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IFR HV WORK PROCEDURE

The IFR-RPC HV system contains 10kV (1 or 2 mA) supplies and distributes this high voltage to RPCs of up to 5 nF capacitance. The supplies, cables and chambers constitute a STARTLE Hazard which although not dangerous in itself may cause a worker to slip or fall. See section 3.3.5.3 of the BABAR safety document – SLAC-I-023-302TP-000. To reduce potential exposure to the high voltage the following procedures must be followed when working on any part of the High Voltage system.

System description: Three CAEN SY-127 HV (+1 spare) crates are mounted in rack B620B-08 in the Electronics house. Each crate can contain up to 10 pods (2 channels of 1 or 2 mA). Each channel is connected to a splitter mounted above or below the crate. Type C HV cables carry the HV from the Electronics house to various locations on the detector. On the detector the HV is further subdivided in a High Voltage Distribution box.

A: Large scale work on RPC connections on the detector.

Turn off all HV channels in the CAEN crate supplying the sector being worked on by lowering the HV Enable Toggle on the front panel

Verify by EPICS that all voltages are < 50V.

Turn off CAEN crate and remove the key.

On the detector use appropriate fall protection when working in elevated locations.

Remove or attach RPCs and supply HV cables as needed.

B: Work on 1 or 2 RPC connections on the detector.

Identify HV control channel(s).

Turn off channel(s) using online detector control.

Verify by EPICS that all voltages are < 50V.

On back of CAEN crate verify that the appropriate channel is off (LED off) and remove cable to detector.

On the detector use appropriate fall protection when working in elevated locations.

Verify that the HV group is supplied by the cable disconnected in the Electronic's House

Remove or attach RPCs and supply HV cables as needed.