Hypothesis plots summary

1666957, Gustavo Espinal Lugo

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Plots and corresponding metadata

Number of data points used: 99999,
mean expected W mass: 80.36010913 $[GeV/c^2]$,
mean hypothesis masses $[GeV/c^2]$: [¡generator object ¡genexpr¿ at 0x7f820a339510¿],
mass width: 2.07041274 $[GeV/c^2]$,
chi␣square value of hypothesis fit: 112.07408778430181
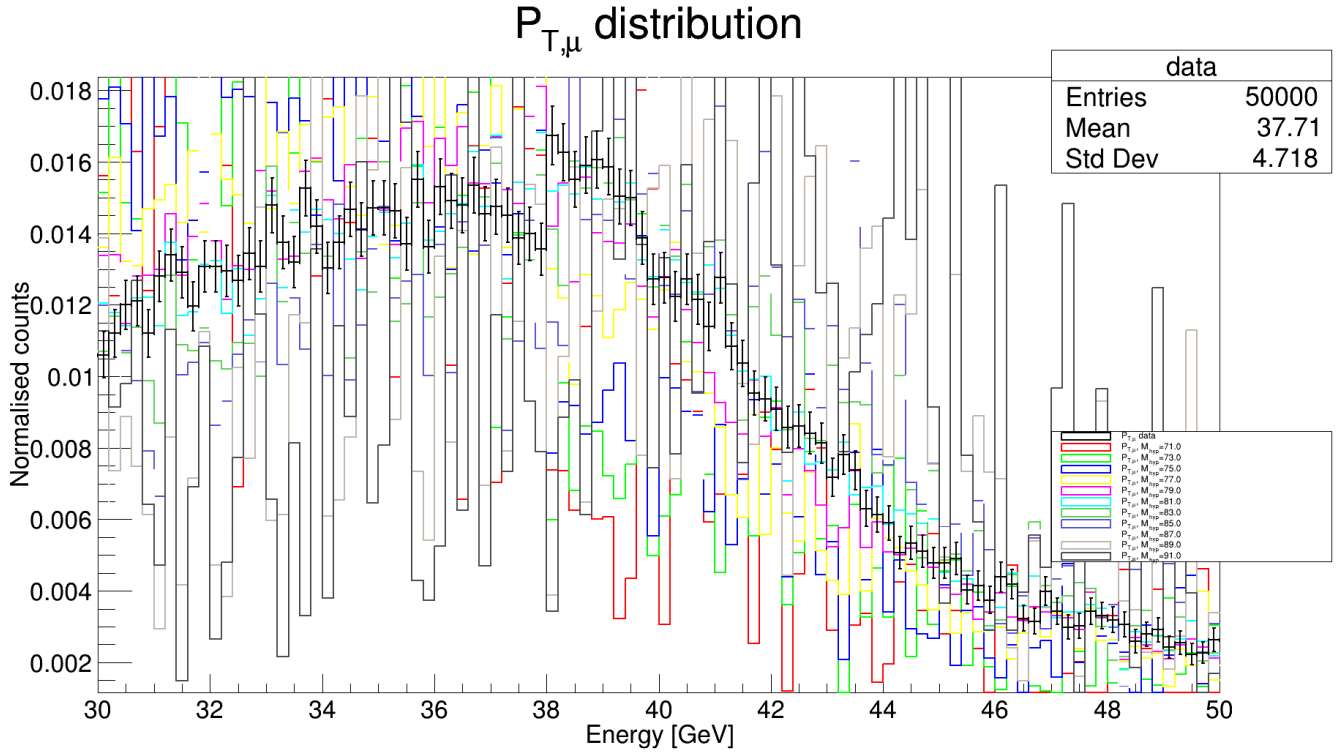Absolute path to figure: /home/physics/phuxdp/Desktop/PX402 Physics Project/WBosonProject/noQED/plots
Next lines are the data of the shown histograms (if needed):
All quantities: 99999, 80.36010913, [71. 73. 75. 77. 79. 81. 83. 85. 87. 89. 91.], 2.07041274,
112.07408778430181
X␣energ␣vls = [30.1, 30.299999999999997, 30.5, 30.700000000000003, 30.9, 31.1, 31.299999999999997,
31.5, 31.700000000000003, 31.9, 32.1, 32.3, 32.5, 32.7, 32.9, 33.1, 33.3, 33.5, 33.7, 33.9, 34.1,
34.3, 34.5, 34.7, 34.9, 35.1, 35.3, 35.5, 35.7, 35.9, 36.1, 36.3, 36.5, 36.7, 36.9, 37.1, 37.3, 37.5,
37.7, 37.9, 38.1, 38.3, 38.5, 38.7, 38.9, 39.1, 39.3, 39.5, 39.7, 39.9, 40.1, 40.3, 40.5, 40.7, 40.9,
41.1, 41.3, 41.5, 41.7, 41.9, 42.1, 42.3, 42.5, 42.7, 42.9, 43.1, 43.3, 43.5, 43.7, 43.9, 44.1, 44.3,
44.5, 44.7, 44.9, 45.1, 45.3, 45.5, 45.7, 45.9, 46.1, 46.300000000000004, 46.5, 46.7, 46.9, 47.1,
47.300000000000004, 47.5, 47.7, 47.9, 48.1, 48.300000000000004, 48.5, 48.7, 48.9, 49.1, 49.30000000000
49.5, 49.7, 49.9]
Y␣data␣bin␣cnts = [266.0, 281.0, 301.0, 304.0, 281.0, 321.0, 336.0, 324.0, 300.0, 328.0, 328.0,
325.0, 318.0, 337.0, 328.0, 371.0, 345.0, 331.0, 383.0, 356.0, 327.0, 345.0, 368.0, 354.0, 369.0,
369.0, 367.0, 344.0, 389.0, 342.0, 384.0, 374.0, 371.0, 385.0, 365.0, 370.0, 364.0, 348.0, 351.0,
340.0, 420.0, 408.0, 389.0, 399.0, 403.0, 398.0, 377.0, 376.0, 348.0, 319.0, 320.0, 307.0, 319.0,
305.0, 286.0, 320.0, 272.0, 260.0, 239.0, 235.0, 228.0, 215.0, 216.0, 211.0, 204.0, 180.0, 196.0,
185.0, 158.0, 154.0, 148.0, 127.0, 134.0, 128.0, 120.0, 120.0, 123.0, 101.0, 104.0, 94.0, 110.0,
105.0, 81.0, 79.0, 100.0, 86.0, 75.0, 76.0, 86.0, 83.0, 80.0, 77.0, 65.0, 70.0, 73.0, 61.0, 64.0, 56.0,
57.0, 66.0]
Y␣model␣bin␣cnts = [248.8841552734375, 201.95858764648438, 216.60215759277344, 280.37548828125,
141.84603881835938, 104.4836196899414, 249.8253631591797, 32.915679931640625, 152.6461029052
239.68687438964844, 58.53604507446289, 106.0986099243164, 170.5635528564453, 409.2520751953122
259.4189758300781, 144.86660766601562, 47.69832229614258, 179.67138671875, 73.05419921875,
299.77728271484375, 83.81353759765625, 252.1007080078125, 196.16159057617188, 353.5842895507[8]
142.7912139892578, 178.62359619140625, 453.01873779296875, 377.9122314453125, 94.98891448974[6]
82.77993774414062, 115.96817016601562, 345.4283752441406, 138.16693115234375, 557.5431518554[6]
103.93212127685547, 258.90179443359375, 162.27090454101562, 409.20709228515625, 205.7985839[84]
174.62045288085938, 75.85962677001953, 195.6945343017578, 218.5081329345703, 135.526931762695
372.4667663574219, 437.4012756347656, 293.29974365234375, 479.5151062011719, 302.243865966796

$P_{T,\mu}$ distribution

164.47879028320312, 294.1531982421875, 173.03416442871094, 351.8013000488281, 210.69944763183
304.1256103515625, 508.3580017089844, 277.75634765625, 167.61851501464844, 340.46649169921875
514.11767578125, 289.6979675292969, 173.88958740234375, 439.3193664550781, 357.152099609375,
272.7370910644531, 278.3534851074219, 174.61090087890625, 223.6378631591797, 246.56036376953
265.5738525390625, 318.517333984375, 428.11212158203125, 305.6524658203125, 412.5213928222656
201.86993408203125, 80.65467071533203, 415.6733703613281, 172.019287109375, 130.9634704589843
63.9389533996582, 338.7933044433594, 64.087646484375, 87.38468933105469, 122.67027282714844,
102.7680435180664, 213.93496704101562, 327.872314453125, 22.32999038696289, 186.0421600341797
213.1693572998047, 132.81527709960938, 111.32666778564453, 41.20119857788086, 131.58323669433
275.5798645019531, 60.03801727294922, 139.77186584472656, 87.23624420166016, 23.9333629608154
37.355350494384766]

Found optimal massses (χ^2 roots): [79.65868412] $[GeV/c^2]$
Uncertainty [GeV/c^2] : $1.4210854715202004e-14$

Notes:
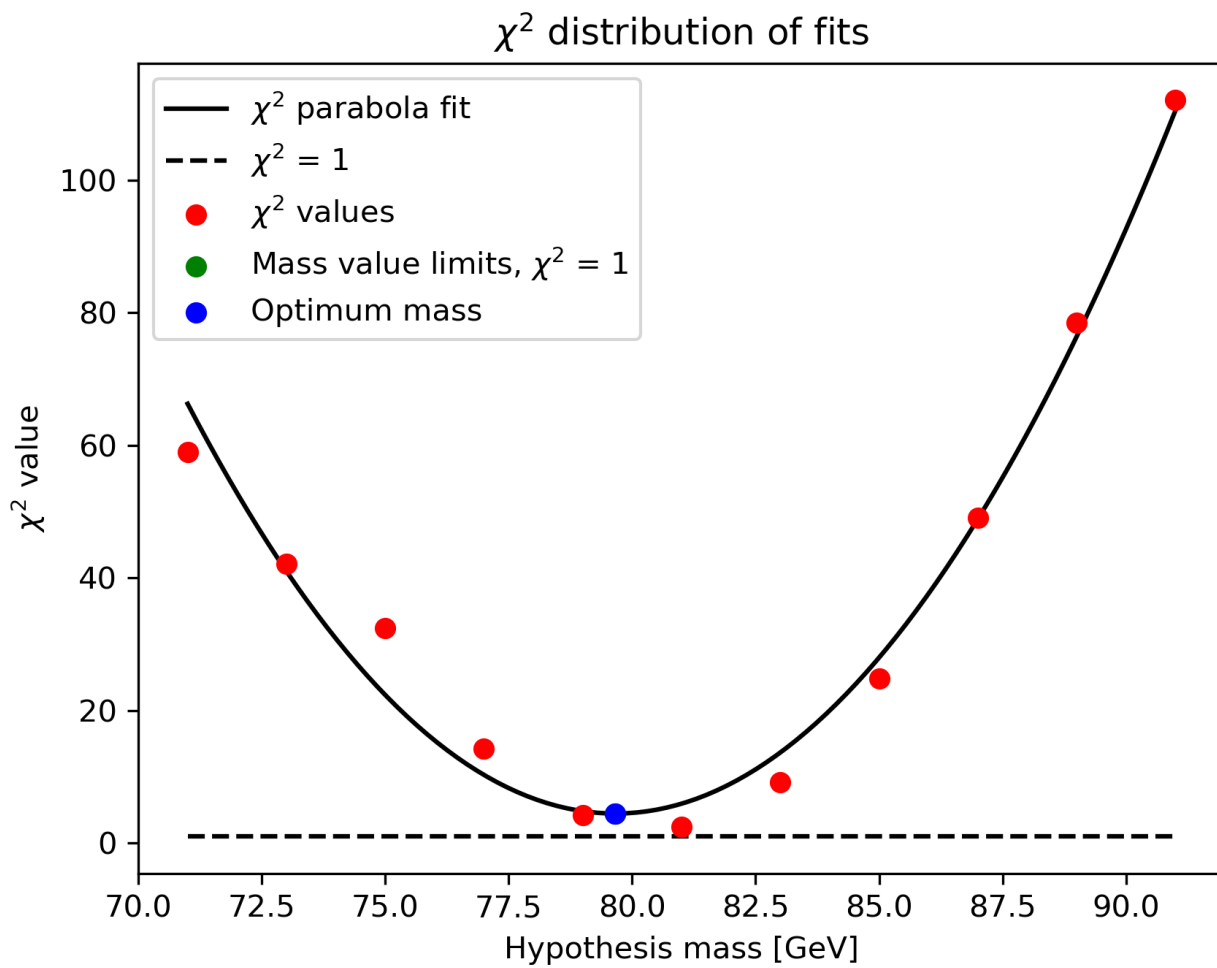1) Using mu_born_PT as pseudodata and Mu_Pt as model/hypothesis
2) Using full run mode
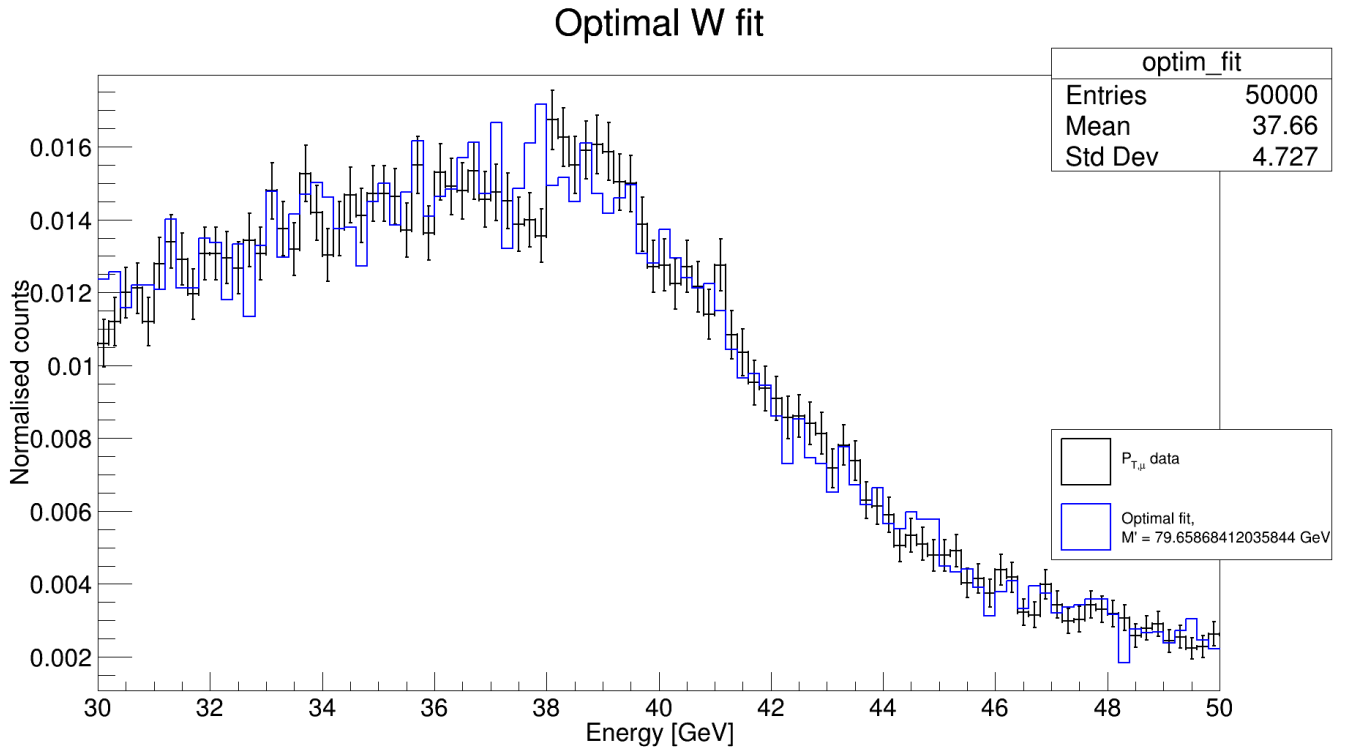
Figure 2: χ^2 of hypothesis masses.

Figure 3: Data and optimum fit with $\chi^2 = 1.8980230486966845$. Used the hypothesis mass of 79.65868412035844 $[GeV/c^2]$.