Report about HGamma Meeting

Maosen Zhou

20th July

Outline

Tuesday, 14 July 2015

15:30 - 15:40 **Introduction** *10'*
Speakers: Elisabeth Petit (DESY), Dag Gillberg (CERN)
Material: HGam_int...

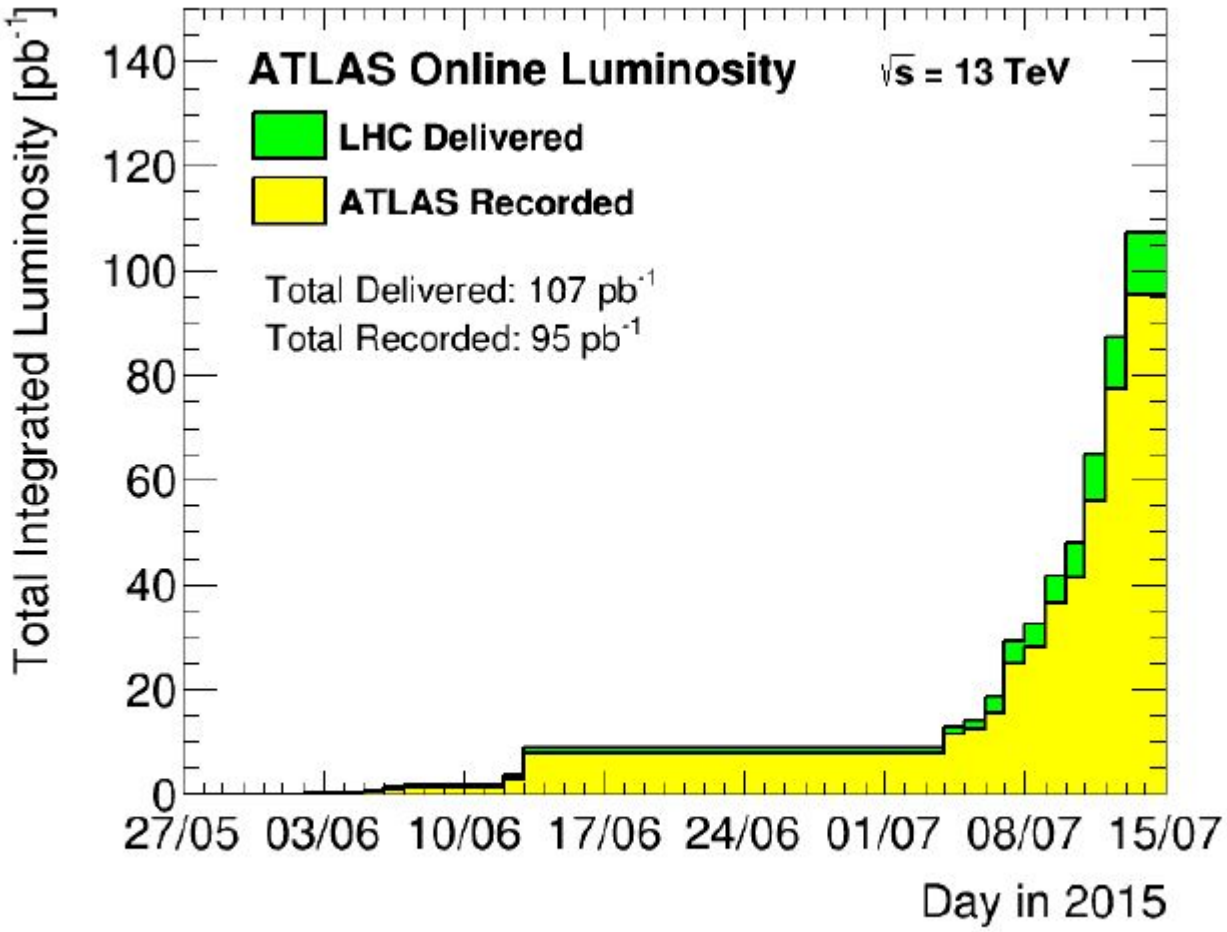
15:45 - 16:05 **Isolation studies** *20'*
Speaker: Jared Vasquez (Yale University (US))
Material: JVasque...

16:10 - 16:30 **e->γ fake rate studies** *20'*
Speaker: Alizeh Maqbool (Yale University (US))
Material: eyfakepre...

16:35 - 16:50 **Look at A1 to C2 of data of Run 2 (18.78 pb-1)** *15'*
Speaker: Marc Achille Escalier (LAL-Orsay (FR))
Material: escalier_1...

16:55 - 17:10 **News on photon triggers** *15'*
Speaker: Fernando Monticelli (Universidad Nacional de La Plata (AR))
Material: 2015071...

Convenor's talk



e-gamma fake rate

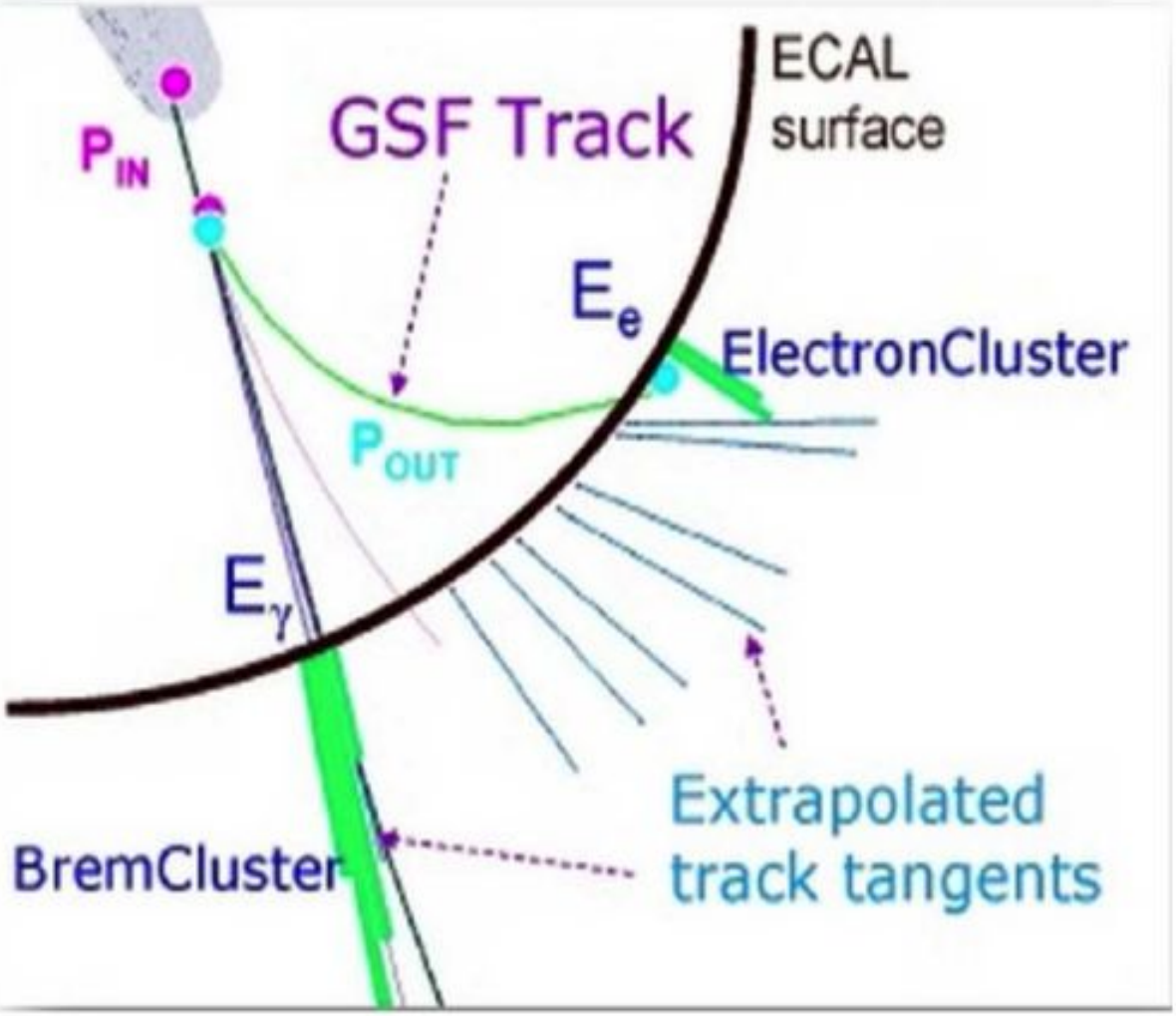


Figure 1: How do e fake γ?

Introduction

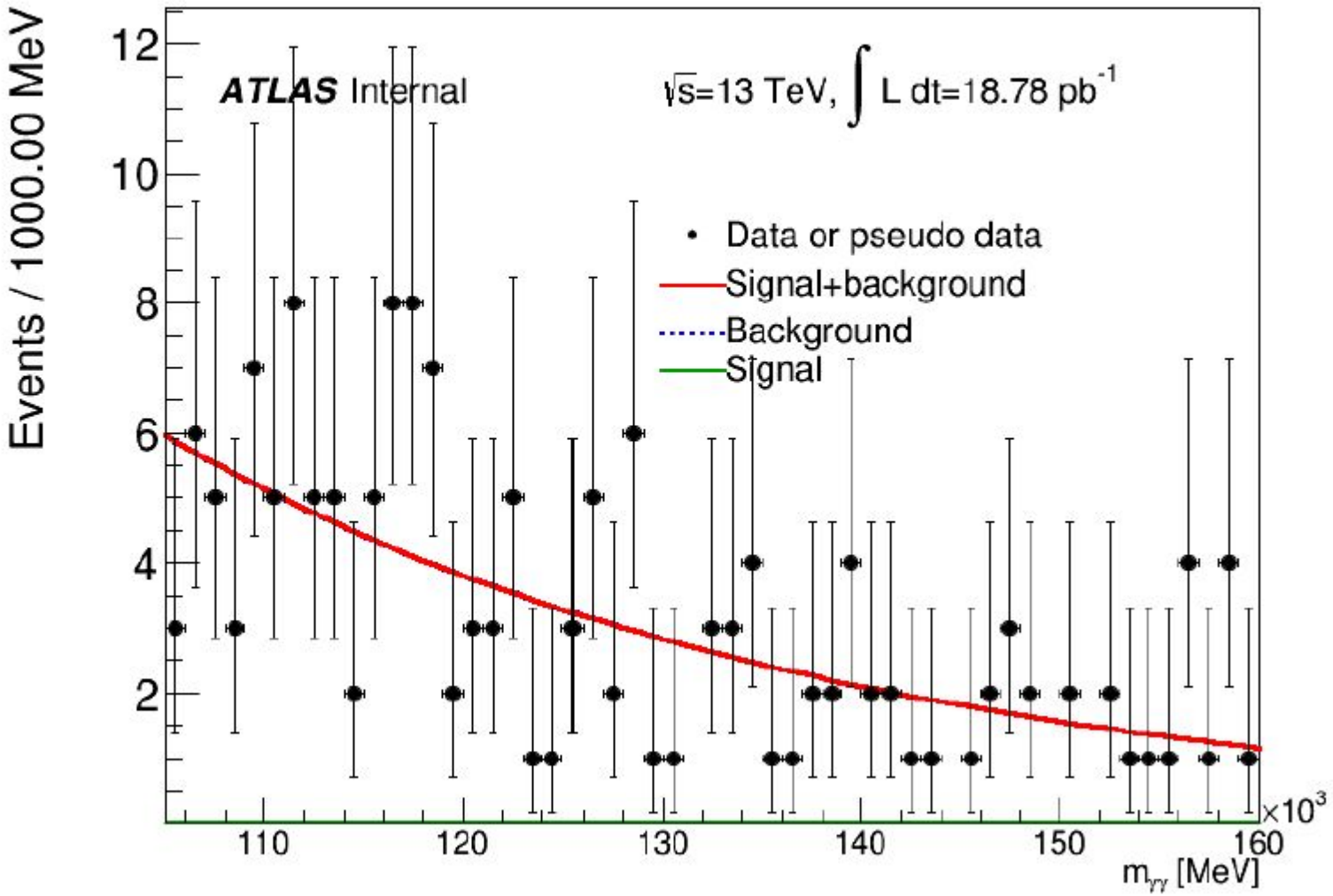
- Use $Z \rightarrow e^+e^-$ Monte Carlo Simulations to estimate the rate at which an electron fakes a photon
- Exclude e and γ from the barrel-endcap crack region ($1.37<|\eta|<1.52$)
- MC sample used : mc15_13TeV.361106
- Data used : EGAM1 stream of (some of) the collected Run 2 data, which corresponds to 7/pb
- Framework used : $HGamAnalysisFramework - 00 - 02 - 14$
- Applied good run list
- The following selection cuts were applied to e and γ
  - For both e and γ, $P_T > 25$ GeV
  - For γ, $|\eta| < 2.37$
  - For e, $|\eta| < 2.47$

why different if want to get e-gamma fake rate?

Look at data of Run 2

Data

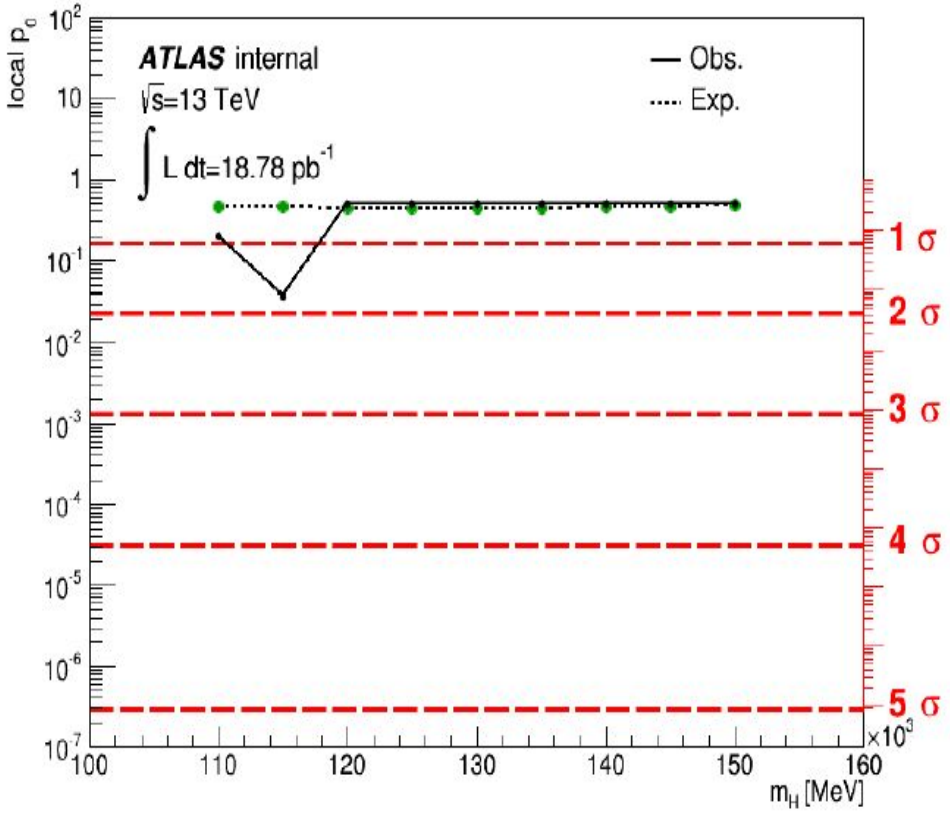
161 events



data of Run 2

p_0 scan

- Stat scan, using capped (historical one) p0



(markers corresponds to points scanned)

As expected, nothing surprising in first data, in context of SM H→γγ