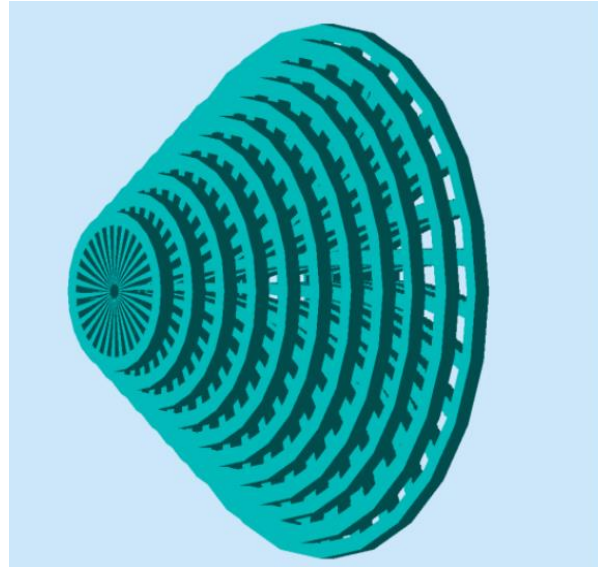


Baffles

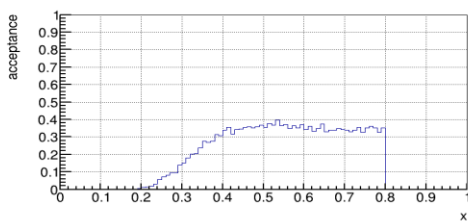
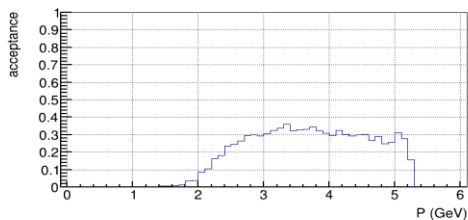
The SoLID baffle system is required for operation of the detectors at high luminosity on a cryogenic target for the PVDIS experiment. These serve as a momentum filter blocking both low energy particles and line-of-sight photons.

The system is designed by utilizing the equations of motion of the particles through a solenoidal field, which are approximately linear in z and ϕ for our field integrals. Coupling this with preventing line-of-sight to the target defines the profiles for the “wheels”.

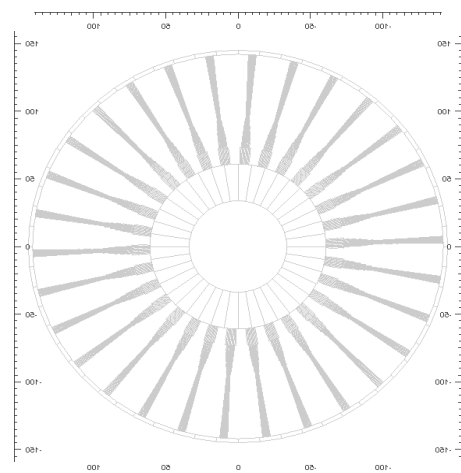


Technical Parameters

Parameter	Design Value
Planes	11(+1)
Sectors	30
Material	Tungsten/Lead
Thickness-per-plane	9 cm (+5 cm)
Nominal Acceptance	30%
Angular range from target center	22-35 deg
Momentum acceptance	>2 GeV
x acceptance	0.2-1
Background Reduction	$\times 10$



Baffle acceptance



Baffle profile, 11th Plane