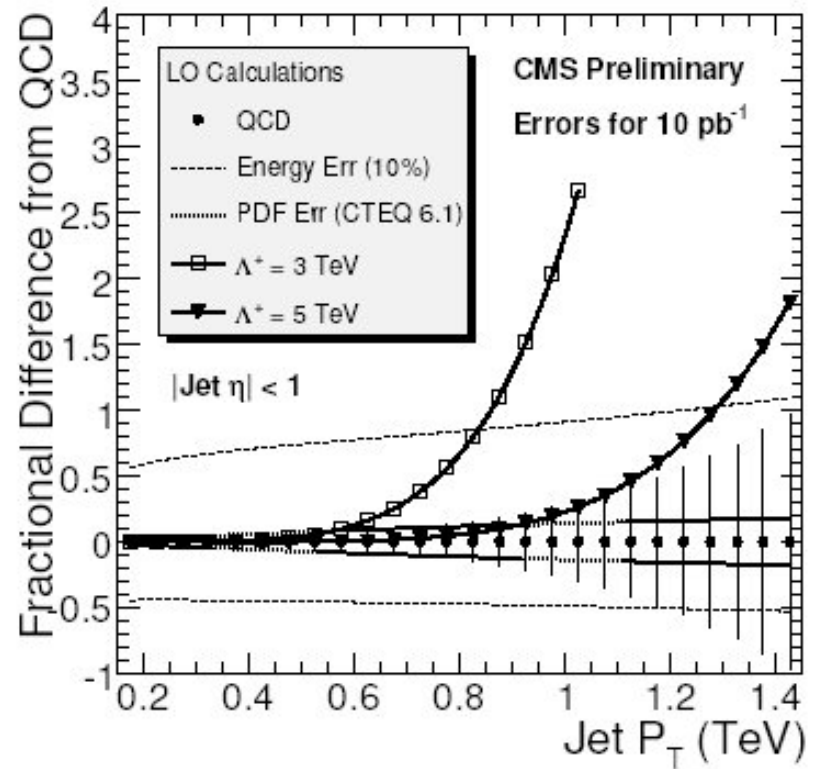
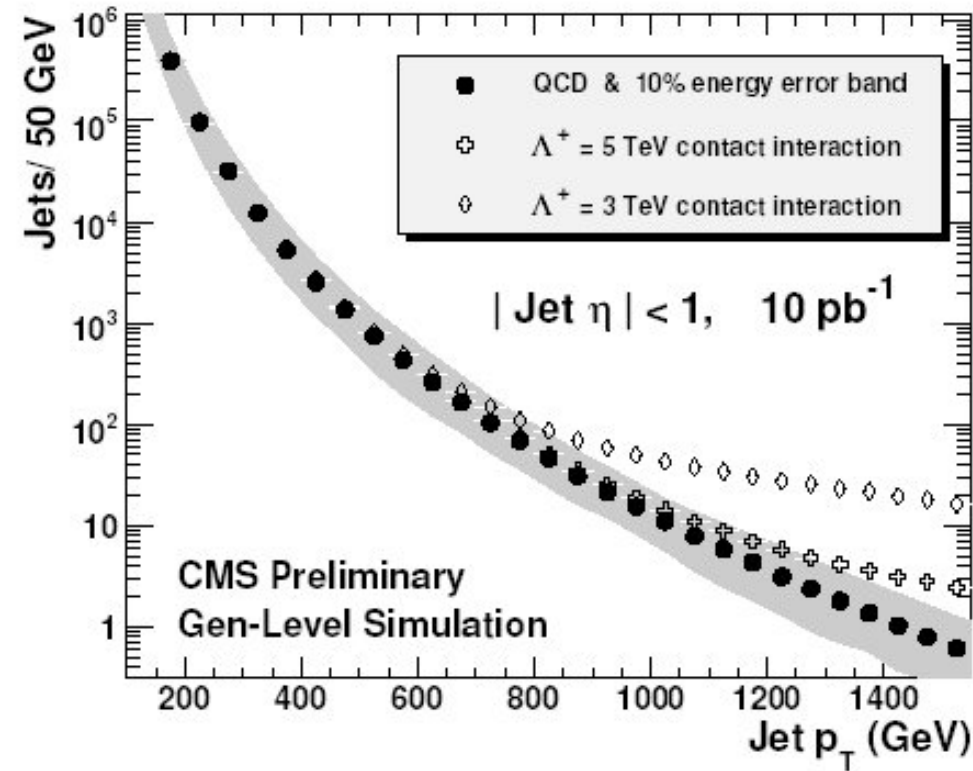
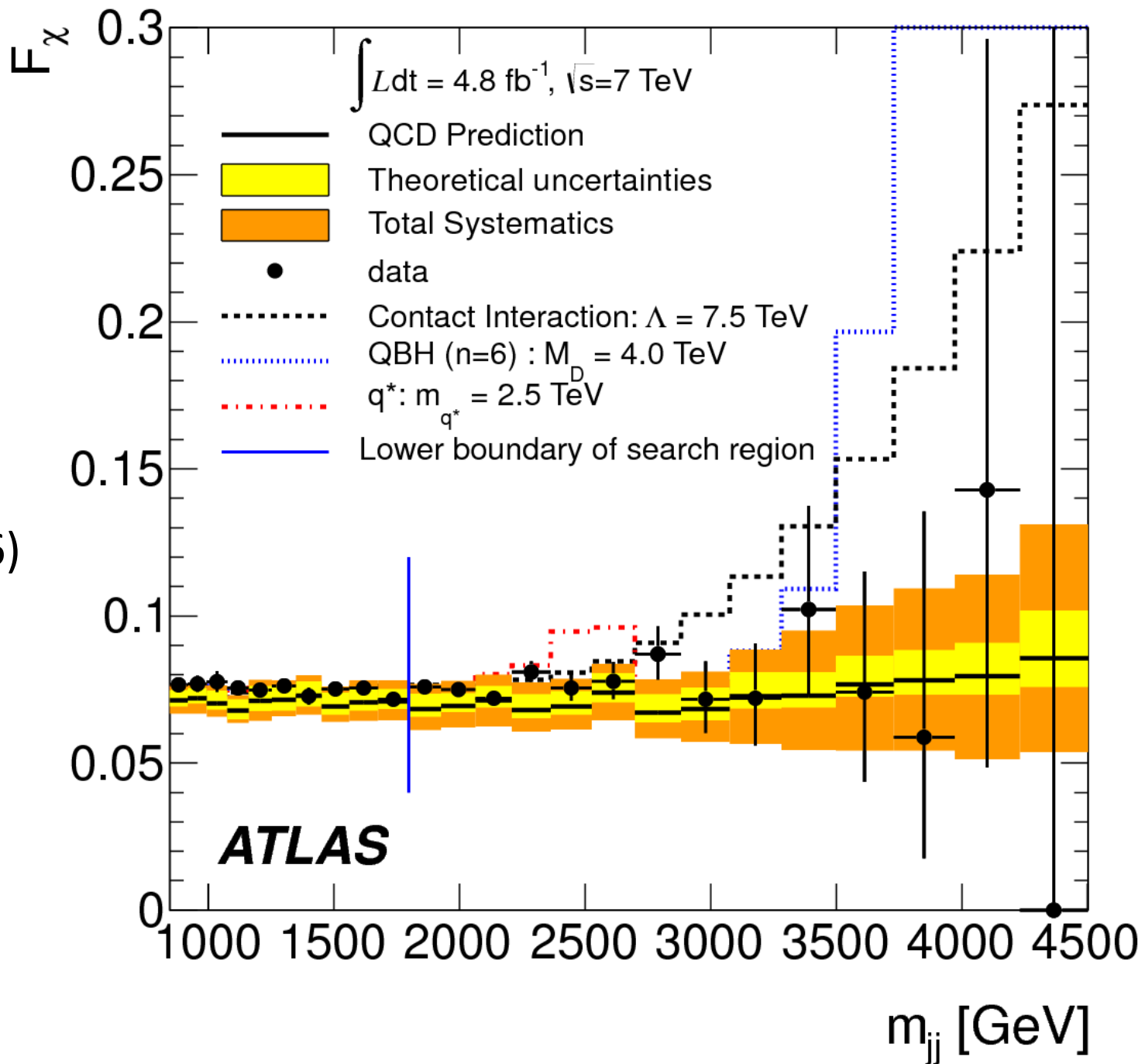
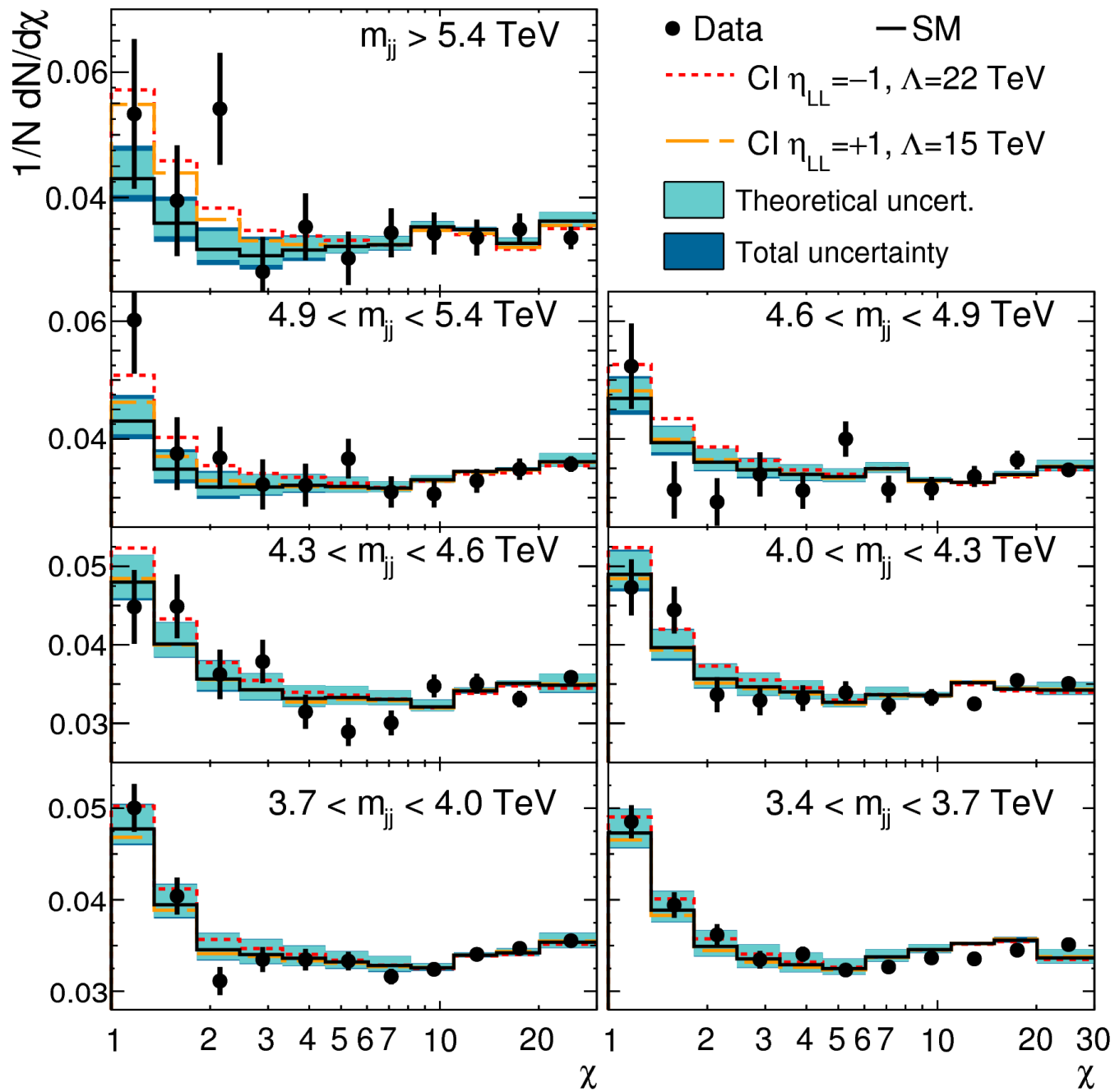


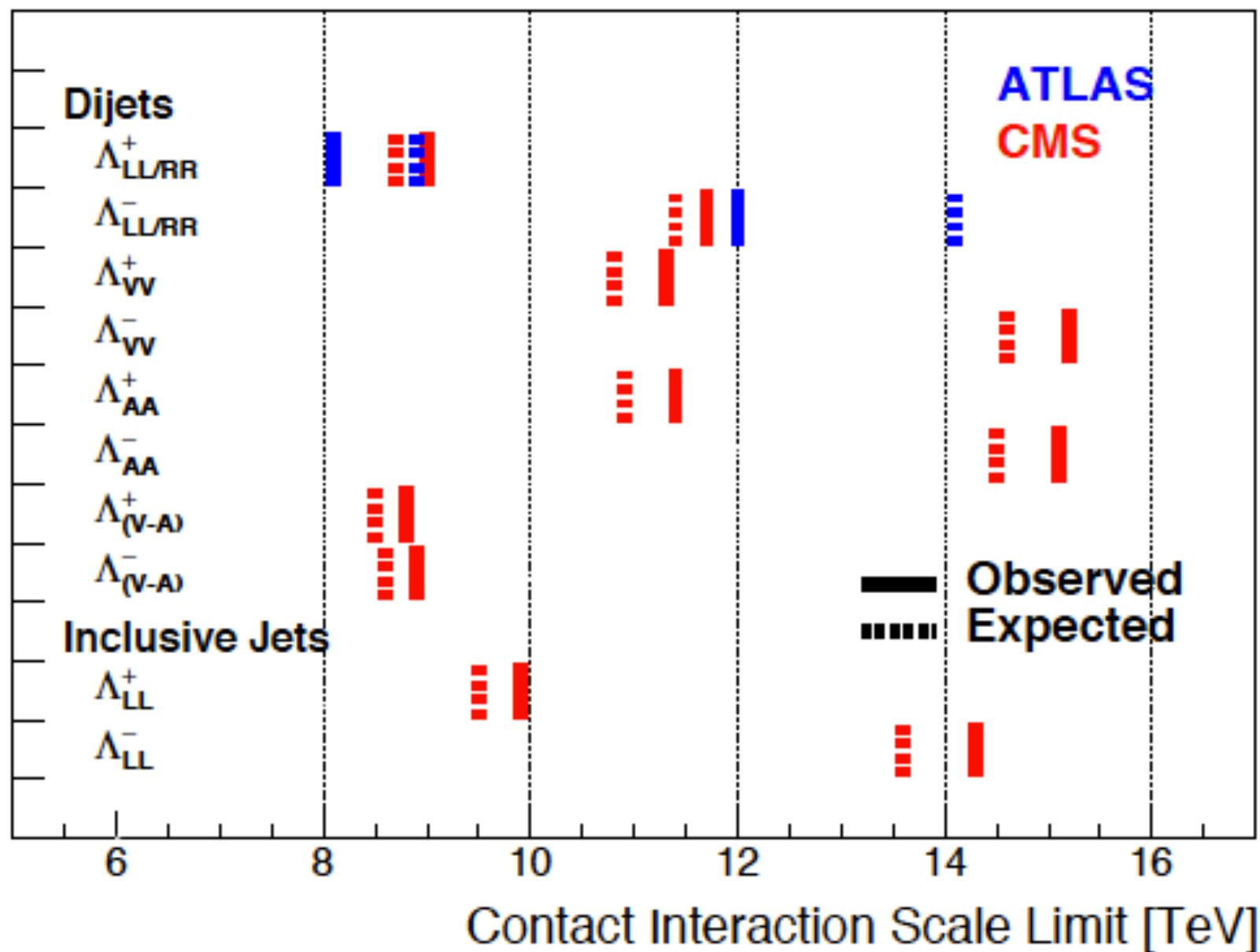
# Deviations in jet $p_T$ distributions from contact interactions

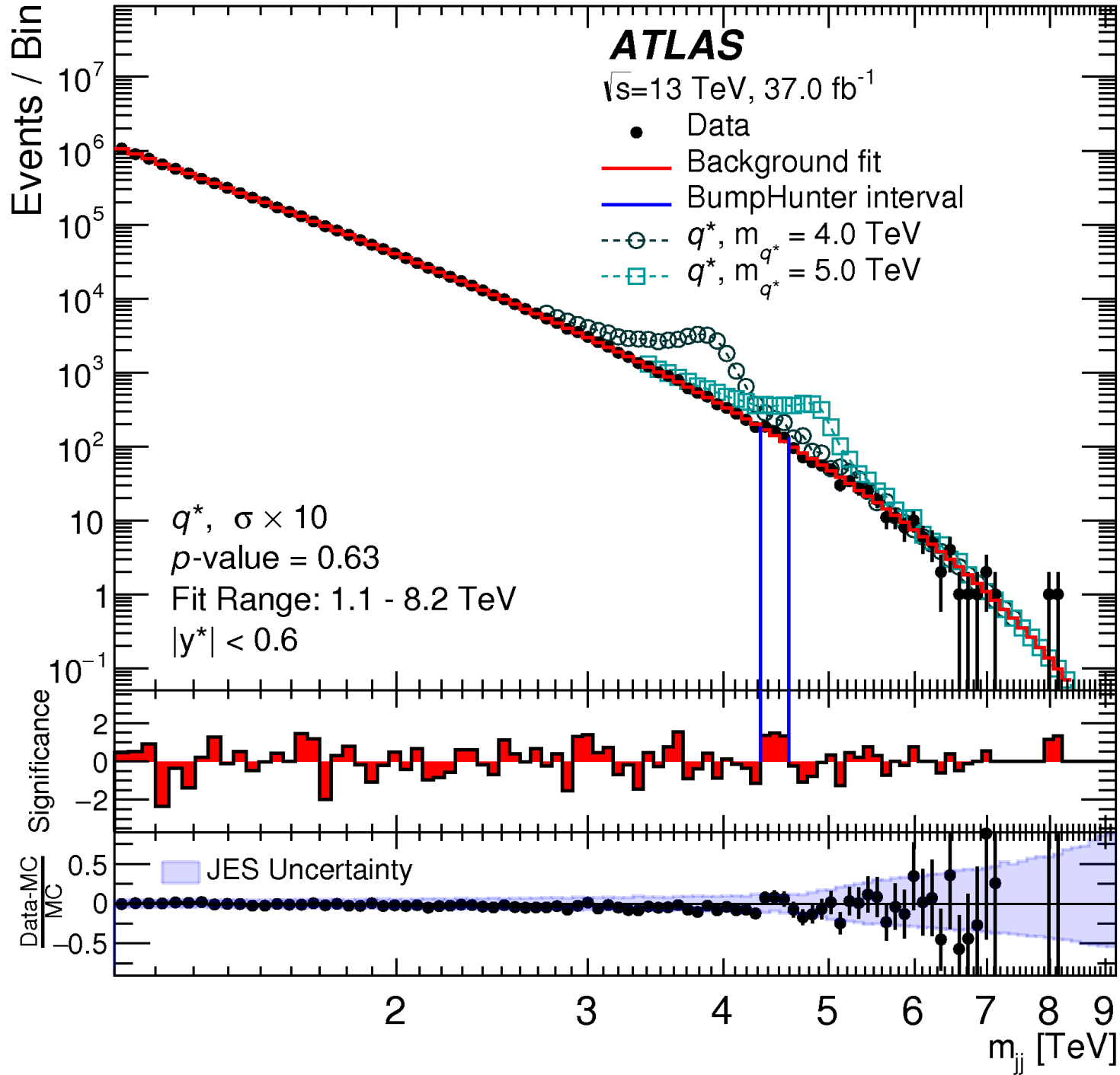


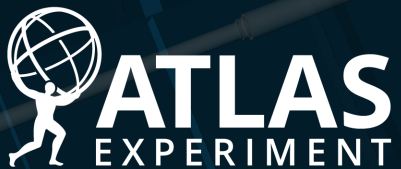
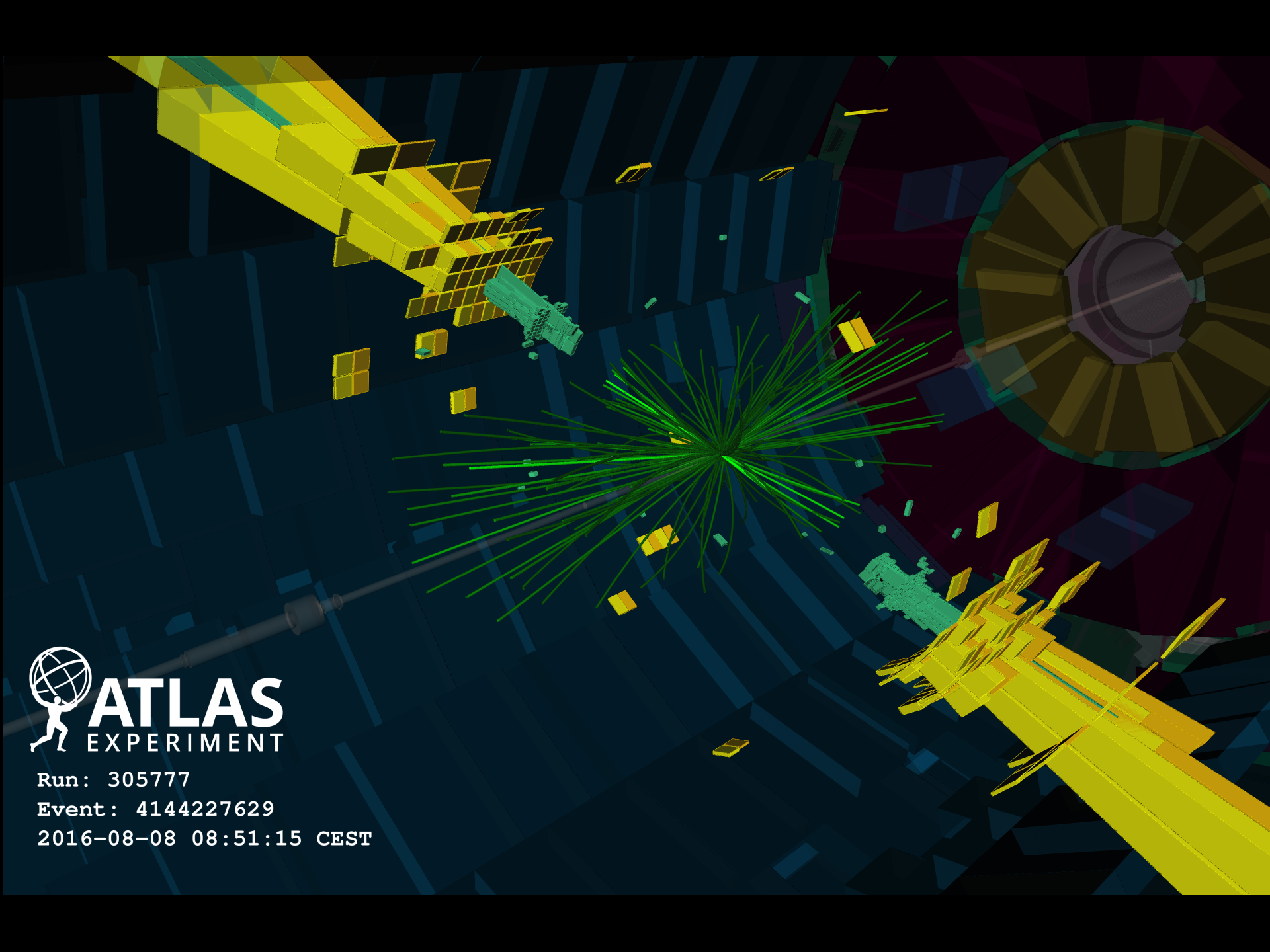
Fraction of central dijet events  
(rapidity < 0.6)



$\sqrt{s}=13$  TeV, 37.0 fb<sup>-1</sup>**ATLAS**



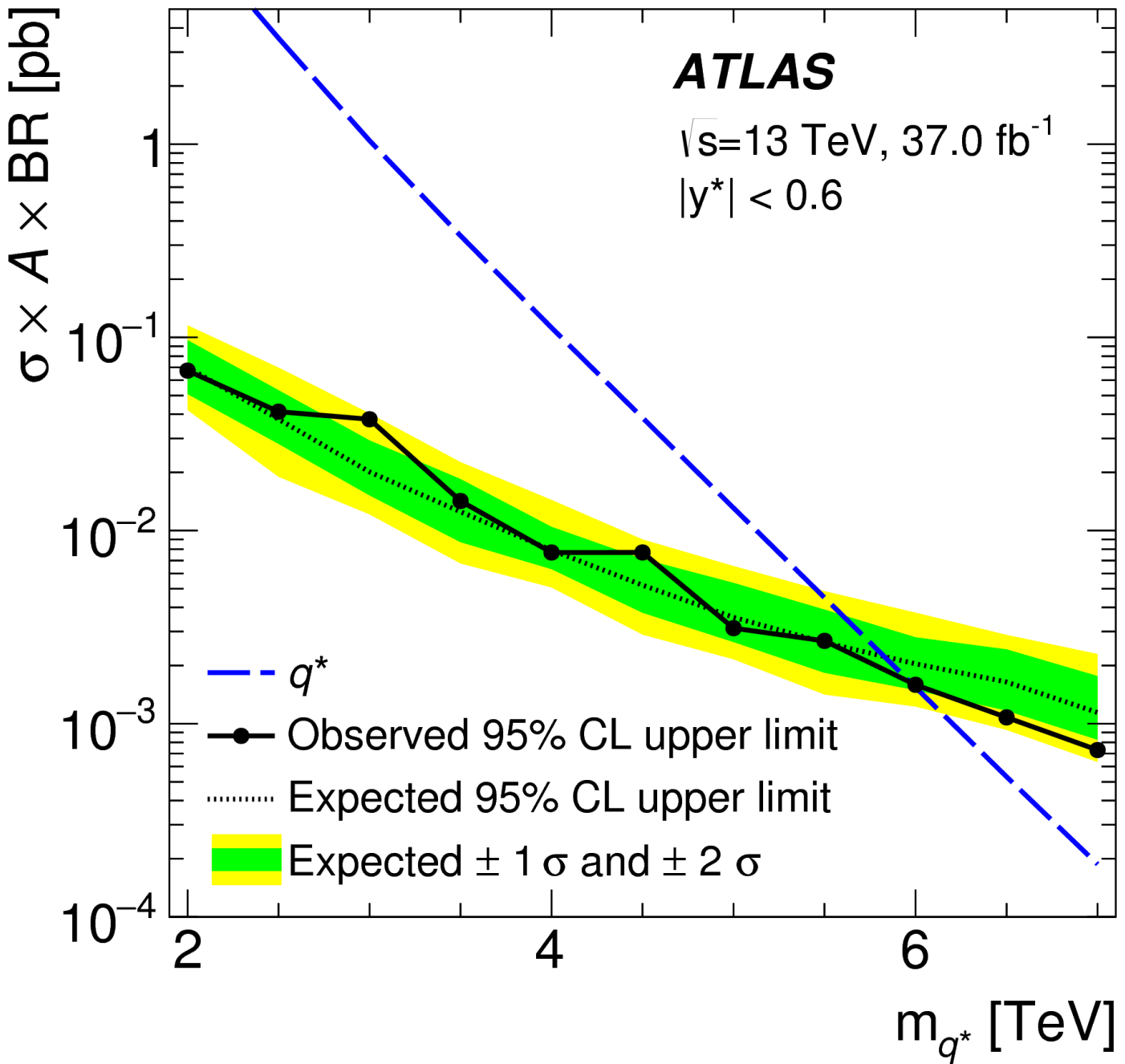


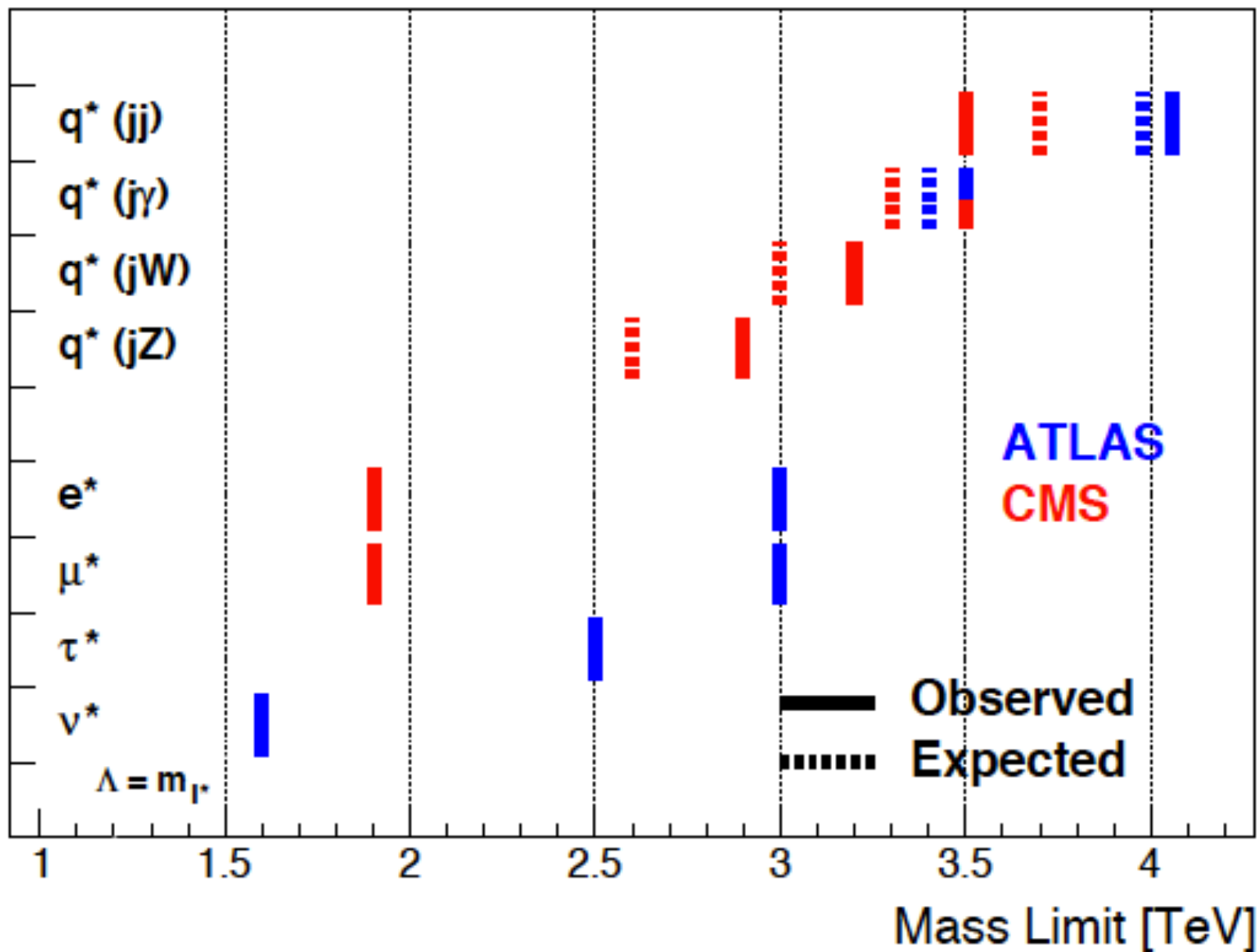


Run: 305777

Event: 4144227629

2016-08-08 08:51:15 CEST



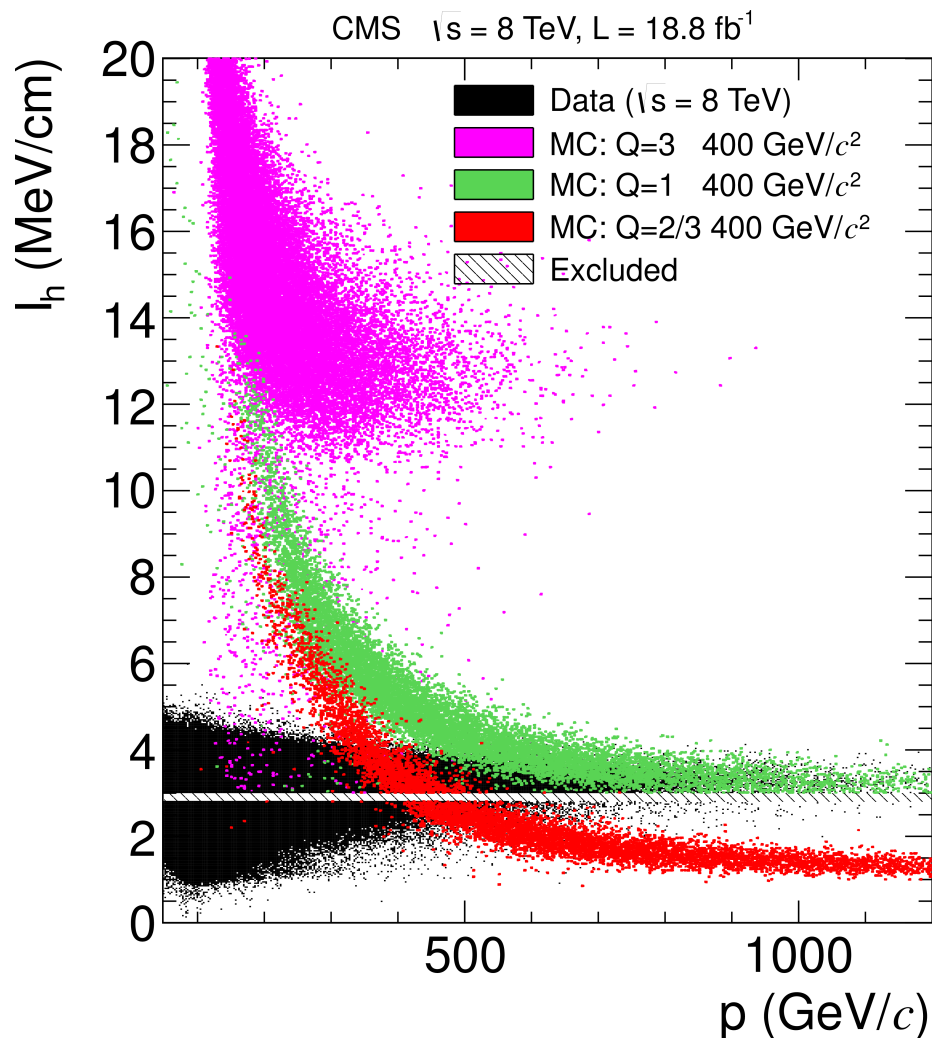
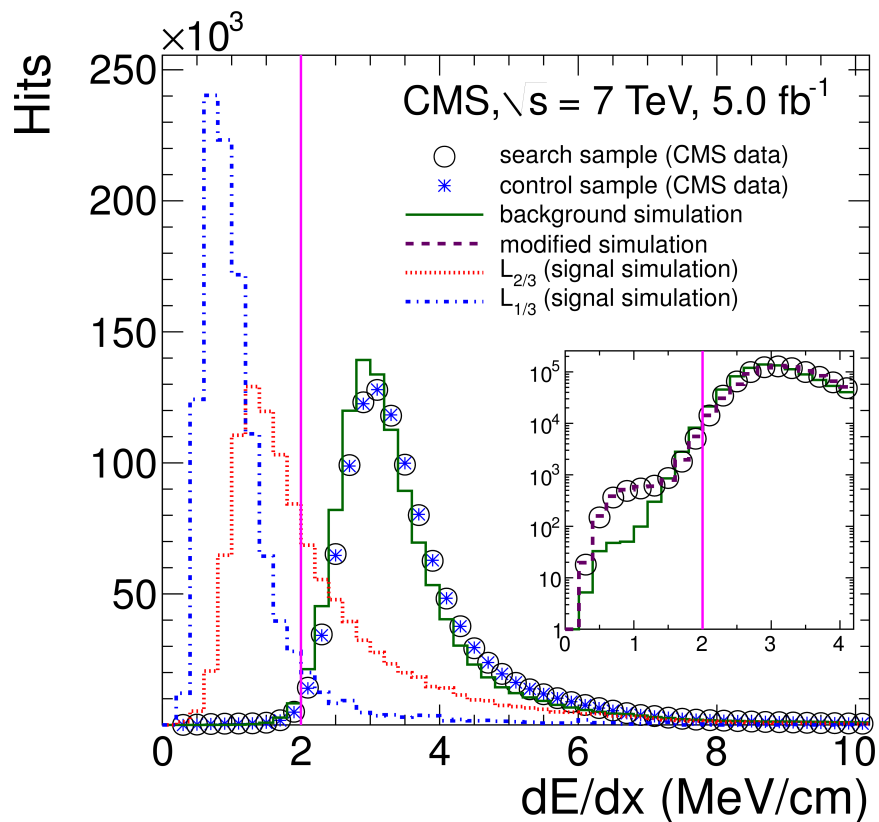


(actual numbers somewhat outdated)

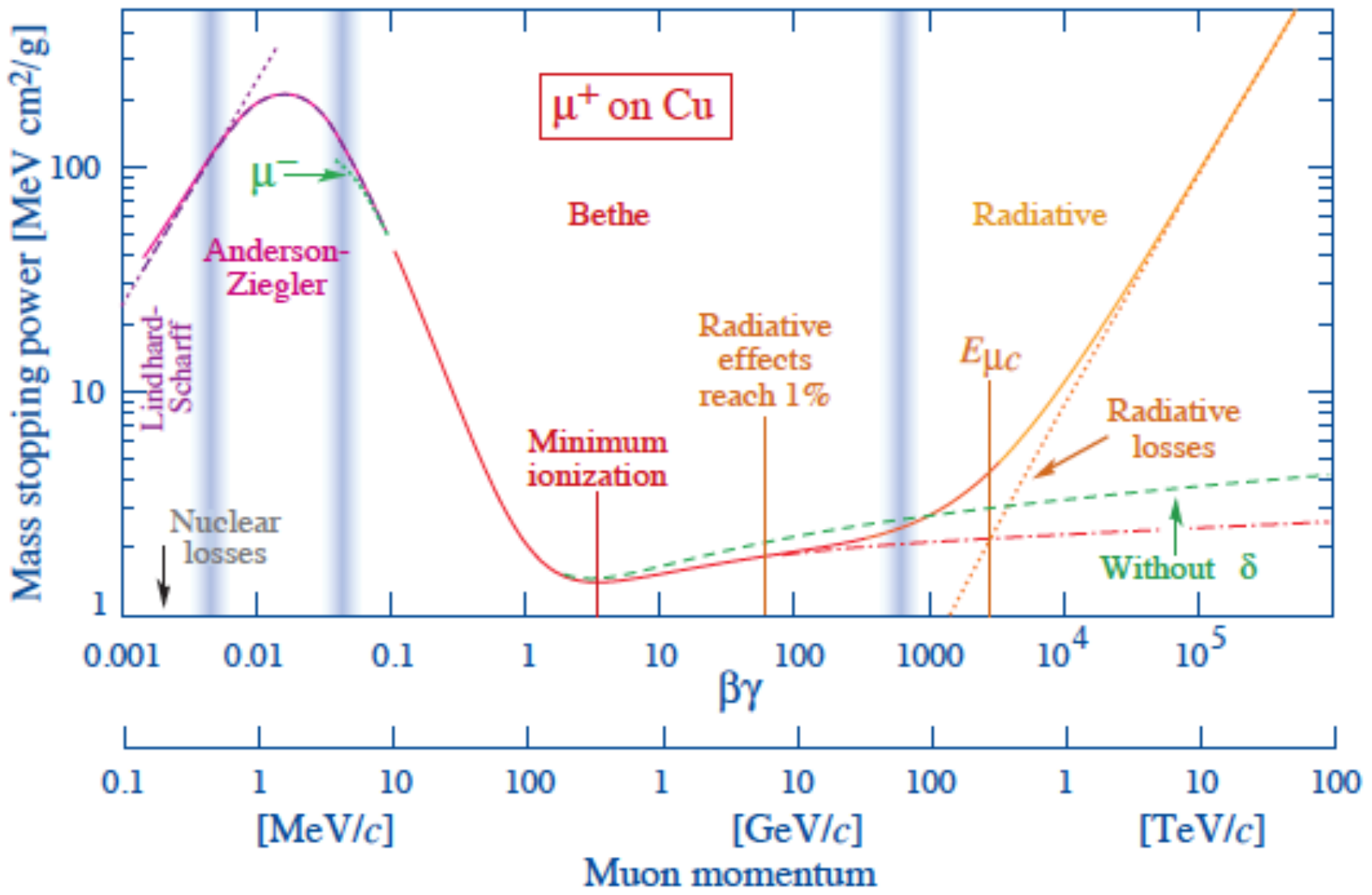


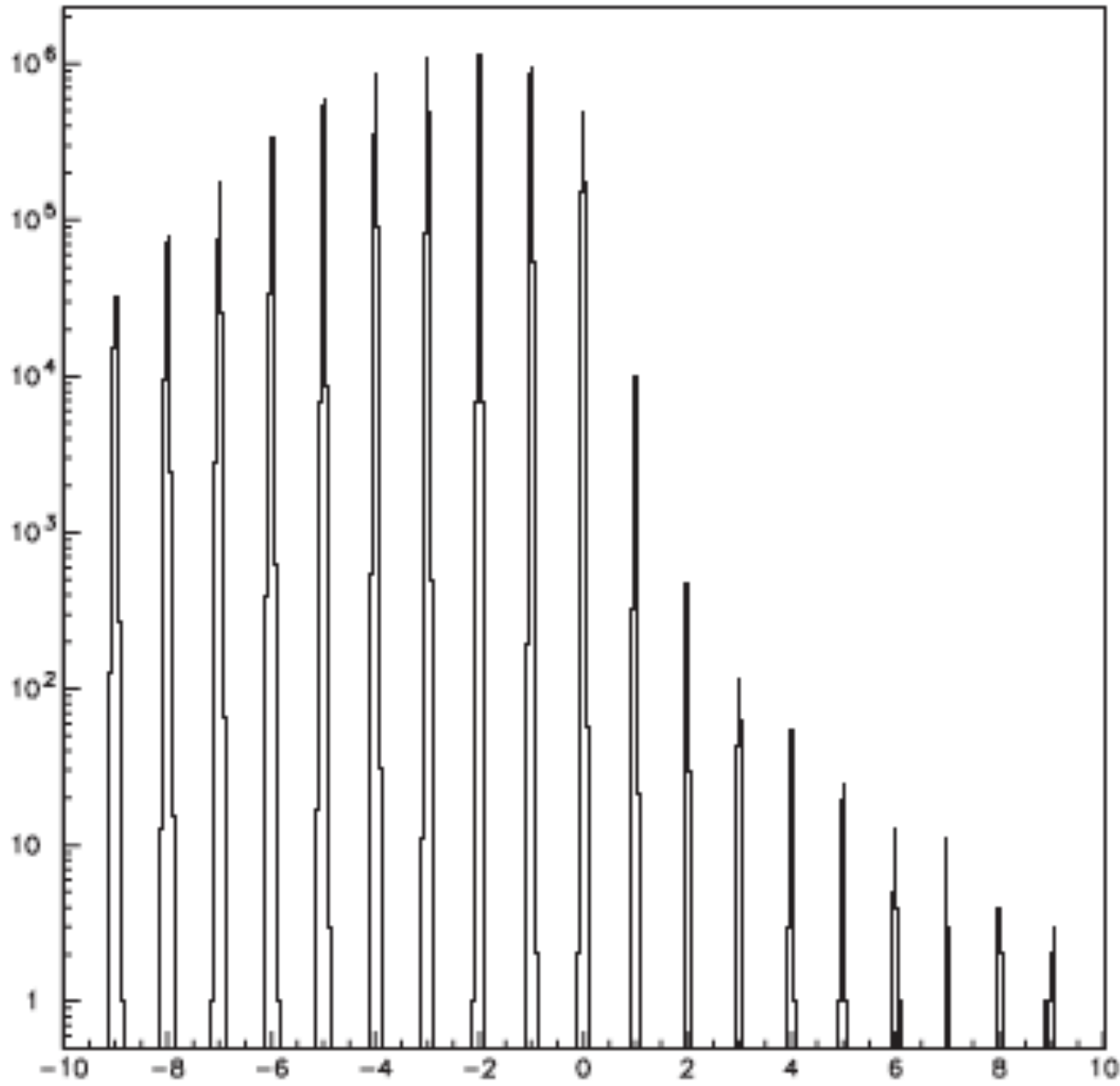
# Search for “unusually charged particles” in CMS

Make use of ionization energy loss



# Typical energy loss curve for a positive muon in copper

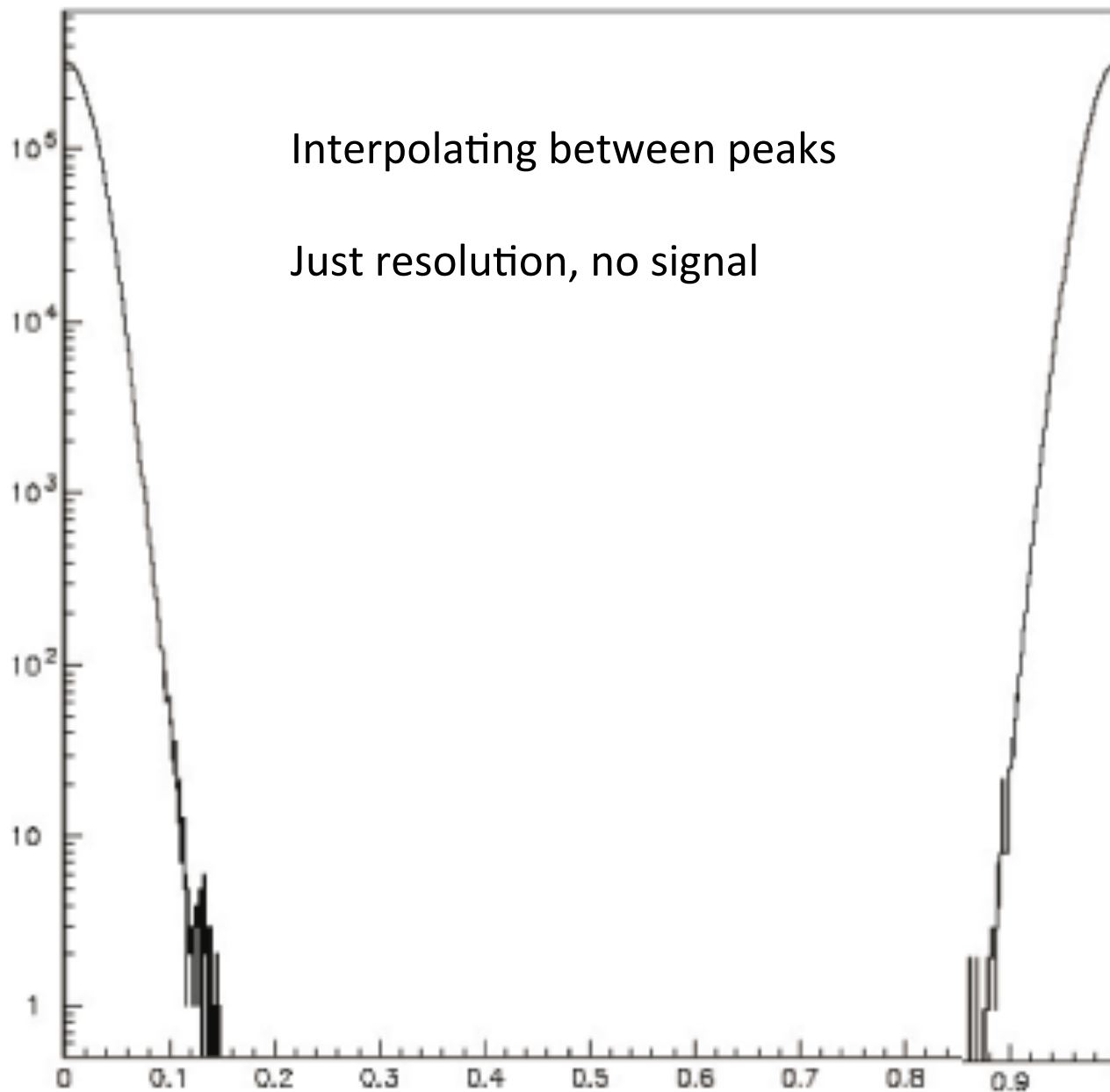




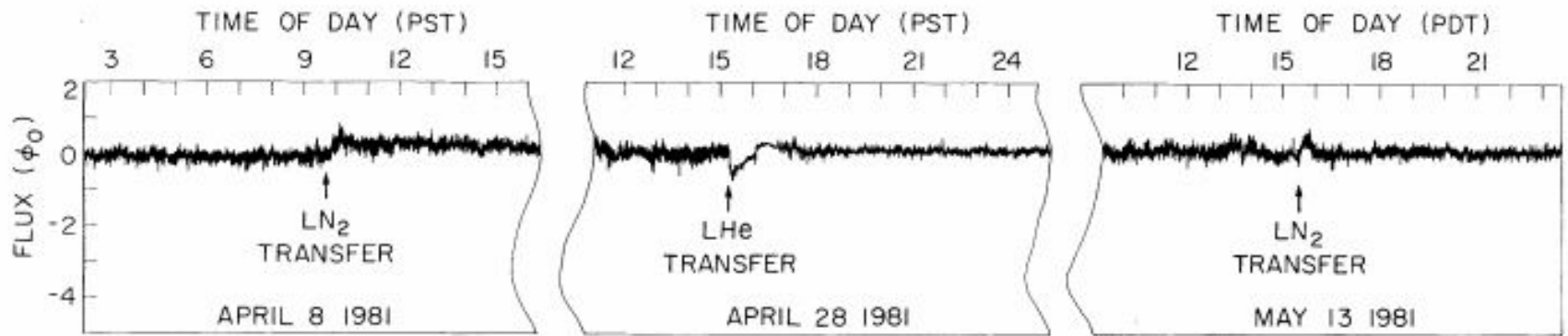
Millikan oil drop

fractionally charged  
particles / nucleon  
<  $10^{-22}$

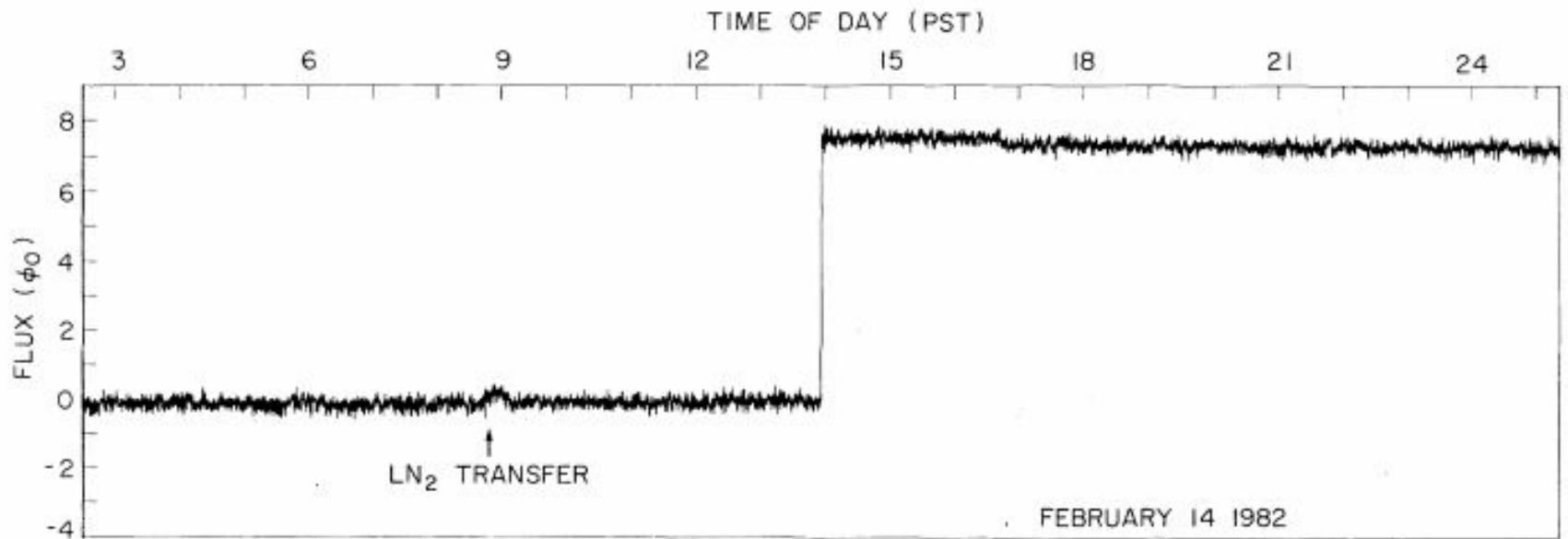
Fig. 2. The  $f$  charge distribution in 70.1 mg of silicone oil. <sup>17</sup>



# The "Valentine's Day" monopole



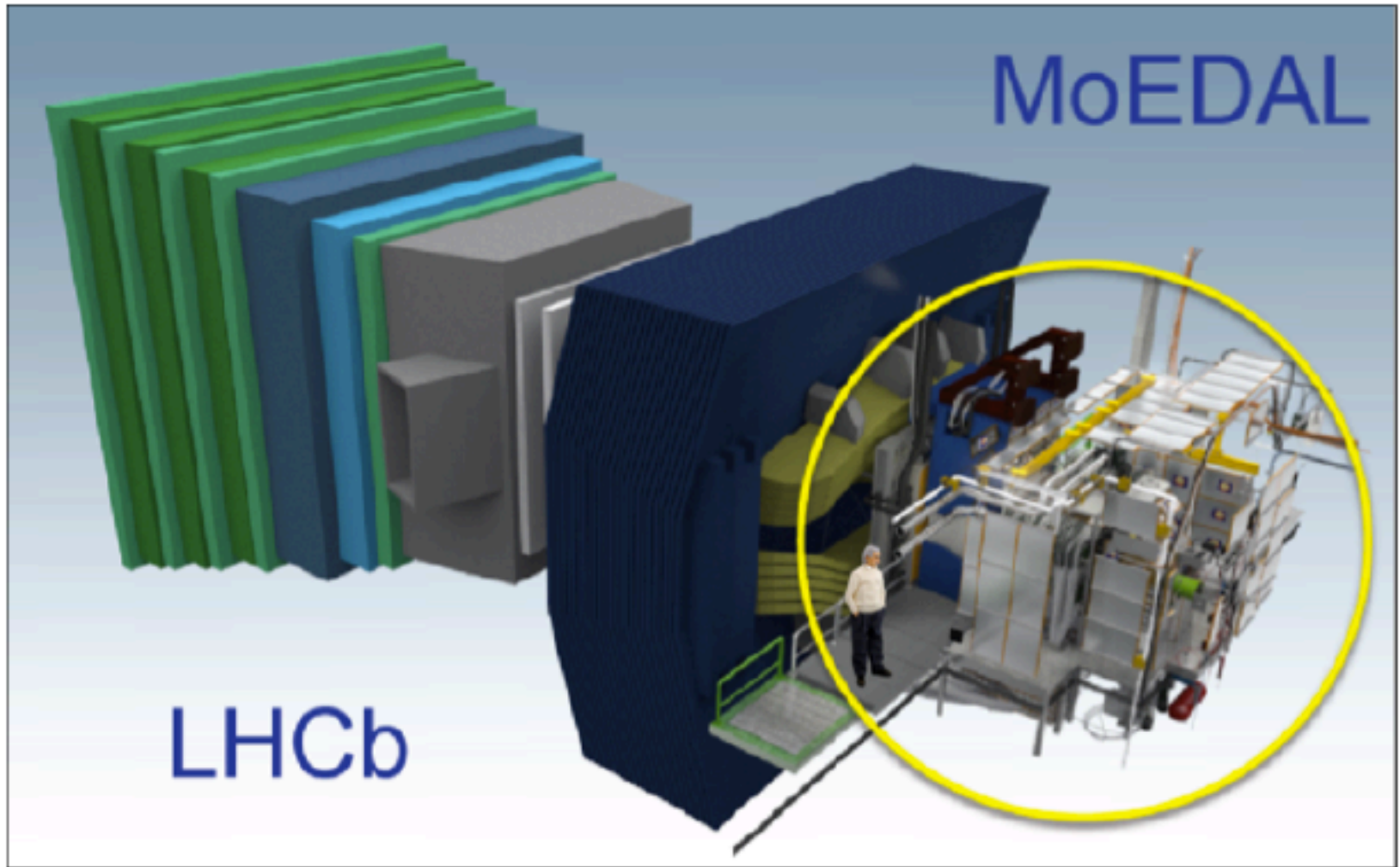
(a)



(b)

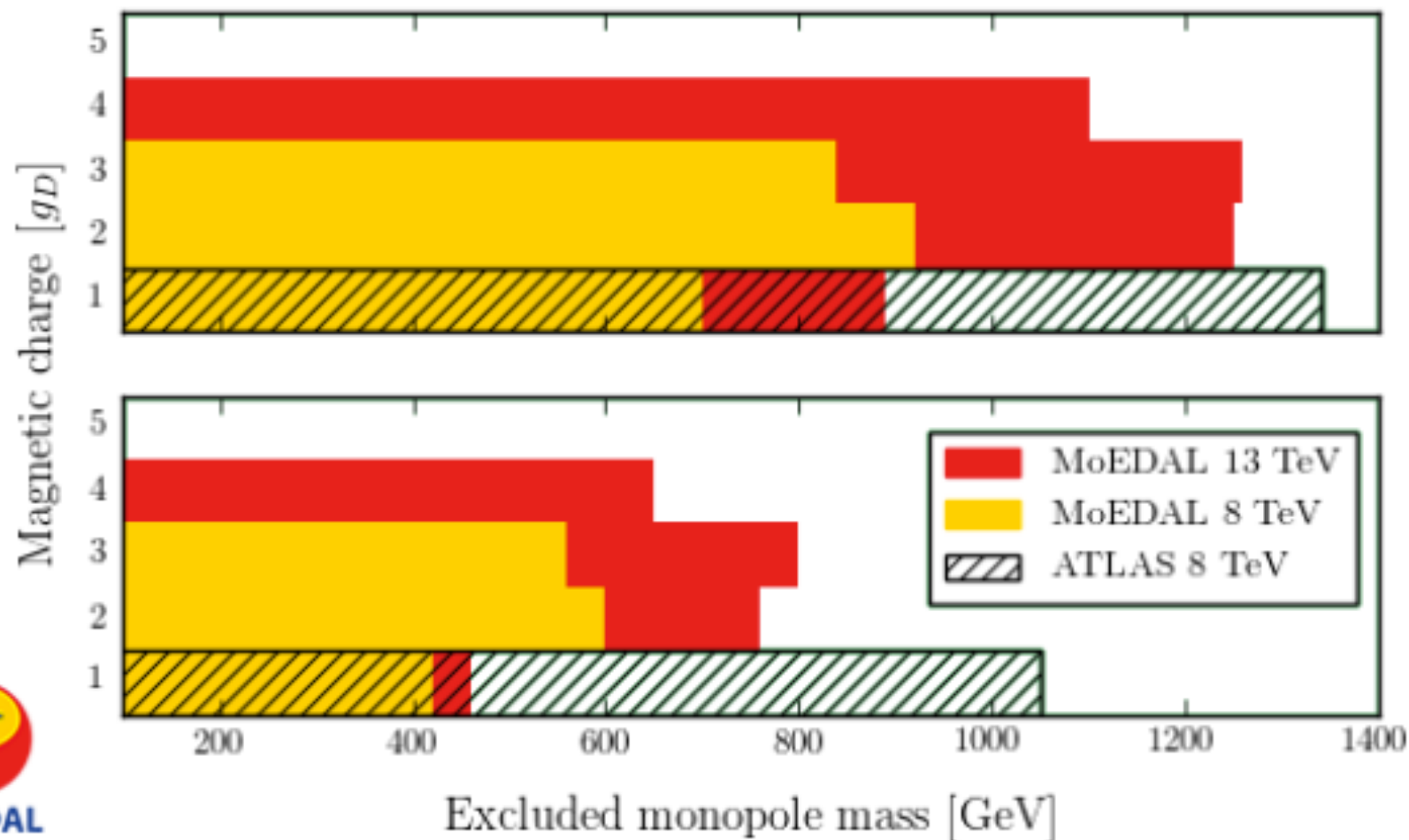
FIG. 2. Data records showing (a) typical stability and (b) the candidate monopole event.

MoEDAL search for monopoles  
Nuclear tracking detectors, around LHCb VELO





DY Spin 0  
DY Spin 1/2



# Neutrino telescope (Antares) hit distributions

## Monopoles versus neutrinos/muons

