# PB TMD meeting

- Hoping that you are all ok !

# Next workshops

- ICHEP 2020 30 July – 5 August Prague(now considering remote participation)
  - Jet production at NLO in the Parton Branching method at LHC energies

    A. Bermudez, F. Hautmann

My abstracts

3 / 3 | Enter #id or search string

616.TMD densities at leading and higher order from the Parton Branching method

Sara Taheri Monfared (Deutsches Elektrone... )

Last modified: 21 Feb 2020

Submitted

We present a new determination of Transverse Momentum Dependent (TMD) parton distributions obtained with the Parton Branching (PB) method at LO, NLO and NNLO. The PB TMDs are extracted from fits to precision DIS data using

800.Drell-Yan production at NLO in the Parton Branching method at low and high DY masses and low and high *sqrts*

Qun Wang (Peking University (CN))

Last modified: 25 Feb 2020

Submitted

Transverse Momentum Dependent (TMD) parton distributions obtained from the Parton Branching (PB) method are combined with next-to-leading-order (NLO) calculations of Drell-Yan (DY) production. We apply the MC@NLO method for

857.Parton Branching method and applications to pp and ep processes

Jindrich Lidrych (Deutsches Elektrone... )

Last modified: 26 Feb 2020

Submitted

Transverse Momentum Dependent (TMD) parton distributions obtained within the Parton Branching (PB) approach offer a wide spectrum of applications to describe processes in pp as well as in ep interactions. We give an overview of the PB

# News

- CASCADE 3.0.2-beta02 released:
  - `/afs/desy.de/user/j/jung/scratch-dust/cvs/cascade3/cascade-3.0.2-beta02.tar.gz`
  - final state PS improved (making use of PYTHIA tools):
    - FPS for Z+j
    - QED radiation from lepton pairs ($Z \to e^+ e^-$ , $Z \to \mu^+ \mu^-$ , etc.)
  - Hadronization (and tune) parameters for PYTHIA changeable in steering

- Ready on lxplus:
  - /afs/cern.ch/user/j/jung/work/public
    - /afs/cern.ch/user/j/jung/work/public/runs
      - runscript for running on batch farm with rivet
      - example for Z+b at 8 TeV

- next release:
  - allow for multiple weights → to be used in Rivet3 for scales (and perhaps for TMD)

# News

- TMDlib2.0 is ready
  - to be uploaded today on: https://tmdlib.hepforge.org/
  - news:
    - using class for several instances
    - data grid files no longer distributed with source
      - install them as needed with:

```
~/jung/cvs/TMDlib/TMDlib2-local/bin> ./TMDlib-getdata -help
*****************************************************************
*    TMDlib-install: tool for downloading  TMDlib grid files      *
*    Usage: TMDlib-install [[--help|-h] | Name_of_TMDgrid]         *
*    TMDlib version  2.0.0-beta01    *
*    type ./TMDlib-getdata --help  for help                       *
*****************************************************************

 TMDlib-getdata: intsallation tool for the TMDlib grid files

 Usage: TMDlib-getdata [[--help|-h] | Name_of_TMDgrid]
 Options:
  --help | -h    : show this help message
  Name_of_TMDgrid:
                  all
                  PB-NLO-2018
                  PB-NLO_208_82
                  nCTEQ15FullNuc_208_82
                  EPPS16nlo_CT14nlo_Pb208
                  BHKS
                  CCFM
                  EKMP
                  KS
                  SBRS
~/jung/cvs/TMDlib/TMDlib2-local/bin>
```

# News

- TMDlib2.0 is ready
  - to be uploaded today on: https://tmdlib.hepforge.org/
  - thanks a lot to Andreas, Olek, Ola for testing
    - bugs found and updated
      - still one issue with memory in YAML interface ...
    - are features missing ?
      - multiple TMD sets in fortran interface

# LHCEW yellow report this year

- LHCEW WG is planning a midterm yellow report:
  - important: benchmark comparisons
    - PB results for jets, Z+jets, W+jets ?
      - can we start a task force to produce benchmark comparisons ?
      - other contributions ?
  - include determination of intrinsic kt

# Agenda

## PB TMD discussion

Thursday, 23 April 2020 from **15:30** to **17:30** (Europe/Berlin)
at **CMS meeting room**

Manage

**Description** Vidyo connection:

https://vidyoportal.cern.ch/flex.html?roomdirect.html&key=Nh6qpY4rP69Q

If you want to join by phone, please use one of the phone numbers listed in the link below:

http://information-technology.web.cern.ch/services/fe/howto/users-join-vidyo-meeting-phone

and enter the meeting extension 1010403749 in order to join.

### Thursday, 23 April 2020

| | | |
|---|---|---|
| 15:30 - 15:50 | Intro *20'* | |
| 15:50 - 16:10 | Trijets in kt-factorisation: matrix elements vs parton shower - report on arXiv 2004.07551 *20'*<br>Speaker: Krzysztof Kutak | |
| 16:10 - 16:30 | QED and QCD helicity amplitudes in parton-shower gauge - report on arXiv 2003.03003 *20'*<br>Speaker: Krzysztof Kutak | |
| 16:30 - 16:40 | Update on Sudkov *10'*<br>Speaker: Mees vanKampen | |