

Workshop on Double Parton Scattering and the 3D structure of hadrons

Saturday 11 January 2025 - Wednesday 15 January 2025

Aussois, Centre Paul Langevin

Book of Abstracts

Contents

Talk 1	1
Double parton scattering: theory review	1
DPS off light-nuclei	1
Overview on Generalized Parton Distribution functions	1
DPS and TPS in pA and AA collisions	1
DPS on CMS	1
Spatial dependence of nuclear PDFs	1
TPS at CMS	2
DPS with Pythia	2
DPDs and lattice	2
DPS studies with CMS	2
DPS studies with ALICE	2
A new role for the photon in double parton scattering	2
Cold nuclear matter effects and UPCs	2
Exclusive quarkonium production in UPCs and nPDFs	3
Quarkonia in pA and nPDF	3
Phase-space distributions of nuclear short-range correlations	3
MPI at the hadron colliders	3
DPS at LHCb	3
DPS at ATLAS	3
DPDs in Pythia	3
Some hints from heavy ions Physics, centrality and impact parameter distros.	4
Q&A session (joint session)	4

Summary of the workshop and prospects (document, global analysis of sigma_eff, ..) . . .	4
Q&A session	4
Q&A session	4
Q&A session	4

25

Talk 1

Morning session 1 (6 talks of 30 min) / 26

Double parton scattering: theory review

Corresponding Author: jonathan.gaunt@manchester.ac.uk

Morning session 1 (6 talks of 30 min) / 27

DPS off light-nuclei

Corresponding Author: fillippo.fornetti@pg.infn.it

Morning session 1 (6 talks of 30 min) / 28

Overview on Generalized Parton Distribution functions

Corresponding Author: nabeebaccus@ijclab.in2p3.fr

Morning session 1 (6 talks of 30 min) / 29

DPS and TPS in pA and AA collisions

Corresponding Author: david.d'enterria@cern.ch

Morning session 1 (6 talks of 30 min) / 30

DPS on CMS

Corresponding Author: stefanos.leontsinis@cern.ch

Morning session 1 (6 talks of 30 min) / 31

Spatial dependence of nuclear PDFs

Corresponding Author: sdelorme@ifj.edu.pl

Morning session 2 (6 talks of 30 min) / 32

TPS at CMS

Corresponding Author: maria.elena.asciotti@cern.ch

Morning session 3 (6 talks of 30 min) / 33

DPS with Pythia

Corresponding Author: lawrie.smith@postgrad.manchester.ac.uk

Morning session 2 (6 talks of 30 min) / 34

DPDs and lattice

Corresponding Author: christian.zimmermann@univ-amu.fr

Morning session 2 (6 talks of 30 min) / 35

DPS studies with CMS

Corresponding Author: ankita.mehta@cern.ch

Morning session 2 (6 talks of 30 min) / 36

DPS studies with ALICE

Corresponding Author: andrea.tavira-garcia@ijclab.in2p3.fr

Morning session 3 (6 talks of 30 min) / 37

A new role for the photon in double parton scattering

Corresponding Author: federico.a.ceccopieri@gmail.com

Joint session / 38

Cold nuclear matter effects and UPCs

Corresponding Author: vadim.a.guzey@jyu.fi

Joint session / 39

Exclusive quarkonium production in UPCs and nPDFs

Corresponding Author: christopher.flett@ijclab.in2p3.fr

Joint session / 40

Quarkonia in pA and nPDF

Corresponding Author: aleksander.kusina@ifj.edu.pl

Joint session / 41

Phase-space distributions of nuclear short-range correlations

Corresponding Author: wcosyn@fiu.edu

Morning session 3 (6 talks of 30 min) / 42

MPI at the hadron colliders

Corresponding Author: luca.rottoli@cern.ch

Morning session 2 (6 talks of 30 min) / 43

DPS at LHCb

Corresponding Author: jibo.he@cern.ch

Morning session 2 (6 talks of 30 min) / 44

DPS at ATLAS

Corresponding Author: yue.xu@cern.ch

Morning session 3 (6 talks of 30 min) / 45

DPDs in Pythia

Corresponding Author: lawrie.smith@postgrad.manchester.ac.uk

Discussion / 46

Some hints from heavy ions Physics, centrality and impact parameter distros.

Morning session 4 (summary talks and discussion) / 47

Q&A session (joint session)

Morning session 4 (summary talks and discussion) / 48

Summary of the workshop and prospects (document, global analysis of σ_{eff} , ..)

Discussion / 49

Q&A session

Discussion session 2: Question & Round tables / 50

Q&A session

Morning session 3 (6 talks of 30 min) / 51

Q&A session