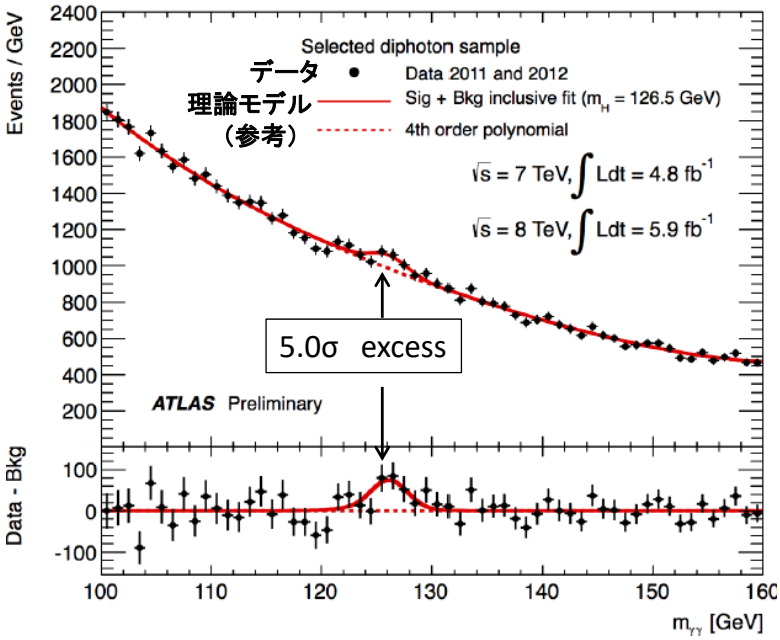
ヒッグス粒子らしい粒子を発見したとの報道

2012/7/4 at CERN

https://indico.cern.ch/event/197461/contributions/1478916/attachments/290953/406671/ATLAS_Higgs-CERN-seminar-2012.pdf にある図から作成

ATLAS チーム

理論モデルと実験データの適合度を示す図



$m_{\gamma\gamma}$ spectrum fit, for each category, with Crystal Ball + Gaussian for signal plus background model optimised (with MC) to minimize biases
Max deviation of background model from expected background distribution taken as systematic uncertainty

主な系統誤差

Main systematic uncertainties	
Signal yield	
Theory	~ 20%
Photon efficiency	~ 10%
Background model	~ 10%
Categories migration	
Higgs p_T modeling	up to ~ 10%
Conv/unconv γ	up to ~ 6%
Jet E-scale	up to 20% (2j/VBF)
Underlying event	up to 30% (2j/VBF)
H→ γγ mass resolution	~ 14%
Photon E-scale	~ 0.6%