

Fast Beam Chopper

A fast beam chopper is designed and commissioned for the 88-Inch Cyclotron at Lawrence Berkeley National Laboratory. The Cyclotron accelerates protons through uranium with frequency of operation from 5.5 MHz to 16.5 MHz. The new chopper uses a fast square wave pulser from BEHLKE and is connected to two parallel electrostatic deflector plates that can be biased to +/- 1000V. The new chopper is part of an effort to select single bunches with the goal of measuring the neutron time-of-flight by spacing bunches to avoid the "wrap around" effect, where slow neutrons from the previous bunch superimpose to fast neutrons from the actual bunch. Details of the electronic design and results will be presented.

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