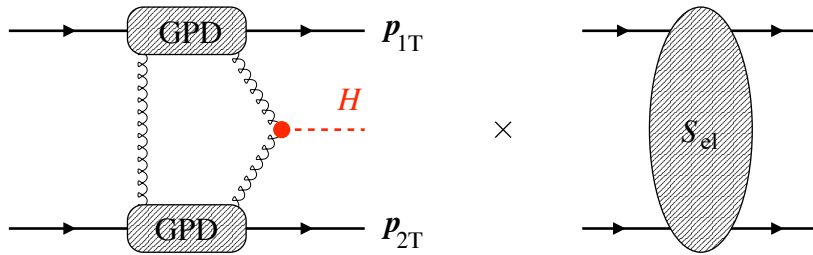


Probing GPDs in hard exclusive diffractive pp scattering

$$pp \rightarrow p + \text{gap} + H + \text{gap} + p$$

(= dijet, Higgs, $Q\bar{Q}$, ...)

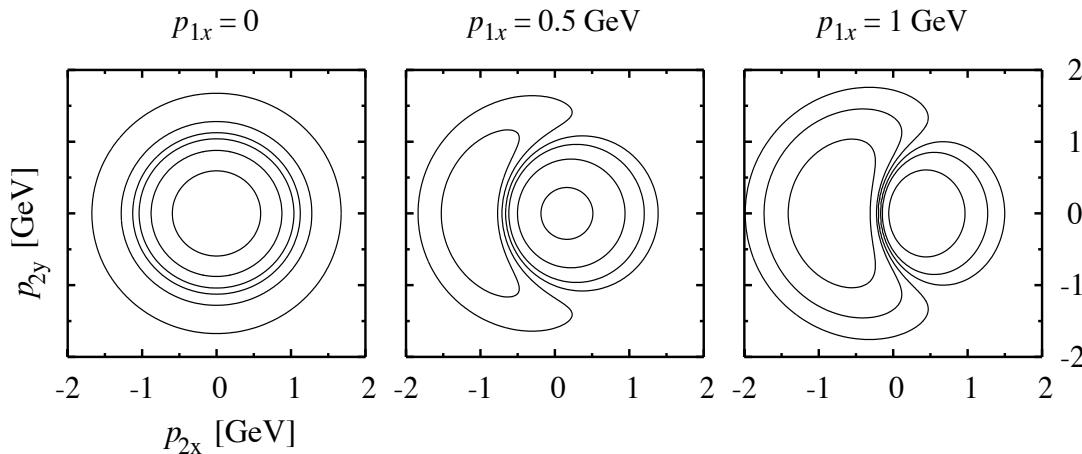


- Hard process modified by soft spectator interactions (“rapidity gap survival”)

$$\text{soft} \approx \text{elastic } S_{el}$$

- Interference phenomenon:

$$S_{el} = 1 + T_{el} \leftarrow \text{known!}$$



- Diffraction pattern in p_{1T}, p_{2T} , observable with forward detectors:

CMS/TOTEM at LHC

LHC420 ($x < 0.01$)

STAR pp2pp @ $\sqrt{s} = 500 \text{ GeV}$?