Jets and heavy flavor physics WG update

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Broad representation, ~40 members form the US and abroad

- BNL, U. Colorado, JLAB, LANL, LBNL, NCSU, NIKHEF, NRNU, ORNL, SMU, Temple U., Tubingen U., UIC, UCR, UNG, Wayne State, …

Existing simulations / theory

Simulations: Spin asymmetries with jets, light jet kinematics, heavy flavor reconstruction, heavy flavor mesons, heavy flavor jets

Theory work: jets in polarized and unpolarized e+p, gamma-jets, lepton jet and di-jet correlations, light and heavy flavor meson production in e+p and e+A and their modification, determination of the charm content in e+p, extraction of alpha_s in e+p

Proposed measurements

Proposed measurements

1. Spin physics with jets – A_{LL}, Sievers function [nucleon and nuclear structure]
2. Inclusive jets and jet substructure, charge current reactions, EW structure functions [FF_S, shapes, EW structure functions]
3. GammaJet+jet, lepton-jet, di-jet correlations [TMD constraints, broadening in e+A]
4. D and B meson cross sections, modification in e+A [energy loss, hadronization]
5. Heavy flavor jet cross sections, modification and substructure in e+A, charm F_2 [transport properties of nuclei, QCD in matter, N charm content]
6. Angularities, n-jettiness [extraction of $alpha_s$]

Coordination with Physics and Detector WG

- Calorimetry, Tracking, Central and Forward Integration, Inclusive, Semi-inclusive, Simulations