

time	Monday		Tuesday			Wednesday			Thursday		Friday
9:00	Key notes: LHC++ HardQCD		Plenary 1: Audit. Small x overview (th) Fwd + soft QCD (exp.) Jet production (exp.)			Plenary 3: Audit. Resummation and Jets (th) Higher order corrections (th) Jet substruct., boosted obj (exp)			Plenary 5: Audit. Matching in NLO and ME W/Z+jets		Summaries:Audit Group1, 30 min Group2, 30 min Group3, 30 min
9:30											
											Coffee break
11:00			Plenary 2: Audit Top (th.) Top (exp)			Plenary 4: Audit. Progress on ME&Loop Calcula. (th) W/Z+heavy flavor (exp)			Plenary 6: Audit. QCD in Higgs and BSM (ex) QCD in Higgs and BSM (th)		Summary ex 60min
11:20											Summary th 60min
11:30											
11:50											Coffee break
	PDF										
12:40			Lunch			Lunch			Lunch		
12,50											
13:00	Lunch										Departure
14:00	QCD exp. MC overview		P3: SR4a	P4:SR4b MP dyn.: Small x	P5:SR3 Heavy Quarkon	P6:SR4a Hard QCD1:	P7: SR5 PDF+ PDF4LHC:	P8:SR4b HardQC D2:	P9: Audit. HardQCD+ MP dynamic:	P10: SR1 PDF group	
15:00			Hard QCD+ PDF	Fwd phys.	ia	NLO, NNLO,	Reports from PDF fitting	resumm ation	Soft.correcti ons		
15:40			Coffee break			Coffee break					
16:00			Coffee break			MPI+DP The..+ex		EWcorr.	groups	jets	
16:20	P1: Audi	P2: SR3	DESY Seminar: George Sterman								
16:50	Hard	Low X									
18:00	Hard QCD										
18:30											
	reception					Dinner					

Big overview / Question rising talks on Monday (50 (incl.10 min discussion) min each) => Monday afternoon

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Hard QCD/high precision overview +  $\alpha_s$  - theory ( Thomas Gehrmann )

MC overview (LO+NLO Matching) (Jeppe Anderssen)

PDFs overview +  $\alpha_s$  - phenomenology+experimental (Mandy Cooper-Sakar, ATLAS)

QCD from LHC experimental - includes ATLAS, CMS, LHCb (Kostas Kousouris, CMS)

LHC overview & outlook (heavy ion, searches, high luminosity upgrade, general overview and perspectives) (Max Klein)

Summaries in Friday (60min incl discussion)

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Experimental (incl.PDF) Summary & Outlook (Stefan Tapprogge, Mainz, ATLAS)

Theory (incl. PDF) Summary & Outlook (Nigel Glover, Durham)

Other plenary sessions, 40 min talks (incl.10min discussion), 20 min coffee break, going into more details (Tuesday, Wednesday, Thursday => 14talks):

Experimental (7 talks)

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Top results from the LHC+Tevatron (cross sections, differential distributions, mass) (ATLAS sc)

Jets (production, heavy flavor) results of LHC incl. heavy ion +Tevatron (ATLAS sc)

Jet sub-structure, boosted objects (CMS sc: Maxime Gouzevitch (IPN Lyon,France))

W/Z +jets (ATLAS sc)

W/Z+heavy flavor (CMS sc: Anne-Marie Magnan (Imperial College, London))

Fwd physics and soft QCD results LHC (incl. UE, soft+hard diffraction) (CMS sc: Benoit Roland (Universiteit Antwerpen, Belgium))

QCD in Higg and BSM studies (ATLAS sc)

Theory (7 talks)

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Progress on Matrix Element and Loop Calculations, Automated NLO (Stefan Weinzierl, Mainz)

Matching in NLO and multi-leg calculations (Leif Lonnblad, Lund)

Resummation and Jets (Anna Kulesza, Muenster)

Higher order corrections, NNLO (Giancarlo Ferrera)  
Top (Simone Alioli)  
QCD in Higgs and BSM (Frank Tackmann, Hamburg)  
Broad small x at LHC overview (Francesco Hautmann, Oxford)

Parallel sessions, 20min talks+10min discussion, 3.5h/session= $\sim$ 6-7 talks/session

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Summaries of each group by one of the conveners on Friday morning

Group 1: PDF (incl.alpha\_s) discussion group (all sessions: convener Voica Radescu + Pedro Jimenez-Delgado)

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session 1, P3, (Tuesday): together with hard QCD:  
results on W+jets, W+heavy flavor, jets from ATLAS, CMS, LHCb, HERA, Tevatron

session 2, P7, (Wednesday):  
details from PDF fitting groups (ABKM, HeraPDFs, CTEQ, MSTW, NNPDF, GRV)

session 3, P10, (Thursday):  
combined with HardQCD NNLO  
Prompt photons, diphotons ?

Group 2: Hard QCD and MC (convener: David D'Enterria(CMS), Pavel Starovoitov (ATLAS), Gabor Somogyi(theory), Steffen Schumann (theory,MC), Matteo Cacciari (theory, jets))

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session 1 (Tuesday) split:  
a) Hard QCD together with PDF group

b) Heavy quarkonia session (chaired by: Butenschoen(theory), Alex Cerri(ATLAS), G.Manca (LHCb))

session 2 (Wednesday) split:

a) QCD radiation and NLO calculations

b) resummation & jets :

jets

boosted jets

new physics in jets

session 3 (Thursday) together with soft QCD

Group 3: Multi-parton dynamics (O.Kepka (ATLAS), Albert Knutsson(CMS),K. Kutak(theory))

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session 1, P2, (Monday) small x and multi-parton dynamics

session 2, P4, (Tuesday): fwd physics

Session 3, P9, (Thursday) common with hard QCD and MC group:

soft physics corrections to jets including pile-up and color flow

NLO and multi-leg matching, contributions expected from:

aMC@NLO

Pythia8 matching to NLO

Sherpa+Blackhat

Herwig++

Powheg

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Detailed Parallel session plan

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P1 (Mon, 16:20-18:30, hard QCD) 5 talks of 20+5 min

- (1) Top mass + inclusive cross sections + QCD systematic (ATLAS) (ATLAS sc) (20+5 min)
  - (2) Top mass + inclusive cross sections + QCD systematic (CMS) (CMS sc: Akram Khan (Brunel Univ, UK)) (20+5 min)
  - (3)  $t\bar{t}$  production at NNLO (Paul Fiedler) (20+5 min)
  - (4) \*\*\*\*  $t\text{-}t\bar{t}$  at NNLO and PDF constraints (Rojo, Mangano) (20+5 min) - no speaker available
  - (5) A new observable to measure the top quark mass at hadron colliders (Adrian Irles) (20+5 min)
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P2 (Mon, 16:20-18:30h MP dynamics and low x) 5 talks of 20+5 min

- (1) Piet Mulders – Theory tbc – (20+5 min) tbc
- (2) Jonathan Gaunt - Theory MPI confirmed (20+5 min)
- (3) Piotr Kotko, “Recent theory and phenomenology developments in fwd physics within high-energy factorization” confirmed (20+5 min)
- (4) Results from TOTEM (Totem sc) (20+5 min) -> talk retracted by TOTEM
- (5) CMS exclusive production in pp and pA (20+5 min) (CMS sc)

\*\*\* put a HERA talk on hard diffraction here?

P3 (Tues. 14:00 - 16:50, with 20' coffee-break, Hard QCD + PDF (6 talks at 20+5 min to be shared with PDF group))

- (1) Jet incl. cross sections: Atlas data (ATLAS sc) 20+5min
- (2) JET incl. cross sections: CMS data (CMS sc: Giannis Flouris (Univ. of Ioannina, Greece) 20+5 min)
- (3) ATLAS+CMS measurement of  $\alpha_s$  (ATLAS sc) 20+5 min
- (4) \*\*\*PDF systematics at high x 20+5 min -> maybe replace by HERA talk on Jet production,  $\alpha_s$  and QCD parameters?
- (5) \*\*\*Dijet production at NNLO (Gehrmann-De Ridder, Gehrmann, Glover, Pires) 20+5 min -> will be covered in Gehrman's seminar
- (6) EW corrections for photon and jet production Alexander Huss 20+5 min

P4 (Tues. 14:00 - 16:50, with 20' coffee-break, small x, fwd physics MP (6 talks a 20 min + 5, min, 10 min for general discussion))

- (1) Saturation and evolution equations for multi-gluons Stephan Munier (20+5 min)

- (2) Recent results on automated calculations of matrix elements in high energy factorization Andreas van Hameren (20+5) min
- (3) Small-x and fwd physics (ATLAS) – 20+5min (ATLAS sc)
- (4) fwd production of particles and jets (CMS) – 20+5 min (CMS sc)
- (5) Small-x and fwd physics (ALICE) – 20+5 min (Alice sc)
- (6) **Studies of soft QCD at LHCb**\_(including exclusive production) (LHCb) – 20+5 min (LHCb sc)

P5 (Tues. 14:00 - 16:50, with 20' coffee-break, heavy quarkonia (7 talks a 17+3 min + 10 min Rest for general discussion))

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- (1) NRQCD Quarkonium production/polarization: tba
- (2) Quarkonium production in kT factorization: Sergej Baranov
- (3) Quarkonium production in kT factorization, V.Saleev
- (4) Overview talk about exotics: Ahmed Ali
- (5) Quarkonia Production (ATLAS, CMS, LHCb) (ATLAS sc)
- (6) Quarkonia Polarisation (ATLAS, CMS, LHCb) (CMS sc)
- (7) Exotic in hadronic and e+e- colliders (ATLAS, CMS, LHCb, [BaBar, Belle]) (LHCb sc)

\*\*\*\*(8) Quarkonia in Heavy Ion collisions (Alice, ATLAS, CMS, LHCb)

\*\*\*\*(9) Charm and beauty at HERA (in DIS and photoproduction!)

P6 (Wed 14:00-18:05, 20+5 min/talk -> 9 talks with 20' coffee break,) Hard QCD 1: QCD radiation + NLO tools

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- (1) Atlas Z,W+jets, ttbar+jets, W+HF (ATLAS sc) 20+5 min
- (2) CMS Z,W+jets, ttbar+jets, W+HF (CMS sc, Matteo Marone, Trieste, Italy) 20+5min
- (3) Sherpa + Blackhat (25min) Frank Siegert, 20+5 min
- (4) GoSam, Edoardo Mirabella 20+5 min
- (5) Helac-NLO, Giuseppe Bevilacqua 20+5 min
- (6) OpenLoops, Pozzorini or Fabia Cascioli 20+5 min
- (7)
- (8)
- (9)

P7 (Wed 14:00-18:05, 20+5 min/talk -> 9 talks , 20' coffee break,) PDF: reports from fitting groups

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\*\*\*\*\*Combined with PDF4LHC meeting\*\*\*\*\*

- (1) ATLAS+CMS W+c (CMS sc: Andrea Vargas Trevino (DESY, Germany))
- (2) HERA
- (3) JLAB results (if any) ? or LHeC
- (4) HERAFitter
- (5) MSTW
- (6) ABM
- (7) NNPDF
- (8) CTEQ
- (9) GRV

P8 (Wed 14:00-18:05, 9 talks, 20' +5' talks with 20' coffee break) Hard QCD 2: Resummation, jets, jet-substructure

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- (1) Atlas results using jets substructure – 20+5 min (ATLAS sc)
- (2) CMS results on boosted objects and jet substructure 20+5 min (cms sc: Aniello Spiezia (Perugia, Italy))
- (3) Marzani ??? 20+5 min
- (4) SKET people ??? (Tackmann) 20+5 min
- (5) Jessy Taylor (substructure) 1st, Gregory Soyez (substructure) 2<sup>nd</sup> ??? 20+5 min
- (6) Jet veto measurement (exp, ATLAS+CMS ) (ATLAS sc) (20+5 min)
- (7) High precision Wmass (exp. ATLAS, CMS) (CMS sc) (20+5 min)
- (8) Ist Banfi (low pt Vector Boson, resumption) ???(20+5 min)
- (9) Dasgupta (jet veto, resummation) ??? (20+5 min)

P9 (Thu 14:00-18:05, 9 talks at 20+5min with 20 coffee break) Hard QCD + MP dynamics + MC: Matching

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- (1) NLO EW + QCD corrections to single W/Drell-Yan production matched with a parton shower in POWHEG, Fulvio Piccinini 20+5min

- (2) News from PowhegBox incl. MINLO and NLO EW + QCD corrections (20+5min) Emmanuele Re
- (3) MC@NLO and aMC@NLO (20+5min) Marco Zaro
- (4) Matching & NLO Merging in Herwig ++ Simon Plaetzer (20+5min)
- (5) Matching & NLO Merging in Pythia 8 Stefan Prestel (20+5min)
- (6) Hadronization, parton shower, and MPI corrections in jet & heavy-quark measurements, Samantha Dooling (20+5min)
- (7) ATLAS+CMS results on UE measurements and tuning (ATLAS+CMS) – 20+5min (ATLAS sc)
- (8) Atlas jet reconstruction performances and non-perturbative corrections to jet cross sections. – 20+5min (ATLAS sc)
- (9) CMS jet reconstruction and performance non-perturbative corrections to jet cross sections. – 20+5 min (CMS sp)

\*\*\*\*\*+abstract Tania Robens “Nagy-Soper subtraction for massless final states”

P10 (Thu 15:00-18:05, 9 talks at 20+5min with 20' coffee break) PDF+HardQCD NNLO

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Time for talk on NLO EW+QCD correction in P9

- (1) ATLAS W/Z inclusive (ATLAS sc) (20+5)
- (2) CMS WZ/Inclusive (CMS sc) (20+5)
- (3) LHCb W/Z inclusive (20+5)
- (4) \*\*\*NLO EW + NNLO QCD corrections to Drell-Yan in FEWZ (Li, Petriello) -> no author available -> move LHCb PDF talk here?
- (5) Higgs + jet production at NNLO Radja Boughezal 20+5
- (6) Higgs production in gluon fusion at approximate N3LO Marco Bonvini 20+5
- (7) put “Diphoton measurement” from CMS” here?
- (8)
- (9)

Potential additional talks

- (13) Direct integration of multiloop integrals (Becker, Weinzierl) [though Weinzierl is giving a plenary talk already]
- (14) Integrand reduction at two-loops (Mastrolia, Mirabella, Ossola, Peraro)
- (15) Multiloop integrals with SecDec (Borowka, Heinrich)
- (16) NNLO OPP (Kleiss, Malamos, Papadopoulos, Verheyena)