Hypothesis plots summary

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Plots

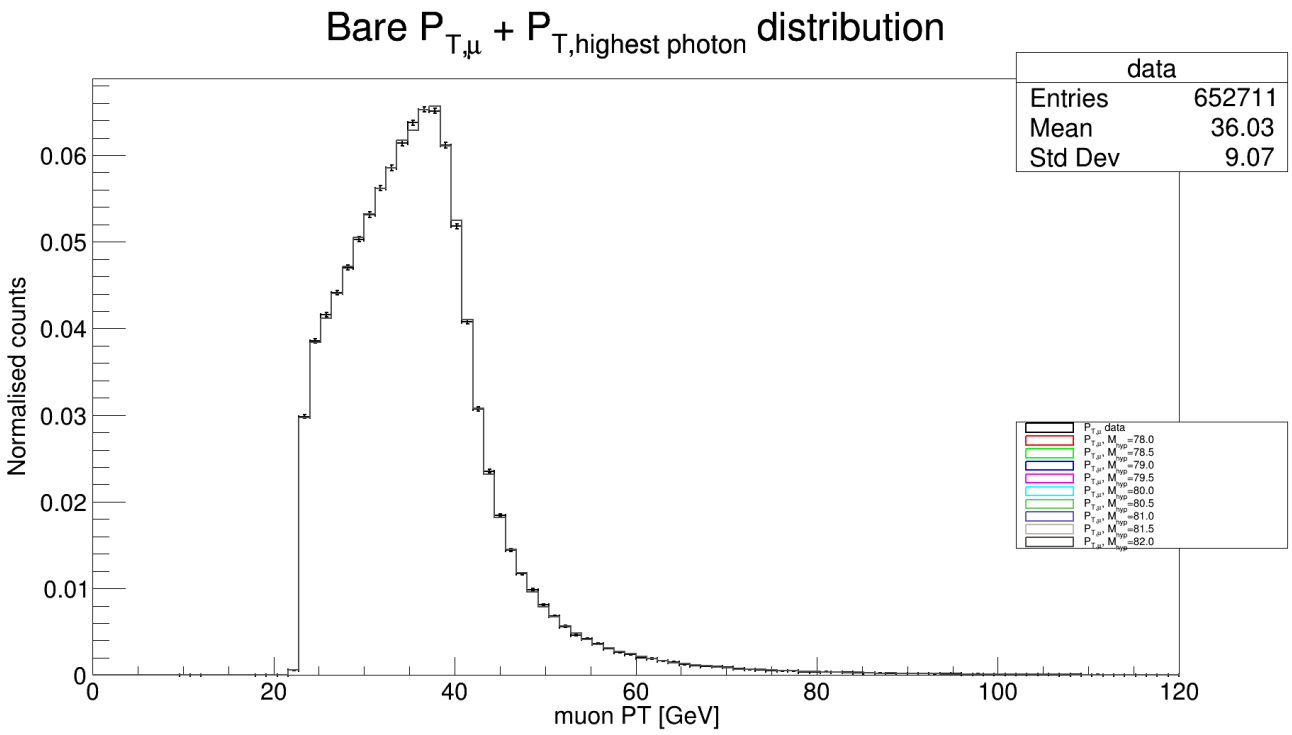

Figure 1: Hypothesis masses [78. 78.5 79. 79.5 80. 80.5 81. 81.5 82.].

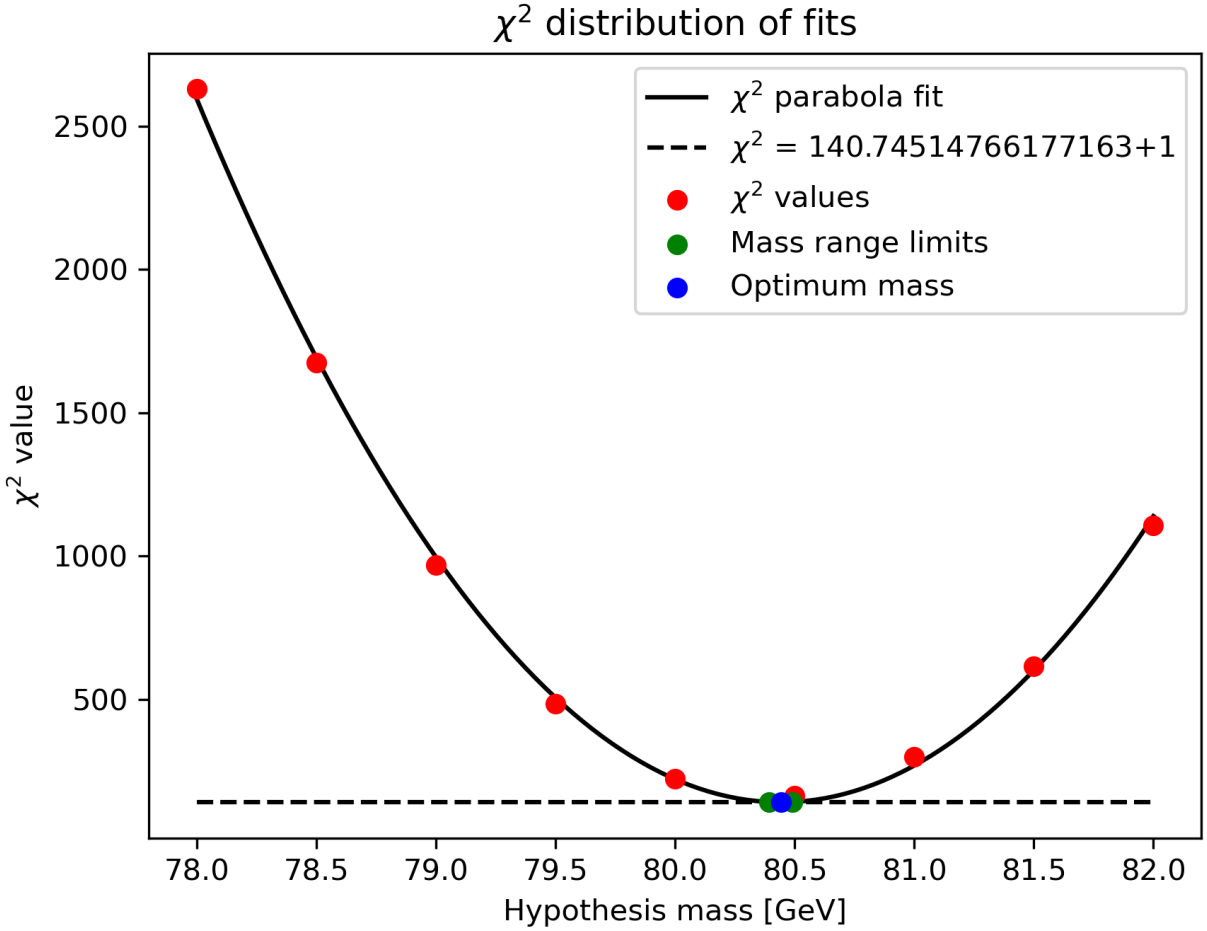

Figure 2: χ^2 of hypothesis masses.

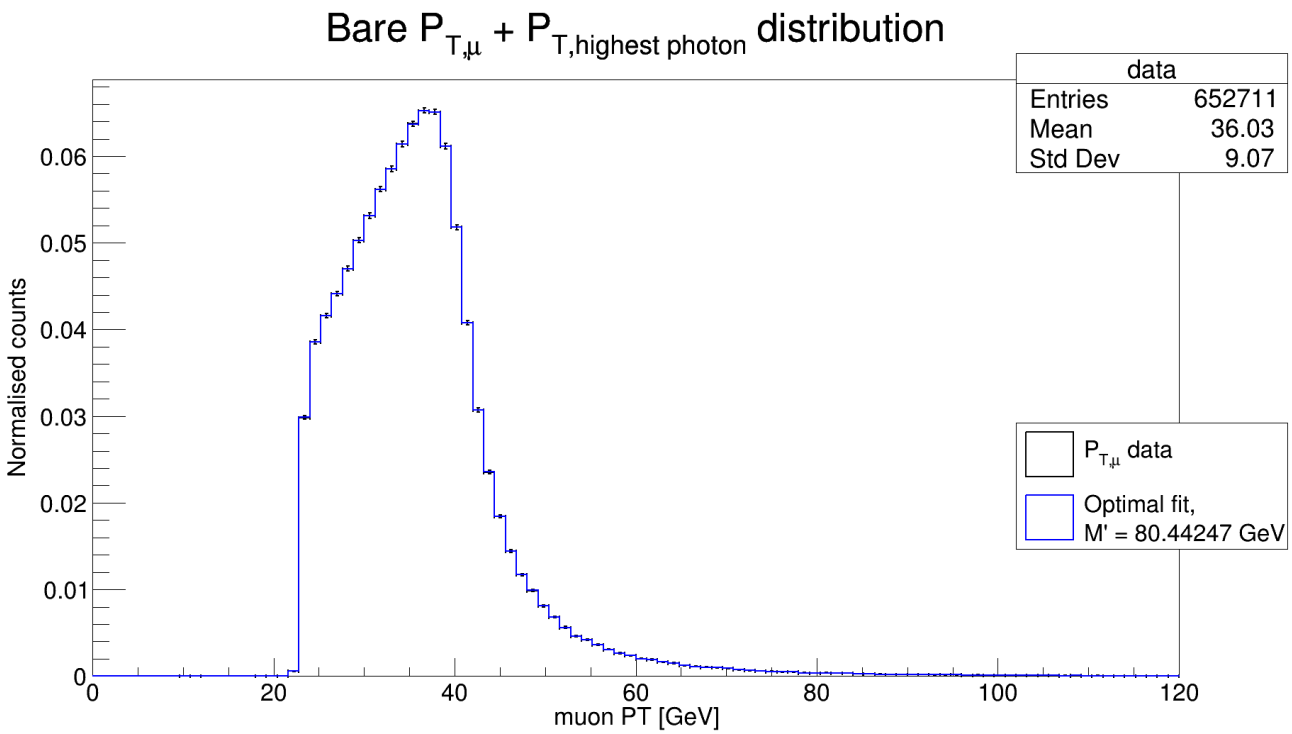

Figure 3: Data and optimum fit with $\chi^2/DoF(n\_hist\_bins - parms\_fit) = 4.443182549202235/98$. Used the hypothesis mass of 80.44247±0.04928 $[GeV/c^2]$.

Summary and Metadata

Found optimal massses (χ^2 roots): [80.44247] $[GeV/c^2]$ Uncertainty $[GeV/c^2]$: 0.04928
mean expected W mass: 80.379 $[GeV/c^2]$,
mean hypothesis masses: [78. 78.5 79. 79.5 80. 80.5 81. 81.5 82.] $[GeV/c^2]$,
mass width: 0.02 $[GeV/c^2]$,
chi_square value of hypothesis fit: 1108.0679777042362
Absolute path to figure: /home/physics/phuxdp/Desktop/PX402 Physics Project/WBosonProject/T2W7/5.4
Next lines are the data of the shown histograms (if needed):
All quantities: 80.379, [78. 78.5 79. 79.5 80. 80.5 81. 81.5 82.], 20, 1108.0679777042362
X_energ_vls = [0.6, 1.7999999999999998, 3.0, 4.199999999999999, 5.4, 6.6, 7.8, 9.0, 10.2,
11.399999999999999, 12.6, 13.799999999999999, 15.0, 16.2, 17.4, 18.6, 19.799999999999997,
21.0, 22.2, 23.4, 24.6, 25.799999999999997, 27.0, 28.199999999999996, 29.4, 30.6, 31.7999999999999
33.0, 34.2, 35.4, 36.599999999999994, 37.8, 39.0, 40.2, 41.4, 42.599999999999994, 43.8,
45.0, 46.2, 47.4, 48.599999999999994, 49.8, 51.0, 52.2, 53.4, 54.599999999999994, 55.8,
57.0, 58.199999999999996, 59.4, 60.599999999999994, 61.8, 63.0, 64.19999999999999, 65.4,
66.6, 67.8, 69.0, 70.19999999999999, 71.4, 72.6, 73.8, 75.0, 76.19999999999999, 77.4, 78.6,
79.8, 81.0, 82.19999999999999, 83.4, 84.6, 85.8, 87.0, 88.19999999999999, 89.4, 90.6, 91.8,
93.0, 94.19999999999999, 95.4, 96.6, 97.8, 99.0, 100.19999999999999, 101.4, 102.6, 103.8,
105.0, 106.19999999999999, 107.4, 108.6, 109.8, 111.0, 112.19999999999999, 113.4, 114.6,
115.79999999999998, 117.0, 118.19999999999999, 119.4]
Y_data_bin_cnts = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 3.96209454536438, 7.404178619384766,
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41091.60546875, 38584.78125, 32692.09765625, 25732.2734375, 19384.86328125, 14854.2666015625
11627.359375, 9115.375, 7388.07373046875, 6236.3828125, 5115.0888671875, 4310.10400390625,
3546.5, 2924.277587890625, 2630.420166015625, 2304.469482421875, 1949.3170166015625,
1672.61767578125, 1497.8271484375, 1265.7596435546875, 1202.437744140625, 1033.03881835937
949.2772827148438, 786.862060546875, 700.986572265625, 645.8587646484375, 633.490234375,
574.92529296875, 474.5463562011719, 419.48236083984375, 378.2182312011719, 337.24465942382
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33.428314208984375, 23.92335319519043, 30.536388397216797, 29.352127075195312, 30.41346549
23.79930877685547, 23.533931732177734]
Y_model_bin_cnts = [0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,
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35491.23046875, 37420.04296875, 38132.328125, 39572.1171875, 39829.45703125, 37018.984375,
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