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data =
  Import["E:\\Dokumente und Einstellungen\\Sword\\Eigene Dateien\\Downloads\\KplKmin(1).txt", "Table", "FieldSeparators" → "|"][[4 ;; -3, All]];
Zeilenskalar[v1_, v2_] := (erg = {});
  For[i = 1, i <= Length[v1], i++, erg = Append[erg, v1[[i]].v2[[i]]]];
  erg)
mk = 493.677 * 10^-3;

p1 = {data[[All, 1]] * Sin[data[[All, 2]]] * Cos[data[[All, 3]]],
  data[[All, 1]] * Sin[data[[All, 2]]] * Sin[data[[All, 3]]], data[[All, 1]] * Cos[data[[All, 2]]]} // Transpose;
p2 = {data[[All, 4]] * Sin[data[[All, 5]]] * Cos[data[[All, 6]]],
  data[[All, 4]] * Sin[data[[All, 5]]] * Sin[data[[All, 6]]], data[[All, 4]] * Cos[data[[All, 5]]]} // Transpose;

e1 =  $\sqrt{\text{data}[[\text{All}, 1]]^2 + \text{mk}^2}$  ;
e2 =  $\sqrt{\text{data}[[\text{All}, 4]]^2 + \text{mk}^2}$  ;

m =  $\sqrt{e1^2 + 2 e1 e2 + e2^2 - \text{Zeilenskalar}[p1, p1] - 2 \text{Zeilenskalar}[p1, p2] - \text{Zeilenskalar}[p2, p2]}$ ;
h = HistogramList[m, 100]; hd = {h[[1]][[1 ;; -2]], h[[2]]} // Transpose;
g = 1 / ( $\sigma \text{Sqrt}[2 \pi]$ ) Exp[-1 / 2 ((x -  $\mu$ ) /  $\sigma$ )^2] + a x + b;
gv = FindFit[hd, g, {{ $\sigma$ , 0.001}, { $\mu$ , 1.02}, {a, 0}, {b, -8}}, x, WorkingPrecision → 5]
{ $\sigma \rightarrow 0.0067628$ ,  $\mu \rightarrow 1.0190$ , a → 86.468, b → -82.584}

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Show[Histogram[m, 100, PlotRange → All, ChartStyle → Blue], Plot[g /. gv, {x, 0.985, 1.1}, PlotRange → All, PlotStyle → {Red, Thick}], PlotRange → All,
Epilog → {Inset[g /. gv, {1.07, 60}, BaseStyle → {18, Red}], Inset[StringForm["FWHM=`", 8 Log[2] σ /. gv], {1.07, 53}, BaseStyle → {18, Red}],
Inset[StringForm["Peak=`±`", μ /. gv, 4 Log[2] σ /. gv], {1.07, 47}, BaseStyle → {18, Red}],
Inset["Messdaten", {1.07, 30}, BaseStyle → {18, Blue}]], ImageSize → 600, BaseStyle → {15, Black}, AxesLabel → {"minv (GeV/c2)", "Anzahl"}]
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