Fit to proton spectra

Blastwave

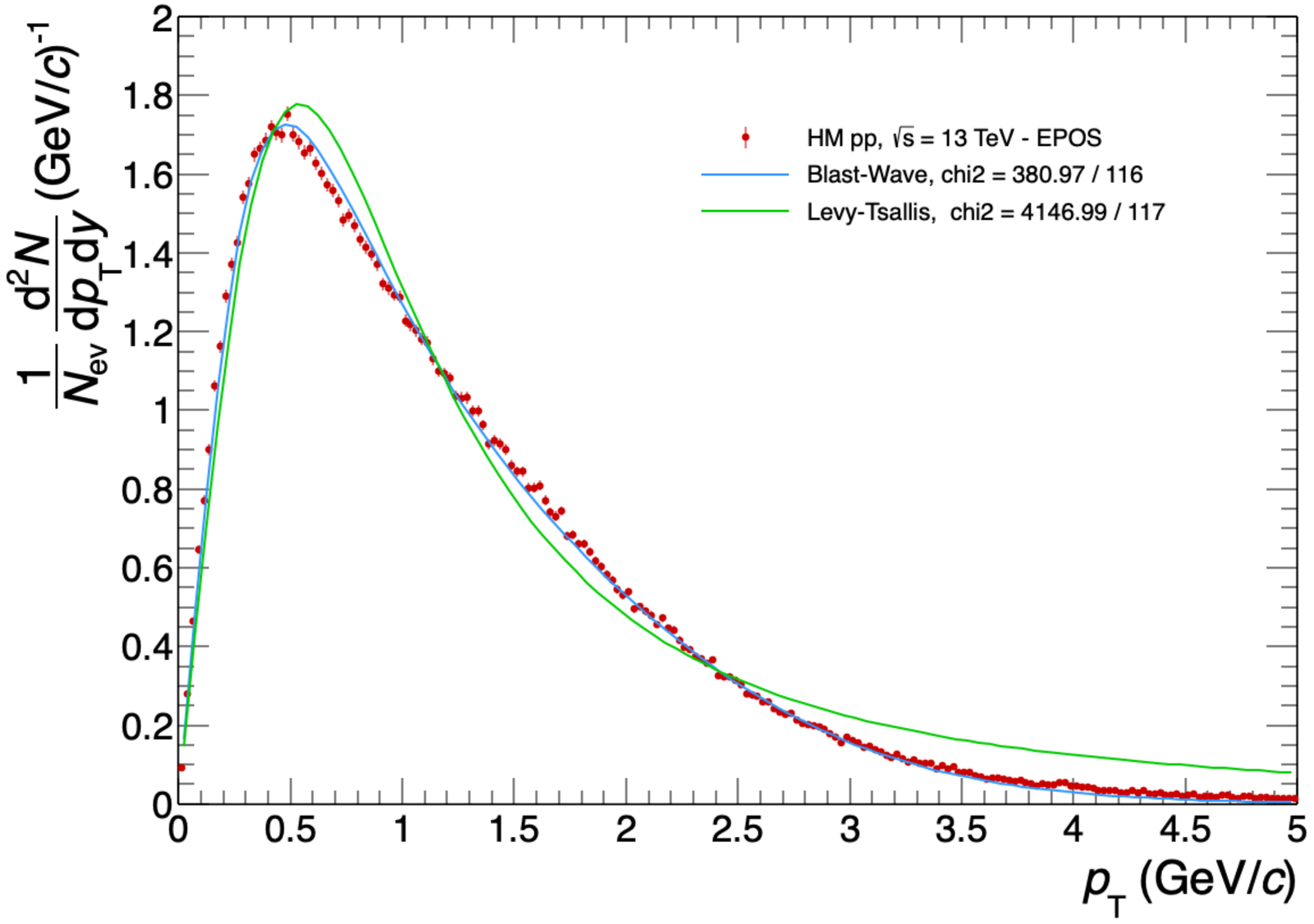
$$\frac{\mathrm{d}N}{\mathrm{d}y\,\mathrm{d}p_\mathrm{T}} = \mathcal{N} p_\mathrm{T} \int_0^1 \mathrm{d}\rho\, K_1\left(\frac{m_\mathrm{T}\cosh\rho}{T}\right) I_0\left(\frac{p_\mathrm{T}\cosh\rho}{T}\right), \text{ with } \rho = \mathrm{arctanh}(\beta_{max})$$

$$K_1\Big(\frac{m_T\,\mathrm{cosh}\rho}{T}\Big) = \int_0^\infty \mathrm{cosh}y\,\exp\Big(-\frac{m_T\,\mathrm{cosh}y\,\mathrm{cosh}\rho}{T}\Big)dy, \qquad I_0\Big(\frac{p_T\,\mathrm{sinh}\rho}{T}\Big) = \frac{1}{2\pi}\int_0^{2\pi} exp\Big(\frac{p_T\,\mathrm{sinh}\rho\,\mathrm{cos}\phi}{T}\Big)d\phi,$$

Levy-Tsallis

$$\frac{\mathrm{d}^2N}{\mathrm{d}y\,\mathrm{d}p_\mathrm{T}} = \frac{\mathrm{d}N}{\mathrm{d}y}\frac{p_\mathrm{T}\,(n-1)\,(n-2)}{nC[nC+m_\mathrm{d}\,(n-2)]}\left(1+\frac{m_\mathrm{T}-m_\mathrm{d}}{nC}\right)^{-n},$$

This is with the mass of the deuteron, but it is exactly the sam for protons



Blastwave

Mass	0.938272
β_{max}	0.935 ± 0.004
T	0.068 ± 0.001
N	1.540 ± 0.004
Norm	(1.69 ± 0.05) E+08

Levy-Tsallis

Mass	0.938272
C	0.22 ± 0.01
N	2.96 ± 0.02
Norm	3.18 ± 0.01

There's no way to fit it with a LT!!

AOB

- Checked for available MC production with pp @ 900 GeV:
  - 1M events
- Start a production with 300M pp collisions @ 13 MB
  - Talked with Ante: setting the code for the simulation