Hall C Fast Raster

- Present Hall C fast raster is
  - 2 sets of X-Y coils to give a square pattern at the target.
  - The two frequencies are around 25 kHz with a triangular wave pattern.
  - A coil has 81 Gauss*cm per 1 Amp in the power supply.
  - The maximum raster size for 11 GeV/C beam with I_1/2 = 50 A is a full size of 6mm or +/- 3mm at the target.
  - I_1/2 = 50 A is the maximum that the supplies should run at. This is about 80% of the maximum current that the supplies can run.
- To modify the system to do a circular raster.
  - 2 sets of X-Y with sinusoidal frequencies at around 19kHz out of phase by $\pi/2$
  - The amplitudes modulated as a 49 Hz square root function of time.
  - Equipment exists. Need to buy spares since the supplies will be running at near 80% of the max current for the supply.
  - Need to make changes to the EPICS software.
  - Need to modify the Beam Raster Monitor trip level detection circuit.

Testing of Circular Raster

Circular Raster for ^{3}He

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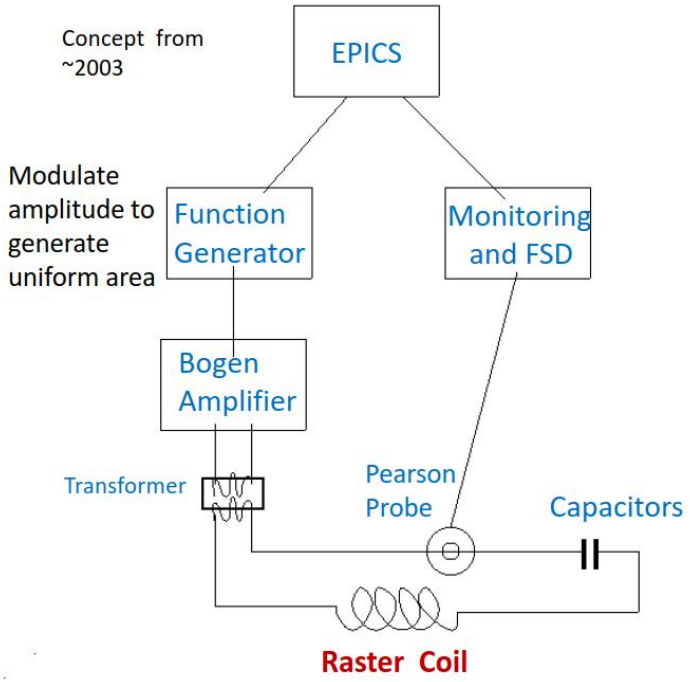
Status June 15, 2018: A test stand is being setup (started this week). Will measure the uniformity of the raster using an FADC-based DAQ.



Test Setup in EEL 126