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

dimanche 3 février 2013 - mercredi 13 février 2013

ECT* Trento

Programme Scientifique

We expect to have review and contributing talks in the mornings and work in groups in the afternoons.

Morning 1 : introduction to AFTER

– Key figures of AFTER :sqrt(sNN), luminosities, likely detectors acceptances,...

– Flagship studies at AFTER

Morning 2 : physics in pp and pd collisions

– Gluon pdf reach in the proton and neutron

– Heavy-quark content in the nucleon

– W/Z production, Drell-Yan process

Morning 3 : spin physics

– Anomalous Single Spin Asymmetries

– Single Spin Asymmetries with gluon sensitive probes

– Asymmetries with final state polarisation

– Target polarisation

Morning 4 : cold and hot nuclear matter studies

– Nuclear matter studies in pA nucleus

– Quest for quarkonium sequential suppression

– Ultra-relativistic heavy-ion collisions from the perspective of the target rapidity domain

Morning 5 : semi-diffractive physics, forward heavy-baryon production

– Ultra-peripheral collisions

– Diffractive heavy-baryon production

– Connections with cosmic ray studies

Morning 6 : Review talks on Heavy-Ion Collisions and Spin physics

Afternoon 6 : Bent crystal, beam collimation & extraction; ALICE upgrades

Morning 7 : Summary talks : Technical aspects & simulation, synergies with LUA9, Spin

Afternoon 7 : Summary talks : quarkonia, heavy-flavour, pA, AA & (n)PDF

Morning 8 : synergies, future tasks, funding applications, future collaboration & network, creation of a study group...

Afternoon 8 : Other fixed-target experiment project

introduction to AFTER

physics in pp and pd collisions

spin physics

cold and hot nuclear matter studies

semi-diffractive physics, forward heavy-baryon production