Pion and Kaon electroproduction.

Initialize limits

Set event generation limits to give full population of desired kinematics after taking into account resolution, energy loss, radiative corrections, etc...

Generate vertex

Generate position based on target geometry, beam witdh, raster.

Generate beam energy.

Generate scattering kinematics

H(e,e'π/K): Generate θ_e, ϕ_e, θ_e, ϕ_e, p_e - calc. p_h

A(e,e'π/K): Generate θ_e, ϕ_e, θ_e, ϕ_e, p_e, p_m, E_m - calc. p_h

Modifications to kinematics

Apply radiative corrections (generate radiated photons)

Apply coulomb distortions (effective momentum approximation)

Follow particles.

Apply energy loss, mult. scattering in target/detector materials.

Run particles through model of spectrometers

Apply cross section weighting to good events: uses cross section model for free proton, applied in γ-N center of mass.

Simulate particle decay. (1)Apply event-by-event weight equal to survival prob. or (2) model decay of the meson and follow the main decay product.

Calculate normalization factors.

Luminosity.

Event generation phase space.