

Subject: Booster bypass changes for interleaving**Date:** Wed, 6 Dec 2000 16:01:53 -0600 (CST)**From:** Michael Borland <borland@aps.anl.gov>**To:** carwar, goeppner, jagger, kmt**CC:** borland, lewellen

For interleaving top-up and LEUTL, we'll need two additional quadrupoles in the booster bypass. The specifications for these magnets are as follows:

Name	L m	K1 1/m ²	B1 T/m	B1L T	Current A	pCentral m\$be\$nc
BB:QE1	0.1527	3.4345	11.4561	1.7493	31.3222	1956.9472
BB:QE2	0.1527	-3.9965	-13.3310	-2.0356	36.4485	1956.9472

As you can see, I'm specing these at 1Gev. The magnets are the same as the BB:Q1 through BB:Q6 magnets. The excitation curve I have goes up to 60A and looks quite linear, so there is no problem there.

As for location, it is easiest for me to specify it relative to nearby magnets. These are the centers of the quadrupoles in the area, relative to BB:Q1.

ElementName	X m	Z m
PTB:Q9-C	0.000000e+00	-3.635001e+00
BB:QE1-C	0.000000e+00	-1.055401e+00
BB:QE2-C	0.000000e+00	-5.277013e-01
BB:Q1-C	0.000000e+00	-1.285829e-06

--Michael