

# TOPLHCWG

## THIRD OPEN SESSION

**18-19<sup>TH</sup> APRIL 2013**

# Introduction and coordinates

- Third open session of the TOPLHCWG
  - Forum for public discussions (ATLAS+CMS+TH) on combination and interpretation of top physics measurements at the LHC
  - Plan is to have two open sessions per year
- 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](http://lpcc.web.cern.ch/LPCC/index.php?page=top_wg)
    - Public notes produced so far also available from that page
  - Please make sure you subscribe to the main open list [lhc-toplhwcg@cern.ch](mailto:lhc-toplhwcg@cern.ch)
- Welcome !

# Recent activities

- **Combination activities**
  - The W helicity fractions has recently been approved by the Collaborations
    - See presentations today
  - Towards the first top mass world average
  - Working on cross section combinations (top-pair, single top) at 8 TeV
  - Towards finalization of pseudo-tops and common acceptances
    - See presentation today
- **“Tools”**
  - JetMET
    - A cross ATLAS-CMS effort is formed
      - Coordinators: C.Dogliani, B.Malescu (ATLAS), H.Kirschenmann , M.Voutilainen (CMS)
    - Mandate: present a proposal for common conventions and classification.
      - Today a summary of the discussions so far
  - B-tag
    - Subgroup is being formed, same mandate as for JetMET
  - Theory systematic errors
    - Discussion about the inclusion of fragmentation in our analyses
      - Presentation today
    - Several other contributions, today and tomorrow, on specific theory issues

## Thursday, 18 April 2013

14:00 - 14:15 Introduction 15'  
Speaker: Roberto Chierici (Universite Claude Bernard-Lyon I (FR))

14:15 - 16:30 Current combinations and limitations from theoretical uncertainties

14:15 **W helicity combination** 20'  
Speaker: Kevin Alexander Kroeninger (Georg-August-Universitaet Goettingen (DE))

14:40 **Top mass combination and fragmentation/hadronisation uncertainties** 30'  
Speaker: Steve Wimpenny (University of California Riverside (US))

15:10 **Discussion time** 30'

15:40 **Extrapolation uncertainties from single top generators** 20'  
Speaker: Dominic Hirschbuehl (Bergische Universitaet Wuppertal (DE))

16:00 **Discussion time** 30'

### Combination activities

16:30 - 17:00 Tea break

17:00 - 18:30 Tools

17:00 **Towards recommendations for a coherent treatment of jet/Etmiss related systematics** 30'

17:30 **Discussion** 30'

18:00 **A new tool for combining observables** 10'  
Speaker: Kevin Alexander Kroeninger (Georg-August-Universitaet Goettingen (DE))

### Tools

## Friday, 19 April 2013

09:00 - 10:45 Cross Section

09:00 **Pseudo top definition and common acceptance** 30'

09:40 **ttbar cross-section at NNLO** 20'  
Speaker: Alexander Dimitrov Mitov (CERN)

10:10 **Implications of the new NNLO tt cross section and PDF fits** 20'  
Speaker: Juan Rojo (INFN)

10:30 **Discussion** 15'

### Cross section

10:45 - 11:15 Coffee break

11:15 - 12:30 New ideas and outlook

11:15 **Theoretical systematics in the predictions of the top pT spectrum** 20'  
Speaker: Michelangelo Mangano (CERN)

11:35 **aMC@NLO studies: effects of NLO merging on jet gap fractions and width effects in single top t-channel** 15'  
Speaker: Stefano Frixione (CERN)

### Theory feedback

11:50 **Discussion** 20'

12:10 **Next steps and discussion** 20'  
Speaker: Markus Cristinziani (Universitaet Bonn (DE))

### Future