MCnet meeting

Report of Contributions

Contribution ID: **0**   Type: **not specified**

Cross Sections and Diffraction in Pythia8

Pythia8 is currently being updated with new descriptions of the total and elastic cross sections. An introduction to the framework will be given along with a presentation of the different parametrizations used. Similar updates are planned for the diffractive framework and will be discussed here as well along with a presentation of the new framework for hard diffraction, already available in Pythia8.

Author: RASMUSSEN, Christine Overgaard (Lund University)

Presenter: RASMUSSEN, Christine Overgaard (Lund University)

Contribution ID: **1** Type: **not specified**

H+Jets

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Author: SCHICHTEL, Peter (IPPP)

Presenter: SCHICHTEL, Peter (IPPP)

Contribution ID: **2** Type: **not specified**

Merging

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Author: BELLM, Johannes (KIT)

Presenter: BELLM, Johannes (KIT)

Contribution ID: **3**   Type: **not specified**

Shower Reweighting in Herwig 7

In the computation of shower uncertainties, re-running a full Monte Carlo simulation for each set of input scales is very CPU intensive. The major experimental collaborations are therefore very interested in in-event scale variation. I will present a development of the veto algorithm to perform on-the-fly reweighting in the parton shower and review the progress of its implementation in Herwig 7. I will compare the results from scale variations in the parton showers obtained using the new reweighting method and the traditional full event generation approach.

Author: WEBSTER, Stephen James (CERN)

Presenter: WEBSTER, Stephen James (CERN)

Contribution ID: **4**   Type: **not specified**

Introduction

Introduction talk for Stephen Webster.

Author: WEBSTER, Stephen James (CERN)

Presenter: WEBSTER, Stephen James (CERN)

Contribution ID: **5** Type: **not specified**

Diffractive excitation in proton/Lead collisions

TBA.

Author: BIERLICH, Christian (Lund University (SE))

Presenter: BIERLICH, Christian (Lund University (SE))

Contribution ID: **6** Type: **not specified**

Shower Uncertainties

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Author: Mr NAIL, Graeme (University of Manchester)

Presenter: Mr NAIL, Graeme (University of Manchester)

Contribution ID: **7** Type: **not specified**

Hello! MCnet

Introduction of a new member.

Author: SHAH, Harsh (Lund University)

Presenter: SHAH, Harsh (Lund University)

Contribution ID: **8**   Type: **not specified**

Associated production of single top quark and W boson

One important aspect of single top-quark production is the sensitivity to non-SM couplings of the Wtb vertex. It provides direct extraction of the magnitude of Vtb matrix element of the CKM matrix by just measuring its cross-section. Among all modes of single top-quark production, only the associated production of single top quark with W boson (tW-channel) provides the real W boson. However, main challenge to observe tW subprocess is the interference with the top-quarks pair production at NLO. To overcome this difficulty, two methods were proposed "Diagram Removal" and "Diagram Subtraction". The difference between the two is the measure of the size of interference. In this talk I'll explain the implementation of Diagram Removal & Diagram Subtraction in Herwig++.

Author: PRIYANKA, Priyanka (University of Delhi (IN))

Co-author: GIESEKE, Stefan (Unknown)

Presenter: PRIYANKA, Priyanka (University of Delhi (IN))

Contribution ID: **9**   Type: **not specified**

ATLAS V+jets and Heavy Flavour modelling

Overview of the current state of V+jets and heavy flavour production modelling and measurement at the LHC by the ATLAS detector. An overview of the MC generators and setups currently used by ATLAS, discussion of their performance compared to existing data and an outline of future measurements planned or in progress. In addition, a specific look at heavy flavour production modelling, the current modelling issues observed, the associated systematic uncertainties on MC modelling and future plans for measurements to constrain this. These processes are important backgrounds for several LHC measurements and searches. For example, precise measurement of VH(H->bb) production is a very important Run 2 goal allowing accurate observation of the Higgs coupling to fermions for the first time. V+jets (including heavy flavour) production is a dominant background in this measurement and the associated MC modelling uncertainty is one of the dominant uncertainties.

Author: MCFAYDEN, Josh (University College London (UK))

Presenter: MCFAYDEN, Josh (University College London (UK))

Contribution ID: **10**   Type: **not specified**

Herwig-Parallel patch for Rivet 2.4.0 and YODA 1.5.5

Abstract: Due to the need of high statistics in case of certain high energy physics processes, CPU time used by Monte Carlo event generators grow and parallelization of the event production runs is necessary. Herwig-Parallel patches Rivet 2.4.0 to ensure proper statistical handling of multiple output of parallel runs and its merging. The patch is based on former work made by Daniel Rauch.

Author: PODSKUBKA, Radek (Acad. of Sciences of the Czech Rep. (CZ))

Presenter: PODSKUBKA, Radek (Acad. of Sciences of the Czech Rep. (CZ))

Contribution ID: **11**   Type: **not specified**

H+Jets

Tuesday 5 April 2016 14:45 (20 minutes)

Presenter: SCHICHTEL, Peter (IPPP)

Session Classification: Fifth session

Contribution ID: **12** Type: **not specified**

Associated production of single top quark and W boson

Monday 4 April 2016 16:10 (25 minutes)

Presenter: PRIYANKA, Priyanka (University of Delhi (IN))

Session Classification: Second session

Contribution ID: **13**   Type: **not specified**

ATLAS V+jets and Heavy Flavour modelling

Presenter: MCFAYDEN, Josh (University College London (UK))

Contribution ID: **14**   Type: **not specified**

Hello! MCnet

Monday 4 April 2016 16:00 (5 minutes)

Presenter: SHAH, Harsh (Lund University)

Session Classification: Second session

Contribution ID: **15** Type: **not specified**

Introduction

Tuesday 5 April 2016 14:20 (5 minutes)

Presenter: WEBSTER, Stephen James (CERN)

Session Classification: Fifth session

Contribution ID: **16** Type: **not specified**

Shower Reweighting in Herwig 7

Tuesday 5 April 2016 14:25 (20 minutes)

Presenter: WEBSTER, Stephen James (CERN)

Session Classification: Fifth session

Contribution ID: **17** Type: **not specified**

Merging

Tuesday 5 April 2016 14:00 (20 minutes)

Presenter: BELLM, Johannes (KIT)

Session Classification: Fifth session

Contribution ID: **18** Type: **not specified**

Shower Uncertainties

Tuesday 5 April 2016 15:05 (20 minutes)

Presenter: Mr NAIL, Graeme (University of Manchester)

Session Classification: Fifth session

Contribution ID: **19** Type: **not specified**

Cross Sections and Diffraction in Pythia8

Wednesday 6 April 2016 09:05 (25 minutes)

Presenter: RASMUSSEN, Christine Overgaard (Lund University)

Session Classification: Seventh session

Contribution ID: **20** Type: **not specified**

Diffractive excitation in proton/Lead collisions

Wednesday 6 April 2016 09:30 (25 minutes)

Presenter: BIERLICH, Christian (Lund University (SE))

Session Classification: Seventh session

Contribution ID: **21** Type: **not specified**

Herwig-Parallel patch for Rivet 2.4.0 and YODA 1.5.5

Wednesday 6 April 2016 09:55 (25 minutes)

Presenter: PODSKUBKA, Radek (Acad. of Sciences of the Czech Rep. (CZ))

Session Classification: Seventh session

Contribution ID: **22** Type: **not specified**

Introduction

Monday 4 April 2016 16:05 (5 minutes)

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

Session Classification: Second session

Contribution ID: **23**   Type: **not specified**

Introduction to MCnet

Monday 4 April 2016 16:35 (5 minutes)

Author: THOMPSON, Jennifer (Durham University)

Presenter: THOMPSON, Jennifer (Durham University)

Session Classification: Second session

Contribution ID: **24** Type: **not specified**

MCnet living resource

Monday 4 April 2016 16:40 (15 minutes)

Presenter: SEYMOUR, Mike (University of Manchester (GB))

Session Classification: Second session

Contribution ID: **25**   Type: **not specified**

Introduction

Wednesday 6 April 2016 09:00 (5 minutes)

Presenter: SHAH, Harsh (Lund University)

Session Classification: Seventh session

Contribution ID: **26**   Type: **not specified**

Introduction

Presenter: RUSSELL, Michael

Contribution ID: **27** Type: **not specified**

Introduction

Tuesday 5 April 2016 11:00 (20 minutes)

Presenters: MALTONI, Fabio (Universite Catholique de Louvain (UCL) (BE)); SEYMOUR, Mike (University of Manchester (GB))

Session Classification: Fourth session

Contribution ID: **28** Type: **not specified**

Contrib Torbjorn

Tuesday 5 April 2016 16:15 (15 minutes)

Presenter: SJOSTRAND, Torbjorn (Lund University (SE))

Session Classification: Sixth session

Contribution ID: **29** Type: **not specified**

Contrib Andrzej

Tuesday 5 April 2016 16:30 (15 minutes)

Presenter: SIODMOK, Andrzej Konrad (CERN)

Session Classification: Sixth session

Contribution ID: **30** Type: **not specified**

Contrib Jon

Tuesday 5 April 2016 16:00 (15 minutes)

Presenter: BUTTERWORTH, Jonathan (University College London (UK))

Session Classification: Sixth session

Contribution ID: **31** Type: **not specified**

Contrib Silvan

Tuesday 5 April 2016 16:45 (15 minutes)

Presenter: KUTTIMALAI, Silvan (Durham University)

Session Classification: Sixth session