

Common summary plots ATLAS/CMS

– **General idea** → e.g. see **Top Group**

– **Plan of action**

Kristin Lohwasser

DESY

Proposal for Summary Plots

➤ LHC Top working group has summary page with summary plots

▪ <https://twiki.cern.ch/twiki/bin/view/LHCPhysics/LHCtopWGSummaryPlots>

TWiki > LHCPhysics Web > LHCtopWG > LHCtopWGSummaryPlots (2016-12-16, Martin Adikari)

LHCtopWG Summary Plots

- Standalone Summary Plots
- Summary Plots in Combination Notes

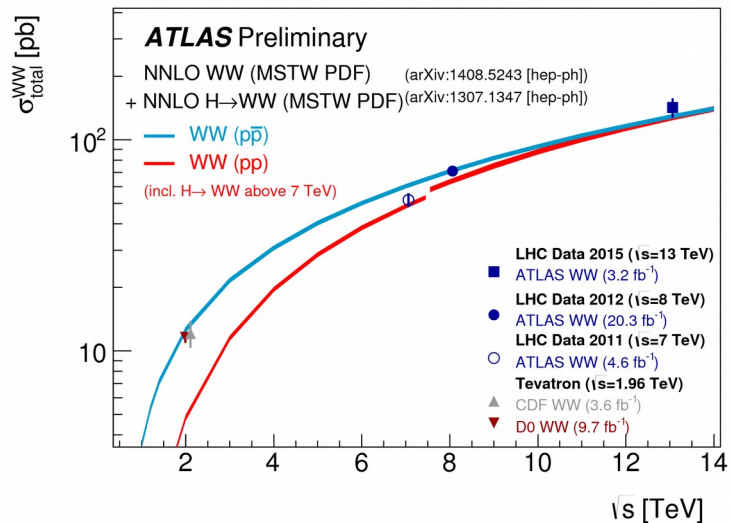
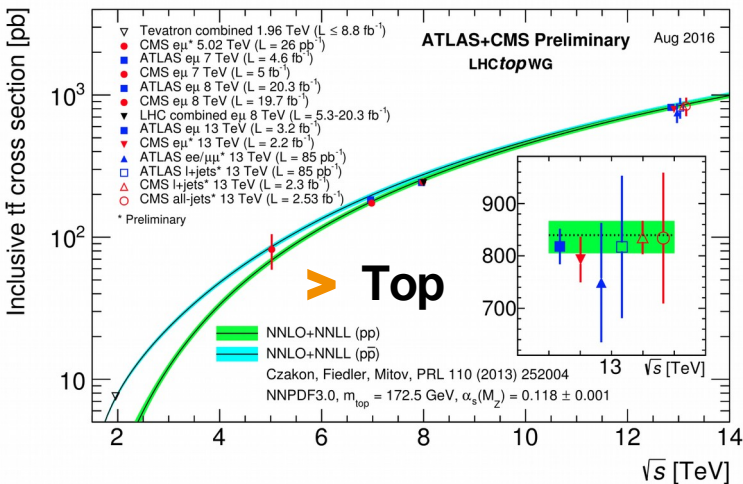
Standalone Summary Plots

Figure	Description
<p>Pair production inclusive cross section</p> <p>Summary of LHC and Tevatron measurements of the top-pair production cross-section as a function of \sqrt{s} at $m_{top}=172.5$ GeV. Measurements made at the same centre-of-mass energy are slightly offset for clarity.</p> <p>Aug 2016</p> <p>This and previous plot versions</p>	<p>Some of these are general summary plots, Other stem from specific combinations</p> <p>General summary plots would be useful for LHC EWK dibosons too</p>
<p>Top-pair cross-section measurements at 7 TeV by the ATLAS and CMS collaborations. The bar shows early LHC measurements and their combination. The lower part summarizes measurements.</p> <p>May 2016</p> <p>This and previous plot versions</p>	<p>Currently available mainly privately (no checks) (ATLAS e.g. uses only official – paper – results)</p>
<p>Summary of measurements of the top-pair production cross-section at 5 TeV compared to the ATLAS-CMS Preliminary LHCtopWG summary.</p> <p>May 2016</p> <p>This and previous plot versions</p> <p>Same, for $m_{top}=173.34$ GeV, only older plot versions available</p>	<p>Top group has separate svn area for the LHCtopWG to keep macros: https://svnweb.cern.ch/cern/wsvn/toplhwcw write permission to whoever is taking care of the particular plot, to keep the macros up-to-date.</p> <p>For the approval process, the plots go through the standard procedure for the respective collaborations, here ATLAS: → a min 3 day circulation to the full collaboration. → Then update the plots with all the comments & get the final OK from PC to put them on the web / upload to the web (normal ATLAS public page, plus the LHCtopWG webpage).</p>

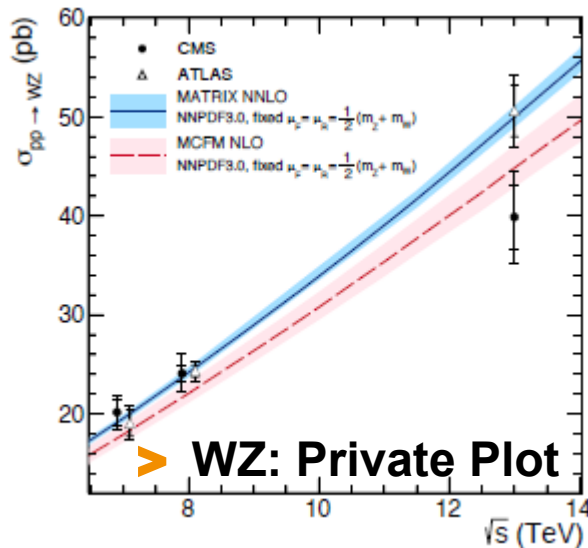


General idea

> Possible Summary Plots



> WW: include/exclude Higgs? CMS missing (preliminary)



Idea:
Do this for:
WW, WZ, ZZ \rightarrow add small inserts ratios
(volunteers to iterate on plots?)

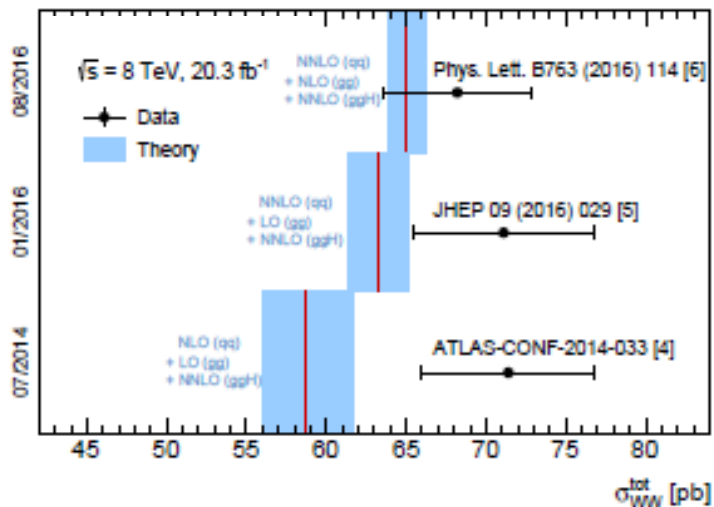
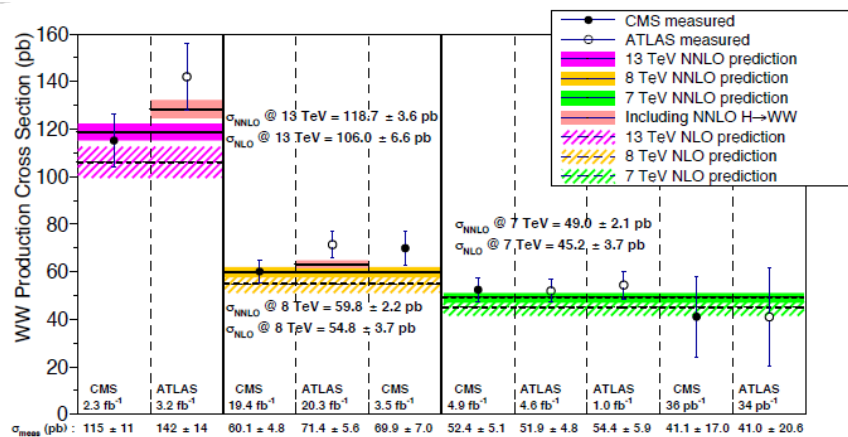
Identify possible other final state for total / even fiducial (if same definition) cross sections (could start call within collaborations?)



Other possible plots

➤ Could also have more specific plots for summary talks

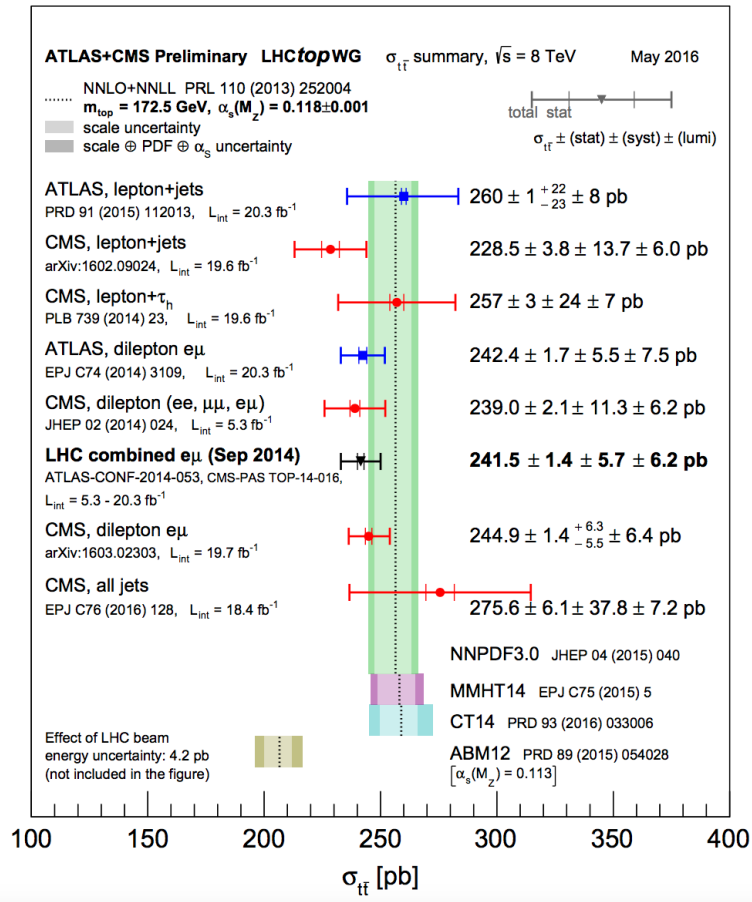
- e.g. for WW and WZ to summarize the theoretical developments together with measurements (→ note again, both private plots)



Other possible plots: aTGC summaries

> Corresponding to e.g. TOP mass combination

- (already mainly available from CMS side, but might be nice to have common scripts to be updated everytime)



Eventually possible?

➤ Publication of fiducial / differential cross section in same/similar phase ?

- See again top example → could be also “afterburner” from main publications? (examples include also W asymmetry with extrapolations)

