

Fast Shutdown System

The FSD system is a network of permissive signals, which terminate at the electron gun and chopper1. The permissive signal to the gun and chopper1 may be inhibited by any device connected to an FSD mode. Devices connected to the FSD system include vacuum valves, RF systems, Beam loss systems, beam current monitors, beam dumps, and particular to Hall A, the target motion mechanism.

The gun control system includes software program which monitors beam operating conditions and the state of the FSD and BLM systems. The program will warn the operators if a potential for beam damage exists. Potential for damage exists when running high average current beam, when FSD nodes are masked and when the beam power approaches the operating envelope limits for a specific beam dump.