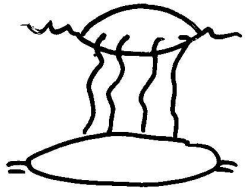


$p \ll 1$

A. When

small- $x$ , otherwise higher-twist suppressed

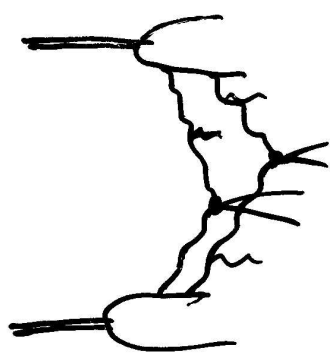
DIS:



$$= O\left(\frac{1}{Q^2}\right) e^{\sqrt{\beta \ln \frac{1}{x} \ln Q^2}}$$

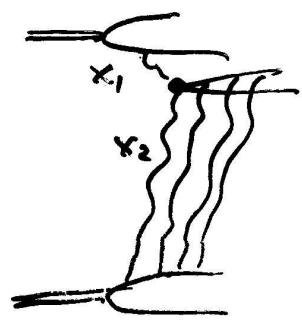
In pp:

- Multijet background, underlying event.



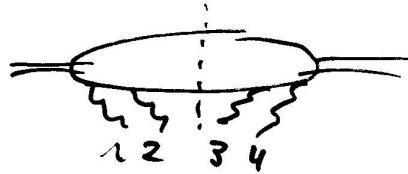
- saturation at small  $x$ :

$$x_2 \ll x_1$$



B. A few results based upon pQCD:

1) Couplings to proton (correlators)

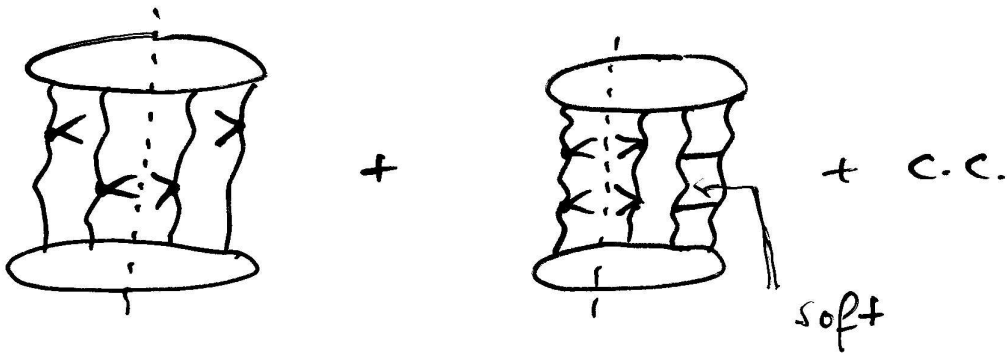


Symmetry: invariant under permutations, e.g.



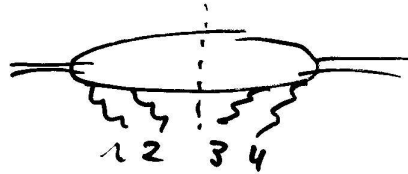
+ higher representations (not:  $\rho_A$ )

Interference:



B. A few results based upon pQCD:

1) Couplings to proton (correlators)

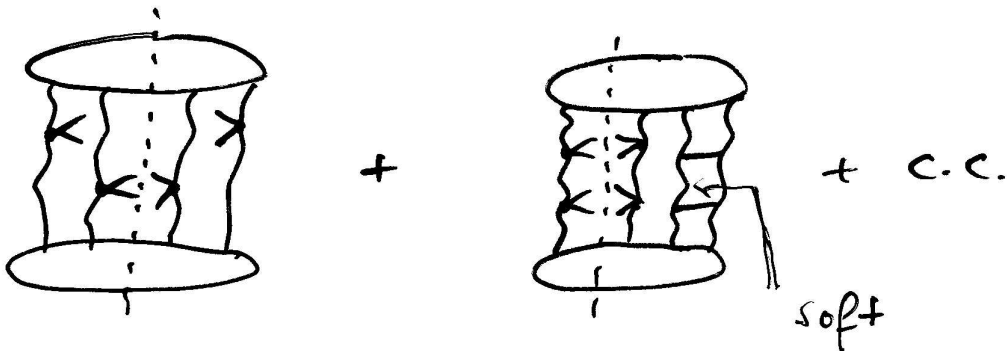


Symmetry: invariant under permutations, e.g.



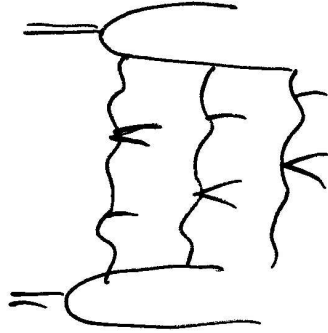
+ higher representations (not:  $\rho_A$ )

Interference:

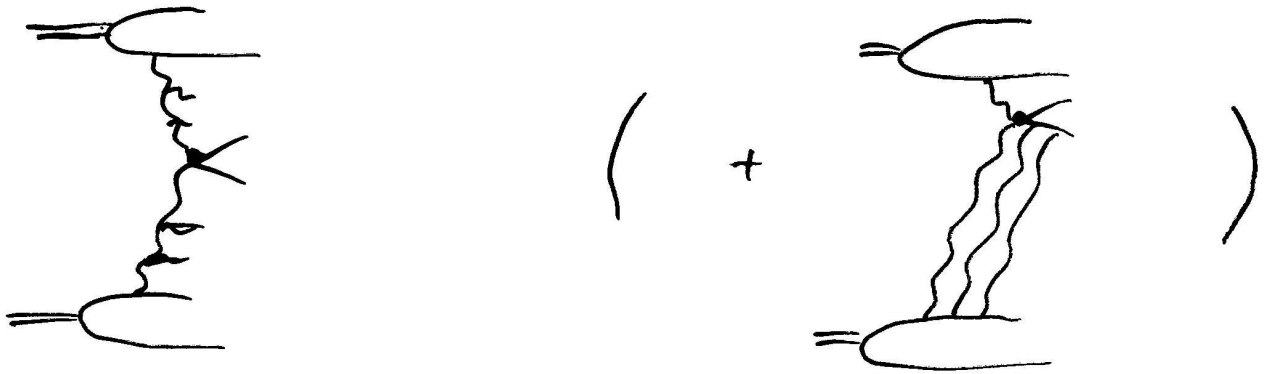


# Cancellations:

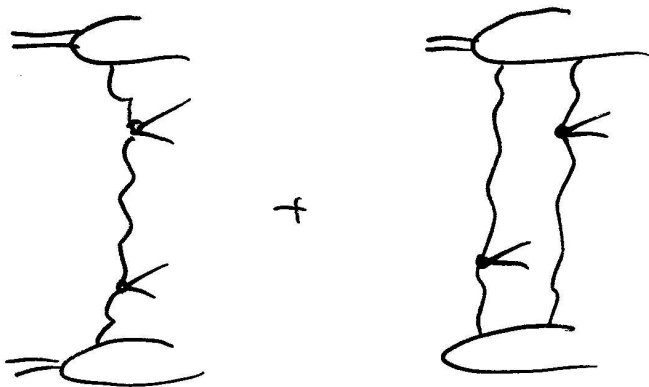
single event:



bracket: single inclusive



double inclusive:

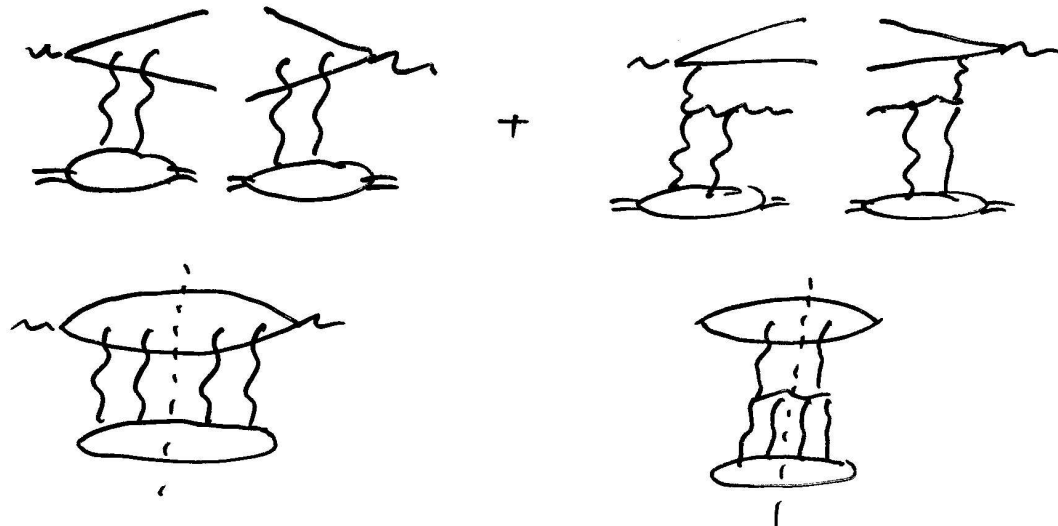


Consistency check for models!

"triple Pomeron vertex":

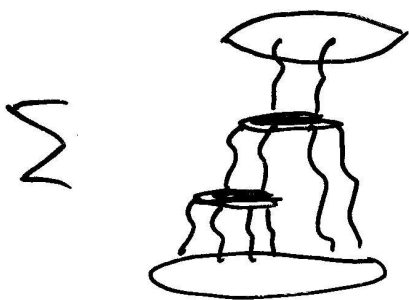
(5)

in DIS: diffraction



"number changing vertex", discussed in last 10 years

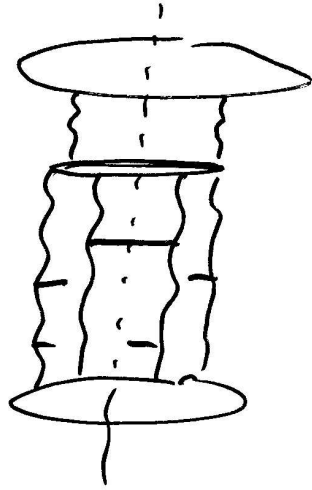
Evidence for repetition, eg.:



$\rightarrow$  BK-equation etc.

(6)

the pp:



Challenge for theorists:

difference between inclusive cross section  
and exclusive one:

"cut triple Pomeron vertex"

AGK: all ok, but more subtle than expected