

Physics at A Fixed Target Experiment (AFTER) using the LHC beams

Sunday 03 February 2013 - Wednesday 13 February 2013

**ECT* Trento
Programme**

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Sunday 03 February 2013

Welcome dinner - Ristorante-Pizzeria ALLA MOSTRA (20:15-22:15)

Monday 04 February 2013

Introduction to AFTER (09:00-13:00)

time	title	presenter
09:00	Organisation of the workshop (00h10')	ORGANISERS
09:10	Key figures of a fixed-target experiment on the LHC beams (00h35')	Dr. RAKOTOZAFINDRABE, Andry (CEA Saclay, IRFU/SPhN) Dr. LANSBERG, Jean-Philippe (IPNO - Paris-Sud U. - CNRS/IN2P3)
09:50	Tools for simulations (00h35')	Prof. PORTEBOEUF-HOUSSAIS, Sarah (LPC Clermont-Ferrand)
10:30	Coffee break (00h30')	
11:00	Flagships for AFTER (00h35')	Prof. BRODSKY, Stanley J. (SLAC National Accelerator Laboratory -- Stanford University)
11:40	Aliroot for AFTER (00h25')	Dr. HRIVNACOVA, Ivana (IPN Orsay - CNRS/IN2P3)
12:10	RHIC and EIC, the way to unravel the mystery about the spin of the proton (00h35')	ASCHENAUER, Elke-Caroline (BNL)

Lunch break (13:00-14:30)

WG 1 Spin (14:30-18:15)

- Conveners: Dr. Lorcé, Cédric (Université Paris-Sud 11); Schnell, Gunar

WG 3 quarkonia, heavy-flavour, pA, AA & (n)PDF (14:30-18:15)

- Conveners: Schienbein, Ingo (LPSC); Dr. Ferreiro, Elena (Department of Particle Physics, University of Santiago de Compostela, Spain)

WG2 Simulation & Technical aspects (14:30-18:15)

- Conveners: Dr. FLEURET, Frédéric (LLR-Ecole polytechnique, CNRS/IN2P3); Dr. Rakotozafindrabe, Andry (CEA Saclay, SPhN)

Tuesday 05 February 2013

Physics in pp and pd collisions (09:00-13:00)

time	title	presenter
09:00	Exclusive limit of Drell Yan processes (00h35')	Prof. TERYAEV, Oleg (JINR, Dubna)
09:40	Gluon PDF, isolated photons and AFTER (00h35')	D'ENTERRIA, David (CERN)
10:20	5 quark content of the baryons (00h25')	Prof. SAGHAI, Bijan (CEA-Saclay, France)
10:50	Coffee break (00h30')	
11:20	Hadron physics at JParc (00h35')	Prof. SAWADA, Shinya (KEK, Japan)
12:00	Prospect for future heavy-flavour and quarkonium studies at the LHC (00h25')	Prof. KARTVELISHVILI, Vakhtang (Lancaster U)
12:30	Heavy-quark + gamma production in pp collisions (00h25')	STAVREVA, Tzvetalina (LPSC)

lunch break (13:00-14:30)

WG 1 Spin (14:30-18:00)

WG 3 quarkonia, heavy-flavour, pA, AA & (n)PDF (14:30-18:00)

WG2 Simulation & Technical aspects (14:30-18:00)

Wednesday 06 February 2013

Spin physics (09:00-13:00)

time	title	presenter
09:00	Theoretical review on Single Spin Asymmetries (00h35')	Pf. ANSELMINO, Mauro (INFN - Torino U.)
09:40	Experimental review on Single Spin Asymmetries (00h35')	Dr. SCHNELL, Gunar (UPV/EHU Bilbao (Spain))
10:20	SSA with photon observables (00h25')	Dr. SCHLEGEL, Marc (University of Tuebingen)
10:50	Coffee break (00h30')	
11:20	Extraction of TMDs with global fits (00h25')	MELIS, Stefano (Univ.Torino)
11:50	Electronics for AFTER (00h25')	Mrs. CHAMBERT, Valérie (IPNO)
12:20	Spin studies in unpolarised pp collisions (00h25')	Dr. PISANO, Cristian (University of Cagliari)

Lunch break (13:00-14:30)

Midweek discussion (14:30-15:30)

WG 1 Spin (15:30-18:00)

WG 3 quarkonia, heavy-flavour, pA, AA & (n)PDF (15:30-18:00)

WG2 Simulation & Technical aspects (15:30-18:00)

Thursday 07 February 2013

cold and hot nuclear matter studies (09:00-13:00)

time	title	presenter
09:00	Charmonium physics in heavy-ion collisions at the LHC in a fixed target mode (00h35')	Dr. TOPILSKAYA, Nataliya (Institute for Nuclear Research, RAS)
09:40	New probes for QGP: quarkonium polarisation at LHC and AFTER (00h35')	Prof. SEIXAS, Joao (CERN and IST Lisbon)
10:20	Upsilon the new golden probe ? (00h25')	Dr. FERREIRO, Elena (Department of Particle Physics, University of Santiago de Compostela, Spain)
10:50	Coffee break (00h30')	
11:20	Open heavy flavour and quarkonium in pA collisions (00h35')	Prof. VOGT, Ramona (LLNL, USA)
12:00	Quarkonium production in pA: collider vs fixed target experiments (00h25')	Dr. ARNALDI, Roberta (INFN Torino)
12:30	Experimental studies of the nuclear dependence of charm production (00h25')	Dr. ESTRADA, Nora (Universidad Autonoma de San Luis Potosi)

Lunch break (13:00-14:30)

WG 1 Spin (14:30-18:00)

WG 3 quarkonia, heavy-flavour, pA, AA & (n)PDF (14:30-18:00)

WG2 Simulation & Technical aspects (14:30-18:00)

Friday 08 February 2013

Semi-diffractive physics, forward heavy-baryon production (09:00-13:00)

time	title	presenter
09:00	Proton-Deuteron studies at Fermilab (00h35')	Prof. PENG, Jen-Chieh (University of Illinois)
09:40	Experimental review on multiply-heavy-baryon production (00h35')	Prof. ENGELFRIED, Jurgen (Universidad Autonoma de San Luis Potosi)
10:20	Theory of multiply heavy baryon and heavy-meson pair production at large $ xF $ (00h25')	Prof. BRODSKY, Stanley J. (SLAC National Accelerator Laboratory -- Stanford University)
10:50	Coffee break (00h30')	
11:20	Performances of the COMPASS spectrometer (00h25')	Dr. PLATCHKOV, Stephane (CEA Saclay, IRFU/SPhN)
11:50	UPC at AFTER and timelike DVCS (00h35')	Prof. SZYMANOWSKI, Lech (Soltan Institute for Nuclear Studies, Department of Theoretical Physics)
12:30	Ultra-peripheral collisions and dilepton production at RHIC, LHC and AFTER (00h25')	Prof. GUCLU, Mehmet Cem (Istanbul Technical University)

Lunch break (13:00-14:30)

WG 1 Spin (14:30-18:00)

WG 3 quarkonia, heavy-flavour, pA, AA & (n)PDF (14:30-18:00)

WG2 Simulation & Technical aspects (14:30-18:00)

Saturday 09 February 2013

Excursion (09:00-16:00)

Sunday 10 February 2013

Excursion (09:00-16:00)

Excursion (09:00-16:00)

Monday 11 February 2013

Review talks: Heavy-ion & Spin physics (09:00-12:50)

time	title	presenter
09:00	The Quarkonium Analyses of the QGP: Why Fixed-Target Studies? (00h45')	Prof. SATZ, Helmut (Bielefeld)
09:50	The future of heavy-ion collisions from the experimentalist viewpoint (00h35')	Dr. RAKOTOZAFINDRABE, Andry (CEA Saclay, SPhN)
10:30	Coffee break (00h30')	
11:00	Target polarisation (00h25')	Dr. DIDELEZ, Jean-Pierre (CNRS)
11:30	Spin theory (00h35')	Dr. LORCÉ, Cédric (Université Paris-Sud)
12:10	Drell-Yan measurements at COMPASS (00h35')	Dr. DENISOV, Oleg (INFN Torino)

Lunch break (12:50-14:20)

Bent crystal, beam collimation & extraction (14:20-16:00)

time	title	presenter
14:20	TBC (00h25')	Prof. WALTER, Scandale (CERN)
14:50	TBC (00h25')	CAVOTO, Gianluca (INFN Roma)
15:20	TBC (00h25')	MONTESANO, Simone (CERN)
15:45	Discussion (00h15')	

Coffee break (16:00-16:30)

Synergies / other experiments (16:30-18:00)

time	title	presenter
16:30	ALICE upgrades (00h45')	Dr. MASSACRIER, Laure (IPNL)
17:20	Round table (00h40')	

Tuesday 12 February 2013

WG Summary talks : Technical aspects & simulation, synergies with LUA9, Spin (09:00-13:00)

time	title	presenter
09:00	Summary 1 WG2 (Technical aspects & Simulation) (00h30')	Dr. FLEURET, Frédéric (LLR-Ecole polytechnique, CNRS/IN2P3)
09:30	Summary 2 WG2 (Technical aspects & Simulation) (00h30')	Dr. RAKOTOZAFINDRABE, Andry (CEA Saclay, SPhN)
10:00	Discussions (00h45')	
10:45	Coffee break (00h30')	
11:15	Discussions: synergies with LUA9 (00h40')	
11:55	Summary 1 WG1 (Spin) (00h30')	Dr. LORCÉ, Cédric (Université Paris-Sud 11)
12:25	Summary 2 WG1 (Spin) (00h30')	Dr. SCHNELL, Gunar (UPV/EHU Bilbao)

Lunch break (13:00-14:30)

WG Summary talks : Spin (14:30-15:15)

time	title	presenter
14:30	Discussions (WG 1 Spin) (00h45')	

WG Summary talks : quarkonia, heavy-flavour, pA, AA & (n)PDF (15:15-19:15)

time	title	presenter
15:15	Summary 1 WG 3 (quarkonia, heavy-flavour, pA, AA & (n)PDF) (00h30')	Dr. LANSBERG, Jean-Philippe (IPNO - Paris Sud U. / CNRS/IN2P3)
15:45	Summary 1 WG 3 (quarkonia, heavy-flavour, pA, AA & (n)PDF) (00h30')	Dr. FERREIRO, Elena (Department of Particle Physics, University of Santiago de Compostela, Spain) SCHIENBEIN, Ingo (LPSC)
16:15	Coffee break (00h30')	
16:45	Discussions WG 3 (quarkonia, heavy-flavour, pA, AA & (n)PDF) (00h45')	

Wednesday 13 February 2013

Work on the synergies, future tasks, funding applications, future collaboration & network, creation of a study group... (09:00-12:00)

- *Future funding: bilateral agreements, EU project (I4HP, COST, ERC, ...), national funding*
- *Future meetings: INT-Seattle, Bad Honnef, Les Houches, SPA, CERN, ...*
- *Future task: theory, simulation, beam extraction, experiment location*

Lunch break (12:00-13:30)

Other fixed-target experiment project (13:30-17:50)

time	title	presenter
13:30	CHIC@SPS (00h35')	Dr. FLEURET, Frédéric (LLR-Ecole polytechnique, CNRS/IN2P3)
14:10	Future experiment for low mass dilpeton at SPS (00h35')	Dr. USAI, Gianluca
14:50	A few words of the future of COMPASS (00h25')	
15:20	Coffee break (00h30')	
15:55	Round table (01h35')	