

Inclusive Physics WG Task List

Priority:

Early Science

preTDR

Physics analysis:

NC DIS cross section

F2, FL, F3 ..

PDFs

CC DIS cross section

A1, g1

NPDFs

photoproduction

Systematic & background:

Pion contamination

Electron ID sys.

Radiative corrections

etc ..

Software development:

Electron finder / ML recon

Electron identification

Bench mark plots

New event generator

etc ..

	Species	Energy (GeV)	Luminosity/year (fb-1)	Electron polarization	p/A polarization
YEAR 1	e+Ru or e+Cu	10 x 115	0.9	NO (Commissioning)	N/A
YEAR 2	e+D e+p	10 x 130	11.4 4.95 - 5.33	LONG	NO TRANS
YEAR 3	e+p	10 x 130	4.95 - 5.33	LONG	TRANS and/or LONG
YEAR 4	e+Au e+p	10 x 100 10 x 250	0.84 6.19 - 9.18	LONG	N/A TRANS and/or LONG
YEAR 5	e+Au e+3He	10 x 100 10 x 166	0.84 8.65	LONG	N/A TRANS and/or LONG
Note: the eA luminosity is per nucleon					

Example list of variables/quantities for PWG to follow

Kinematic reconstructions	quantity	Reco	Truth	Response (2D)	Purity/bin migration	detector acceptance-only corrected	Unfolding/full correction
(electron,JB, DA,sigma, e-sigma)	Q2	yes	yes	yes	optional	good to have	optional
	x	yes	yes	yes	optional	good to have	optional
	y	yes	yes	yes	optional	good to have	optional
	dQ2/Q2						
	dx/x						
	dy/y						
	e' energy	yes	yes	yes	optional	optional	
	e' theta	yes	yes	yes	optional	optional	
	HFS (E-pz)	yes	yes	yes	optional	optional	
	HFS (pT)	yes	yes	yes	optional	optional	
Event level							
	E-pz (e'+HFS)	yes	yes	yes	optional	optional	
	E/p for calorimeter	yes	yes	yes	optional	optional	
	Calo clusters	yes	no	no			
Observable of interest							
	e.g., t, etc.	yes	yes	yes	yes	yes	optional
Detector specific variables	Depends						
PID quantities:	add when it comes						

This list is not and should not be frozen but a living document for analyzers. And this should be adapted to each analysis and experts (conveners, ACs) can request to add things to check