

4th TOPLHCWG open meeting Introduction

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CERN, 28th - 29th November 2013

Fourth open session of the TOPLHCWG

- forum for public discussions (ATLAS+CMS+TH) on combination and interpretation of top physics measurements at the LHC
- two open sessions per year, topical meetings in between

Documentation and coordinates

- integrated into the LPCC structure at CERN
- agendas available at
 - <https://indico.cern.ch/categoryDisplay.py?categId=4463>
- Twiki page available at
 - http://lpcc.web.cern.ch/LPCC/index.php?page=top_wg
- public notes produced so far also available from that page
- if interested subscribe to lhc-toplhwcg@cern.ch

Welcome !

Shown at EPS this summer (see [talk](#))

Two new combinations released for TOP2013

single top t-channel (8 TeV)

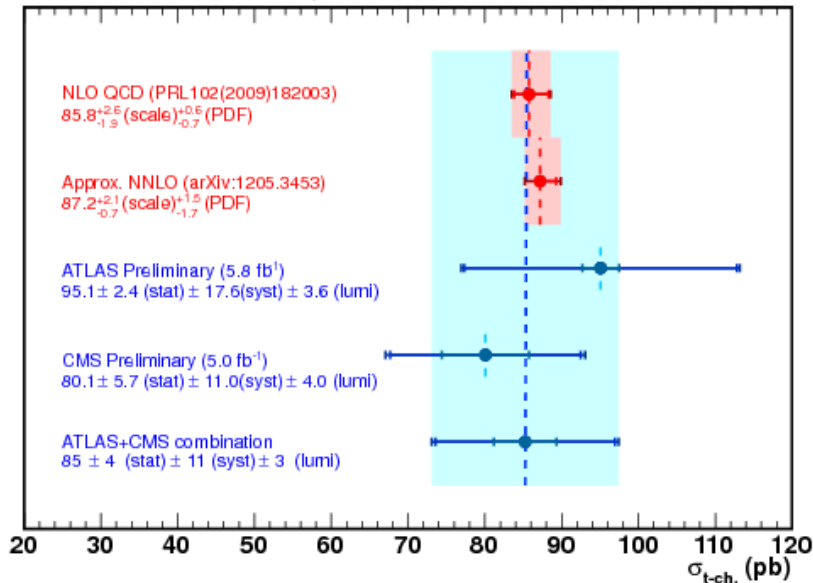
- ATLAS-CONF-2013-098
- CMS PAS TOP-12-002

top quark mass, updated to

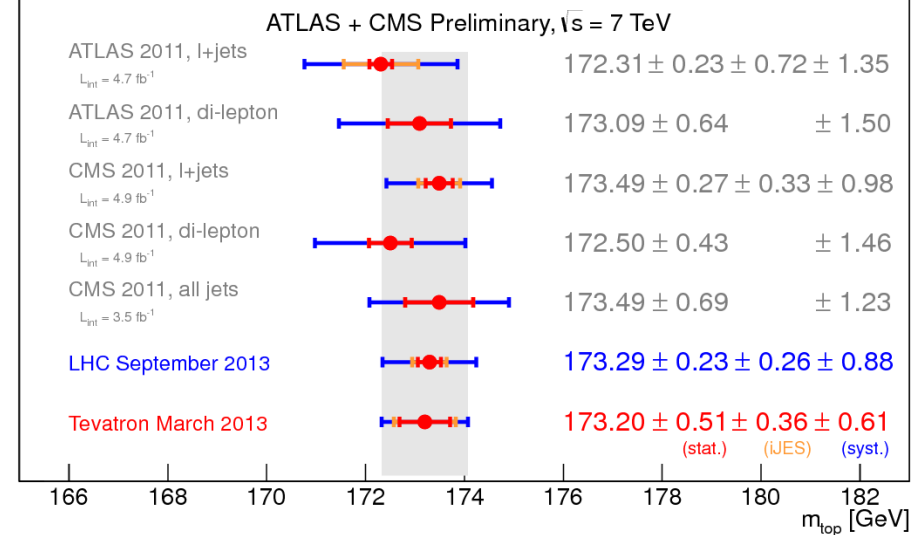
Fall 2013 measurements

- ATLAS-CONF-2013-102
- CMS PAS TOP-13-005

ATLAS+CMS Preliminary, $\sqrt{s} = 8$ TeV



LHC m_{top} combination - September 2013, $L_{\text{int}} = 3.5 \text{ fb}^{-1} - 4.9 \text{ fb}^{-1}$



Combinations

- currently five efforts: m_t , $\sigma(t)$, $\sigma(t\bar{t})$, W helicity, asymmetry

Harmonisation of systematic uncertainties

- detector-related: JES, flavour-tagging
- modeling: radiation, generator, b-fragmentation

Review of combination tools

- usage/implementations of BLUE
- beyond linear approximation

Theory-experiment discussions

- best tools for single top and top quark pair production
- define how to best present results

$t\bar{t}$ charged asymmetry

- effort has started to combine 7 TeV measurements
- contacts: Frédéric Deliot (ATLAS), Thorsten Chwalek (CMS)
- first report today

...


- more discussions tomorrow

Thursday, 28 November 2013

09:00 - 09:15 **Introduction and welcome 15'**
Speakers: Markus Cristinziani (Universitaet Bonn (DE)), Roberto Chierici (Universite Claude Bernard-Lyon I (FR))

09:15 - 10:45 **Single top**

Single top

09:15 **Combination of the t-channel cross section 30'**
Speakers: Luca Lista (Universita e INFN (IT)), Julien Noce Donini (Univ. Blaise Pascal Clermont-Fe. II (FR))
Material: [Slides](#) 

09:45 **Open issues and tools for single top 45'**
Speaker: Rikkert Frederix (CERN)

10:45 - 11:15 **Coffee break**

Charge asymmetry

11:15 - 11:45 **First look at the combination of top charge asymmetry 30'**
Speakers: Thorsten Chwalek (KIT - Karlsruhe Institute of Technology (DE)), Frederic Deliot (CEA/IRFU, Centre d'etude de Saclay Gif-sur-Yvette (FR))

11:45 - 12:15 **Top pair cross sections**

Cross section

11:45 **Comparison with top-pair at NNLO 30'**
Speakers: Maria Aldaya Martin (Hamburg University (DE)), James Ferrando (University of Oxford)

12:15 - 14:00 **Lunch**

14:00 - 16:00 **Top pair cross sections**

14:00 **ttgamma/ttW, theory and tools 30'**
Speaker: Thomas Edward Melia

14:30 **Comparison of ATLAS and CMS top pair differential distributions 1h30'**
Speaker: Maria Aldaya Martin (Hamburg University (DE))

16:00 - 16:30 **Coffee break**

BLUE & Tools

16:30 - 18:00 **BLUE and combination tools**

16:30 **Iterative BLUE 30'**
Speakers: Julien Noce Donini (Univ. Blaise Pascal Clermont-Fe. II (FR)), Luca Lista (Universita e INFN (IT))

17:00 **BLUE: new ideas and towards a common code 30'**
Speaker: Roberto Chierici (Universite Claude Bernard-Lyon I (FR))

Friday, 29 November 2013

09:00 - 10:00

Top mass

09:00 **Top mass combination: status and perspectives 30'**

Speakers: Giorgio Cortiana (Max-Planck-Institut fuer Physik (Werner-Heisenberg-Institut) (D)), Steve Wimpenny (University of California Riverside (US))

09:30 **Top mass extraction from leptonic distributions in dilepton final states 20'**

Speaker: Alexander Dimitrov Mitov (University of Cambridge (GB))

10:00 - 10:30

Questions to theorists:discussion session 30'

Speakers: Markus Cristinziani (Universitaet Bonn (DE)), Roberto Chierici (Universite Claude Bernard-Lyon I (FR))

10:30 - 11:00

Coffee break

11:00 - 12:15

Systematic session 2: b-fragmentation

11:00 **Theory perspectives on b-fragmentation 30'**

Speaker: Gennaro Corcella

11:30 **b-fragmentation in experimental analyses 30'**

Speaker: Markus Seidel (Hamburg University (DE))

12:15 - 12:45

Outlook and future efforts 30'

Speakers: Roberto Chierici (Universite Claude Bernard-Lyon I (FR)), Markus Cristinziani (Universitaet Bonn (DE))

Top mass

Q & A

b-fragmentation

Outlook

Quite some time foreseen for discussions!