0.08196708`},
  {4.5`, 0.04499707`}, {5.`, 0.02569106`}, {5.5`, 0.01596018`},
  {6.`, 0.009929401`}, {6.5`, 0.006642833`}, {7.`, 0.003907831`},
  {8.`, 0.001992465`}, {9.`, 0.001088042`}, {10.`, 0.000668`},
  {11.`, 0.000401`}, {12.`, 0.00026`}, {13.`, 0.000171`}, {14.`, 0.000114`}}
```

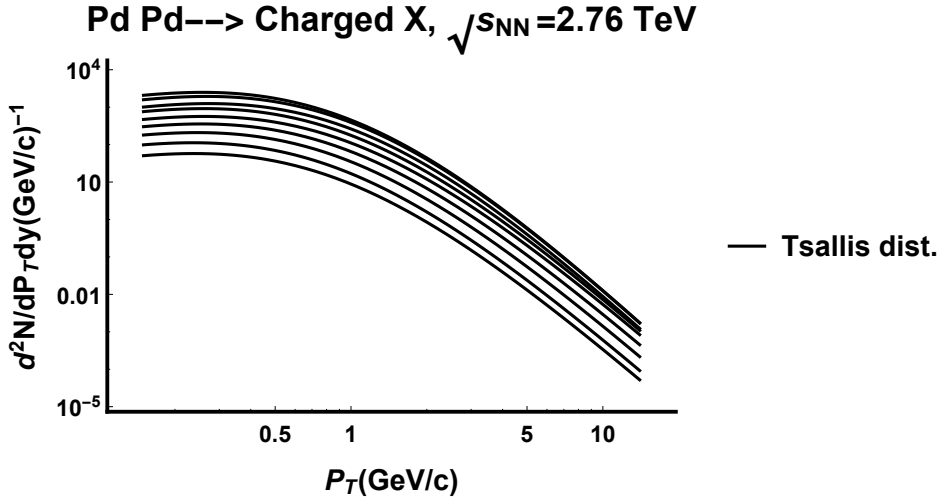
Out[100]=
```
{{0.15, 110.954}, {0.2, 113.259}, {0.25, 109.408}, {0.3, 101.817}, {0.35, 92.975},
 {0.4, 83.817}, {0.45, 74.926}, {0.5, 66.987}, {0.55, 59.685}, {0.6, 53.263},
 {0.65, 47.62}, {0.7, 42.545}, {0.75, 38.101}, {0.8, 33.935}, {0.85, 30.295},
 {0.9, 27.086}, {0.95, 24.218}, {1., 20.469}, {1.1, 16.402}, {1.2, 13.149},
 {1.3, 10.798}, {1.4, 8.647}, {1.5, 7.135}, {1.6, 5.743}, {1.7, 4.73}, {1.8, 3.853},
 {1.9, 3.187}, {2., 2.39433}, {2.2, 1.6477}, {2.4, 1.14795}, {2.6, 0.811517},
 {2.8, 0.576369}, {3., 0.415152}, {3.2, 0.303581}, {3.4, 0.227897},
 {3.6, 0.168562}, {3.8, 0.129403}, {4., 0.0819671}, {4.5, 0.0449971},
 {5., 0.0256911}, {5.5, 0.0159602}, {6., 0.0099294}, {6.5, 0.00664283},
 {7., 0.00390783}, {8., 0.00199247}, {9., 0.00108804}, {10., 0.000668},
 {11., 0.000401}, {12., 0.00026}, {13., 0.000171}, {14., 0.000114}}
```

In[101]:=
```
pd27tc9 = {{0.15`, 53.146`}, {0.2`, 53.819`}, {0.25`, 51.596`}, {0.3`, 47.614`},
   {0.35`, 43.069`}, {0.4`, 38.516`}, {0.45`, 34.175`}, {0.5`, 30.309`},
   {0.55`, 26.801`}, {0.6`, 23.871`}, {0.65`, 21.147`}, {0.7`, 18.763`},
   {0.75`, 16.715`}, {0.8`, 14.821`}, {0.85`, 13.177`}, {0.9`, 11.701`},
   {0.95`, 10.437`}, {1.`, 8.774`}, {1.1`, 6.985`}, {1.2`, 5.56`}, {1.3`, 4.546`},
   {1.4`, 3.64`}, {1.5`, 2.996`}, {1.6`, 2.41`}, {1.7`, 1.988`}, {1.8`, 1.611`},
   {1.9`, 1.331`}, {2.`, 1.008348`}, {2.2`, 0.6934877`}, {2.4`, 0.4864638`},
   {2.6`, 0.3478235`}, {2.8`, 0.2502709`}, {3.`, 0.1804752`}, {3.2`, 0.1335079`},
   {3.4`, 0.09936008`}, {3.6`, 0.07455449`}, {3.8`, 0.05663169`},
   {4.`, 0.03658175`}, {4.5`, 0.02035896`}, {5.`, 0.01188291`},
   {5.5`, 0.007179028`}, {6.`, 0.004454273`}, {6.5`, 0.003080324`},
   {7.`, 0.00172491`}, {8.`, 0.000871`}, {9.`, 0.000508`}, {10.`, 0.000286`},
   {11.`, 0.000162`}, {12.`, 0.000124`}, {13.`, 0.0000724`}, {14.`, 0.0000535`}}
```

Out[101]=
```
{{0.15, 53.146}, {0.2, 53.819}, {0.25, 51.596}, {0.3, 47.614}, {0.35, 43.069},
 {0.4, 38.516}, {0.45, 34.175}, {0.5, 30.309}, {0.55, 26.801}, {0.6, 23.871},
 {0.65, 21.147}, {0.7, 18.763}, {0.75, 16.715}, {0.8, 14.821}, {0.85, 13.177},
 {0.9, 11.701}, {0.95, 10.437}, {1., 8.774}, {1.1, 6.985}, {1.2, 5.56},
 {1.3, 4.546}, {1.4, 3.64}, {1.5, 2.996}, {1.6, 2.41}, {1.7, 1.988}, {1.8, 1.611},
 {1.9, 1.331}, {2., 1.00835}, {2.2, 0.693488}, {2.4, 0.486464}, {2.6, 0.347824},
 {2.8, 0.250271}, {3., 0.180475}, {3.2, 0.133508}, {3.4, 0.0993601},
 {3.6, 0.0745545}, {3.8, 0.0566317}, {4., 0.0365818}, {4.5, 0.020359},
 {5., 0.0118829}, {5.5, 0.00717903}, {6., 0.00445427}, {6.5, 0.00308032},
 {7., 0.00172491}, {8., 0.000871}, {9., 0.000508}, {10., 0.000286},
 {11., 0.000162}, {12., 0.000124}, {13., 0.0000724}, {14., 0.0000535}}
```

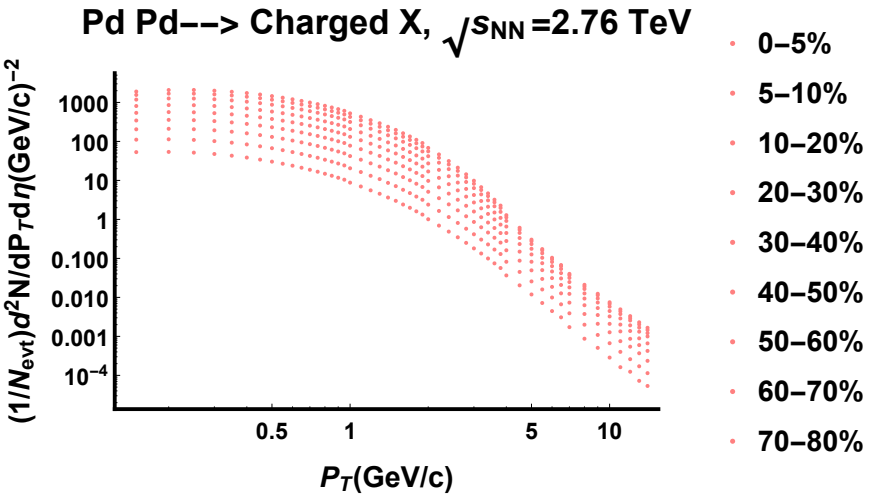
In[102]:=
```
Fpd2Tev = LogLogPlot[{f[c, pt, 1.119, T, μ, 0.`, 0.13957018`] /.
    {c → 2.14819, T → 0.402595, μ → 2.601494},
   1.05 f[c, pt, 1.119, T, μ, 0.`, 0.13957018`] /.
    {c → 2.0979, T → 0.4015, μ → 2.5594},
   f[c, pt, 1.119, T, μ, 0.`, 0.13957018`] /. {c → 1.6072611, T → 0.40096,
     μ → 2.53951}, f[c, pt, 1.123, T, μ, 0.`, 0.13957018`] /.
    {c → 1.5161371292925858`, T → 0.389245, μ → 2.40965},
   f[c, pt, 1.125`, T, μ, 0.`, 0.13957018`] /.
    {c → 1.189680266520952`, T → 0.38448930949094595`, μ → 2.338154279729288`},
   f[c, pt, 1.125`, T, μ, 0.`, 0.13957018`] /.
    {c → 1.2568230905357916`, T → 0.3529112526392587`, μ → 2.1070865520012423`},
   f[c, pt, 1.125`, T, μ, 0.`, 0.13957018`] /.
    {c → 0.7329252000698384`, T → 0.34385654019998135`, μ → 2.061232851555186`},
   f[c, pt, 1.125`, T, μ, 0.`, 0.13957018`] /.
    {c → 0.3754228190663907`, T → 0.33524003898426447`, μ → 2.021872696956248`},
   f[c, pt, 1.1255, T, μ, 0.`, 0.13957018`] /.
    {c → 0.2196, T → 0.332947, μ → 1.99192}},
  {pt, 0.15`, 14.}, Frame → {{True, False}, {True, False}},
  PlotStyle → {Black & /@ {Large}}, FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameLabel → {"P_T (GeV/c)", "d^2N/dP_T dy (GeV/c)^-1"},
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLabel → "Pd Pd--> Charged X, √s_NN =2.76 TeV",
  PlotLegends → Placed[{"Tsallis dist."}, Right]]
```

Out[102]=



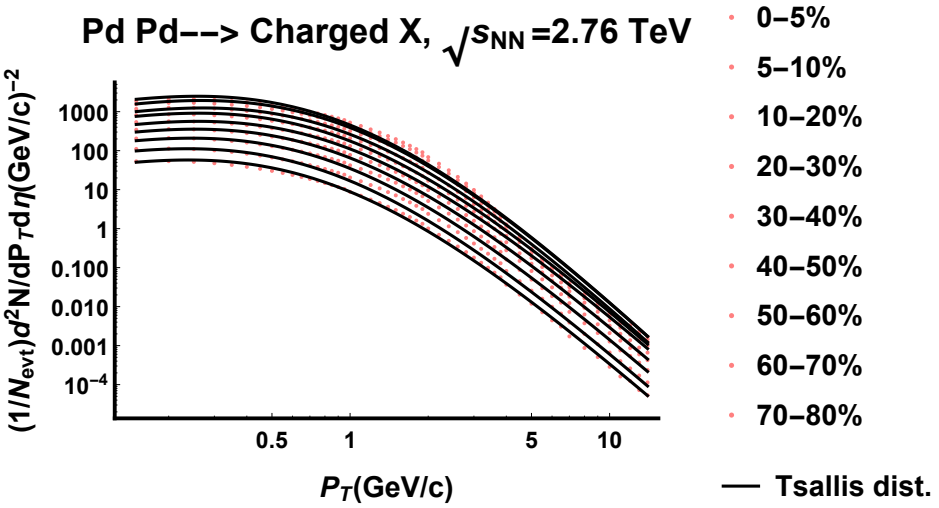
In[103]:=
```
dpd2tev = ListLogLogPlot[{pd27tc1, pd27tc2,
    pd27tc3, pd27tc4, pd27tc5, pd27tc6, pd27tc7, pd27tc8, pd27tc9},
   PlotStyle → {{Red, Blue, Black, Green, Orange, Gray, Yellow, Brown,
       Purple, Silver, Gold, Pink} & /@ {Large}}, FrameTicksStyle →
    Directive[Bold, Dashed, 12], Frame → {{True, False}, {True, False}},
   PlotStyle → {Red, Blue, Black , Gray, Green},
   FrameTicksStyle → Directive[Bold, Dashed, 12],
   FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
   LabelStyle → {Bold, 15}, PlotLegends → Placed[{"0-5%", "5-10%", "10-20%",
      "20-30%", "30-40%", "40-50%", "50-60%", "60-70%", "70-80%"}, Right],
   FrameLabel → {"PT (GeV/c)", "(1/Nevt) d2N/dPTdη (GeV/c)-2"}, PlotLegends →
    Placed[{"√sNN = 0.9 TeV", "√sNN =2.36 TeV", "√sNN =7 Tev"}, Right],
   PlotLabel → "Pd Pd--> Charged X, √sNN =2.76 TeV"]
```

Out[103]=



In[104]:=
```
Show[dpd2tev, Fpd2Tev]
```

Out[104]=



In[105]:=
```
(*/-distributions of pions (+) measured in xe-xe collisions at=5.44 TeV
"0-5%"/*)
```

In[106]:=
```
ptxec1 = {{0.2`, 1386.601`}, {0.25`, 1477.319`}, {0.3`, 1465.569`},
   {0.35`, 1416.543`}, {0.4`, 1336.589`}, {0.45`, 1250.586`},
   {0.5`, 1153.231`}, {0.55`, 1056.972`}, {0.6`, 965.916`},
   {0.65`, 884.112`}, {0.7`, 807.279`}, {0.75`, 737.005`}, {0.8`, 672.99`},
   {0.85`, 612.757`}, {0.9`, 558.56`}, {0.95`, 508.513`}, {1.`, 463.793`},
   {1.1`, 402.362`}, {1.2`, 334.72`}, {1.3`, 278.203`}, {1.4`, 231.196`},
   {1.5`, 193.252`}, {1.6`, 160.58`}, {1.7`, 135.003`}, {1.8`, 112.392`},
   {1.9`, 94.478`}, {2.`, 78.704`}, {2.2`, 60.71198`}, {2.4`, 42.37947`},
   {2.6`, 29.71222`}, {2.8`, 20.75753`}, {3.`, 14.35954`}}
```

Out[106]=
```
{{0.2, 1386.6}, {0.25, 1477.32}, {0.3, 1465.57}, {0.35, 1416.54},
 {0.4, 1336.59}, {0.45, 1250.59}, {0.5, 1153.23}, {0.55, 1056.97},
 {0.6, 965.916}, {0.65, 884.112}, {0.7, 807.279}, {0.75, 737.005},
 {0.8, 672.99}, {0.85, 612.757}, {0.9, 558.56}, {0.95, 508.513}, {1., 463.793},
 {1.1, 402.362}, {1.2, 334.72}, {1.3, 278.203}, {1.4, 231.196}, {1.5, 193.252},
 {1.6, 160.58}, {1.7, 135.003}, {1.8, 112.392}, {1.9, 94.478}, {2., 78.704},
 {2.2, 60.712}, {2.4, 42.3795}, {2.6, 29.7122}, {2.8, 20.7575}, {3., 14.3595}}
```

In[107]:=
```
ptxec2 = {{0.2`, 1144.352`}, {0.25`, 1214.549`}, {0.3`, 1198.63`},
   {0.35`, 1155.699`}, {0.4`, 1087.177`}, {0.45`, 1015.226`},
   {0.5`, 935.932`}, {0.55`, 856.733`}, {0.6`, 783.737`},
   {0.65`, 715.959`}, {0.7`, 654.466`}, {0.75`, 596.139`}, {0.8`, 544.636`},
   {0.85`, 496.679`}, {0.9`, 453.839`}, {0.95`, 412.918`}, {1.`, 376.534`},
   {1.1`, 328.965`}, {1.2`, 273.722`}, {1.3`, 228.858`}, {1.4`, 190.368`},
   {1.5`, 160.487`}, {1.6`, 133.69`}, {1.7`, 113.148`}, {1.8`, 94.433`},
   {1.9`, 80.077`}, {2.`, 66.558`}, {2.2`, 52.1314`}, {2.4`, 36.90528`},
   {2.6`, 26.01049`}, {2.8`, 18.33588`}, {3.`, 12.86219`}}
```

Out[107]=
```
{{0.2, 1144.35}, {0.25, 1214.55}, {0.3, 1198.63}, {0.35, 1155.7}, {0.4, 1087.18},
 {0.45, 1015.23}, {0.5, 935.932}, {0.55, 856.733}, {0.6, 783.737},
 {0.65, 715.959}, {0.7, 654.466}, {0.75, 596.139}, {0.8, 544.636},
 {0.85, 496.679}, {0.9, 453.839}, {0.95, 412.918}, {1., 376.534},
 {1.1, 328.965}, {1.2, 273.722}, {1.3, 228.858}, {1.4, 190.368}, {1.5, 160.487},
 {1.6, 133.69}, {1.7, 113.148}, {1.8, 94.433}, {1.9, 80.077}, {2., 66.558},
 {2.2, 52.1314}, {2.4, 36.9053}, {2.6, 26.0105}, {2.8, 18.3359}, {3., 12.8622}}
```

In[108]:=
```
ptxec3 = {{0.2`, 873.105`}, {0.25`, 923.445`}, {0.3`, 909.095`}, {0.35`, 873.255`},
   {0.4`, 820.247`}, {0.45`, 765.602`}, {0.5`, 704.018`}, {0.55`, 644.185`},
   {0.6`, 589.194`}, {0.65`, 537.374`}, {0.7`, 490.706`}, {0.75`, 446.891`},
   {0.8`, 407.941`}, {0.85`, 371.833`}, {0.9`, 338.628`}, {0.95`, 308.382`},
   {1.`, 280.687`}, {1.1`, 244.371`}, {1.2`, 203.473`}, {1.3`, 169.286`},
   {1.4`, 141.112`}, {1.5`, 117.827`}, {1.6`, 98.216`}, {1.7`, 82.766`},
   {1.8`, 68.96`}, {1.9`, 58.028`}, {2.`, 48.381`}, {2.2`, 37.78613`},
   {2.4`, 26.65087`}, {2.6`, 18.90948`}, {2.8`, 13.20061`}, {3.`, 9.34843`}}
```

Out[108]=
```
{{0.2, 873.105}, {0.25, 923.445}, {0.3, 909.095}, {0.35, 873.255}, {0.4, 820.247},
 {0.45, 765.602}, {0.5, 704.018}, {0.55, 644.185}, {0.6, 589.194},
 {0.65, 537.374}, {0.7, 490.706}, {0.75, 446.891}, {0.8, 407.941},
 {0.85, 371.833}, {0.9, 338.628}, {0.95, 308.382}, {1., 280.687},
 {1.1, 244.371}, {1.2, 203.473}, {1.3, 169.286}, {1.4, 141.112}, {1.5, 117.827},
 {1.6, 98.216}, {1.7, 82.766}, {1.8, 68.96}, {1.9, 58.028}, {2., 48.381},
 {2.2, 37.7861}, {2.4, 26.6509}, {2.6, 18.9095}, {2.8, 13.2006}, {3., 9.34843}}
```

In[109]:=
```
ptxec4 = {{0.2`, 608.452`}, {0.25`, 639.111`}, {0.3`, 625.895`}, {0.35`, 599.402`},
   {0.4`, 561.56`}, {0.45`, 522.071`}, {0.5`, 479.664`}, {0.55`, 437.35`},
   {0.6`, 398.46`}, {0.65`, 363.993`}, {0.7`, 331.118`}, {0.75`, 301.7`},
   {0.8`, 274.344`}, {0.85`, 249.481`}, {0.9`, 226.929`}, {0.95`, 206.55`},
   {1.`, 187.387`}, {1.1`, 162.313`}, {1.2`, 134.467`}, {1.3`, 111.179`},
   {1.4`, 92.71`}, {1.5`, 76.61`}, {1.6`, 63.705`}, {1.7`, 52.985`},
   {1.8`, 44.235`}, {1.9`, 36.958`}, {2.`, 30.823`}, {2.2`, 23.6869`},
   {2.4`, 16.65718`}, {2.6`, 11.66214`}, {2.8`, 8.280152`}, {3.`, 5.843305`}}
```

Out[109]=
```
{{0.2, 608.452}, {0.25, 639.111}, {0.3, 625.895}, {0.35, 599.402},
 {0.4, 561.56}, {0.45, 522.071}, {0.5, 479.664}, {0.55, 437.35}, {0.6, 398.46},
 {0.65, 363.993}, {0.7, 331.118}, {0.75, 301.7}, {0.8, 274.344},
 {0.85, 249.481}, {0.9, 226.929}, {0.95, 206.55}, {1., 187.387},
 {1.1, 162.313}, {1.2, 134.467}, {1.3, 111.179}, {1.4, 92.71}, {1.5, 76.61},
 {1.6, 63.705}, {1.7, 52.985}, {1.8, 44.235}, {1.9, 36.958}, {2., 30.823},
 {2.2, 23.6869}, {2.4, 16.6572}, {2.6, 11.6621}, {2.8, 8.28015}, {3., 5.84331}}
```

In[110]:=
```
ptxec5 = {{0.2`, 414.315`}, {0.25`, 433.463`}, {0.3`, 422.41`}, {0.35`, 402.053`},
  {0.4`, 375.513`}, {0.45`, 348.203`}, {0.5`, 318.684`}, {0.55`, 289.918`},
  {0.6`, 263.685`}, {0.65`, 239.461`}, {0.7`, 217.089`}, {0.75`, 197.454`},
  {0.8`, 179.78`}, {0.85`, 163.099`}, {0.9`, 147.977`}, {0.95`, 134.198`},
  {1.`, 121.497`}, {1.1`, 105.394`}, {1.2`, 87.12`}, {1.3`, 71.747`},
  {1.4`, 59.628`}, {1.5`, 49.187`}, {1.6`, 40.928`}, {1.7`, 33.99`},
  {1.8`, 28.443`}, {1.9`, 23.675`}, {2.`, 19.875`}, {2.2`, 15.24722`},
  {2.4`, 10.64255`}, {2.6`, 7.510811`}, {2.8`, 5.363729`}, {3.`, 3.841575`}}
```

Out[110]=
```
{{0.2, 414.315}, {0.25, 433.463}, {0.3, 422.41}, {0.35, 402.053}, {0.4, 375.513},
 {0.45, 348.203}, {0.5, 318.684}, {0.55, 289.918}, {0.6, 263.685},
 {0.65, 239.461}, {0.7, 217.089}, {0.75, 197.454}, {0.8, 179.78},
 {0.85, 163.099}, {0.9, 147.977}, {0.95, 134.198}, {1., 121.497},
 {1.1, 105.394}, {1.2, 87.12}, {1.3, 71.747}, {1.4, 59.628}, {1.5, 49.187},
 {1.6, 40.928}, {1.7, 33.99}, {1.8, 28.443}, {1.9, 23.675}, {2., 19.875},
 {2.2, 15.2472}, {2.4, 10.6426}, {2.6, 7.51081}, {2.8, 5.36373}, {3., 3.84158}}
```

In[111]:=
```
ptxec6 = {{0.2`, 273.068`}, {0.25`, 284.12`}, {0.3`, 275.13`}, {0.35`, 261.135`},
  {0.4`, 241.776`}, {0.45`, 222.834`}, {0.5`, 203.354`}, {0.55`, 183.582`},
  {0.6`, 166.557`}, {0.65`, 150.882`}, {0.7`, 136.23`}, {0.75`, 123.399`},
  {0.8`, 111.919`}, {0.85`, 101.445`}, {0.9`, 91.568`}, {0.95`, 83.268`},
  {1.`, 75.016`}, {1.1`, 64.757`}, {1.2`, 53.279`}, {1.3`, 43.726`},
  {1.4`, 36.26`}, {1.5`, 29.79`}, {1.6`, 24.717`}, {1.7`, 20.509`},
  {1.8`, 17.088`}, {1.9`, 14.281`}, {2.`, 11.884`}, {2.2`, 9.08251`},
  {2.4`, 6.364074`}, {2.6`, 4.500151`}, {2.8`, 3.203708`}, {3.`, 2.330342`}}
```

Out[111]=
```
{{0.2, 273.068}, {0.25, 284.12}, {0.3, 275.13}, {0.35, 261.135},
 {0.4, 241.776}, {0.45, 222.834}, {0.5, 203.354}, {0.55, 183.582},
 {0.6, 166.557}, {0.65, 150.882}, {0.7, 136.23}, {0.75, 123.399},
 {0.8, 111.919}, {0.85, 101.445}, {0.9, 91.568}, {0.95, 83.268}, {1., 75.016},
 {1.1, 64.757}, {1.2, 53.279}, {1.3, 43.726}, {1.4, 36.26}, {1.5, 29.79},
 {1.6, 24.717}, {1.7, 20.509}, {1.8, 17.088}, {1.9, 14.281}, {2., 11.884},
 {2.2, 9.08251}, {2.4, 6.36407}, {2.6, 4.50015}, {2.8, 3.20371}, {3., 2.33034}}
```

In[112]:=
```
ptxec7 = {{0.2`, 169.044`}, {0.25`, 174.922`}, {0.3`, 168.223`}, {0.35`, 158.655`},
   {0.4`, 146.133`}, {0.45`, 133.916`}, {0.5`, 121.288`}, {0.55`, 109.301`},
   {0.6`, 98.459`}, {0.65`, 88.734`}, {0.7`, 79.726`}, {0.75`, 72.086`},
   {0.8`, 65.025`}, {0.85`, 58.661`}, {0.9`, 52.935`}, {0.95`, 47.879`},
   {1.`, 43.199`}, {1.1`, 37.149`}, {1.2`, 30.325`}, {1.3`, 24.813`},
   {1.4`, 20.527`}, {1.5`, 16.881`}, {1.6`, 13.899`}, {1.7`, 11.544`},
   {1.8`, 9.561`}, {1.9`, 7.96`}, {2.`, 6.652`}, {2.2`, 5.109029`},
   {2.4`, 3.576426`}, {2.6`, 2.538733`}, {2.8`, 1.817043`}, {3.`, 1.32505`}}
```

Out[112]=
```
{{0.2, 169.044}, {0.25, 174.922}, {0.3, 168.223}, {0.35, 158.655},
 {0.4, 146.133}, {0.45, 133.916}, {0.5, 121.288}, {0.55, 109.301},
 {0.6, 98.459}, {0.65, 88.734}, {0.7, 79.726}, {0.75, 72.086}, {0.8, 65.025},
 {0.85, 58.661}, {0.9, 52.935}, {0.95, 47.879}, {1., 43.199}, {1.1, 37.149},
 {1.2, 30.325}, {1.3, 24.813}, {1.4, 20.527}, {1.5, 16.881}, {1.6, 13.899},
 {1.7, 11.544}, {1.8, 9.561}, {1.9, 7.96}, {2., 6.652}, {2.2, 5.10903},
 {2.4, 3.57643}, {2.6, 2.53873}, {2.8, 1.81704}, {3., 1.32505}}
```

In[113]:=
```
ptxec8 = {{0.2`, 97.013`}, {0.25`, 100.072`}, {0.3`, 95.79`}, {0.35`, 89.654`},
   {0.4`, 81.906`}, {0.45`, 74.261`}, {0.5`, 67.08`}, {0.55`, 60.121`},
   {0.6`, 53.832`}, {0.65`, 48.153`}, {0.7`, 43.21`}, {0.75`, 38.661`},
   {0.8`, 34.781`}, {0.85`, 31.221`}, {0.9`, 28.166`}, {0.95`, 25.311`},
   {1.`, 22.796`}, {1.1`, 19.471`}, {1.2`, 15.816`}, {1.3`, 12.921`},
   {1.4`, 10.562`}, {1.5`, 8.674`}, {1.6`, 7.168`}, {1.7`, 5.912`},
   {1.8`, 4.925`}, {1.9`, 4.076`}, {2.`, 3.39`}, {2.2`, 2.595784`},
   {2.4`, 1.816667`}, {2.6`, 1.299034`}, {2.8`, 0.9386324`}, {3.`, 0.6751085`}}
```

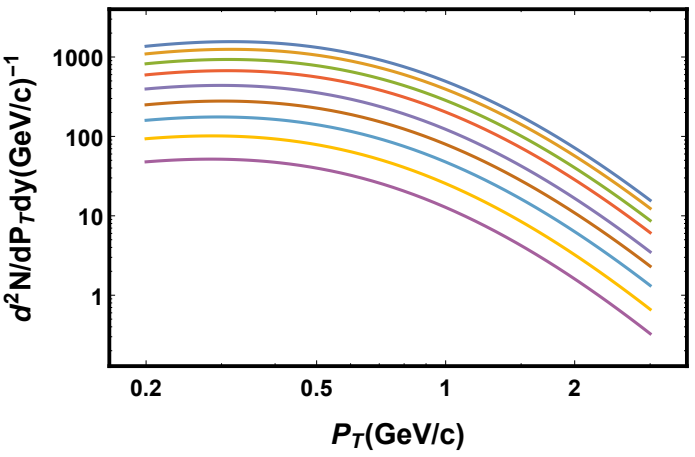
Out[113]=
```
{{0.2, 97.013}, {0.25, 100.072}, {0.3, 95.79}, {0.35, 89.654},
 {0.4, 81.906}, {0.45, 74.261}, {0.5, 67.08}, {0.55, 60.121},
 {0.6, 53.832}, {0.65, 48.153}, {0.7, 43.21}, {0.75, 38.661}, {0.8, 34.781},
 {0.85, 31.221}, {0.9, 28.166}, {0.95, 25.311}, {1., 22.796}, {1.1, 19.471},
 {1.2, 15.816}, {1.3, 12.921}, {1.4, 10.562}, {1.5, 8.674}, {1.6, 7.168},
 {1.7, 5.912}, {1.8, 4.925}, {1.9, 4.076}, {2., 3.39}, {2.2, 2.59578},
 {2.4, 1.81667}, {2.6, 1.29903}, {2.8, 0.938632}, {3., 0.675109}}
```

In[114]:=
```
ptxec9 = {{0.2`, 50.812`}, {0.25`, 52.07`}, {0.3`, 49.378`}, {0.35`, 45.697`},
  {0.4`, 41.394`}, {0.45`, 37.183`}, {0.5`, 33.224`}, {0.55`, 29.73`},
  {0.6`, 26.396`}, {0.65`, 23.398`}, {0.7`, 20.943`}, {0.75`, 18.713`},
  {0.8`, 16.728`}, {0.85`, 15.03`}, {0.9`, 13.383`}, {0.95`, 12.087`},
  {1.`, 10.799`}, {1.1`, 9.223`}, {1.2`, 7.45`}, {1.3`, 5.989`},
  {1.4`, 4.931`}, {1.5`, 4.033`}, {1.6`, 3.273`}, {1.7`, 2.718`},
  {1.8`, 2.26`}, {1.9`, 1.868`}, {2.`, 1.545`}, {2.2`, 1.19684`},
  {2.4`, 0.8487411`}, {2.6`, 0.5991697`}, {2.8`, 0.4377174`}, {3.`, 0.3110494`}}
```

Out[114]=
```
{{0.2, 50.812}, {0.25, 52.07}, {0.3, 49.378}, {0.35, 45.697},
 {0.4, 41.394}, {0.45, 37.183}, {0.5, 33.224}, {0.55, 29.73}, {0.6, 26.396},
 {0.65, 23.398}, {0.7, 20.943}, {0.75, 18.713}, {0.8, 16.728},
 {0.85, 15.03}, {0.9, 13.383}, {0.95, 12.087}, {1., 10.799}, {1.1, 9.223},
 {1.2, 7.45}, {1.3, 5.989}, {1.4, 4.931}, {1.5, 4.033}, {1.6, 3.273},
 {1.7, 2.718}, {1.8, 2.26}, {1.9, 1.868}, {2., 1.545}, {2.2, 1.19684},
 {2.4, 0.848741}, {2.6, 0.59917}, {2.8, 0.437717}, {3., 0.311049}}
```

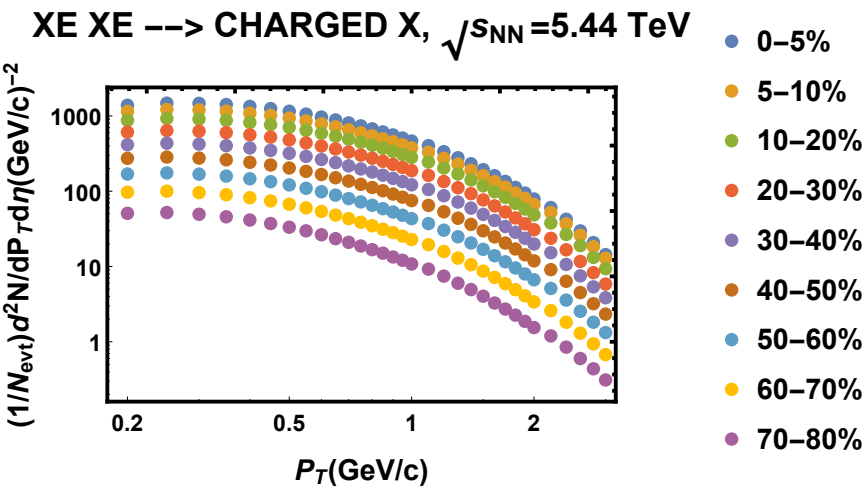
In[115]:=
```
Fxe5Tev = LogLogPlot[{f[c, pt, 1.127, T, μ, 0.`, 0.13957018`] /.
    {c → 2.0412, T → 0.48525, μ → 2.92523},
   f[c, pt, 1.127, T, μ, 0.`, 0.13957018`] /.
    {c → 1.865288, T → 0.4761, μ → 2.8559},
   f[c, pt, 1.127, T, μ, 0.`, 0.13957018`] /.
    {c → 1.5299766, T → 0.46529, μ → 2.7840671},
   f[c, pt, 1.127, T, μ, 0.`, 0.13957018`] /. {c → 1.291349, T → 0.453962,
     μ → 2.7008}, f[c, pt, 1.1275, T, μ, 0.`, 0.13957018`] /.
    {c → 0.80697804, T → 0.4462989, μ → 2.6633}, f[c, pt, 1.1275, T, μ,
     0.`, 0.13957018`] /. {c → 0.614082, T → 0.43919392, μ → 2.59926},
   f[c, pt, 1.1275, T, μ, 0.`, 0.13957018`] /. {c → 0.513938, T → 0.4160825,
     μ → 2.438946}, f[c, pt, 1.1275, T, μ, 0.`, 0.13957018`] /.
    {c → 0.30956587, T → 0.4032961, μ → 2.367917},
   f[c, pt, 1.1275, T, μ, 0.`, 0.13957018`] /.
    {c → 0.1774613, T → 0.39506, μ → 2.309615}},
  {pt, 0.2`, 3`}, Frame → {{True, True}, {True, True}}, PlotStyle →
   (PointSize[#] & /@ {Large}), FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameLabel → {"P_T (GeV/c)", "d^2N/dP_T dy (GeV/c)^-1"},
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLabel → ""]
```

Out[115]=



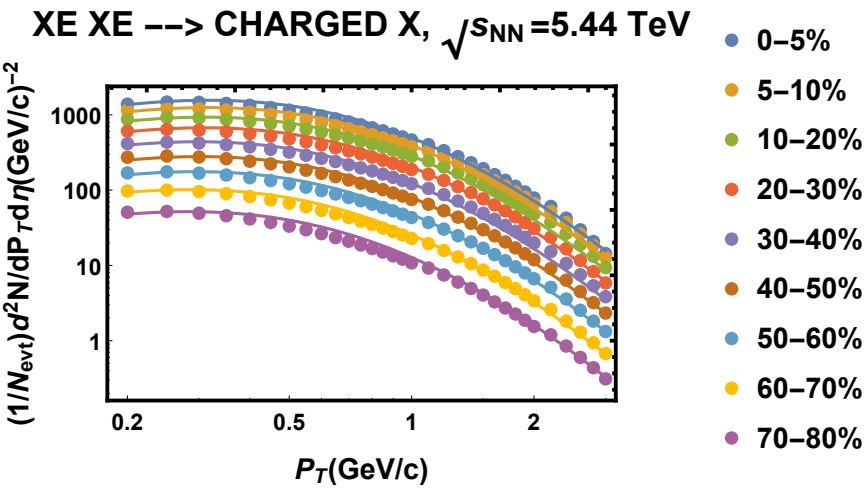
In[116]:=
```
dxe5tev = ListLogLogPlot[
  {ptxec1, ptxec2, ptxec3, ptxec4, ptxec5, ptxec6, ptxec7, ptxec8, ptxec9},
  PlotStyle → (PointSize[#] & /@ {Large}), PlotStyle → {Red, Blue, Black,
    Green, Orange, Gray, Yellow, Brown, Purple, Silver, Gold, Pink},
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  Frame → {{True, True}, {True, True}},
  PlotStyle → {Red, Blue, Black , Gray, Green},
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLegends → Placed[{"0-5%", "5-10%", "10-20%",
    "20-30%", "30-40%", "40-50%", "50-60%", "60-70%", "70-80%"}, Right],
  FrameLabel → {"P_T (GeV/c)", "(1/N_evt) d^2N/dP_T dη (GeV/c)^-2"},
  PlotLegends → Placed[{""}, Right],
  PlotLabel → "XE XE --> CHARGED X, √s_NN =5.44 TeV"]
```

Out[116]=



In[117]:=
```
Show[dxe5tev, Fxe5Tev]
```

Out[117]=



In[118]:=
```
(*/-distributions of pions (+) at AU AU AT 62.4 GeV"
"0%-5%"/*)
```

In[119]:=
```
au62c1 = {{0.5`, 136.`}, {0.55`, 108.3`}, {0.6000000000000001`, 86.9`},
  {0.6500000000000001`, 70.`}, {0.7000000000000002`, 56.8`},
  {0.7500000000000002`, 46.3`}, {0.8000000000000003`, 37.9`},
  {0.8500000000000003`, 31.1`}, {0.9000000000000004`, 25.6`},
  {0.9500000000000004`, 21.2`}, {1.0000000000000004`, 17.5`},
  {1.0500000000000005`, 14.6`}, {1.1000000000000005`, 12.16`},
  {1.1500000000000006`, 10.17`}, {1.2000000000000006`, 8.51`},
  {1.2500000000000007`, 7.13`}, {1.3000000000000007`, 5.99`},
  {1.3500000000000008`, 5.03`}, {1.4000000000000008`, 4.23`},
  {1.4500000000000008`, 3.56`}, {1.5000000000000009`, 3.`},
  {1.550000000000001`, 2.52`}, {1.600000000000001`, 2.13`},
  {1.650000000000001`, 1.8`}, {1.700000000000001`, 1.51`},
  {1.750000000000001`, 1.277`}, {1.8000000000000012`, 1.078`},
  {1.8500000000000012`, 0.908`}, {1.9000000000000012`, 0.77`},
  {1.9500000000000013`, 0.65`}, {2.0000000000000013`, 0.507`},
  {2.1000000000000014`, 0.363`}, {2.2000000000000015`, 0.261`},
  {2.3000000000000016`, 0.187`}, {2.4000000000000017`, 0.1162`},
  {2.600000000000002`, 0.0611`}, {2.800000000000002`, 0.0326`}}
```

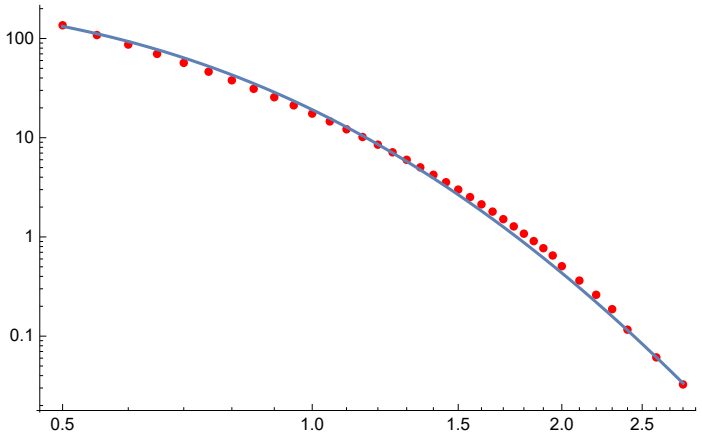
Out[119]=
```
{{0.5, 136.}, {0.55, 108.3}, {0.6, 86.9}, {0.65, 70.}, {0.7, 56.8}, {0.75, 46.3},
 {0.8, 37.9}, {0.85, 31.1}, {0.9, 25.6}, {0.95, 21.2}, {1., 17.5},
 {1.05, 14.6}, {1.1, 12.16}, {1.15, 10.17}, {1.2, 8.51}, {1.25, 7.13},
 {1.3, 5.99}, {1.35, 5.03}, {1.4, 4.23}, {1.45, 3.56}, {1.5, 3.}, {1.55, 2.52},
 {1.6, 2.13}, {1.65, 1.8}, {1.7, 1.51}, {1.75, 1.277}, {1.8, 1.078},
 {1.85, 0.908}, {1.9, 0.77}, {1.95, 0.65}, {2., 0.507}, {2.1, 0.363},
 {2.2, 0.261}, {2.3, 0.187}, {2.4, 0.1162}, {2.6, 0.0611}, {2.8, 0.0326}}
```

In[120]:=
```
FindFit[au62c1, f[c, pt, 1.06, T, μ, 0.0, 0.13957018], {c, T, μ}, pt]
```

Out[120]=
```
{c → 1.46141, T → 0.180421, μ → 1.4098}
```

In[121]:=
```
Show[ListLogLogPlot[au62c1, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.06, T, μ, 0., 0.13957] /.
   {c → 1.9596141, T → 0.18821, μ → 1.40928}, {pt, 0.5, 2.8}]]
```

Out[121]=



In[122]:=
```
{c, T, μ} /. {c → 0.509853, T → 0.181865, μ → 1.58084}
```

Out[122]=
```
{0.509853, 0.181865, 1.58084}
```

In[123]:=
```
(*/-distributions of pions (+) at AU AU AT 62.4 GeV"
"5%-10%"/*)
```

In[124]:=
```
au62c2 = {{0.5`, 111.4`}, {0.55`, 89.`}, {0.6000000000000001`, 71.4`},
  {0.6500000000000001`, 57.6`}, {0.7000000000000002`, 46.6`},
  {0.7500000000000002`, 38.`}, {0.8000000000000003`, 31.1`},
  {0.8500000000000003`, 25.5`}, {0.9000000000000004`, 21.`},
  {0.9500000000000004`, 17.3`}, {1.0000000000000004`, 14.4`},
  {1.0500000000000005`, 11.94`}, {1.1000000000000005`, 9.95`},
  {1.1500000000000006`, 8.31`}, {1.2000000000000006`, 6.96`},
  {1.2500000000000007`, 5.83`}, {1.3000000000000007`, 4.9`},
  {1.3500000000000008`, 4.12`}, {1.4000000000000008`, 3.46`},
  {1.4500000000000008`, 2.91`}, {1.5000000000000009`, 2.45`},
  {1.550000000000001`, 2.07`}, {1.600000000000001`, 1.74`},
  {1.650000000000001`, 1.47`}, {1.700000000000001`, 1.239`},
  {1.750000000000001`, 1.048`}, {1.8000000000000012`, 0.886`},
  {1.8500000000000012`, 0.749`}, {1.9000000000000012`, 0.633`},
  {1.9500000000000013`, 0.536`}, {2.0000000000000013`, 0.418`},
  {2.1000000000000014`, 0.3`}, {2.2000000000000015`, 0.216`},
  {2.3000000000000016`, 0.156`}, {2.4000000000000017`, 0.0972`},
  {2.600000000000002`, 0.0512`}, {2.800000000000002`, 0.0276`}}
```

Out[124]=
```
{{0.5, 111.4}, {0.55, 89.}, {0.6, 71.4}, {0.65, 57.6}, {0.7, 46.6},
 {0.75, 38.}, {0.8, 31.1}, {0.85, 25.5}, {0.9, 21.}, {0.95, 17.3}, {1., 14.4},
 {1.05, 11.94}, {1.1, 9.95}, {1.15, 8.31}, {1.2, 6.96}, {1.25, 5.83},
 {1.3, 4.9}, {1.35, 4.12}, {1.4, 3.46}, {1.45, 2.91}, {1.5, 2.45}, {1.55, 2.07},
 {1.6, 1.74}, {1.65, 1.47}, {1.7, 1.239}, {1.75, 1.048}, {1.8, 0.886},
 {1.85, 0.749}, {1.9, 0.633}, {1.95, 0.536}, {2., 0.418}, {2.1, 0.3},
 {2.2, 0.216}, {2.3, 0.156}, {2.4, 0.0972}, {2.6, 0.0512}, {2.8, 0.0276}}
```

In[125]:=
```
au62c3 = {{0.5`, 84.7`}, {0.55`, 67.7`}, {0.6000000000000001`, 54.3`},
  {0.6500000000000001`, 43.8`}, {0.7000000000000002`, 35.4`},
  {0.7500000000000002`, 28.8`}, {0.8000000000000003`, 23.6`},
  {0.8500000000000003`, 19.3`}, {0.9000000000000004`, 15.9`},
  {0.9500000000000004`, 13.11`}, {1.0000000000000004`, 10.85`},
  {1.0500000000000005`, 9.01`}, {1.1000000000000005`, 7.5`},
  {1.1500000000000006`, 6.26`}, {1.2000000000000006`, 5.24`},
  {1.2500000000000007`, 4.39`}, {1.3000000000000007`, 3.68`},
  {1.3500000000000008`, 3.09`}, {1.4000000000000008`, 2.6`},
  {1.4500000000000008`, 2.19`}, {1.5000000000000009`, 1.85`},
  {1.550000000000001`, 1.55`}, {1.600000000000001`, 1.312`},
  {1.650000000000001`, 1.108`}, {1.700000000000001`, 0.934`},
  {1.750000000000001`, 0.79`}, {1.8000000000000012`, 0.667`},
  {1.8500000000000012`, 0.566`}, {1.9000000000000012`, 0.478`},
  {1.9500000000000013`, 0.404`}, {2.0000000000000013`, 0.317`},
  {2.1000000000000014`, 0.228`}, {2.2000000000000015`, 0.165`},
  {2.3000000000000016`, 0.1191`}, {2.4000000000000017`, 0.0746`},
  {2.600000000000002`, 0.0398`}, {2.800000000000002`, 0.0215`}}
```

Out[125]=
```
{{0.5, 84.7}, {0.55, 67.7}, {0.6, 54.3}, {0.65, 43.8}, {0.7, 35.4}, {0.75, 28.8},
 {0.8, 23.6}, {0.85, 19.3}, {0.9, 15.9}, {0.95, 13.11}, {1., 10.85},
 {1.05, 9.01}, {1.1, 7.5}, {1.15, 6.26}, {1.2, 5.24}, {1.25, 4.39}, {1.3, 3.68},
 {1.35, 3.09}, {1.4, 2.6}, {1.45, 2.19}, {1.5, 1.85}, {1.55, 1.55},
 {1.6, 1.312}, {1.65, 1.108}, {1.7, 0.934}, {1.75, 0.79}, {1.8, 0.667},
 {1.85, 0.566}, {1.9, 0.478}, {1.95, 0.404}, {2., 0.317}, {2.1, 0.228},
 {2.2, 0.165}, {2.3, 0.1191}, {2.4, 0.0746}, {2.6, 0.0398}, {2.8, 0.0215}}
```

In[126]:=
```
au62c4 = {{0.5`, 47.5`}, {0.55`, 37.9`}, {0.6000000000000001`, 30.4`},
  {0.6500000000000001`, 24.4`}, {0.7000000000000002`, 19.7`},
  {0.7500000000000002`, 16.`}, {0.8000000000000003`, 13.02`},
  {0.8500000000000003`, 10.64`}, {0.9000000000000004`, 8.73`},
  {0.9500000000000004`, 7.17`}, {1.0000000000000004`, 5.91`},
  {1.0500000000000005`, 4.89`}, {1.1000000000000005`, 4.06`},
  {1.1500000000000006`, 3.37`}, {1.2000000000000006`, 2.82`},
  {1.2500000000000007`, 2.35`}, {1.3000000000000007`, 1.97`},
  {1.3500000000000008`, 1.65`}, {1.4000000000000008`, 1.388`},
  {1.4500000000000008`, 1.168`}, {1.5000000000000009`, 0.981`},
  {1.550000000000001`, 0.827`}, {1.600000000000001`, 0.697`},
  {1.650000000000001`, 0.588`}, {1.700000000000001`, 0.496`},
  {1.750000000000001`, 0.42`}, {1.8000000000000012`, 0.354`},
  {1.8500000000000012`, 0.3`}, {1.9000000000000012`, 0.254`},
  {1.9500000000000013`, 0.215`}, {2.0000000000000013`, 0.169`},
  {2.1000000000000014`, 0.1218`}, {2.2000000000000015`, 0.0882`},
  {2.3000000000000016`, 0.064`}, {2.4000000000000017`, 0.0405`},
  {2.600000000000002`, 0.0217`}, {2.800000000000002`, 0.01186`}}
```

Out[126]=
```
{{0.5, 47.5}, {0.55, 37.9}, {0.6, 30.4}, {0.65, 24.4}, {0.7, 19.7}, {0.75, 16.},
 {0.8, 13.02}, {0.85, 10.64}, {0.9, 8.73}, {0.95, 7.17}, {1., 5.91},
 {1.05, 4.89}, {1.1, 4.06}, {1.15, 3.37}, {1.2, 2.82}, {1.25, 2.35}, {1.3, 1.97},
 {1.35, 1.65}, {1.4, 1.388}, {1.45, 1.168}, {1.5, 0.981}, {1.55, 0.827},
 {1.6, 0.697}, {1.65, 0.588}, {1.7, 0.496}, {1.75, 0.42}, {1.8, 0.354},
 {1.85, 0.3}, {1.9, 0.254}, {1.95, 0.215}, {2., 0.169}, {2.1, 0.1218},
 {2.2, 0.0882}, {2.3, 0.064}, {2.4, 0.0405}, {2.6, 0.0217}, {2.8, 0.01186}}
```

In[127]:=
```
au62c5 = {{0.5`, 18.4`}, {0.55`, 14.6`}, {0.6000000000000001`, 11.63`},
  {0.6500000000000001`, 9.28`}, {0.7000000000000002`, 7.43`},
  {0.7500000000000002`, 5.98`}, {0.8000000000000003`, 4.83`},
  {0.8500000000000003`, 3.92`}, {0.9000000000000004`, 3.19`},
  {0.9500000000000004`, 2.6`}, {1.0000000000000004`, 2.13`},
  {1.0500000000000005`, 1.75`}, {1.1000000000000005`, 1.436`},
  {1.1500000000000006`, 1.186`}, {1.2000000000000006`, 0.982`},
  {1.2500000000000007`, 0.816`}, {1.3000000000000007`, 0.68`},
  {1.3500000000000008`, 0.567`}, {1.4000000000000008`, 0.475`},
  {1.4500000000000008`, 0.397`}, {1.5000000000000009`, 0.333`},
  {1.550000000000001`, 0.279`}, {1.600000000000001`, 0.234`},
  {1.650000000000001`, 0.197`}, {1.700000000000001`, 0.166`},
  {1.750000000000001`, 0.1401`}, {1.8000000000000012`, 0.1182`},
  {1.8500000000000012`, 0.0997`}, {1.9000000000000012`, 0.0844`},
  {1.9500000000000013`, 0.0715`}, {2.0000000000000013`, 0.0561`},
  {2.1000000000000014`, 0.0406`}, {2.2000000000000015`, 0.0294`},
  {2.3000000000000016`, 0.0214`}, {2.4000000000000017`, 0.01357`},
  {2.600000000000002`, 0.00735`}, {2.800000000000002`, 0.00407`}}
```

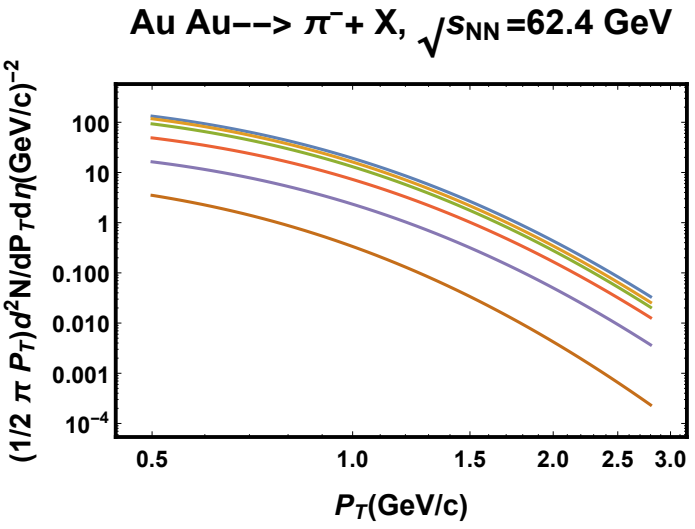
Out[127]=
```
{{0.5, 18.4}, {0.55, 14.6}, {0.6, 11.63}, {0.65, 9.28}, {0.7, 7.43}, {0.75, 5.98},
 {0.8, 4.83}, {0.85, 3.92}, {0.9, 3.19}, {0.95, 2.6}, {1., 2.13}, {1.05, 1.75},
 {1.1, 1.436}, {1.15, 1.186}, {1.2, 0.982}, {1.25, 0.816}, {1.3, 0.68},
 {1.35, 0.567}, {1.4, 0.475}, {1.45, 0.397}, {1.5, 0.333}, {1.55, 0.279},
 {1.6, 0.234}, {1.65, 0.197}, {1.7, 0.166}, {1.75, 0.1401}, {1.8, 0.1182},
 {1.85, 0.0997}, {1.9, 0.0844}, {1.95, 0.0715}, {2., 0.0561}, {2.1, 0.0406},
 {2.2, 0.0294}, {2.3, 0.0214}, {2.4, 0.01357}, {2.6, 0.00735}, {2.8, 0.00407}}
```

In[128]:=
```
au62c6 = {{0.5`, 5.2`}, {0.55`, 4.08`}, {0.6000000000000001`, 3.2`},
  {0.6500000000000001`, 2.53`}, {0.7000000000000002`, 2.`},
  {0.7500000000000002`, 1.59`}, {0.8000000000000003`, 1.268`},
  {0.8500000000000003`, 1.016`}, {0.9000000000000004`, 0.818`},
  {0.9500000000000004`, 0.66`}, {1.0000000000000004`, 0.532`},
  {1.0500000000000005`, 0.432`}, {1.1000000000000005`, 0.352`},
  {1.1500000000000006`, 0.287`}, {1.2000000000000006`, 0.236`},
  {1.2500000000000007`, 0.194`}, {1.3000000000000007`, 0.16`},
  {1.3500000000000008`, 0.1326`}, {1.4000000000000008`, 0.1101`},
  {1.4500000000000008`, 0.0915`}, {1.5000000000000009`, 0.0761`},
  {1.550000000000001`, 0.0636`}, {1.600000000000001`, 0.0531`},
  {1.650000000000001`, 0.0446`}, {1.700000000000001`, 0.0373`},
  {1.750000000000001`, 0.0315`}, {1.8000000000000012`, 0.0264`},
  {1.8500000000000012`, 0.0221`}, {1.9000000000000012`, 0.0187`},
  {1.9500000000000013`, 0.0159`}, {2.0000000000000013`, 0.01237`},
  {2.1000000000000014`, 0.00894`}, {2.2000000000000015`, 0.00646`},
  {2.3000000000000016`, 0.0047`}, {2.4000000000000017`, 0.00296`},
  {2.600000000000002`, 0.00161`}, {2.800000000000002`, 0.000898`}}
```

Out[128]=
```
{{0.5, 5.2}, {0.55, 4.08}, {0.6, 3.2}, {0.65, 2.53}, {0.7, 2.},
 {0.75, 1.59}, {0.8, 1.268}, {0.85, 1.016}, {0.9, 0.818}, {0.95, 0.66},
 {1., 0.532}, {1.05, 0.432}, {1.1, 0.352}, {1.15, 0.287}, {1.2, 0.236},
 {1.25, 0.194}, {1.3, 0.16}, {1.35, 0.1326}, {1.4, 0.1101}, {1.45, 0.0915},
 {1.5, 0.0761}, {1.55, 0.0636}, {1.6, 0.0531}, {1.65, 0.0446},
 {1.7, 0.0373}, {1.75, 0.0315}, {1.8, 0.0264}, {1.85, 0.0221}, {1.9, 0.0187},
 {1.95, 0.0159}, {2., 0.01237}, {2.1, 0.00894}, {2.2, 0.00646},
 {2.3, 0.0047}, {2.4, 0.00296}, {2.6, 0.00161}, {2.8, 0.000898}}
```

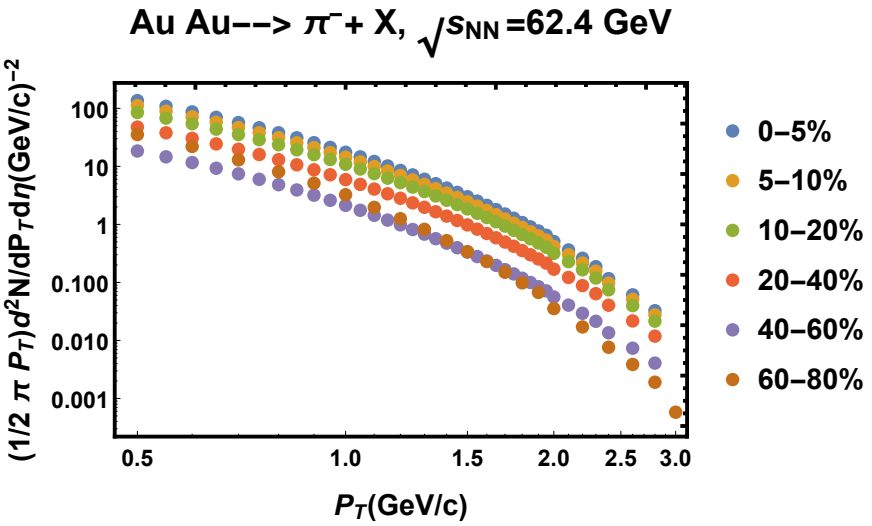
In[129]:=
```
Fau62Gev = LogLogPlot[{f[c, pt, 1.06, T, μ, 0.`, 0.13957018`] /.
    {c → 1.9596141, T → 0.18821, μ → 1.40928},
   f[c, pt, 1.06, T, μ, 0.`, 0.13957018`] /.
    {c → 1.71465, T → 0.185261, μ → 1.39707},
   f[c, pt, 1.059, T, μ, 0.`, 0.13957018`] /.
    {c → 1.5886, T → 0.183936, μ → 1.37211},
   f[c, pt, 1.059, T, μ, 0.`, 0.13957018`] /. {c → 1.4091604, T → 0.181839,
     μ → 1.2922}, f[c, pt, 1.058, T, μ, 0.`, 0.13957018`] /.
    {c → 1.29401964, T → 0.168805, μ → 1.105957}, f[c, pt, 1.056, T, μ,
     0.`, 0.13957018`] /. {c → 0.359029, T → 0.145982, μ → 0.9983}},
  {pt, 0.5, 2.8}, Frame → {{True, True}, {True, True}}, PlotStyle →
   (PointSize[#] & /@ {Large}), FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameLabel → {"PT (GeV/c)", "(1/2 π PT) d2N/dPTdη (GeV/c)-2"},
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLabel → "Au Au--> π- + X, √sNN =62.4 GeV"]
```

Out[129]=



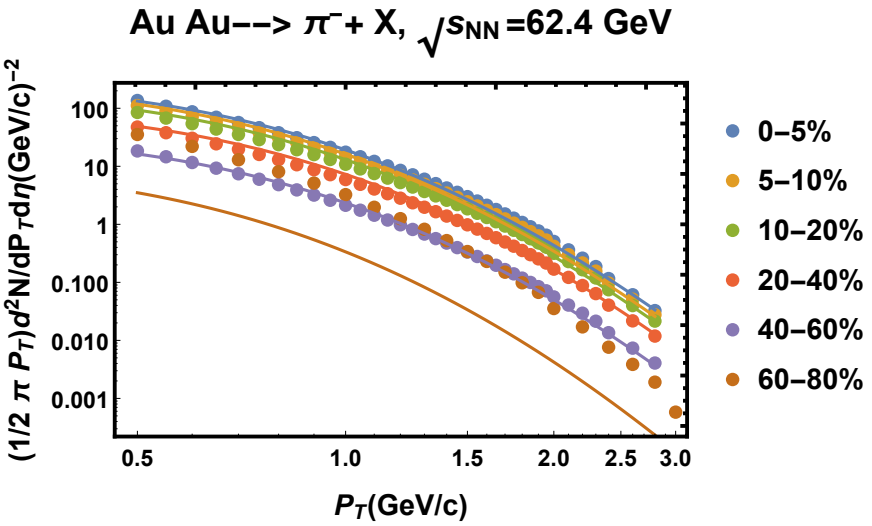
In[130]:=
```
dau64G = ListLogLogPlot[{au62c1, au62c2, au62c3, au62c4, au62c5, au19c6},
  PlotStyle → (PointSize[#] & /@ {Large}), PlotStyle → {Red, Blue, Black,
    Green, Orange, Gray, Yellow, Brown, Purple, Silver, Gold, Pink},
  FrameTicksStyle → Directive[Bold, Dashed, 12], Frame →
   {{True, True}, {True, True}}, PlotStyle → {Red, Blue, Black , Gray, Green},
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLegends →
   Placed[{"0-5%", "5-10%", "10-20%", "20-40%", "40-60%", "60-80%"}, Right],
  FrameLabel → {"PT (GeV/c)", "(1/2 π PT) d2N/dPTdη (GeV/c)-2"},
  PlotLegends → Placed[{""}, Right], PlotLabel → "Au Au--> π- + X, √sNN =62.4 GeV"]
```

Out[130]=



In[131]:=
```
Show[dau64G, Fau62Gev]
```

Out[131]=



In[132]:=
```
Import["au14n.xlsx"]
```

```
{{{, 14.5}, {Centrality, 0%-5%}, {0.5, 86.6}, {0.55, 68.9}, {0.6, 55.},
  {0.65, 44.2}, {0.7, 35.9}, {0.75, 29.}, {0.8, 23.6}, {0.85, 19.3},
  {0.9, 15.8}, {0.95, 12.95}, {1., 10.67}, {1.05, 8.77}, {1.1, 7.27},
  {1.15, 6.03}, {1.2, 5.01}, {1.25, 4.15}, {1.3, 3.45}, {1.35, 2.86},
```

{1.4, 2.38}, {1.45, 1.99}, {1.5, 1.65}, {1.55, 1.37}, {1.6, 1.138},
{1.65, 0.951}, {1.7, 0.787}, {1.75, 0.655}, {1.8, 0.545}, {1.85, 0.452},
{1.9, 0.374}, {1.95, 0.312}, {2., 0.237}, {2.1, 0.163}, {2.2, 0.1135},
{2.3, 0.0776}, {2.4, 0.0455}, {2.6, 0.0218}, {2.8, 0.01046}},
{{, }, {Centrality, 5%-10%}, {0.5, 71.1}, {0.55, 56.5}, {0.6, 45.1}, {0.65, 36.2},
{0.7, 29.3}, {0.75, 23.7}, {0.8, 19.3}, {0.85, 15.8}, {0.9, 12.86}, {0.95, 10.55},
{1., 8.67}, {1.05, 7.14}, {1.1, 5.89}, {1.15, 4.88}, {1.2, 4.06}, {1.25, 3.37},
{1.3, 2.79}, {1.35, 2.31}, {1.4, 1.92}, {1.45, 1.6}, {1.5, 1.33}, {1.55, 1.105},
{1.6, 0.919}, {1.65, 0.764}, {1.7, 0.636}, {1.75, 0.527}, {1.8, 0.439},
{1.85, 0.363}, {1.9, 0.303}, {1.95, 0.251}, {2., 0.191}, {2.1, 0.1314},
{2.2, 0.0907}, {2.3, 0.0626}, {2.4, 0.0368}, {2.6, 0.0178}, {2.8, 0.00849}},
{{Centrality, 10%-20%}, {0.5, 54.2}, {0.55, 43.}, {0.6, 34.4},
{0.65, 27.5}, {0.7, 22.3}, {0.75, 17.9}, {0.8, 14.6}, {0.85, 11.89},
{0.9, 9.68}, {0.95, 7.92}, {1., 6.48}, {1.05, 5.33}, {1.1, 4.39},
{1.15, 3.63}, {1.2, 3.01}, {1.25, 2.49}, {1.3, 2.06}, {1.35, 1.71},
{1.4, 1.42}, {1.45, 1.178}, {1.5, 0.981}, {1.55, 0.811}, {1.6, 0.675},
{1.65, 0.56}, {1.7, 0.466}, {1.75, 0.386}, {1.8, 0.32}, {1.85, 0.265},
{1.9, 0.221}, {1.95, 0.183}, {2., 0.14}, {2.1, 0.0963}, {2.2, 0.0664},
{2.3, 0.0459}, {2.4, 0.0267}, {2.6, 0.01295}, {2.8, 0.00616}},
{{Centrality, 20%-40%}, {0.5, 30.4}, {0.55, 24.1}, {0.6, 19.2},
{0.65, 15.3}, {0.7, 12.28}, {0.75, 9.85}, {0.8, 7.96}, {0.85, 6.45},
{0.9, 5.23}, {0.95, 4.25}, {1., 3.46}, {1.05, 2.82}, {1.1, 2.31},
{1.15, 1.9}, {1.2, 1.57}, {1.25, 1.285}, {1.3, 1.061}, {1.35, 0.877},
{1.4, 0.726}, {1.45, 0.599}, {1.5, 0.495}, {1.55, 0.41}, {1.6, 0.339},
{1.65, 0.28}, {1.7, 0.232}, {1.75, 0.192}, {1.8, 0.159}, {1.85, 0.132},
{1.9, 0.1087}, {1.95, 0.0908}, {2., 0.0681}, {2.1, 0.0471}, {2.2, 0.0324},
{2.3, 0.0223}, {2.4, 0.01298}, {2.6, 0.00616}, {2.8, 0.00298}},
{{Centrality, 40%-60%}, {0.5, 11.83}, {0.55, 9.29}, {0.6, 7.32},
{0.65, 5.77}, {0.7, 4.59}, {0.75, 3.63}, {0.8, 2.9}, {0.85, 2.32},
{0.9, 1.86}, {0.95, 1.49}, {1., 1.2}, {1.05, 0.967}, {1.1, 0.78},
{1.15, 0.634}, {1.2, 0.517}, {1.25, 0.42}, {1.3, 0.343}, {1.35, 0.28},
{1.4, 0.23}, {1.45, 0.187}, {1.5, 0.153}, {1.55, 0.1253}, {1.6, 0.1032},
{1.65, 0.0844}, {1.7, 0.0695}, {1.75, 0.0568}, {1.8, 0.0468}, {1.85, 0.0385},
{1.9, 0.0315}, {1.95, 0.0258}, {2., 0.0195}, {2.1, 0.0132}, {2.2, 0.00897},
{2.3, 0.00612}, {2.4, 0.00343}, {2.6, 0.00162}, {2.8, 0.000741}},
{{Centrality, 60%-80%}, {0.5, 3.51}, {0.55, 2.73}, {0.6, 2.12}, {0.65, 1.65},
{0.7, 1.29}, {0.75, 1.006}, {0.8, 0.791}, {0.85, 0.623}, {0.9, 0.491},
{0.95, 0.388}, {1., 0.307}, {1.05, 0.243}, {1.1, 0.193}, {1.15, 0.153},
{1.2, 0.1232}, {1.25, 0.098}, {1.3, 0.079}, {1.35, 0.0634}, {1.4, 0.0515},
{1.45, 0.0411}, {1.5, 0.0331}, {1.55, 0.0268}, {1.6, 0.0217}, {1.65, 0.0176},
{1.7, 0.0143}, {1.75, 0.01132}, {1.8, 0.00932}, {1.85, 0.00755},
{1.9, 0.00616}, {1.95, 0.00491}, {2., 0.00366}, {2.1, 0.00236}, {2.2, 0.00158},
{2.3, 0.001045}, {2.4, 0.000573}, {2.6, 0.000254}, {2.8, 0.0001111}}}

```
{{{"", 14.5`}, {"Centrality", "0%-5%"},}, {{"", ""}, {"Centrality", "5%-10%"},},
 {{"Centrality", "10%-20%"},}, {{"Centrality", "20%-40%"},},
 {{"Centrality", "40%-60%"},}, {{"Centrality", "60%-80%"},}}
```

```
{{{, 14.5}, {Centrality, 0%-5%}, Null}, {{, }, {Centrality, 5%-10%}, Null},
 {{Centrality, 10%-20%}, Null}, {{Centrality, 20%-40%}, Null},
 {{Centrality, 40%-60%}, Null}, {{Centrality, 60%-80%}, Null}}
```

```
(*/-distributions of pions (+) at AU AU AT 14.5 GeV"
"0%-5%"/*)
```

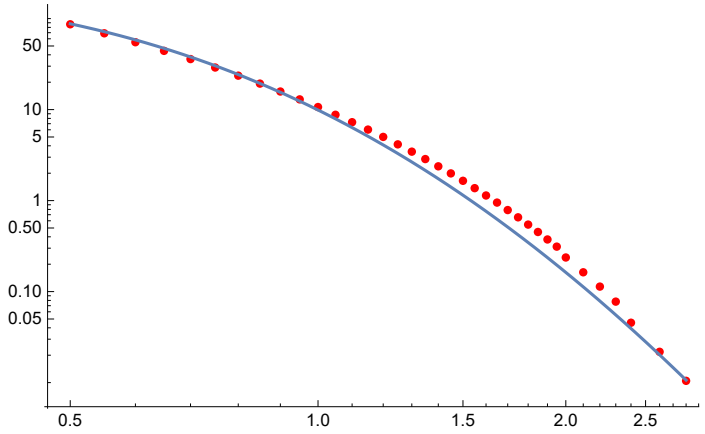
```
au4c1 = {{0.5`, 86.6`}, {0.55`, 68.9`}, {0.6000000000000001`, 55.`},
   {0.6500000000000001`, 44.2`}, {0.7000000000000002`, 35.9`},
   {0.7500000000000002`, 29.`}, {0.8000000000000003`, 23.6`},
   {0.8500000000000003`, 19.3`}, {0.9000000000000004`, 15.8`},
   {0.9500000000000004`, 12.95`}, {1.0000000000000004`, 10.67`},
   {1.0500000000000005`, 8.77`}, {1.1000000000000005`, 7.27`},
   {1.1500000000000006`, 6.03`}, {1.2000000000000006`, 5.01`},
   {1.2500000000000007`, 4.15`}, {1.3000000000000007`, 3.45`},
   {1.3500000000000008`, 2.86`}, {1.4000000000000008`, 2.38`},
   {1.4500000000000008`, 1.99`}, {1.5000000000000009`, 1.65`},
   {1.550000000000001`, 1.37`}, {1.600000000000001`, 1.138`},
   {1.650000000000001`, 0.951`}, {1.700000000000001`, 0.787`},
   {1.750000000000001`, 0.655`}, {1.8000000000000012`, 0.545`},
   {1.8500000000000012`, 0.452`}, {1.9000000000000012`, 0.374`},
   {1.9500000000000013`, 0.312`}, {2.0000000000000013`, 0.237`},
   {2.1000000000000014`, 0.163`}, {2.2000000000000015`, 0.1135`},
   {2.3000000000000016`, 0.0776`}, {2.4000000000000017`, 0.0455`},
   {2.600000000000002`, 0.0218`}, {2.800000000000002`, 0.01046`}}
```

```
{{0.5, 86.6}, {0.55, 68.9}, {0.6, 55.}, {0.65, 44.2}, {0.7, 35.9}, {0.75, 29.},
 {0.8, 23.6}, {0.85, 19.3}, {0.9, 15.8}, {0.95, 12.95}, {1., 10.67},
 {1.05, 8.77}, {1.1, 7.27}, {1.15, 6.03}, {1.2, 5.01}, {1.25, 4.15}, {1.3, 3.45},
 {1.35, 2.86}, {1.4, 2.38}, {1.45, 1.99}, {1.5, 1.65}, {1.55, 1.37},
 {1.6, 1.138}, {1.65, 0.951}, {1.7, 0.787}, {1.75, 0.655}, {1.8, 0.545},
 {1.85, 0.452}, {1.9, 0.374}, {1.95, 0.312}, {2., 0.237}, {2.1, 0.163},
 {2.2, 0.1135}, {2.3, 0.0776}, {2.4, 0.0455}, {2.6, 0.0218}, {2.8, 0.01046}}
```

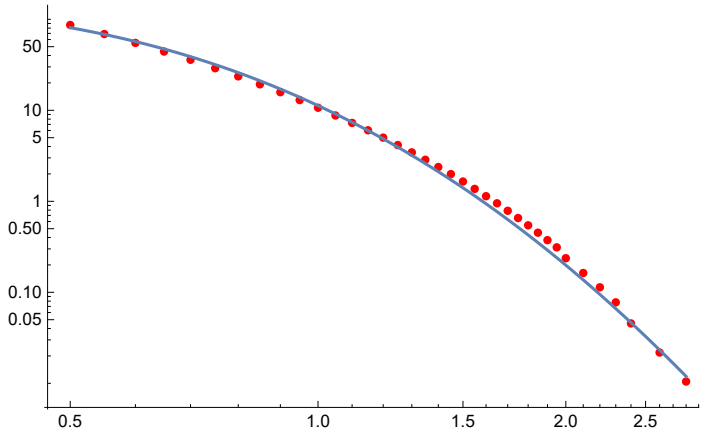
```
FindFit[au4c1, f[c, pt, 1.045, T, 1.1059, 0.0, 0.13957018], {c, T, μ}, pt]
```

```
{c → 4.99017, T → 0.154241, μ → 1.}
```

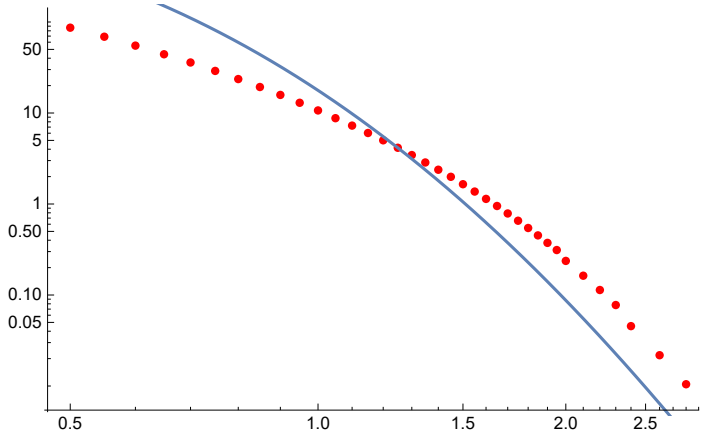
```
Show[ListLogLogPlot[au4c1, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.059, T, 1.1059, 0., 0.13957] /.
   {c → 5.299017, T → 0.159241, μ → 1.}, {pt, 0.5, 2.8}]]
```



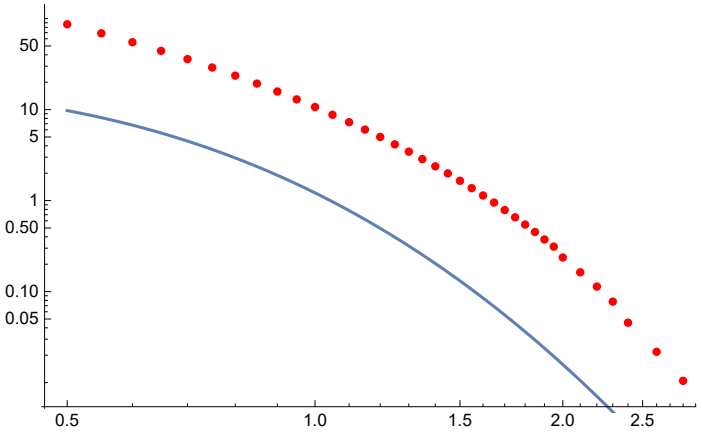

```
Show[ListLogLogPlot[au4c1, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.05, T, μ, 0., 0.13957] /.
   {c → 6.29367, T → 0.164612, μ → 1.1026216}, {pt, 0.5, 2.8}]]
```




```
Show[ListLogLogPlot[au4c1, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.0515, T, μ, 0., 0.13957] /.
   {c → 0.629267, T → 0.147862, μ → 1.46201}, {pt, 0.5, 2.8}]]
```



```
Show[ListLogLogPlot[au4c1, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.043, T, μ, 0., 0.13957] /.
   {c → 0.498502, T → 0.159348, μ → 1.147629}, {pt, 0.5, 2.8}]]
```




```
(*/-distributions of pions (+) at AU AU AT 14.5 GeV"
"5%-10%"/*)

au4c2 = {{0.5`, 71.1`}, {0.55`, 56.5`}, {0.6000000000000001`, 45.1`},
   {0.6500000000000001`, 36.2`}, {0.7000000000000002`, 29.3`},
   {0.7500000000000002`, 23.7`}, {0.8000000000000003`, 19.3`},
   {0.8500000000000003`, 15.8`}, {0.9000000000000004`, 12.86`},
   {0.9500000000000004`, 10.55`}, {1.0000000000000004`, 8.67`},
   {1.0500000000000005`, 7.14`}, {1.1000000000000005`, 5.89`},
   {1.1500000000000006`, 4.88`}, {1.2000000000000006`, 4.06`},
   {1.2500000000000007`, 3.37`}, {1.3000000000000007`, 2.79`},
   {1.3500000000000008`, 2.31`}, {1.4000000000000008`, 1.92`},
   {1.4500000000000008`, 1.6`}, {1.5000000000000009`, 1.33`},
   {1.550000000000001`, 1.105`}, {1.600000000000001`, 0.919`},
   {1.650000000000001`, 0.764`}, {1.700000000000001`, 0.636`},
   {1.750000000000001`, 0.527`}, {1.8000000000000012`, 0.439`},
   {1.8500000000000012`, 0.363`}, {1.9000000000000012`, 0.303`},
   {1.9500000000000013`, 0.251`}, {2.0000000000000013`, 0.191`},
   {2.1000000000000014`, 0.1314`}, {2.2000000000000015`, 0.0907`},
   {2.3000000000000016`, 0.0626`}, {2.4000000000000017`, 0.0368`},
   {2.600000000000002`, 0.0178`}, {2.800000000000002`, 0.00849`}}

{{0.5, 71.1}, {0.55, 56.5}, {0.6, 45.1}, {0.65, 36.2}, {0.7, 29.3}, {0.75, 23.7},
 {0.8, 19.3}, {0.85, 15.8}, {0.9, 12.86}, {0.95, 10.55}, {1., 8.67},
 {1.05, 7.14}, {1.1, 5.89}, {1.15, 4.88}, {1.2, 4.06}, {1.25, 3.37}, {1.3, 2.79},
 {1.35, 2.31}, {1.4, 1.92}, {1.45, 1.6}, {1.5, 1.33}, {1.55, 1.105},
 {1.6, 0.919}, {1.65, 0.764}, {1.7, 0.636}, {1.75, 0.527}, {1.8, 0.439},
 {1.85, 0.363}, {1.9, 0.303}, {1.95, 0.251}, {2., 0.191}, {2.1, 0.1314},
 {2.2, 0.0907}, {2.3, 0.0626}, {2.4, 0.0368}, {2.6, 0.0178}, {2.8, 0.00849}}

(*/-distributions of pions (+) at AU AU AT 14.5 GeV"
"20%-30%"/*)
```

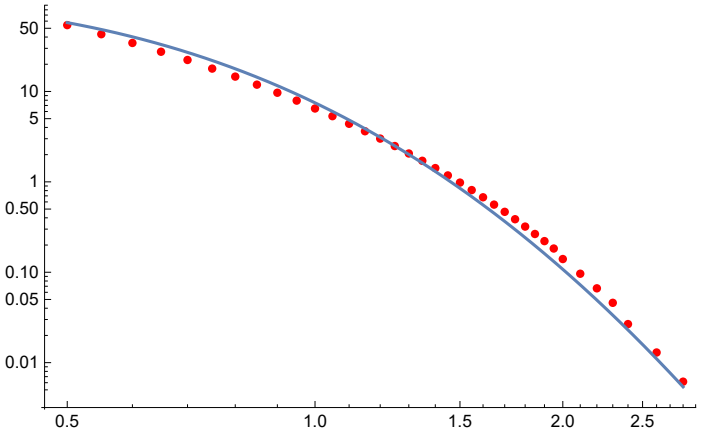
```
au4c3 = {{0.5`, 54.2`}, {0.55`, 43.`}, {0.6000000000000001`, 34.4`},
  {0.6500000000000001`, 27.5`}, {0.7000000000000002`, 22.3`},
  {0.7500000000000002`, 17.9`}, {0.8000000000000003`, 14.6`},
  {0.8500000000000003`, 11.89`}, {0.9000000000000004`, 9.68`},
  {0.9500000000000004`, 7.92`}, {1.0000000000000004`, 6.48`},
  {1.0500000000000005`, 5.33`}, {1.1000000000000005`, 4.39`},
  {1.1500000000000006`, 3.63`}, {1.2000000000000006`, 3.01`},
  {1.2500000000000007`, 2.49`}, {1.3000000000000007`, 2.06`},
  {1.3500000000000008`, 1.71`}, {1.4000000000000008`, 1.42`},
  {1.4500000000000008`, 1.178`}, {1.5000000000000009`, 0.981`},
  {1.550000000000001`, 0.811`}, {1.600000000000001`, 0.675`},
  {1.650000000000001`, 0.56`}, {1.700000000000001`, 0.466`},
  {1.750000000000001`, 0.386`}, {1.8000000000000012`, 0.32`},
  {1.8500000000000012`, 0.265`}, {1.9000000000000012`, 0.221`},
  {1.9500000000000013`, 0.183`}, {2.0000000000000013`, 0.14`},
  {2.1000000000000014`, 0.0963`}, {2.2000000000000015`, 0.0664`},
  {2.3000000000000016`, 0.0459`}, {2.4000000000000017`, 0.0267`},
  {2.600000000000002`, 0.01295`}, {2.800000000000002`, 0.00616`}}
```

```
{{0.5, 54.2}, {0.55, 43.}, {0.6, 34.4}, {0.65, 27.5}, {0.7, 22.3}, {0.75, 17.9},
 {0.8, 14.6}, {0.85, 11.89}, {0.9, 9.68}, {0.95, 7.92}, {1., 6.48}, {1.05, 5.33},
 {1.1, 4.39}, {1.15, 3.63}, {1.2, 3.01}, {1.25, 2.49}, {1.3, 2.06},
 {1.35, 1.71}, {1.4, 1.42}, {1.45, 1.178}, {1.5, 0.981}, {1.55, 0.811},
 {1.6, 0.675}, {1.65, 0.56}, {1.7, 0.466}, {1.75, 0.386}, {1.8, 0.32},
 {1.85, 0.265}, {1.9, 0.221}, {1.95, 0.183}, {2., 0.14}, {2.1, 0.0963},
 {2.2, 0.0664}, {2.3, 0.0459}, {2.4, 0.0267}, {2.6, 0.01295}, {2.8, 0.00616}}
```

```
FindFit[au4c3, f[c, pt, 1.0451, 0.145, μ, 0.0, 0.13957018], {c, T, μ}, pt]
```

```
{c → 10.3376, T → 1., μ → 0.923103}
```

```
Show[ListLogLogPlot[au4c3, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.045, T, μ, 0., 0.13957] /.
   {c → 4.1466011, T → 0.15973, μ → 1.10143}, {pt, 0.5, 2.8}]]
```



```
au4c4 = {{0.5`, 30.4`}, {0.55`, 24.1`}, {0.6000000000000001`, 19.2`},
  {0.6500000000000001`, 15.3`}, {0.7000000000000002`, 12.28`},
  {0.7500000000000002`, 9.85`}, {0.8000000000000003`, 7.96`},
  {0.8500000000000003`, 6.45`}, {0.9000000000000004`, 5.23`},
  {0.9500000000000004`, 4.25`}, {1.0000000000000004`, 3.46`},
  {1.0500000000000005`, 2.82`}, {1.1000000000000005`, 2.31`},
  {1.1500000000000006`, 1.9`}, {1.2000000000000006`, 1.57`},
  {1.2500000000000007`, 1.285`}, {1.3000000000000007`, 1.061`},
  {1.3500000000000008`, 0.877`}, {1.4000000000000008`, 0.726`},
  {1.4500000000000008`, 0.599`}, {1.5000000000000009`, 0.495`},
  {1.550000000000001`, 0.41`}, {1.600000000000001`, 0.339`},
  {1.650000000000001`, 0.28`}, {1.700000000000001`, 0.232`},
  {1.750000000000001`, 0.192`}, {1.8000000000000012`, 0.159`},
  {1.8500000000000012`, 0.132`}, {1.9000000000000012`, 0.1087`},
  {1.9500000000000013`, 0.0908`}, {2.0000000000000013`, 0.0681`},
  {2.1000000000000014`, 0.0471`}, {2.2000000000000015`, 0.0324`},
  {2.3000000000000016`, 0.0223`}, {2.4000000000000017`, 0.01298`},
  {2.600000000000002`, 0.00616`}, {2.800000000000002`, 0.00298`}}
```

```
{{0.5, 30.4}, {0.55, 24.1}, {0.6, 19.2}, {0.65, 15.3}, {0.7, 12.28}, {0.75, 9.85},
 {0.8, 7.96}, {0.85, 6.45}, {0.9, 5.23}, {0.95, 4.25}, {1., 3.46}, {1.05, 2.82},
 {1.1, 2.31}, {1.15, 1.9}, {1.2, 1.57}, {1.25, 1.285}, {1.3, 1.061},
 {1.35, 0.877}, {1.4, 0.726}, {1.45, 0.599}, {1.5, 0.495}, {1.55, 0.41},
 {1.6, 0.339}, {1.65, 0.28}, {1.7, 0.232}, {1.75, 0.192}, {1.8, 0.159},
 {1.85, 0.132}, {1.9, 0.1087}, {1.95, 0.0908}, {2., 0.0681}, {2.1, 0.0471},
 {2.2, 0.0324}, {2.3, 0.0223}, {2.4, 0.01298}, {2.6, 0.00616}, {2.8, 0.00298}}
```

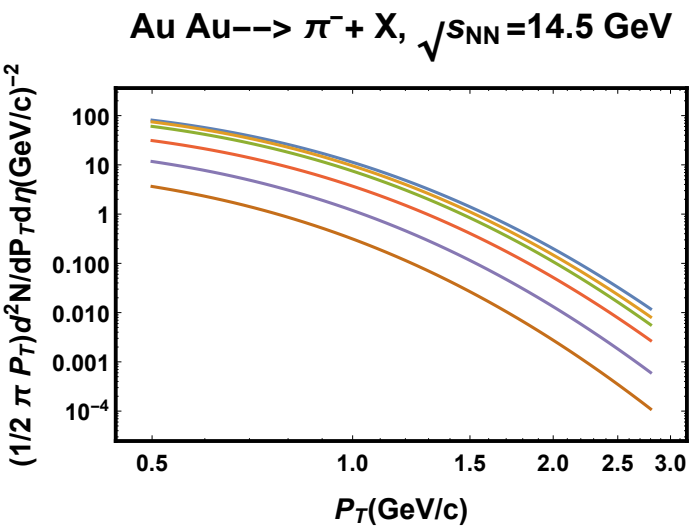
```
au4c5 = {{0.5`, 11.83`}, {0.55`, 9.29`}, {0.6000000000000001`, 7.32`},
  {0.6500000000000001`, 5.77`}, {0.7000000000000002`, 4.59`},
  {0.7500000000000002`, 3.63`}, {0.8000000000000003`, 2.9`},
  {0.8500000000000003`, 2.32`}, {0.9000000000000004`, 1.86`},
  {0.9500000000000004`, 1.49`}, {1.0000000000000004`, 1.2`},
  {1.0500000000000005`, 0.967`}, {1.1000000000000005`, 0.78`},
  {1.1500000000000006`, 0.634`}, {1.2000000000000006`, 0.517`},
  {1.2500000000000007`, 0.42`}, {1.3000000000000007`, 0.343`},
  {1.3500000000000008`, 0.28`}, {1.4000000000000008`, 0.23`},
  {1.4500000000000008`, 0.187`}, {1.5000000000000009`, 0.153`},
  {1.550000000000001`, 0.1253`}, {1.600000000000001`, 0.1032`},
  {1.650000000000001`, 0.0844`}, {1.700000000000001`, 0.0695`},
  {1.750000000000001`, 0.0568`}, {1.8000000000000012`, 0.0468`},
  {1.8500000000000012`, 0.0385`}, {1.9000000000000012`, 0.0315`},
  {1.9500000000000013`, 0.0258`}, {2.0000000000000013`, 0.0195`},
  {2.1000000000000014`, 0.0132`}, {2.2000000000000015`, 0.00897`},
  {2.3000000000000016`, 0.00612`}, {2.4000000000000017`, 0.00343`},
  {2.600000000000002`, 0.00162`}, {2.800000000000002`, 0.000741`}}
```

```
{{0.5, 11.83}, {0.55, 9.29}, {0.6, 7.32}, {0.65, 5.77}, {0.7, 4.59}, {0.75, 3.63},
 {0.8, 2.9}, {0.85, 2.32}, {0.9, 1.86}, {0.95, 1.49}, {1., 1.2}, {1.05, 0.967},
 {1.1, 0.78}, {1.15, 0.634}, {1.2, 0.517}, {1.25, 0.42}, {1.3, 0.343},
 {1.35, 0.28}, {1.4, 0.23}, {1.45, 0.187}, {1.5, 0.153}, {1.55, 0.1253},
 {1.6, 0.1032}, {1.65, 0.0844}, {1.7, 0.0695}, {1.75, 0.0568}, {1.8, 0.0468},
 {1.85, 0.0385}, {1.9, 0.0315}, {1.95, 0.0258}, {2., 0.0195}, {2.1, 0.0132},
 {2.2, 0.00897}, {2.3, 0.00612}, {2.4, 0.00343}, {2.6, 0.00162}, {2.8, 0.000741}}
```

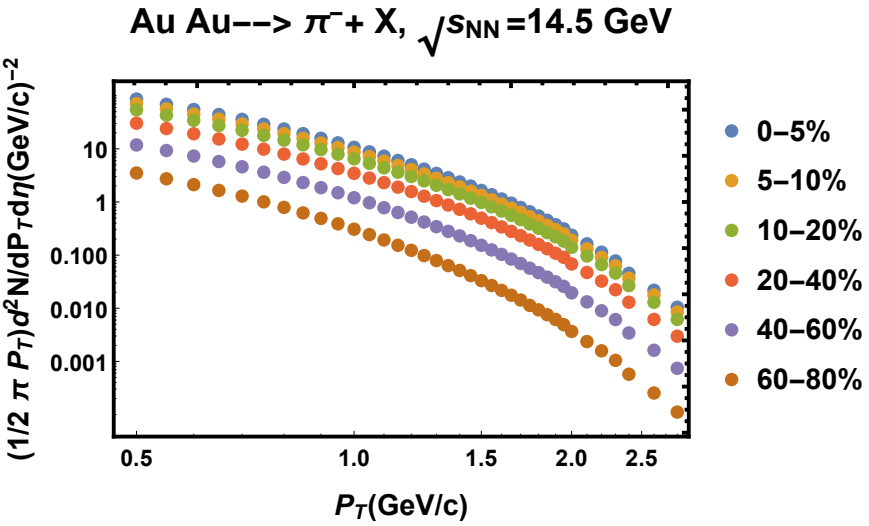
```
au4c6 = {{0.5`, 3.51`}, {0.55`, 2.73`}, {0.6000000000000001`, 2.12`},
  {0.6500000000000001`, 1.65`}, {0.7000000000000002`, 1.29`},
  {0.7500000000000002`, 1.006`}, {0.8000000000000003`, 0.791`},
  {0.8500000000000003`, 0.623`}, {0.9000000000000004`, 0.491`},
  {0.9500000000000004`, 0.388`}, {1.0000000000000004`, 0.307`},
  {1.0500000000000005`, 0.243`}, {1.1000000000000005`, 0.193`},
  {1.1500000000000006`, 0.153`}, {1.2000000000000006`, 0.1232`},
  {1.2500000000000007`, 0.098`}, {1.3000000000000007`, 0.079`},
  {1.3500000000000008`, 0.0634`}, {1.4000000000000008`, 0.0515`},
  {1.4500000000000008`, 0.0411`}, {1.5000000000000009`, 0.0331`},
  {1.550000000000001`, 0.0268`}, {1.600000000000001`, 0.0217`},
  {1.650000000000001`, 0.0176`}, {1.700000000000001`, 0.0143`},
  {1.750000000000001`, 0.01132`}, {1.8000000000000012`, 0.00932`},
  {1.8500000000000012`, 0.00755`}, {1.9000000000000012`, 0.00616`},
  {1.9500000000000013`, 0.00491`}, {2.0000000000000013`, 0.00366`},
  {2.1000000000000014`, 0.00236`}, {2.2000000000000015`, 0.00158`},
  {2.3000000000000016`, 0.001045`}, {2.4000000000000017`, 0.000573`},
  {2.600000000000002`, 0.000254`}, {2.800000000000002`, 0.0001111`}}
```

```
{{0.5, 3.51}, {0.55, 2.73}, {0.6, 2.12}, {0.65, 1.65}, {0.7, 1.29},
 {0.75, 1.006}, {0.8, 0.791}, {0.85, 0.623}, {0.9, 0.491}, {0.95, 0.388},
 {1., 0.307}, {1.05, 0.243}, {1.1, 0.193}, {1.15, 0.153}, {1.2, 0.1232},
 {1.25, 0.098}, {1.3, 0.079}, {1.35, 0.0634}, {1.4, 0.0515}, {1.45, 0.0411},
 {1.5, 0.0331}, {1.55, 0.0268}, {1.6, 0.0217}, {1.65, 0.0176}, {1.7, 0.0143},
 {1.75, 0.01132}, {1.8, 0.00932}, {1.85, 0.00755}, {1.9, 0.00616},
 {1.95, 0.00491}, {2., 0.00366}, {2.1, 0.00236}, {2.2, 0.00158},
 {2.3, 0.001045}, {2.4, 0.000573}, {2.6, 0.000254}, {2.8, 0.0001111}}
```

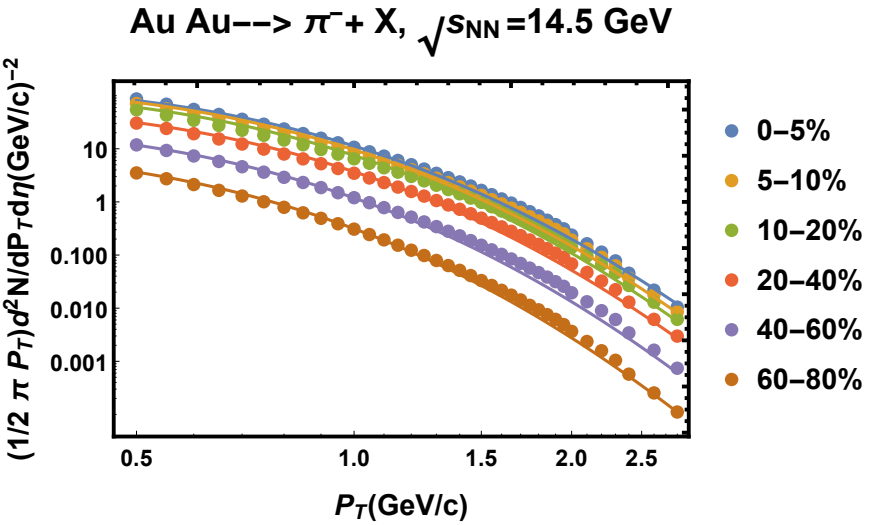
```
Fau14Gev =
 LogLogPlot[{f[c, pt, 1.05, T, μ, 0.`, 0.13957018`] /. {c → 6.29367, T → 0.164612,
      μ → 1.1026216}, f[c, pt, 1.049, T, μ, 0.`, 0.13957018`] /.
     {c → 5.29367, T → 0.160612, μ → 1.1016216}, f[c, pt, 1.048, T, μ,
      0.`, 0.13957018`] /. {c → 4.1466011, T → 0.15873, μ → 1.10043},
    f[c, pt, 1.049, T, μ, 0.`, 0.13957018`] /. {c → 9.29367, T → 0.14612,
      μ → 0.87026216}, f[c, pt, 1.048, T, μ, 0.`, 0.13957018`] /.
     {c → 6.929367, T → 0.134612, μ → 0.76026216},
    f[c, pt, 1.047, T, μ, 0.`, 0.13957018`] /.
     {c → 3.19729367, T → 0.12594612, μ → 0.699026216}},
   {pt, 0.5`, 2.8`}, Frame → {{True, True}, {True, True}},
   FrameTicksStyle → Directive[Bold, Dashed, 12],
   PlotStyle → (PointSize[#] & /@ {Large}),
   FrameLabel → {"PT (GeV/c)", "(1/2 π PT) d2N/dPTdη (GeV/c)-2"},
   FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
   LabelStyle → {Bold, 15}, PlotLabel → "Au Au--> π- + X, √sNN =14.5 GeV"]
```



```
dau14G = ListLogLogPlot[{au4c1, au4c2, au4c3, au4c4, au4c5, au4c6},
  PlotStyle → (PointSize[#] & /@ {Large}),
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  Frame → {{True, True}, {True, True}}, PlotStyle →
   {Red, Blue, Black , Gray, Green}, FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLegends →
   Placed[{"0-5%", "5-10%", "10-20%", "20-40%", "40-60%", "60-80%"}, Right],
  FrameLabel → {"PT (GeV/c)", "(1/2 π PT) d2N/dPTdη (GeV/c)-2"},
  PlotLegends → Placed[{""}, Right], PlotLabel → "Au Au--> π- + X, √sNN =14.5 GeV"]
```




```
Show[dau14G, Fau14Gev]
```




```
(*/-distributions of pions (+) at AU AU AT 19.6 GeV"
"0%-5%"/*)

Import["au19n.xlsx"]

{{{Centrality, 0%-5%}, {0.5, 97.8}, {0.55, 77.8}, {0.6, 62.}, {0.65, 49.7},
  {0.7, 40.}, {0.75, 32.4}, {0.8, 26.4}, {0.85, 21.5}, {0.9, 17.6}, {0.95, 14.5},
```

{1., 11.88}, {1.05, 9.8}, {1.1, 8.1}, {1.15, 6.7}, {1.2, 5.56}, {1.25, 4.62},
{1.3, 3.83}, {1.35, 3.19}, {1.4, 2.66}, {1.45, 2.21}, {1.5, 1.84}, {1.55, 1.53},
{1.6, 1.268}, {1.65, 1.057}, {1.7, 0.882}, {1.75, 0.734}, {1.8, 0.61},
{1.85, 0.507}, {1.9, 0.421}, {1.95, 0.353}, {2., 0.268}, {2.1, 0.186},
{2.2, 0.1287}, {2.3, 0.0894}, {2.4, 0.053}, {2.6, 0.0256}, {2.8, 0.01259}},
{{Centrality, 5%-10%}, {0.5, 79.7}, {0.55, 63.3}, {0.6, 50.5}, {0.65, 40.5},
{0.7, 32.6}, {0.75, 26.4}, {0.8, 21.4}, {0.85, 17.5}, {0.9, 14.3}, {0.95, 11.7},
{1., 9.62}, {1.05, 7.91}, {1.1, 6.53}, {1.15, 5.41}, {1.2, 4.48}, {1.25, 3.72},
{1.3, 3.09}, {1.35, 2.57}, {1.4, 2.14}, {1.45, 1.78}, {1.5, 1.48}, {1.55, 1.229},
{1.6, 1.022}, {1.65, 0.849}, {1.7, 0.711}, {1.75, 0.59}, {1.8, 0.49},
{1.85, 0.407}, {1.9, 0.339}, {1.95, 0.283}, {2., 0.217}, {2.1, 0.149},
{2.2, 0.1042}, {2.3, 0.0727}, {2.4, 0.0427}, {2.6, 0.0208}, {2.8, 0.01019}},
{{Centrality, 10%-20%}, {0.5, 60.5}, {0.55, 48.1}, {0.6, 38.3}, {0.65, 30.7},
{0.7, 24.7}, {0.75, 19.9}, {0.8, 16.2}, {0.85, 13.15}, {0.9, 10.73},
{0.95, 8.79}, {1., 7.2}, {1.05, 5.91}, {1.1, 4.88}, {1.15, 4.03}, {1.2, 3.33},
{1.25, 2.76}, {1.3, 2.29}, {1.35, 1.9}, {1.4, 1.58}, {1.45, 1.313}, {1.5, 1.09},
{1.55, 0.907}, {1.6, 0.754}, {1.65, 0.628}, {1.7, 0.522}, {1.75, 0.435},
{1.8, 0.36}, {1.85, 0.3}, {1.9, 0.25}, {1.95, 0.209}, {2., 0.159}, {2.1, 0.1107},
{2.2, 0.0767}, {2.3, 0.0535}, {2.4, 0.0315}, {2.6, 0.0154}, {2.8, 0.00758}},
{{Centrality, 20%-40%}, {0.5, 34.}, {0.55, 26.9}, {0.6, 21.4},
{0.65, 17.1}, {0.7, 13.7}, {0.75, 10.98}, {0.8, 8.86}, {0.85, 7.18},
{0.9, 5.83}, {0.95, 4.74}, {1., 3.87}, {1.05, 3.16}, {1.1, 2.59},
{1.15, 2.13}, {1.2, 1.75}, {1.25, 1.45}, {1.3, 1.194}, {1.35, 0.988},
{1.4, 0.817}, {1.45, 0.677}, {1.5, 0.561}, {1.55, 0.465}, {1.6, 0.386},
{1.65, 0.32}, {1.7, 0.266}, {1.75, 0.22}, {1.8, 0.183}, {1.85, 0.152},
{1.9, 0.1268}, {1.95, 0.1051}, {2., 0.0801}, {2.1, 0.0558}, {2.2, 0.0385},
{2.3, 0.0269}, {2.4, 0.0158}, {2.6, 0.00776}, {2.8, 0.00382}},
{{Centrality, 40%-60%}, {0.5, 13.3}, {0.55, 10.47}, {0.6, 8.25},
{0.65, 6.53}, {0.7, 5.17}, {0.75, 4.11}, {0.8, 3.28}, {0.85, 2.63},
{0.9, 2.11}, {0.95, 1.7}, {1., 1.37}, {1.05, 1.11}, {1.1, 0.899},
{1.15, 0.732}, {1.2, 0.595}, {1.25, 0.487}, {1.3, 0.398}, {1.35, 0.326},
{1.4, 0.268}, {1.45, 0.22}, {1.5, 0.18}, {1.55, 0.149}, {1.6, 0.1226},
{1.65, 0.1012}, {1.7, 0.0834}, {1.75, 0.0688}, {1.8, 0.0571}, {1.85, 0.047},
{1.9, 0.0389}, {1.95, 0.032}, {2., 0.0243}, {2.1, 0.0168}, {2.2, 0.01155},
{2.3, 0.00795}, {2.4, 0.00467}, {2.6, 0.00222}, {2.8, 0.001067}},
{{Centrality, 60%-80%}, {0.5, 4.}, {0.55, 3.11}, {0.6, 2.42}, {0.65, 1.89},
{0.7, 1.48}, {0.75, 1.156}, {0.8, 0.908}, {0.85, 0.72}, {0.9, 0.568},
{0.95, 0.452}, {1., 0.359}, {1.05, 0.285}, {1.1, 0.227}, {1.15, 0.182},
{1.2, 0.147}, {1.25, 0.1185}, {1.3, 0.0954}, {1.35, 0.0769}, {1.4, 0.0624},
{1.45, 0.0507}, {1.5, 0.0416}, {1.55, 0.0334}, {1.6, 0.0273}, {1.65, 0.0222},
{1.7, 0.0183}, {1.75, 0.0149}, {1.8, 0.01204}, {1.85, 0.00992}, {1.9, 0.00817},
{1.95, 0.00665}, {2., 0.00498}, {2.1, 0.00333}, {2.2, 0.00228},
{2.3, 0.00153}, {2.4, 0.000885}, {2.6, 0.000416}, {2.8, 0.000192}},
{{62.4, }, {Centrality, 0%-5%}, {0.5, 136.}, {0.55, 108.3}, {0.6, 86.9},
{0.65, 70.}, {0.7, 56.8}, {0.75, 46.3}, {0.8, 37.9}, {0.85, 31.1}, {0.9, 25.6},
{0.95, 21.2}, {1., 17.5}, {1.05, 14.6}, {1.1, 12.16}, {1.15, 10.17}, {1.2, 8.51},

```
  {1.25, 7.13}, {1.3, 5.99}, {1.35, 5.03}, {1.4, 4.23}, {1.45, 3.56}, {1.5, 3.},
  {1.55, 2.52}, {1.6, 2.13}, {1.65, 1.8}, {1.7, 1.51}, {1.75, 1.277}, {1.8, 1.078},
  {1.85, 0.908}, {1.9, 0.77}, {1.95, 0.65}, {2., 0.507}, {2.1, 0.363},
  {2.2, 0.261}, {2.3, 0.187}, {2.4, 0.1162}, {2.6, 0.0611}, {2.8, 0.0326}, {, }},
 {{62.4, }, {Centrality, 5%-10%}, {0.5, 111.4}, {0.55, 89.}, {0.6, 71.4},
  {0.65, 57.6}, {0.7, 46.6}, {0.75, 38.}, {0.8, 31.1}, {0.85, 25.5}, {0.9, 21.},
  {0.95, 17.3}, {1., 14.4}, {1.05, 11.94}, {1.1, 9.95}, {1.15, 8.31}, {1.2, 6.96},
  {1.25, 5.83}, {1.3, 4.9}, {1.35, 4.12}, {1.4, 3.46}, {1.45, 2.91}, {1.5, 2.45},
  {1.55, 2.07}, {1.6, 1.74}, {1.65, 1.47}, {1.7, 1.239}, {1.75, 1.048},
  {1.8, 0.886}, {1.85, 0.749}, {1.9, 0.633}, {1.95, 0.536}, {2., 0.418}, {2.1, 0.3},
  {2.2, 0.216}, {2.3, 0.156}, {2.4, 0.0972}, {2.6, 0.0512}, {2.8, 0.0276}, {, }},
 {{Centrality, 10%-20%}, {0.5, 84.7}, {0.55, 67.7}, {0.6, 54.3}, {0.65, 43.8},
  {0.7, 35.4}, {0.75, 28.8}, {0.8, 23.6}, {0.85, 19.3}, {0.9, 15.9}, {0.95, 13.11},
  {1., 10.85}, {1.05, 9.01}, {1.1, 7.5}, {1.15, 6.26}, {1.2, 5.24}, {1.25, 4.39},
  {1.3, 3.68}, {1.35, 3.09}, {1.4, 2.6}, {1.45, 2.19}, {1.5, 1.85}, {1.55, 1.55},
  {1.6, 1.312}, {1.65, 1.108}, {1.7, 0.934}, {1.75, 0.79}, {1.8, 0.667},
  {1.85, 0.566}, {1.9, 0.478}, {1.95, 0.404}, {2., 0.317}, {2.1, 0.228},
  {2.2, 0.165}, {2.3, 0.1191}, {2.4, 0.0746}, {2.6, 0.0398}, {2.8, 0.0215}, {, }},
 {{Centrality, 20%-40%}, {0.5, 47.5}, {0.55, 37.9}, {0.6, 30.4},
  {0.65, 24.4}, {0.7, 19.7}, {0.75, 16.}, {0.8, 13.02}, {0.85, 10.64},
  {0.9, 8.73}, {0.95, 7.17}, {1., 5.91}, {1.05, 4.89}, {1.1, 4.06},
  {1.15, 3.37}, {1.2, 2.82}, {1.25, 2.35}, {1.3, 1.97}, {1.35, 1.65},
  {1.4, 1.388}, {1.45, 1.168}, {1.5, 0.981}, {1.55, 0.827}, {1.6, 0.697},
  {1.65, 0.588}, {1.7, 0.496}, {1.75, 0.42}, {1.8, 0.354}, {1.85, 0.3},
  {1.9, 0.254}, {1.95, 0.215}, {2., 0.169}, {2.1, 0.1218}, {2.2, 0.0882},
  {2.3, 0.064}, {2.4, 0.0405}, {2.6, 0.0217}, {2.8, 0.01186}, {, }},
 {{Centrality, 40%-60%}, {0.5, 18.4}, {0.55, 14.6}, {0.6, 11.63},
  {0.65, 9.28}, {0.7, 7.43}, {0.75, 5.98}, {0.8, 4.83}, {0.85, 3.92},
  {0.9, 3.19}, {0.95, 2.6}, {1., 2.13}, {1.05, 1.75}, {1.1, 1.436},
  {1.15, 1.186}, {1.2, 0.982}, {1.25, 0.816}, {1.3, 0.68}, {1.35, 0.567},
  {1.4, 0.475}, {1.45, 0.397}, {1.5, 0.333}, {1.55, 0.279}, {1.6, 0.234},
  {1.65, 0.197}, {1.7, 0.166}, {1.75, 0.1401}, {1.8, 0.1182}, {1.85, 0.0997},
  {1.9, 0.0844}, {1.95, 0.0715}, {2., 0.0561}, {2.1, 0.0406}, {2.2, 0.0294},
  {2.3, 0.0214}, {2.4, 0.01357}, {2.6, 0.00735}, {2.8, 0.00407}},
 {{Centrality, 60%-80%}, {0.5, 5.2}, {0.55, 4.08}, {0.6, 3.2}, {0.65, 2.53},
  {0.7, 2.}, {0.75, 1.59}, {0.8, 1.268}, {0.85, 1.016}, {0.9, 0.818},
  {0.95, 0.66}, {1., 0.532}, {1.05, 0.432}, {1.1, 0.352}, {1.15, 0.287},
  {1.2, 0.236}, {1.25, 0.194}, {1.3, 0.16}, {1.35, 0.1326}, {1.4, 0.1101},
  {1.45, 0.0915}, {1.5, 0.0761}, {1.55, 0.0636}, {1.6, 0.0531}, {1.65, 0.0446},
  {1.7, 0.0373}, {1.75, 0.0315}, {1.8, 0.0264}, {1.85, 0.0221}, {1.9, 0.0187},
  {1.95, 0.0159}, {2., 0.01237}, {2.1, 0.00894}, {2.2, 0.00646},
  {2.3, 0.0047}, {2.4, 0.00296}, {2.6, 0.00161}, {2.8, 0.000898}}}

{{{"Centrality", "0%-5%"},}, {{"Centrality", "5%-10%"},},
 {{"Centrality", "10%-20%"},}, {{"Centrality", "20%-40%"},},
 {{"Centrality", "40%-60%"},}, {{"Centrality", "60%-80%"},},}
```

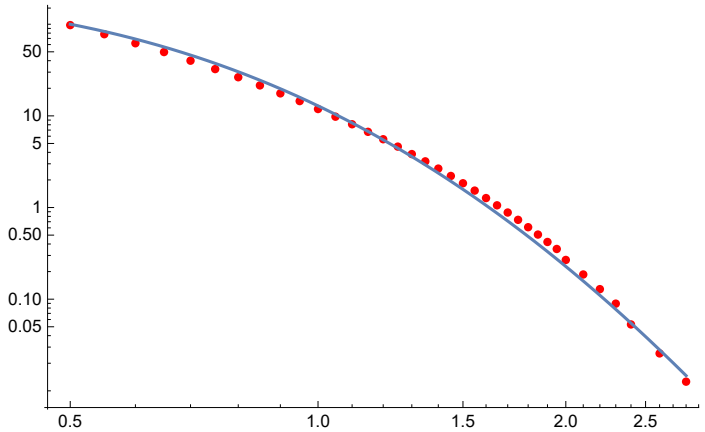
```
au19c1 = {{0.5`, 97.8`}, {0.55`, 77.8`}, {0.6000000000000001`, 62.`},
  {0.6500000000000001`, 49.7`}, {0.7000000000000002`, 40.`},
  {0.7500000000000002`, 32.4`}, {0.8000000000000003`, 26.4`},
  {0.8500000000000003`, 21.5`}, {0.9000000000000004`, 17.6`},
  {0.9500000000000004`, 14.5`}, {1.0000000000000004`, 11.88`},
  {1.0500000000000005`, 9.8`}, {1.1000000000000005`, 8.1`},
  {1.1500000000000006`, 6.7`}, {1.2000000000000006`, 5.56`},
  {1.2500000000000007`, 4.62`}, {1.3000000000000007`, 3.83`},
  {1.3500000000000008`, 3.19`}, {1.4000000000000008`, 2.66`},
  {1.4500000000000008`, 2.21`}, {1.5000000000000009`, 1.84`},
  {1.550000000000001`, 1.53`}, {1.600000000000001`, 1.268`},
  {1.650000000000001`, 1.057`}, {1.700000000000001`, 0.882`},
  {1.750000000000001`, 0.734`}, {1.8000000000000012`, 0.61`},
  {1.8500000000000012`, 0.507`}, {1.9000000000000012`, 0.421`},
  {1.9500000000000013`, 0.353`}, {2.0000000000000013`, 0.268`},
  {2.1000000000000014`, 0.186`}, {2.2000000000000015`, 0.1287`},
  {2.3000000000000016`, 0.0894`}, {2.4000000000000017`, 0.053`},
  {2.600000000000002`, 0.0256`}, {2.800000000000002`, 0.01259`}}
```

```
{{0.5, 97.8}, {0.55, 77.8}, {0.6, 62.}, {0.65, 49.7}, {0.7, 40.}, {0.75, 32.4},
 {0.8, 26.4}, {0.85, 21.5}, {0.9, 17.6}, {0.95, 14.5}, {1., 11.88},
 {1.05, 9.8}, {1.1, 8.1}, {1.15, 6.7}, {1.2, 5.56}, {1.25, 4.62}, {1.3, 3.83},
 {1.35, 3.19}, {1.4, 2.66}, {1.45, 2.21}, {1.5, 1.84}, {1.55, 1.53},
 {1.6, 1.268}, {1.65, 1.057}, {1.7, 0.882}, {1.75, 0.734}, {1.8, 0.61},
 {1.85, 0.507}, {1.9, 0.421}, {1.95, 0.353}, {2., 0.268}, {2.1, 0.186},
 {2.2, 0.1287}, {2.3, 0.0894}, {2.4, 0.053}, {2.6, 0.0256}, {2.8, 0.01259}}
```

```
FindFit[au19c1, f[c, pt, 1.055, T, μ, 0.0, 0.13957018], {c, T, μ}, pt]
```

```
{c → 0.506568, T → 0.180051, μ → 1.51401}
```

```
Show[ListLogLogPlot[au19c1, PlotStyle → Red],
 LogLogPlot[f[c, pt, 1.055, T, μ, 0., 0.13957] /.
   {c → 1.15969568, T → 0.180051, μ → 1.41401}, {pt, 0.5, 2.8}]]
```



```
au19c2 = {{0.5`, 79.7`}, {0.55`, 63.3`}, {0.6000000000000001`, 50.5`},
  {0.6500000000000001`, 40.5`}, {0.7000000000000002`, 32.6`},
  {0.7500000000000002`, 26.4`}, {0.8000000000000003`, 21.4`},
  {0.8500000000000003`, 17.5`}, {0.9000000000000004`, 14.3`},
  {0.9500000000000004`, 11.7`}, {1.0000000000000004`, 9.62`},
  {1.0500000000000005`, 7.91`}, {1.1000000000000005`, 6.53`},
  {1.1500000000000006`, 5.41`}, {1.2000000000000006`, 4.48`},
  {1.2500000000000007`, 3.72`}, {1.3000000000000007`, 3.09`},
  {1.3500000000000008`, 2.57`}, {1.4000000000000008`, 2.14`},
  {1.4500000000000008`, 1.78`}, {1.5000000000000009`, 1.48`},
  {1.550000000000001`, 1.229`}, {1.600000000000001`, 1.022`},
  {1.650000000000001`, 0.849`}, {1.700000000000001`, 0.711`},
  {1.750000000000001`, 0.59`}, {1.8000000000000012`, 0.49`},
  {1.8500000000000012`, 0.407`}, {1.9000000000000012`, 0.339`},
  {1.9500000000000013`, 0.283`}, {2.0000000000000013`, 0.217`},
  {2.1000000000000014`, 0.149`}, {2.2000000000000015`, 0.1042`},
  {2.3000000000000016`, 0.0727`}, {2.4000000000000017`, 0.0427`},
  {2.600000000000002`, 0.0208`}, {2.800000000000002`, 0.01019`}}
```

```
{{0.5, 79.7}, {0.55, 63.3}, {0.6, 50.5}, {0.65, 40.5}, {0.7, 32.6}, {0.75, 26.4},
 {0.8, 21.4}, {0.85, 17.5}, {0.9, 14.3}, {0.95, 11.7}, {1., 9.62}, {1.05, 7.91},
 {1.1, 6.53}, {1.15, 5.41}, {1.2, 4.48}, {1.25, 3.72}, {1.3, 3.09},
 {1.35, 2.57}, {1.4, 2.14}, {1.45, 1.78}, {1.5, 1.48}, {1.55, 1.229},
 {1.6, 1.022}, {1.65, 0.849}, {1.7, 0.711}, {1.75, 0.59}, {1.8, 0.49},
 {1.85, 0.407}, {1.9, 0.339}, {1.95, 0.283}, {2., 0.217}, {2.1, 0.149},
 {2.2, 0.1042}, {2.3, 0.0727}, {2.4, 0.0427}, {2.6, 0.0208}, {2.8, 0.01019}}
```

```
au19c3 = {{0.5`, 60.5`}, {0.55`, 48.1`}, {0.6000000000000001`, 38.3`},
  {0.6500000000000001`, 30.7`}, {0.7000000000000002`, 24.7`},
  {0.7500000000000002`, 19.9`}, {0.8000000000000003`, 16.2`},
  {0.8500000000000003`, 13.15`}, {0.9000000000000004`, 10.73`},
  {0.9500000000000004`, 8.79`}, {1.0000000000000004`, 7.2`},
  {1.0500000000000005`, 5.91`}, {1.1000000000000005`, 4.88`},
  {1.1500000000000006`, 4.03`}, {1.2000000000000006`, 3.33`},
  {1.2500000000000007`, 2.76`}, {1.3000000000000007`, 2.29`},
  {1.3500000000000008`, 1.9`}, {1.4000000000000008`, 1.58`},
  {1.4500000000000008`, 1.313`}, {1.5000000000000009`, 1.09`},
  {1.550000000000001`, 0.907`}, {1.600000000000001`, 0.754`},
  {1.650000000000001`, 0.628`}, {1.700000000000001`, 0.522`},
  {1.750000000000001`, 0.435`}, {1.8000000000000012`, 0.36`},
  {1.8500000000000012`, 0.3`}, {1.9000000000000012`, 0.25`},
  {1.9500000000000013`, 0.209`}, {2.0000000000000013`, 0.159`},
  {2.1000000000000014`, 0.1107`}, {2.2000000000000015`, 0.0767`},
  {2.3000000000000016`, 0.0535`}, {2.4000000000000017`, 0.0315`},
  {2.600000000000002`, 0.0154`}, {2.800000000000002`, 0.00758`}}
```

```
{{0.5, 60.5}, {0.55, 48.1}, {0.6, 38.3}, {0.65, 30.7}, {0.7, 24.7}, {0.75, 19.9},
 {0.8, 16.2}, {0.85, 13.15}, {0.9, 10.73}, {0.95, 8.79}, {1., 7.2}, {1.05, 5.91},
 {1.1, 4.88}, {1.15, 4.03}, {1.2, 3.33}, {1.25, 2.76}, {1.3, 2.29},
 {1.35, 1.9}, {1.4, 1.58}, {1.45, 1.313}, {1.5, 1.09}, {1.55, 0.907},
 {1.6, 0.754}, {1.65, 0.628}, {1.7, 0.522}, {1.75, 0.435}, {1.8, 0.36},
 {1.85, 0.3}, {1.9, 0.25}, {1.95, 0.209}, {2., 0.159}, {2.1, 0.1107},
 {2.2, 0.0767}, {2.3, 0.0535}, {2.4, 0.0315}, {2.6, 0.0154}, {2.8, 0.00758}}
```

```
au19c4 = {{0.5`, 34.`}, {0.55`, 26.9`}, {0.6000000000000001`, 21.4`},
  {0.6500000000000001`, 17.1`}, {0.7000000000000002`, 13.7`},
  {0.7500000000000002`, 10.98`}, {0.8000000000000003`, 8.86`},
  {0.8500000000000003`, 7.18`}, {0.9000000000000004`, 5.83`},
  {0.9500000000000004`, 4.74`}, {1.0000000000000004`, 3.87`},
  {1.0500000000000005`, 3.16`}, {1.1000000000000005`, 2.59`},
  {1.1500000000000006`, 2.13`}, {1.2000000000000006`, 1.75`},
  {1.2500000000000007`, 1.45`}, {1.3000000000000007`, 1.194`},
  {1.3500000000000008`, 0.988`}, {1.4000000000000008`, 0.817`},
  {1.4500000000000008`, 0.677`}, {1.5000000000000009`, 0.561`},
  {1.550000000000001`, 0.465`}, {1.600000000000001`, 0.386`},
  {1.650000000000001`, 0.32`}, {1.700000000000001`, 0.266`},
  {1.750000000000001`, 0.22`}, {1.8000000000000012`, 0.183`},
  {1.8500000000000012`, 0.152`}, {1.9000000000000012`, 0.1268`},
  {1.9500000000000013`, 0.1051`}, {2.0000000000000013`, 0.0801`},
  {2.1000000000000014`, 0.0558`}, {2.2000000000000015`, 0.0385`},
  {2.3000000000000016`, 0.0269`}, {2.4000000000000017`, 0.0158`},
  {2.600000000000002`, 0.00776`}, {2.800000000000002`, 0.00382`}}
```

```
{{0.5, 34.}, {0.55, 26.9}, {0.6, 21.4}, {0.65, 17.1}, {0.7, 13.7}, {0.75, 10.98},
 {0.8, 8.86}, {0.85, 7.18}, {0.9, 5.83}, {0.95, 4.74}, {1., 3.87}, {1.05, 3.16},
 {1.1, 2.59}, {1.15, 2.13}, {1.2, 1.75}, {1.25, 1.45}, {1.3, 1.194},
 {1.35, 0.988}, {1.4, 0.817}, {1.45, 0.677}, {1.5, 0.561}, {1.55, 0.465},
 {1.6, 0.386}, {1.65, 0.32}, {1.7, 0.266}, {1.75, 0.22}, {1.8, 0.183},
 {1.85, 0.152}, {1.9, 0.1268}, {1.95, 0.1051}, {2., 0.0801}, {2.1, 0.0558},
 {2.2, 0.0385}, {2.3, 0.0269}, {2.4, 0.0158}, {2.6, 0.00776}, {2.8, 0.00382}}
```

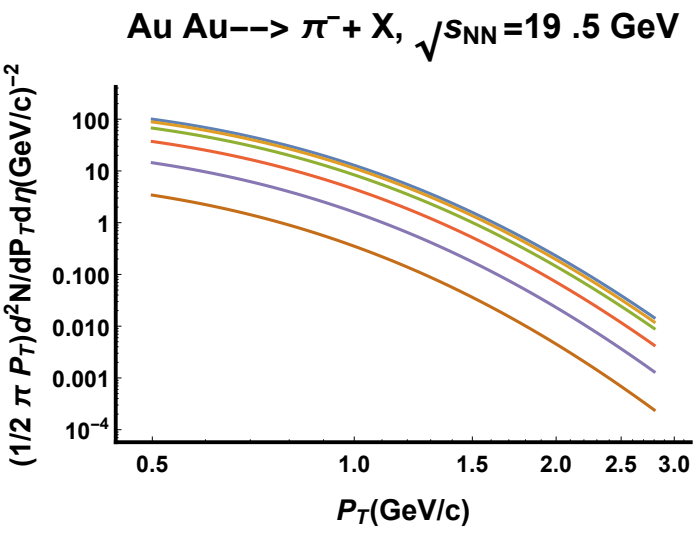
```
au19c5 = {{0.5`, 13.3`}, {0.55`, 10.47`}, {0.6000000000000001`, 8.25`},
  {0.6500000000000001`, 6.53`}, {0.7000000000000002`, 5.17`},
  {0.7500000000000002`, 4.11`}, {0.8000000000000003`, 3.28`},
  {0.8500000000000003`, 2.63`}, {0.9000000000000004`, 2.11`},
  {0.9500000000000004`, 1.7`}, {1.0000000000000004`, 1.37`},
  {1.0500000000000005`, 1.11`}, {1.1000000000000005`, 0.899`},
  {1.1500000000000006`, 0.732`}, {1.2000000000000006`, 0.595`},
  {1.2500000000000007`, 0.487`}, {1.3000000000000007`, 0.398`},
  {1.3500000000000008`, 0.326`}, {1.4000000000000008`, 0.268`},
  {1.4500000000000008`, 0.22`}, {1.5000000000000009`, 0.18`},
  {1.550000000000001`, 0.149`}, {1.600000000000001`, 0.1226`},
  {1.650000000000001`, 0.1012`}, {1.700000000000001`, 0.0834`},
  {1.750000000000001`, 0.0688`}, {1.8000000000000012`, 0.0571`},
  {1.8500000000000012`, 0.047`}, {1.9000000000000012`, 0.0389`},
  {1.9500000000000013`, 0.032`}, {2.0000000000000013`, 0.0243`},
  {2.1000000000000014`, 0.0168`}, {2.2000000000000015`, 0.01155`},
  {2.3000000000000016`, 0.00795`}, {2.4000000000000017`, 0.00467`},
  {2.600000000000002`, 0.00222`}, {2.800000000000002`, 0.001067`}}
```

```
{{0.5, 13.3}, {0.55, 10.47}, {0.6, 8.25}, {0.65, 6.53}, {0.7, 5.17}, {0.75, 4.11},
 {0.8, 3.28}, {0.85, 2.63}, {0.9, 2.11}, {0.95, 1.7}, {1., 1.37}, {1.05, 1.11},
 {1.1, 0.899}, {1.15, 0.732}, {1.2, 0.595}, {1.25, 0.487}, {1.3, 0.398},
 {1.35, 0.326}, {1.4, 0.268}, {1.45, 0.22}, {1.5, 0.18}, {1.55, 0.149},
 {1.6, 0.1226}, {1.65, 0.1012}, {1.7, 0.0834}, {1.75, 0.0688}, {1.8, 0.0571},
 {1.85, 0.047}, {1.9, 0.0389}, {1.95, 0.032}, {2., 0.0243}, {2.1, 0.0168},
 {2.2, 0.01155}, {2.3, 0.00795}, {2.4, 0.00467}, {2.6, 0.00222}, {2.8, 0.001067}}
```

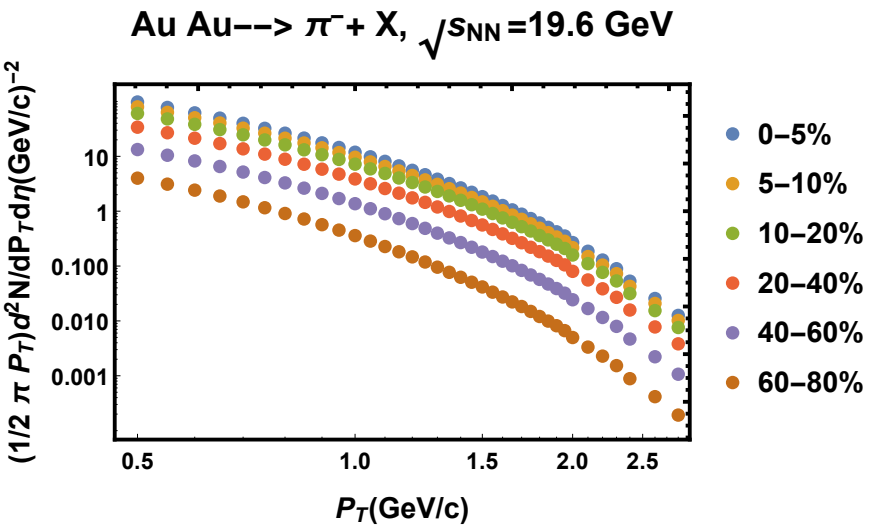
```
au19c6 = {{0.5`, 4.`}, {0.55`, 3.11`}, {0.6000000000000001`, 2.42`},
  {0.6500000000000001`, 1.89`}, {0.7000000000000002`, 1.48`},
  {0.7500000000000002`, 1.156`}, {0.8000000000000003`, 0.908`},
  {0.8500000000000003`, 0.72`}, {0.9000000000000004`, 0.568`},
  {0.9500000000000004`, 0.452`}, {1.0000000000000004`, 0.359`},
  {1.0500000000000005`, 0.285`}, {1.1000000000000005`, 0.227`},
  {1.1500000000000006`, 0.182`}, {1.2000000000000006`, 0.147`},
  {1.2500000000000007`, 0.1185`}, {1.3000000000000007`, 0.0954`},
  {1.3500000000000008`, 0.0769`}, {1.4000000000000008`, 0.0624`},
  {1.4500000000000008`, 0.0507`}, {1.5000000000000009`, 0.0416`},
  {1.550000000000001`, 0.0334`}, {1.600000000000001`, 0.0273`},
  {1.650000000000001`, 0.0222`}, {1.700000000000001`, 0.0183`},
  {1.750000000000001`, 0.0149`}, {1.8000000000000012`, 0.01204`},
  {1.8500000000000012`, 0.00992`}, {1.9000000000000012`, 0.00817`},
  {1.9500000000000013`, 0.00665`}, {2.0000000000000013`, 0.00498`},
  {2.1000000000000014`, 0.00333`}, {2.2000000000000015`, 0.00228`},
  {2.3000000000000016`, 0.00153`}, {2.4000000000000017`, 0.000885`},
  {2.600000000000002`, 0.000416`}, {2.800000000000002`, 0.000192`}}
```

```
{{0.5, 4.}, {0.55, 3.11}, {0.6, 2.42}, {0.65, 1.89}, {0.7, 1.48},
 {0.75, 1.156}, {0.8, 0.908}, {0.85, 0.72}, {0.9, 0.568}, {0.95, 0.452},
 {1., 0.359}, {1.05, 0.285}, {1.1, 0.227}, {1.15, 0.182}, {1.2, 0.147},
 {1.25, 0.1185}, {1.3, 0.0954}, {1.35, 0.0769}, {1.4, 0.0624}, {1.45, 0.0507},
 {1.5, 0.0416}, {1.55, 0.0334}, {1.6, 0.0273}, {1.65, 0.0222}, {1.7, 0.0183},
 {1.75, 0.0149}, {1.8, 0.01204}, {1.85, 0.00992}, {1.9, 0.00817},
 {1.95, 0.00665}, {2., 0.00498}, {2.1, 0.00333}, {2.2, 0.00228},
 {2.3, 0.00153}, {2.4, 0.000885}, {2.6, 0.000416}, {2.8, 0.000192}}
```

```
Fau19Gev = LogLogPlot[{
    f[c, pt, 1.055, T, μ, 0.`, 0.13957018`] /.
     {c → 1.15969568, T → 0.180051, μ → 1.41401},
    f[c, pt, 1.054, T, μ, 0.`, 0.13957018`] /.
     {c → 1.08355, T → 0.17828, μ → 1.4005},
    f[c, pt, 1.055, T, μ, 0.`, 0.13957018`] /. {c → 0.850058, T → 0.17746, μ → 1.39},
    f[c, pt, 1.054, T, μ, 0.`, 0.13957] /. {c → 1.2998, T → 0.1654, μ → 1.2056},
    f[c, pt, 1.054, T, μ, 0.`, 0.13957] /. {c → 1.58, T → 0.1516, μ → 1.0098102},
    f[c, pt, 1.053, T, μ, 0.`, 0.13957018`] /.
     {c → 0.813567, T → 0.14198, μ → 0.8863}},
   {pt, 0.5`, 2.8}, Frame → {{True, False}, {True, False}},
   PlotStyle → (PointSize[#] & /@ {Medium}),
   FrameTicksStyle → Directive[Bold, Dashed, 12],
   FrameLabel → {"PT (GeV/c)", "(1/2 π PT) d2N/dPTdη (GeV/c)-2"},
   FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
   LabelStyle → {Bold, 15}, PlotLabel → "Au Au--> π- + X, √sNN =19 .5 GeV"]
```



```
dau19G = ListLogLogPlot[{au19c1, au19c2, au19c3, au19c4, au19c5, au19c6},
  PlotStyle → (PointSize[#] & /@ {Large}), FrameTicksStyle →
   Directive[Bold, Dashed, 12], Frame → {{True, True}, {True, True}},
  FrameTicksStyle → Directive[Bold, Dashed, 12],
  FrameStyle → Directive[GrayLevel[0], AbsoluteThickness[2.`]],
  LabelStyle → {Bold, 15}, PlotLegends →
   Placed[{"0-5%", "5-10%", "10-20%", "20-40%", "40-60%", "60-80%"}, Right],
  FrameLabel → {"PT(GeV/c)", "(1/2 π PT)d2N/dPTdη(GeV/c)-2"},
  PlotLegends → Placed[{""}, Right], PlotLabel → "Au Au--> π- + X, √sNN =19.6 GeV"]
```




```
Show[dau19G, Fau19Gev]
```