

LHC TOP WG meeting

Report of Contributions

Contribution ID: 1

Type: **not specified**

Introduction

Wednesday 4 June 2025 14:30 (15 minutes)

Author: VOS, Marcel (IFIC Valencia (ES))

Presenters: Prof. MALTONI, Fabio (Universite Catholique de Louvain (UCL) (BE) and Università di Bologna); PALENCIA CORTEZON, Jose Enrique (Universidad de Oviedo (ES)); VOS, Marcel (IFIC Valencia (ES))

Session Classification: Day 1

Contribution ID: 2

Type: **not specified**

Observation of tWZ production at the CMS experiment

Wednesday 4 June 2025 14:50 (20 minutes)

CMS-PAS-TOP-24-009 - <http://cds.cern.ch/record/2932252?ln=en>

Presenter: BELVEDERE, Alberto (Deutsches Elektronen-Synchrotron (DE))

Session Classification: Day 1

Contribution ID: 3

Type: **not specified**

Invariant-mass threshold resummation for the production of four top quarks at the LHC

Wednesday 4 June 2025 15:20 (20 minutes)

<https://arxiv.org/pdf/2505.10381>

Presenter: KULESZA, Anna Katarzyna (Universität Münster (DE))

Session Classification: Day 1

Contribution ID: 4

Type: **not specified**

Test of lepton flavour universality in W-boson decays into electrons and tau-leptons using pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector

Wednesday 4 June 2025 16:20 (20 minutes)

TOPQ-2023-10 - JHEP 05 (2025) 038

Presenter: BORISSOV, Guennadi (Lancaster University (GB))

Session Classification: Day 1

Contribution ID: 5

Type: **not specified**

Measurement of the ttW differential cross section and charge asymmetry at $\sqrt{s}=13$ TeV

Wednesday 4 June 2025 16:50 (25 minutes)

CMS-PAS-TOP-24-003 - <http://cds.cern.ch/record/2927533>

Author: VICO VILLALBA, Carlos (Universidad de Oviedo (ES))

Co-author: BULLARD, Brendon (SLAC National Accelerator Laboratory (US))

Presenters: BULLARD, Brendon (SLAC National Accelerator Laboratory (US)); VICO VILLALBA, Carlos (Universidad de Oviedo (ES))

Session Classification: Day 1

Contribution ID: 6

Type: **not specified**

Invariant-mass threshold resummation for the production of four top quarks at the LHC

Presenter: KULESZA, Anna Katarzyna (Universität Münster (DE))

Session Classification: Day 1

Contribution ID: 7

Type: **not specified**

Inclusive and differential measurements of the $t\bar{t}\gamma$ cross section and the $t\bar{t}\gamma/t\bar{t}$ ratio in proton-proton collisions at $\sqrt{s}=13$ TeV

Thursday 5 June 2025 10:00 (25 minutes)

CMS-PAS-TOP-23-002 - <https://cds.cern.ch/record/2927506?ln=en>

Author: RIBEIRO LOPES, Beatriz (CERN)

Co-author: DIEZ PARDOS, Carmen (Universitaet Siegen (DE))

Presenters: RIBEIRO LOPES, Beatriz (CERN); DIEZ PARDOS, Carmen (Universitaet Siegen (DE))

Session Classification: Day 2

Contribution ID: 8

Type: **not specified**

LHCmcWG (tbc)

Session Classification: Day 2

Contribution ID: 9

Type: **not specified**

Recent progress and open issues in top modelling

Thursday 5 June 2025 09:30 (20 minutes)

Presenter: SKANDS, Peter (Monash University (AU))

Session Classification: Day 2

Contribution ID: **10**

Type: **not specified**

Review of rare and exclusive top quark decays

Thursday 5 June 2025 11:05 (20 minutes)

<https://inspirehep.net/literature/2738532>

Author: LE, Van Dung (Vietnam National University (VN))

Co-author: D'ENTERRIA, David (CERN)

Presenters: D'ENTERRIA, David (CERN); LE, Van Dung (Vietnam National University (VN))

Session Classification: Day 2

Contribution ID: 11

Type: **not specified**

Measurement of the top quark mass with the ATLAS detector using events with a high transverse momentum top quark

Thursday 5 June 2025 11:35 (25 minutes)

TOPQ-2022-24 - <https://arxiv.org/abs/2502.18216>

Author: WATTON, Elliot (University of Glasgow (GB))

Co-author: KOGLER, Roman (DESY (DE))

Presenters: WATTON, Elliot (University of Glasgow (GB)); KOGLER, Roman (DESY (DE))

Session Classification: Day 2

Contribution ID: **12**

Type: **not specified**

How to Unfold Top Decays

Thursday 5 June 2025 12:10 (20 minutes)

<https://arxiv.org/abs/2501.12363>

Presenter: PALACIOS SCHWEITZER, Sofia (ITP, University Heidelberg)

Session Classification: Day 2

Contribution ID: 13

Type: **not specified**

Standard Model predictions for the top quark pair production threshold region

Thursday 5 June 2025 14:30 (20 minutes)

Presenter: NASON, Paolo

Session Classification: Day 2

Contribution ID: 14

Type: **not specified**

Observation of a pseudoscalar excess at the top quark pair production threshold

Thursday 5 June 2025 15:00 (20 minutes)

CMS-PAS-TOP-24-007 - <https://arxiv.org/abs/2503.22382>

Presenter: BACH, Jorn (Deutsches Elektronen-Synchrotron (DE))

Session Classification: Day 2

Contribution ID: 15

Type: **not specified**

Review of toponium models

Thursday 5 June 2025 15:30 (20 minutes)

Presenter: FUKS, Benjamin

Session Classification: Day 2

Contribution ID: **16**

Type: **not specified**

RF contribution -> declined

Session Classification: Day 2

Contribution ID: 17

Type: **not specified**

Search for CP violation in events with top quarks and Z bosons

Thursday 5 June 2025 16:30 (20 minutes)

CMS-PAS-TOP-24-012 - <http://cds.cern.ch/record/2928204>

Presenter: SANCHEZ CRUZ, Sergio (CERN)

Session Classification: Day 2

Contribution ID: **18**

Type: **not specified**

Probing the flavour structure of dimension-6 EFT operators in multilepton final states

Thursday 5 June 2025 17:00 (20 minutes)

CMS-PAS-TOP-23-009 - <http://cds.cern.ch/record/2929076>

Presenter: SCHOEFBECK, Robert (Austrian Academy of Sciences (AT))

Session Classification: Day 2

Contribution ID: **19**

Type: **not specified**

Joker talk ATLAS: observation of $t\bar{t}\gamma$

Friday 6 June 2025 09:30 (20 minutes)

Presenter: GHOSAL, Arpan (Universitaet Siegen (DE))

Session Classification: Day 3

Contribution ID: **20**

Type: **not specified**

tbc

Session Classification: Day 3

Contribution ID: 21

Type: **not specified**

Measurement of high-mass ttll production and lepton flavour universality-inspired effective field theory interpretations at $\sqrt{s}=13$ TeV with the ATLAS detector

Friday 6 June 2025 10:00 (20 minutes)

TOPQ-2023-02 - <https://arxiv.org/abs/2504.05919>

Presenter: LOESCHCKE CENTENO, Gianna (Centre National de la Recherche Scientifique (FR))

Session Classification: Day 3

Contribution ID: 22

Type: **not specified**

Highlights from GGI

Friday 6 June 2025 11:30 (20 minutes)

Presenter: FABBRI, Federica (Universita e INFN, Bologna (IT))

Session Classification: Day 3

Contribution ID: 23

Type: **not specified**

Highlights of the HL-LHC

Presenter: FERRARI, Pamela (Nikhef National institute for subatomic physics (NL))

Session Classification: Day 3

Contribution ID: 24

Type: **not specified**

Joker talk ATLAS: measurement of the $WbWb$ cross section

Friday 6 June 2025 10:30 (20 minutes)

Presenter: Dr ROMANO, Marino (INFN Bologna (IT))

Session Classification: Day 3