

**PEP-II Quadrupole and Sextupole
Alignment Engineering Group Survey**

REGION 11 HER

Summer Downtime 2004
Final As Built Positions PEP-II Magnets

Magnet Name	Target Name	Z	X	Y
BHAAQUA	BHAAQUAA	-0.008	0.062	0.051
	BHAAQUAD	-0.007	0.063	0.069
	BHAAQUAW	-0.027	0.063	0.052
	BHAAQUAX	-0.024	0.069	0.070
BHAAQUB	BHAAQUBA	-0.067	0.033	0.070
	BHAAQUBD	-0.063	0.032	0.070
	BHAAQUBW	-0.072	0.045	0.072
	BHAAQUBX	-0.075	0.041	0.066
BHAAQUC	BHAAQUCA	-0.067	0.017	0.054
	BHAAQUCD	-0.073	0.020	0.052
	BHAAQUCW	-0.061	0.039	0.055
	BHAAQUCX	-0.054	0.039	0.056
BHAAQUD	BHAAQUDA	-0.080	0.035	0.052
	BHAAQUDD	-0.073	0.031	0.050
	BHAAQUDW	-0.074	0.040	0.043
	BHAAQUDX	-0.075	0.039	0.046
BHAAQUE	BHAAQUEA	-0.100	0.022	0.054
	BHAAQUED	-0.102	0.026	0.054
	BHAAQUEW	-0.081	0.036	0.056
	BHAAQUEX	-0.094	0.039	0.056
BHAAQUF	BHAAQUFA	-0.084	0.028	0.054
	BHAAQUFA	0.000	0.000	0.000
	BHAAQUFB	-14.987	21.574	0.049
	BHAAQUFC	0.000	0.000	0.000
	BHAAQUFD	0.000	0.000	0.000
	BHAAQUFD	-0.081	0.023	0.052
	BHAAQUFW	-0.077	0.051	0.054
BHAAQUFX	-0.076	0.039	0.050	
BHAAQUG	BHAAQUGA	-0.063	0.024	0.061
	BHAAQUGD	-0.064	0.020	0.055
	BHAAQUGW	-0.056	0.029	0.061
	BHAAQUGX	-0.057	0.030	0.055
BHAAQUH	BHAAQUHA	-0.069	-0.001	0.068
	BHAAQUHD	-0.065	-0.007	0.067
	BHAAQUHW	-0.068	0.022	0.067
	BHAAQUHX	-0.066	0.019	0.068
BHAAQUI	BHAAQUIA	-0.059	-0.002	0.058
	BHAAQUID	-0.063	-0.002	0.054
	BHAAQUIW	-0.053	0.010	0.060
	BHAAQUIX	-0.053	0.007	0.055
BHAAQUJ	BHAAQUJA	-0.096	0.014	0.066
	BHAAQUJD	-0.094	0.006	0.064
	BHAAQUJW	-0.093	0.019	0.064
	BHAAQUJX	-0.095	0.015	0.064
BHAAQUK	BHAAQUKA	-0.079	0.003	0.058
	BHAAQUKD	-0.089	-0.001	0.057
	BHAAQUKW	-0.084	0.010	0.059
	BHAAQUKX	-0.083	0.005	0.055
BHAAQUL	BHAAQULA	-0.075	0.008	0.052

	BHAAQULD	-0.082	0.007	0.054
	BHAAQULW	-0.082	0.023	0.050
	BHAAQULX	-0.080	0.014	0.051
BHAAQUM	BHAAQUMA	-0.090	-0.001	0.046
	BHAAQUMD	-0.082	-0.002	0.056
	BHAAQUMW	-0.089	0.013	0.048
	BHAAQUMX	-0.079	0.010	0.064
BHAAQUN	BHAAQUNA	-0.071	-0.024	0.061
	BHAAQUND	-0.074	-0.024	0.058
	BHAAQUNW	-0.064	-0.008	0.058
	BHAAQUNX	-0.063	-0.003	0.060
BHAAQUP	BHAAQUPA	-0.105	0.002	0.051
	BHAAQUPD	-0.101	0.003	0.048
	BHAAQUPW	-0.093	0.007	0.049
	BHAAQUPX	-0.092	0.014	0.044
BHAAQUQ	BHAAQUQA	-0.098	-0.001	0.041
	BHAAQUQD	-0.101	0.000	0.042
	BHAAQUQW	-0.096	0.009	0.040
	BHAAQUQX	-0.103	0.009	0.042
BHAASXD	BHAASXDM	4.234	0.559	15.807
	BHAASXDM	-4.452	1.464	15.807
	BHAASXDM	-4.329	-1.733	15.809
	BHAASXDM	4.147	16.759	-0.187
	BHAASXDM	-3.988	16.818	-0.119
BHAASXE	BHAASXEM	4.148	0.962	15.821
	BHAASXEM	-4.292	1.755	15.823
	BHAASXEM	-4.317	-1.873	15.820
	BHAASXEM	4.001	16.740	-0.466
	BHAASXEM	-4.169	16.760	0.265
BHAASXF	BHAASXFM	4.341	0.728	15.796
	BHAASXFM	-4.308	1.669	15.791
	BHAASXFM	-4.277	-1.346	15.796
	BHAASXFM	4.260	16.753	-0.231
	BHAASXFM	-4.578	16.764	-0.215
BHAASXG	BHAASXGM	4.188	1.062	15.823
	BHAASXGM	-4.113	1.841	15.827
	BHAASXGM	-4.219	-1.733	15.837
	BHAASXGM	3.135	16.764	-0.467
	BHAASXGM	-3.322	16.725	-0.521
BHAASXH	BHAASXHM	4.379	0.848	15.813
	BHAASXHM	-4.341	1.484	15.820
	BHAASXHM	-3.957	-1.612	15.825
	BHAASXHM	4.257	16.730	-0.127
	BHAASXHM	-3.904	16.733	-0.306
BHAASXI	BHAASXIM	4.259	0.910	15.853
	BHAASXIM	-3.782	1.741	15.829
	BHAASXIM	-4.532	-2.036	15.807
	BHAASXIM	3.967	16.725	-0.461
	BHAASXIM	-3.989	16.696	-0.129
BHAASXJ	BHAASXJM	4.317	1.025	15.840
	BHAASXJM	-4.249	1.736	15.842
	BHAASXJM	-4.215	-0.649	15.848

	BHAASXJM	3.465	16.759	-0.176
	BHAASXJM	-3.222	16.772	-0.057
BHAASXK	BHAASXKM	4.229	0.863	15.832
	BHAASXKM	-4.036	1.743	15.841
	BHAASXKM	-4.322	-1.861	15.839
	BHAASXKM	4.115	16.695	-0.420
	BHAASXKM	-4.271	16.744	0.329
BHAASXL	BHAASXLM	4.246	0.438	15.819
	BHAASXLM	-4.472	1.957	15.819
	BHAASXLM	-4.132	-1.297	15.824
	BHAASXLM	3.308	16.731	0.251
	BHAASXLM	-3.607	16.672	0.335
BHAASXM	BHAASXMM	4.269	1.762	15.821
	BHAASXMM	-4.123	1.788	15.842
	BHAASXMM	-4.294	-1.529	15.821
	BHAASXMM	3.313	16.742	-0.136
	BHAASXMM	-3.274	16.737	-0.262
BHAASXN	BHAASXNM	4.209	1.808	15.816
	BHAASXNM	-4.172	1.737	15.826
	BHAASXNM	-4.136	-1.888	15.815
	BHAASXNM	3.289	16.723	-0.233
	BHAASXNM	-3.351	16.665	-0.046
BHAASXP	BHAASXPM	4.101	1.387	15.829
	BHAASXPM	-4.252	1.433	15.823
	BHAASXPM	-4.211	-1.562	15.823
	BHAASXPM	4.202	16.720	0.167
	BHAASXPM	-4.067	16.742	-0.391
BHAASXQ	BHAASXQM	4.170	0.936	15.807
	BHAASXQM	-4.174	1.094	15.804
	BHAASXQM	-4.324	-1.535	15.794
	BHAASXQM	3.328	16.708	-0.875
	BHAASXQM	-3.213	16.694	-0.970
BHABQUA	BHABQUAA	-0.067	-0.007	0.052
	BHABQUAD	-0.067	-0.009	0.053
	BHABQUAW	-0.072	0.002	0.053
	BHABQUAX	-0.067	0.003	0.054
BHABQUB	BHABQUBA	-0.081	-0.009	0.053
	BHABQUBD	-0.078	-0.012	0.050
	BHABQUBM	7.596	10.930	15.565
	BHABQUBW	-0.077	-0.001	0.049
	BHABQUBX	-0.079	0.002	0.051
BHABQUC	BHABQUCA	-0.069	-0.036	0.048
	BHABQUCD	-0.060	-0.029	0.048
	BHABQUCW	-0.062	-0.015	0.049
	BHABQUCX	-0.063	-0.018	0.044
BHABQUD	BHABQUDA	-0.072	-0.025	0.036
	BHABQUDD	-0.069	-0.024	0.038
	BHABQUDW	-0.065	-0.019	0.035
	BHABQUDX	-0.065	-0.022	0.038
BHABQUE	BHABQUEA	-0.049	-0.047	0.043
	BHABQUED	-0.052	-0.043	0.043
	BHABQUEW	-0.048	-0.028	0.043

	BHABQUEX	-0.057	-0.028	0.047
BHABQUF	BHABQUFA	-0.043	-0.065	0.042
	BHABQUFB	0.000	0.000	0.000
	BHABQUFD	-0.043	-0.063	0.045
	BHABQUFW	-0.044	-0.043	0.045
	BHABQUFX	-0.045	-0.040	0.048
BHABQUG	BHABQUGA	-0.055	-0.056	0.049
	BHABQUGD	-0.056	-0.056	0.053
	BHABQUGW	-0.055	-0.037	0.050
	BHABQUGX	-0.055	-0.043	0.054
BHABQUH	BHABQUHA	-0.039	-0.063	0.041
	BHABQUHD	-0.057	-0.066	0.040
	BHABQUHW	-0.044	-0.027	0.035
	BHABQUHX	-0.056	-0.037	0.030
BHABQUI	BHABQUIA	-0.078	-0.043	0.020
	BHABQUID	-0.073	-0.051	0.025
	BHABQUIW	-0.079	-0.025	0.022
	BHABQUIX	-0.079	-0.028	0.025
	BHABQUIX	15.163	-0.034	0.031
BHABQUJ	BHABQUJA	-0.027	-0.051	0.043
	BHABQUJD	-0.026	-0.047	0.047
	BHABQUJW	-0.023	-0.027	0.050
	BHABQUJX	-0.026	-0.026	0.050
BHABQUK	BHABQUKA	-0.057	-0.031	0.040
	BHABQUKD	-0.058	-0.029	0.048
	BHABQUKW	-0.063	-0.003	0.047
	BHABQUKX	-0.058	-0.009	0.052
BHABQUL	BHABQULA	-0.064	-0.021	0.046
	BHABQULA	-0.044	-0.028	0.031
	BHABQULD	-0.061	-0.021	0.047
	BHABQULD	-0.047	-0.028	0.035
	BHABQULW	-0.052	-0.011	0.050
	BHABQULW	-0.048	-0.016	0.034
	BHABQULX	-0.069	-0.007	0.054
BHABQULX	-0.052	-0.012	0.035	
BHABQUM	BHABQUMA	-0.073	-0.043	0.018
	BHABQUMD	-0.072	-0.049	0.020
	BHABQUMW	-0.079	-0.025	0.021
	BHABQUMX	-0.083	-0.023	0.023
BHABQUN	BHABQUNA	-0.056	-0.037	0.033
	BHABQUND	-0.059	-0.040	0.033
	BHABQUNW	-0.059	-0.028	0.039
	BHABQUNX	-0.060	-0.031	0.037
BHABQUP	BHABQUPA	-0.072	-0.016	0.041
	BHABQUPD	-0.069	-0.015	0.033
	BHABQUPW	-0.060	-0.015	0.040
	BHABQUPX	-0.063	-0.012	0.032
BHABSXA	BHABSXAM	4.170	0.561	15.817
	BHABSXAM	-3.549	1.766	15.802
	BHABSXAM	-4.243	-1.787	15.821
	BHABSXAM	4.093	16.698	-0.184
	BHABSXAM	-4.020	16.697	-0.298

BHABSXB	BHABSXBM	4.156	0.752	15.813
	BHABSXBM	-4.450	1.848	15.822
	BHABSXBM	-4.333	-1.519	15.813
	BHABSXBM	4.210	16.685	-0.053
	BHABSXBM	-3.798	16.735	-0.479
BHABSXC	BHABSXCM	3.992	0.583	15.835
	BHABSXCM	-4.037	1.519	15.836
	BHABSXCM	-3.939	-1.668	15.834
	BHABSXCM	3.674	16.726	-0.454
	BHABSXCM	-4.358	16.732	-0.254
BHABSXD	BHABSXDM	4.175	1.012	15.809
	BHABSXDM	-4.330	1.701	15.801
	BHABSXDM	-4.165	-1.278	15.808
	BHABSXDM	3.131	16.698	-0.390
	BHABSXDM	-3.383	16.657	-0.427
BHABSXE	BHABSXEM	4.346	0.362	15.808
	BHABSXEM	-4.100	1.596	15.830
	BHABSXEM	-3.966	-1.805	15.825
	BHABSXEM	4.185	16.675	-0.444
	BHABSXEM	-3.755	16.678	0.081
BHABSXF	BHABSXFM	4.378	1.064	15.793
	BHABSXFM	-4.233	1.403	15.818
	BHABSXFM	-4.290	-1.703	15.813
	BHABSXFM	3.375	16.667	0.261
	BHABSXFM	-3.218	16.670	-0.421
BHABSXG	BHABSXGM	4.240	0.669	15.832
	BHABSXGM	-4.355	1.410	15.832
	BHABSXGM	-4.439	-1.534	15.841
	BHABSXGM	4.274	16.710	-0.737
	BHABSXGM	-4.191	16.720	-0.308
BHABSXH	BHABSXHM	4.272	1.035	15.797
	BHABSXHM	-3.986	1.742	15.807
	BHABSXHM	-3.683	-1.620	15.798
	BHABSXHM	4.261	16.671	0.599
	BHABSXHM	-3.738	16.659	-0.396
BHABSXI	BHABSXIM	4.363	0.702	15.785
	BHABSXIM	-4.207	1.161	15.784
	BHABSXIM	-4.285	-1.724	15.779
	BHABSXIM	2.992	16.669	-0.195
	BHABSXIM	-2.959	16.747	-0.022
BHABSXJ	BHABSXJM	4.321	1.782	15.788
	BHABSXJM	-4.035	1.650	15.792
	BHABSXJM	-4.091	-1.673	15.786
	BHABSXJM	3.014	16.654	-0.524
	BHABSXJM	-3.102	16.694	-0.195
BHABSXK	BHABSXKM	4.057	1.733	15.783
	BHABSXKM	-4.498	1.427	15.770
	BHABSXKM	-4.665	-1.366	15.754
	BHABSXKM	3.077	16.706	0.359
	BHABSXKM	-3.085	16.698	0.173

**PEP-II Quadrupole and Sextupole
Alignment Engineering Group Survey**

REGION 11 LER

Summer Downtime 2004
Final As Built Positions PEP-II Magnets

Magnet Name	Target Name	Z	X	Y
BLAAQUA	BLAAQUAA	-0.051	0.071	0.009
	BLAAQUAB	-0.053	0.067	0.009
	BLAAQUAC	-0.051	0.075	0.009
BLAAQUB	BLAAQUBA	-0.017	0.060	0.021
	BLAAQUBB	-0.018	0.056	0.017
	BLAAQUBC	-0.013	0.059	0.022
BLAAQUC	BLAAQUCA	-0.044	0.031	0.032
	BLAAQUCB	-0.037	0.029	0.013
	BLAAQUCC	-0.025	0.025	0.025
BLAAQUD	BLAAQUDA	-0.044	0.056	0.020
	BLAAQUDB	-0.041	0.059	0.015
	BLAAQUDC	-0.040	0.066	0.018
BLAAQUE	BLAAQUEA	-0.087	0.044	0.027
	BLAAQUEB	-0.079	0.052	0.018
	BLAAQUEC	-0.080	0.046	0.028
BLAAQUF	BLAAQUFA	-0.038	0.034	0.029
	BLAAQUFB	-0.032	0.035	0.024
	BLAAQUFC	-0.032	0.029	0.028
BLAAQUG	BLAAQUGA	-0.054	0.042	0.030
	BLAAQUGB	-0.050	0.039	0.027
	BLAAQUGC	-0.045	0.036	0.030
BLAAQUH	BLAAQUHA	-0.010	0.021	0.034
	BLAAQUHB	-0.006	0.023	0.030
	BLAAQUHC	-0.001	0.022	0.034
BLAAQUI	BLAAQUIA	-0.036	0.019	0.034
	BLAAQUIB	-0.035	0.020	0.029
	BLAAQUIC	-0.030	0.017	0.031
BLAAQUJ	BLAAQUJA	-0.053	0.027	0.033
	BLAAQUJB	-0.044	0.027	0.028
	BLAAQUJC	-0.044	0.021	0.033
BLAAQUK	BLAAQUKA	-0.007	0.015	0.031
	BLAAQUKB	-0.018	0.017	0.023
	BLAAQUKC	-0.011	0.017	0.029
BLAAQUL	BLAAQULA	-0.051	0.001	0.044
	BLAAQULB	-0.045	0.005	0.037
	BLAAQULC	-0.048	-0.007	0.044
BLAAQUM	BLAAQUMA	-0.050	0.013	0.040
	BLAAQUMB	-0.031	0.005	0.037
	BLAAQUMC	-0.040	0.007	0.041
BLAAQUN	BLAAQUNA	-0.050	0.007	0.049
	BLAAQUNB	-0.052	0.007	0.044
	BLAAQUNC	-0.059	-0.005	0.050
BLAAQUP	BLAAQUPA	-0.060	0.010	0.038
	BLAAQUPB	-0.055	0.008	0.036
	BLAAQUPC	-0.056	0.008	0.040
BLAAQUQ	BLAAQUQA	-0.036	0.014	0.043
	BLAAQUQB	-0.034	0.009	0.040
	BLAAQUQC	-0.035	0.010	0.043
BLAASXA				

BLAASXD	BLAASXD3	0.072	0.069	0.016
	BLAASXD4	0.082	0.069	0.017
	BLAASXD5	0.114	0.079	0.022
	BLAASXD6	0.107	0.070	0.030
BLAASXF	BLAASXF3	-0.080	0.036	0.019
	BLAASXF4	-0.078	0.036	0.024
	BLAASXF5	-0.095	0.034	0.029
	BLAASXF6	-0.093	0.033	0.027
BLAASXJ	BLAASXJ3	-0.071	0.025	0.026
	BLAASXJ4	-0.073	0.020	0.025
	BLAASXJ5	-0.078	0.028	0.031
	BLAASXJ6	-0.068	0.030	0.033
BLAASXL	BLAASXL3	-0.124	0.017	0.027
	BLAASXL4	-0.120	-0.012	0.031
	BLAASXL5	-0.100	0.022	0.025
	BLAASXL6	-0.103	-0.005	0.032
BLAASXQ	BLAASXQ3	-0.057	0.003	0.041
	BLAASXQ4	-0.059	-0.003	0.030
	BLAASXQ5	-0.057	0.012	0.038
	BLAASXQ6	-0.064	0.001	0.040
BLABQUA	BLABQUAA	-0.061	0.005	0.053
	BLABQUAB	-0.053	0.004	0.048
	BLABQUAC	-0.061	-0.004	0.050
BLABQUB	BLABQUBA	-0.055	0.005	0.042
	BLABQUBB	-0.048	0.008	0.037
	BLABQUBC	-0.048	0.001	0.041
BLABQUC	BLABQUCA	-0.042	-0.005	0.034
	BLABQUCB	-0.044	-0.008	0.030
	BLABQUCC	-0.037	-0.008	0.034
BLABQUD	BLABQUDA	-0.047	-0.014	0.034
	BLABQUDB	-0.040	-0.016	0.034
	BLABQUDC	-0.038	-0.023	0.035
BLABQUE	BLABQUEA	-0.007	-0.023	0.039
	BLABQUEB	-0.006	-0.025	0.030
	BLABQUEC	-0.004	-0.028	0.037
BLABQUF	BLABQUFA	-0.035	-0.039	0.032
	BLABQUFB	-0.032	-0.034	0.026
	BLABQUFC	-0.030	-0.049	0.031
BLABQUG	BLABQUGA	-0.049	-0.030	0.037
	BLABQUGB	-0.044	-0.029	0.030
	BLABQUGC	-0.040	-0.034	0.036
BLABQUH	BLABQUHA	-0.022	-0.029	0.028
	BLABQUHB	-0.015	-0.031	0.030
	BLABQUHC	-0.009	-0.039	0.030
BLABQUI	BLABQUIA	299.603	-0.568	0.020
	BLABQUIA	-0.015	-0.041	0.025
	BLABQUIB	0.000	-0.029	0.020
	BLABQUIC	-0.001	-0.044	0.022
BLABQUJ	BLABQUJA	-0.027	-0.027	0.045

	BLABQUJA	-0.055	-0.028	0.020
	BLABQUJA	0.000	0.000	0.000
	BLABQUJB	-0.028	-0.029	0.039
	BLABQUJB	-0.047	-0.040	0.019
	BLABQUJB	-0.043	-0.032	0.009
	BLABQUJC	-0.023	-0.039	0.047
	BLABQUJC	0.000	0.000	0.000
	BLABQUJC	-0.046	-0.043	0.012
BLABQUK	BLABQUKA	-0.020	-0.027	0.035
	BLABQUKB	-0.019	-0.030	0.026
	BLABQUKC	-0.012	-0.029	0.033
BLABQUL	BLABQULA	-0.033	-0.025	0.045
	BLABQULB	-0.029	-0.027	0.043
	BLABQULC	-0.037	-0.034	0.045
BLABQUM	BLABQUMA	-0.055	-0.037	0.022
	BLABQUMB	-0.057	-0.041	0.018
	BLABQUMC	-0.049	-0.040	0.021
BLABQUN	BLABQUNA	-0.056	-0.039	0.015
	BLABQUNB	-0.048	-0.042	0.011
	BLABQUNC	-0.044	-0.047	0.015
BLABQUP	BLABQUPA	-0.071	-0.021	0.021
	BLABQUPB	-0.072	-0.024	0.018
	BLABQUPC	-0.066	-0.021	0.021
BLABQUQ	BLABQUQA	-0.018	-0.047	0.046
	BLABQUQB	-0.018	-0.048	0.044
	BLABQUQC	-0.015	-0.058	0.045
BLABSXB	BLABSXB3	0.105	0.013	0.026
	BLABSXB4	0.107	0.012	0.036
	BLABSXB5	0.144	0.013	0.038
	BLABSXB6	0.147	0.003	0.043
BLABSXF	BLABSXF3	0.121	-0.042	0.022
	BLABSXF4	0.129	-0.047	0.026
	BLABSXF5	0.143	-0.042	0.019
	BLABSXF6	0.153	-0.043	0.023