

LHC TOP WG meeting

Report of Contributions

Contribution ID: 1

Type: **not specified**

Introduction

Monday 5 June 2023 13:00 (20 minutes)

Presenters: Prof. MALTONI, Fabio (Universite Catholique de Louvain (UCL) (BE) and Università di Bologna); ALDAYA MARTIN, Maria (DESY); WAGNER, Wolfgang (Bergische Universitaet Wuppertal (DE))

Contribution ID: 2

Type: **not specified**

CMS-Highlight-1: ttbb inclusive and differential cross sections, including ATLAS+CMS ttbb modelling comparisons

Monday 5 June 2023 15:00 (30 minutes)

Presenter: VAN DER LINDEN, Jan (KIT - Karlsruhe Institute of Technology (DE))

Contribution ID: 3

Type: **not specified**

ATLAS-Highlight-1: t-channel cross section measurement

Monday 5 June 2023 14:00 (20 minutes)

Presenter: REIDELSTURZ, Joshua Aaron (Bergische Universitaet Wuppertal (DE))

Contribution ID: 4

Type: **not specified**

ATLAS-CMS comparison: tt cross sections in Run3

Monday 5 June 2023 14:30 (20 minutes)

Presenters: GUERRIERI, Giovanni (INFN - National Institute for Nuclear Physics); GUERRIERI, Giovanni (Universita degli Studi di Udine (IT)); KNOLLE, Joscha (Ghent University (BE))

Contribution ID: 5

Type: **not specified**

Common MC settings and other LHCTopWG activities

Monday 5 June 2023 13:30 (20 minutes)

Presenters: NEGRO, Giulia (Purdue University (US)); SCHWIENHORST, Reinhard (Michigan State University (US))

Contribution ID: 6

Type: **not specified**

ATLAS-CMS comparison: latest 4top results

Monday 5 June 2023 16:10 (30 minutes)

Presenters: VAN DEN BOSSCHE, Niels (Ghent University (BE)); ZHENG, Zhi (SLAC National Accelerator Laboratory (US))

Session Classification: Mini-session

Contribution ID: 7

Type: **not specified**

On the BSM reach of 4top production at the LHC

Monday 5 June 2023 16:50 (20 minutes)

2302.08281 [hep-ph]

Presenters: STYLIANOU, Panagiotis; STYLIANOU, Panagiotis (CERN)

Session Classification: Mini-session

Contribution ID: 8

Type: **not specified**

4top resummation at threshold

Monday 5 June 2023 17:20 (20 minutes)

2212.03259 [hep-ph]

Presenter: KULESZA, Anna (University of Muenster)

Session Classification: Mini-session

Contribution ID: 9

Type: **not specified**

Investigation of scale dependence in the MSR and MSbar top mass schemes for the $t\bar{t}$ invariant mass differential xsec using LHC data

Tuesday 6 June 2023 09:00 (20 minutes)

<https://arxiv.org/abs/2301.03546>

Presenter: Dr MAKELA, Toni (NCBJ)

Session Classification: Mini-session

Contribution ID: **10**

Type: **not specified**

New top mass calibration results for inclusive and differential top quark mass observables

Tuesday 6 June 2023 09:30 (20 minutes)

Presenter: HOANG, Andre

Session Classification: Mini-session

Contribution ID: 11

Type: **not specified**

Phenomenological analysis of LHC $t\bar{t}$ data at NNLO accuracy using the MATRIX framework

Tuesday 6 June 2023 10:00 (20 minutes)

Presenters: ZENAIEV, Oleksandr (Hamburg University); ZENAIEV, Oleksandr

Session Classification: Mini-session

Contribution ID: **12**

Type: **not specified**

Linear power correction for single top production

Tuesday 6 June 2023 11:20 (20 minutes)

2302.02729 [hep-ph]

Presenter: OZCELIK, Melih Arslan (KIT - Karlsruhe Institute of Technology (DE))

Session Classification: Mini-session

Contribution ID: **13**

Type: **not specified**

Discussion

Session Classification: Mini-session

Contribution ID: 14

Type: **not specified**

ML approaches for parameter reweighting in MC samples for top production

Tuesday 6 June 2023 11:50 (20 minutes)

Presenter: GUGLIELMI, Valentina (Deutsches Elektronen-Synchrotron (DE))

Session Classification: Mini-session

Contribution ID: 15

Type: **not specified**

Informal discussion on status of tt threshold corrections

Tuesday 6 June 2023 12:35 (30 minutes)

Presenters: HOANG, Andre; Prof. MALTONI, Fabio (Universite Catholique de Louvain (UCL) (BE) and Università di Bologna)

Session Classification: Mini-session

Contribution ID: 16

Type: **not specified**

ATLAS-Highlight-2: Search for charged lepton flavour violation in top quark decays

Tuesday 6 June 2023 14:30 (20 minutes)

Presenter: KEMPSTER, Jacob Julian (University of Sussex (GB))

Contribution ID: 17

Type: **not specified**

SMEFT top decay + entanglement

Tuesday 6 June 2023 15:00 (20 minutes)

2210.09330 [hep-ph]

Presenter: SEVERI, Claudio (Universita e INFN, Bologna (IT))

Contribution ID: **18**

Type: **not specified**

Quantum discord and steering in top quarks at the LHC

Tuesday 6 June 2023 15:30 (20 minutes)

2209.03969 [quant-ph]

Presenters: MUNOZ DE NOVA, Juan Ramon; AFIK, Yoav (CERN)

Contribution ID: **19**

Type: **not specified**

ATLAS-Highlight-3: substructure

Tuesday 6 June 2023 16:00 (20 minutes)

Presenter: FABBRI, Federica (University of Glasgow (GB))

Contribution ID: 20

Type: **not specified**

ATLAS-CMS comparison: latest ttW results

Wednesday 7 June 2023 10:00 (30 minutes)

Presenters: VICO VILLALBA, Carlos (Universidad de Oviedo (ES)); NIEMEYER, Marcel (Georg August Universitaet Goettingen (DE))

Contribution ID: 21

Type: **not specified**

Status/Update NNLO calculation in $t\bar{t}W$

Wednesday 7 June 2023 10:40 (20 minutes)

Presenters: SAVOINI, Chiara; SAVOINI, Chiara (University of Zurich)

Contribution ID: **22**

Type: **not specified**

Empty slot

Contribution ID: **23**

Type: **not specified**

Discussion

Contribution ID: 24

Type: **not specified**

CMS-Highlight-2: Probing EFT models using $t\bar{t}X$ in multiple lepton final states

Wednesday 7 June 2023 13:00 (20 minutes)

Presenter: GOLDOUZIAN, Reza (University of Notre Dame (US))

Session Classification: Mini-session

Contribution ID: 25

Type: **not specified**

Simultaneous CTEQ-TEA extraction of PDFs and SMEFT parameters from jet and tt data

Wednesday 7 June 2023 14:00 (20 minutes)

<https://arxiv.org/abs/2211.01094>

Presenter: Dr HOBBS, TIMOTHY J (Argonne National Laboratory)

Session Classification: Mini-session

Contribution ID: 26

Type: **not specified**

The top quark legacy of the LHC Run2 for PDF and SMEFT analyses

Wednesday 7 June 2023 14:30 (20 minutes)

<https://arxiv.org/abs/2303.06159>

Presenter: Dr ROJO, Juan (VU Amsterdam and Nikhef)

Session Classification: Mini-session

Contribution ID: 27

Type: **not specified**

ATLAS+CMS comparison: latest results on FCNC (latest $t\gamma$ result from CMS, latest results from ATLAS)

Wednesday 7 June 2023 13:30 (20 minutes)

Presenters: HAGHIGHAT, Gholamhossein (Institute for Research in Fundamental Sciences (IR)); YAO, Wei-Ming (Lawrence Berkeley National Lab. (US))

Session Classification: Mini-session

Contribution ID: 28

Type: **not specified**

CMS-Highlight-3: evidence for tWZ production in multilepton final states

Wednesday 7 June 2023 15:15 (20 minutes)

Presenter: SAGGIO, Alessia (Deutsches Elektronen-Synchrotron (DE))

Contribution ID: **29**

Type: **not specified**

TBA

Presenter: KIESELER, Jan (CERN)

Session Classification: Mini-session

Contribution ID: 30

Type: **not specified**

Thoughts on using ML methods to improve the understanding of ATLAS and CMS systematics

Tuesday 6 June 2023 12:20 (10 minutes)

Presenter: KIESELER, Jan (CERN)

Session Classification: Mini-session

Contribution ID: 31

Type: **not specified**

Opportunities for BSM physics in top final states at a future e^+e^- factory

Tuesday 6 June 2023 16:30 (15 minutes)

Presenter: FRANCESCHINI, Roberto (Rome 3 U.)