

# Run I Diboson Resonances

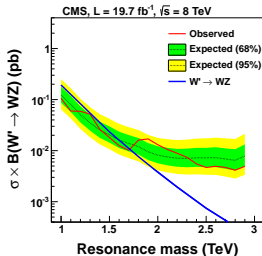
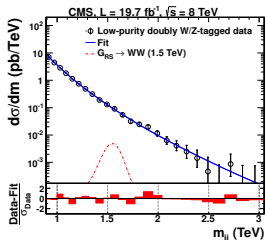
Chris Pollard

University of Glasgow, MCNet

2015 06 12

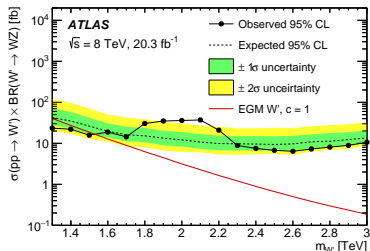
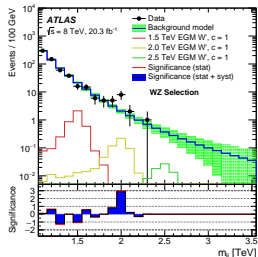
# Intro

- ▶ Tried to collect all public diboson (W, Z, H) resonances results from ATLAS and CMS.
- ▶ There are a lot of channels here: all W/Z/H + W/Z/H combinations with H  $\rightarrow b\bar{b}$ ; W  $\rightarrow$  hadrons or leptons; Z  $\rightarrow$  hadrons, charged leptons, neutrinos.
- ▶ I'm going to highlight the analyses that are sensitive at high  $m_X$ .
- ▶ **NOT** going into a lot of detail, but there are links to the analyses' documentation.

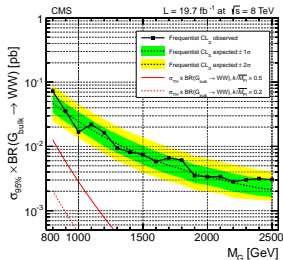
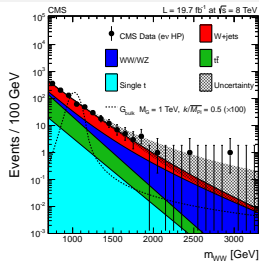
All-hadronic  $WW$  resonances

CMS: <https://twiki.cern.ch/twiki/bin/view/CMSPublic/PhysicsResultsEXO12024>

ATLAS: <https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/PAPERS/EXOT-2013-08/>

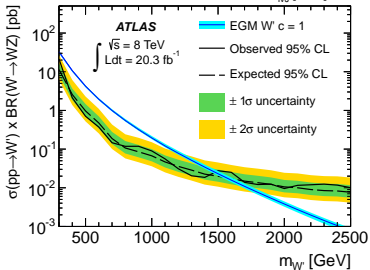
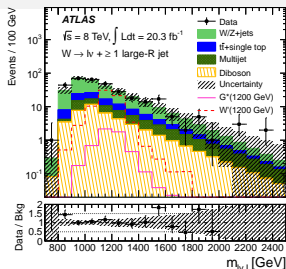


## 1-lepton VV resonances

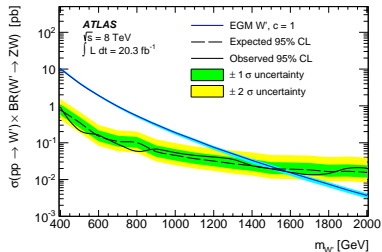
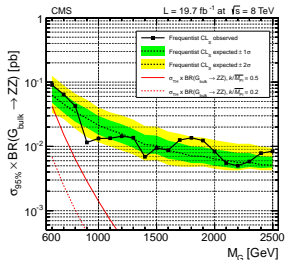
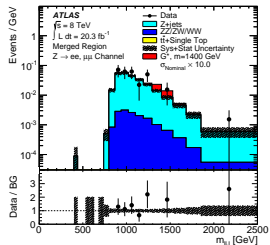
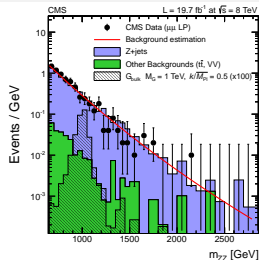


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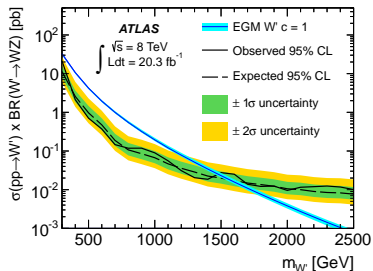
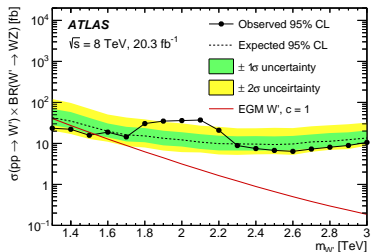
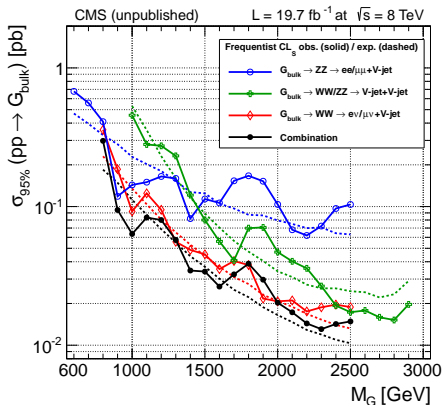
# 2-lepton VV resonances



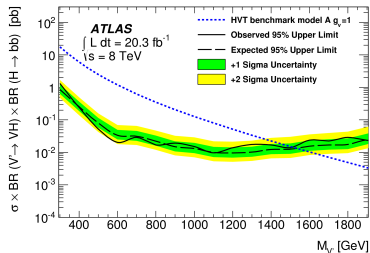
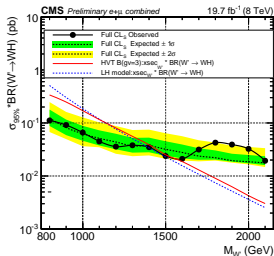
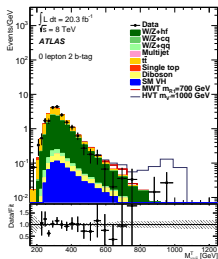
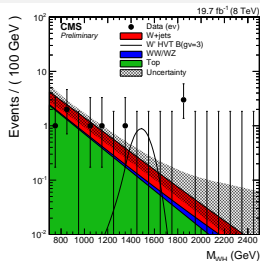
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ATLAS: <https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/PAPERS/EXOT-2013-06/>

# VV resonances comparison



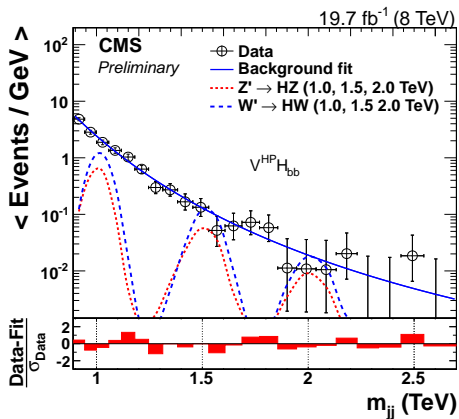
# VH resonances; $V \rightarrow$ leptons



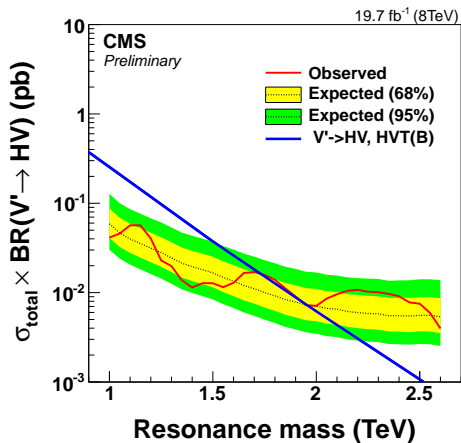
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## All-hadronic VH resonances

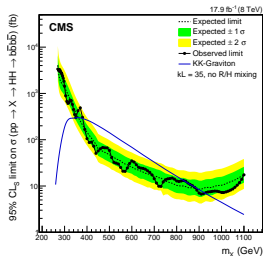
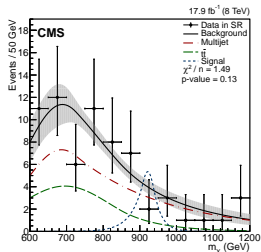


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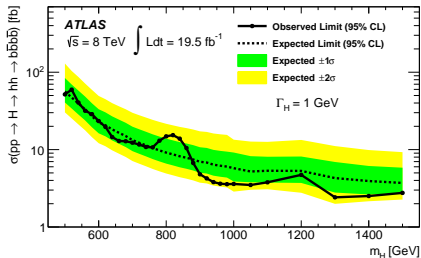
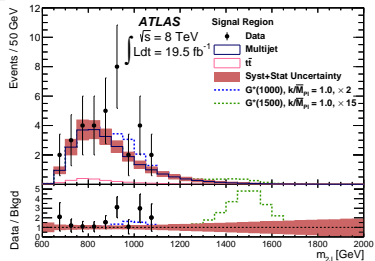


# HH resonances

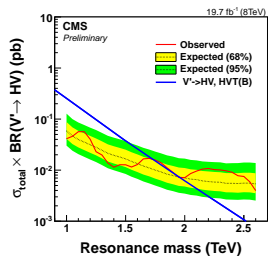
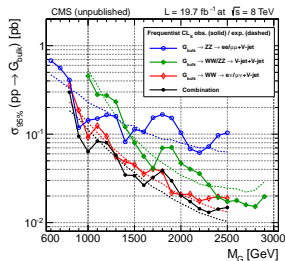
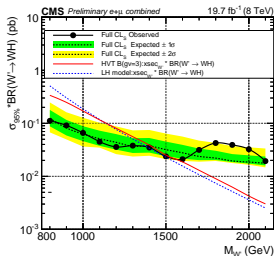
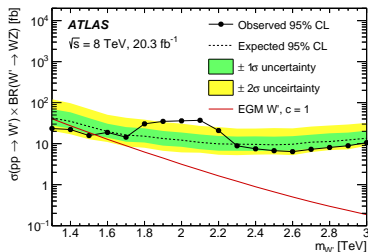


CMS: <https://twiki.cern.ch/twiki/bin/view/CMSPublic/Hig14013PaperTWiki>

ATLAS: <https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/PAPERS/EXOT-2014-11/>



# Summary



very biased choice of plots here...