

17th MCnet Meeting



Report of Contributions

Contribution ID: **19**

Type: **not specified**

Sherpa

Wednesday, 11 April 2018 09:00 (15 minutes)

Presenter: KRAUSS, Frank Martin (University of Durham (GB))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: **20**

Type: **not specified**

CMS

Wednesday, 11 April 2018 09:15 (15 minutes)

Presenter: LONG, Kenneth (University of Wisconsin Madison (US))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: 21

Type: **not specified**

Herwig

Wednesday, 11 April 2018 09:30 (15 minutes)

Presenter: BELLM, Johannes (Lund)

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: 22

Type: **not specified**

Alice

Wednesday, 11 April 2018 09:45 (15 minutes)

Presenter: BERTENS, Redmer Alexander (Nikhef National institute for subatomic physics (NL))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: 23

Type: **not specified**

Madgraph

Wednesday, 11 April 2018 10:00 (15 minutes)

Presenter: MATTELAER, Olivier (UCLouvain)

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: 24

Type: **not specified**

ATLAS

Wednesday, 11 April 2018 10:15 (15 minutes)

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

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: 25

Type: **not specified**

Pythia

Wednesday, 11 April 2018 10:30 (15 minutes)

Presenter: LÖNNBLAD, Leif (Lund University (SE))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators

Contribution ID: 26

Type: **not specified**

LHCb

Wednesday, 11 April 2018 11:30 (15 minutes)

Presenter: ILTEN, Philip (University of Birmingham (GB))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators (continued)

Contribution ID: 27

Type: **not specified**

Plugin/HEJ

Wednesday, 11 April 2018 11:45 (15 minutes)

Presenters: HEIL, Marian (IPPP); ANDERSEN, Jeppe Rosenkrantz (IPPP, University of Durham (UK))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators (continued)

Contribution ID: 28

Type: **not specified**

CLIC/ILC - linear e+e- machines

Wednesday, 11 April 2018 12:00 (15 minutes)

Presenter: SCHNOOR, Ulrike (CERN)

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators (continued)

Contribution ID: 29

Type: **not specified**

Cedar

Wednesday, 11 April 2018 12:15 (15 minutes)

Presenters: BUTTERWORTH, Jonathan (University College London (UK)); BUCKLEY, Andy (University of Glasgow (GB))

Session Classification: Open Session with LHC Experiments - including status reports of MCnet projects/generators (continued)

Contribution ID: **30**

Type: **not specified**

Introduction

Thursday, 12 April 2018 11:00 (5 minutes)

Introduction as a new MCnet Ph.D. student at LU and short description of the first research project

Primary author: Ms CHAKRABORTY, Smita (Lund University)

Presenter: Ms CHAKRABORTY, Smita (Lund University)

Session Classification: Student Talks 2

Contribution ID: 31

Type: **not specified**

Implementing QED radiation in Vincia

Thursday, 12 April 2018 14:40 (20 minutes)

Most parton showers currently work in the leading colour limit, allowing for coherent gluonic radiation through either angular ordering or the dipole/antenna formalism. For photon emission, the equivalent type of radiation in QED, there is no leading colour limit and the soft structure is more complicated. In this talk, I will discuss how we are including photonic emissions into the Vincia parton shower. I will briefly explain several available algorithms which have varying accuracy and speed.

Primary author: VERHEYEN, Rob (Radboud University Nijmegen)

Presenter: VERHEYEN, Rob (Radboud University Nijmegen)

Session Classification: Student Talks 3

Contribution ID: 32

Type: **not specified**

Diffraction in Pythia

Thursday, 12 April 2018 11:10 (25 minutes)

Update on ongoing activities in Pythia.

Primary author: Ms RASMUSSEN, Christine

Presenter: Ms RASMUSSEN, Christine

Session Classification: Student Talks 2

Contribution ID: 33

Type: **not specified**

Introduction

Thursday, 12 April 2018 11:05 (5 minutes)

A short introduction about myself as a new PhD student at Lund University.

Primary author: GELLERSEN, Leif (Lund University)

Presenter: GELLERSEN, Leif (Lund University)

Session Classification: Student Talks 2

Contribution ID: 34

Type: **not specified**

Creating heavy ion events from pp events in a generator independent way

Thursday, 12 April 2018 11:35 (25 minutes)

The Pythia event generator has seen a lot of progress relating to modeling heavy ion collisions, in the parton-level stacking framework known as Angantyr. Several of the ideas behind Angantyr are, however, not local to Pythia, and it is therefore possible to implement them in a generator independent way.

We present the initial version of such an implementation, which essentially allows for input from all three main generators. As this has been suggested as a topic for this years MCnet summer school tutorials, we show some suggestions to how such a tutorial can be organized, and invite for discussion.

Primary authors: BIERLICH, Christian (Lund University (SE)); BELLM, Johannes (Lund)

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

Session Classification: Student Talks 2

Contribution ID: 35

Type: **not specified**

HEJ: The Path to NLL

Thursday, 12 April 2018 14:00 (20 minutes)

Presenting the first set of LL corrections to sub-leading processes within W+Jets in HEJ. This adds resummation to many processes previously only matched to FO.

Primary author: BLACK, James (IPPP)

Presenter: BLACK, James (IPPP)

Session Classification: Student Talks 3

Contribution ID: 36

Type: **not specified**

Secondary absorptive interactions in the Angantyr model

Thursday, 12 April 2018 12:00 (25 minutes)

TBA

Primary author: SHAH, Harsh (Lund University)

Presenter: SHAH, Harsh (Lund University)

Session Classification: Student Talks 2

Contribution ID: 39

Type: **not specified**

Introduction

Wednesday, 11 April 2018 16:00 (5 minutes)

Presenter: GIESEKE, Stefan

Session Classification: MCnet Industry Partners' Talks and discussion of secondment projects

Contribution ID: 40

Type: **not specified**

IBA

Wednesday, 11 April 2018 16:05 (30 minutes)

Presenter: STICHELBAUT, Frederic

Session Classification: MCnet Industry Partners' Talks and discussion of secondment projects

Contribution ID: 41

Type: **not specified**

Blue Yonder

Wednesday, 11 April 2018 16:35 (30 minutes)

Presenter: KÖNIG, Michael

Session Classification: MCnet Industry Partners' Talks and discussion of secondment projects

Contribution ID: 42

Type: **not specified**

d-fine

Wednesday, 11 April 2018 17:05 (30 minutes)

Presenter: BEINKER, Mark

Session Classification: MCnet Industry Partners' Talks and discussion of secondment projects

Contribution ID: 43

Type: **not specified**

B12

Wednesday, 11 April 2018 17:35 (30 minutes)

Presenter: BOUCHER, Vincent

Session Classification: MCnet Industry Partners' Talks and discussion of secondment projects

Contribution ID: 44

Type: **not specified**

Double Parton Distributions and Parton Showers

Thursday, 12 April 2018 14:20 (20 minutes)

Double parton scattering is usually suppressed by single parton scattering. However, in some specific regions of phase-space, the differential cross-sections are comparable. Also, for a given final state, it might happen that the double parton scattering is the dominant contribution if the single parton scattering is suppressed by a higher multiplicity of couplings. For these reasons, it turns out to be necessary to include double parton scattering in event generators in order to give a better description of the data at high energy scales such as at the LHC.

Double parton scattering requires the use of double parton distributions and many efforts have been made during the last decade to produce realistic sets of those distributions, despite the lack of experimental data. In this work, we explore some directions to include those double parton distributions within the conventional partons showers.

Primary author: CABOUAT, Baptiste (University of Manchester)

Presenter: CABOUAT, Baptiste (University of Manchester)

Session Classification: Student Talks 3

Contribution ID: 45

Type: **not specified**

MadDM v.3.0

Thursday, 12 April 2018 10:00 (20 minutes)

We present the recently published MadDM v.3.0, now a plugin of Madgraph5_aMC@NLO. The new release extends the capabilities of the previous versions with a dedicated module for dark matter indirect detection. MadDM is now able to generate energy spectra from dark matter annihilation, calculate cosmic rays fluxes and compare the theory predictions with the Fermi-LAT upper limits from the observation of dwarfs galaxies gamma rays. Moreover the new 'scan mode' functionality makes it easy to sample the parameter space of the user's dark matter model.

Primary author: Mr AMBROGI, Federico (CP3 Centre for Cosmology, Particle Physics and Phenomenology)

Presenter: Mr AMBROGI, Federico (CP3 Centre for Cosmology, Particle Physics and Phenomenology)

Session Classification: Student Talks 1

Contribution ID: 46

Type: **not specified**

ATLAS feedback

Tuesday, 10 April 2018 14:35 (20 minutes)

Presenter: GUTSCHOW, Christian (University College London (UK))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 47

Type: **not specified**

CMS feedback

Tuesday, 10 April 2018 14:55 (10 minutes)

Presenters: SEIDEL, Markus (CERN); JANSSEN, Xavier (University of Antwerp (BE))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 48

Type: **not specified**

LHCb feedback

Tuesday, 10 April 2018 15:05 (10 minutes)

Presenters: GRECU, Alex (IFIN-HH (RO)); CORTI, Gloria (CERN)

Session Classification: MCnet Individual Project Meetings

Contribution ID: 49

Type: **not specified**

ALICE feedback

Tuesday, 10 April 2018 16:05 (20 minutes)

Presenter: KARCZMARCZYK, Przemyslaw (Warsaw University of Technology (PL))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 50

Type: **not specified**

Heavy Ion analysis & MC discussion

Tuesday, 10 April 2018 16:25 (40 minutes)

Presenters: BIERLICH, Christian (Lund University (SE)); LÖNNBLAD, Leif (Lund University (SE))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 51

Type: **not specified**

Recasting: Contur

Tuesday, 10 April 2018 15:45 (20 minutes)

Presenters: YALLUP, David (University College London); BUTTERWORTH, Jonathan (University College London (UK))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 52

Type: **not specified**

CEDAR overview

Tuesday, 10 April 2018 14:05 (30 minutes)

Presenters: BUCKLEY, Andy (University of Glasgow (GB)); BUTTERWORTH, Jonathan (University College London (UK))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 53

Type: **not specified**

Recasting: logistics, standards, data flow, ...

Tuesday, 10 April 2018 15:15 (30 minutes)

Presenters: BUCKLEY, Andy (University of Glasgow (GB)); HEINRICH, Lukas Alexander (New York University (US)); MARSHALL, Zachary Louis (University of California Berkeley (US))

Session Classification: MCnet Individual Project Meetings

Contribution ID: 54

Type: **not specified**

Exploring azimuthal correlations in multijet events

Thursday, 12 April 2018 15:00 (20 minutes)

Following the recent measurements I did within the CMS collaboration I will bring up some still remaining open issues in closely back-to-back dijet topologies in 2- and 3-jet inclusive events. There are considerable differences observed (up to 15%) and 2- and 3-jet data is not described by any of the models considered simultaneously. Also the unexpected behavior of Madgraph interfaced with Pythia8 will be address for 4-jet inclusive topologies. Preliminary studies suggesting a not proper merging as the source of the differences will be presented. An outlook and prospects on an exhaustive phenomenological investigation to address these issues within the Lund MCnet node will also be given.

Primary author: BERMUDEZ MARTINEZ, Armando (CMS-DESY)

Presenter: BERMUDEZ MARTINEZ, Armando (CMS-DESY)

Session Classification: Student Talks 3

Contribution ID: 55

Type: **not specified**

Introduction

Thursday, 12 April 2018 10:20 (5 minutes)

Presenter: Ms HUANG, Joanna

Session Classification: Student Talks 1

Contribution ID: 56

Type: **not specified**

Introduction

Thursday, 12 April 2018 10:25 (5 minutes)

Presenter: Mr PRICE, Alan

Session Classification: Student Talks 1