Toy model for jet quenching

Assume a density distribution. Populate in 2D plane of x,y.

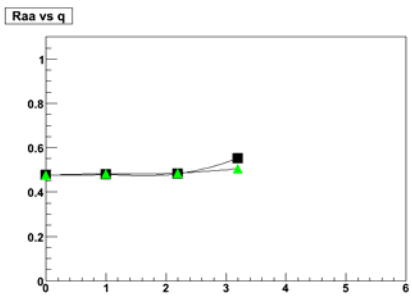
Evaluate dE.

Initial pt distribution from data in pp

Let de ~ q.L**2 (or l*q).

This is similar in spirit to the work of A.Dainese (Eur.Phys.J C33,495) and A.Dainese , C.Loizides and G.Paic (hep-ph/0406201) and by A.Drees,H.Feng and J.Jia PRC (nucl-th/0310044 (2005)

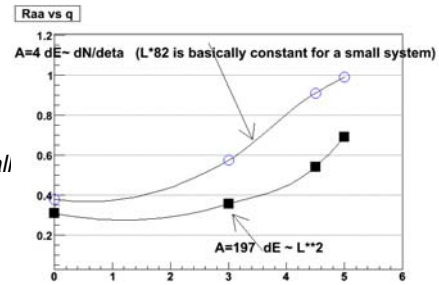
- Had ramiro fit the pp data at h=0,1,2 and 3
- Adjust q by dn/deta and spectrum by actual p0 and n in power law exponent.

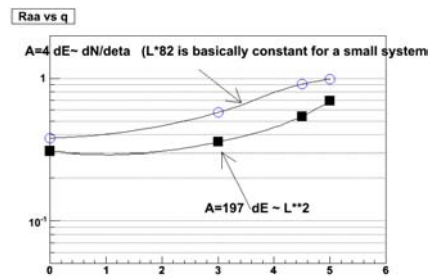
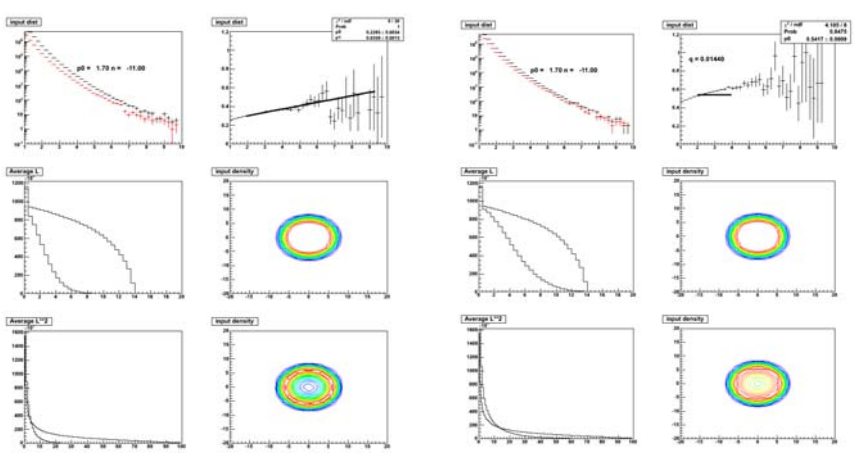


Dn/Deta dependence

To check the difference between the surface emission and the 'bulk' I ran the same model for A=197 extended to higher rapidity, and a model for a *small* system A=4 where the absorption is primarily dependent on dN/dEta.

The surface emission combined with the slow dependence of dN/dEta of the energy loss explains the weak rapidity dependence. The change the reference spectrum most likely is responsible for the remaining effect to make RAA very weakly dependent on eta.





A=197 calculation