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Subject: Chicane, linac and Spectrometer Magnets and Power Supplies.

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This note provides information on the DC magnet systems in the NLCTA chicane, linac and spectrometer. Two types of magnets are used in these regions: quadrupoles and dipoles. However, we will refer to the dipoles that will be used for beam steering as correctors. For operational purposes, the magnets divide into ten groups. Two of these groups are quadrupoles, the QE-M's (1.085Q4.3), which are similar in design to the SLC linac QE's, and the QF's (2.052Q5.62), which are similar in design to the SLC NDR QFI's. Three of the groups are dipoles: the Chicane Bends (1.13D6), the Kicker Compensator (2.006D6), and the Spectrometer Bend (2.5D38). The first two of these are similar to the ASSET dipole magnet design, while the last is a refurbished magnet that had been used in the SPEAR injection line. All of the dipoles will bend the beam in the horizontal plane except for the Kicker Compensator, which will be used to offset the mean vertical kick of the pulsed Kicker magnet. Finally, five of the groups are correctors, four of which are implemented as trim windings. Trims are included in the QE-M's (both vertical and horizontal), the Chicane Bends, the Kicker Compensator, and Spectrometer Bend. The only 'stand-alone' corrector is the 3D4, which was originally designed for the FFTB.

Attached are data sheets containing information on the magnets. The data includes:

Magnet Parameters

This table lists the properties and operational parameters of the ten magnet groups. Note, CB = Chicane Bends, KC = Kicker Compensator, and SB = Spectrometer Bend.

Magnet Power Supplies

The power supplies that are used to operate the magnets, including the type control electronics, are listed in this table. The supplies for the injector magnets are also listed.

Magnet Polarities

Each quadrupole and dipole magnet has two terminals that are labeled 1 and 2. This table lists the polarities of the power supply leads that connect to these terminals.

Magnet Data Base Values

To adjust the field strength of magnet, the SLC VAX requires a set of data base entries that include CAMAC control module addresses, DAC calibration constants, and I-vs-B polynomial coefficients. These and other parameters are listed in the tables for each magnet in the ten groups. Note that the I-vs-B polynomial coefficients were derived from fitting field strength data taken by Magnetic Measurements. Also, all data base values have been entered into the SLC VAX and checked against these tables.

MAGNET PARAMETERS

	QE-M Quad	QF Quad	CB Dipole	KC Dipole	SB Dipole	QE-M Corrector	CB Corrector	KC Corrector	3D4 Corrector	SB Corrector
Number of Magnets	28	5	4	1	1	56	4	1	6	1
Gap (in)	1.085	2.052	1.126	2.006	2.500	1.085	1.126	2.006	2.031	2.500
Dipole Width (in)			5.0	5.0	11.9		5.0	5.0	3.0	11.9
Lcore (in)	4.3	5.6	6.0	6.0	38.5	4.3	6.0	6.0	4.0	38.5
I _{max} (A)	250	160	125	50	600	6	12	12	2	12
B _{max} (kG or kG-m)	73.0	71.2	1.025	0.258	10.0	0.034	0.040	0.025	0.070	0.425
L _{eff} (m)	0.126	0.171	0.200	0.200	1.076	0.126	0.200	0.200	0.152	1.076
B _{pole} (kG)	7.98	10.85	5.13	1.29	9.29	0.27	0.20	0.13	0.46	0.39
V _{max} (V)	11.7	53.1	5.5	2.2	16.4	1.9	1.1	1.1	4.8	15.7
Resistance (Ohm)	0.047	0.332	0.044	0.043	0.027	0.312	0.094	0.095	2.387	1.310
P _{max} (W)	2913	8499	688	108	9828	11	14	14	10	189
Stored Energy (J)	69	1123	81	7	7434	0.2	0.1	0.1	0.6	13.1
I _{max} / Area (A/in ²)	11628	7442	2441	977	1143	1066	1348	1348	355	1348
Inductance (mH)	2.2	87.7	10.3	5.8	41.3	10.3	1.8	1.0	289.7	182.1
Risetime (msec)	47	264	234	135	1513	33	19	11	121	139
# Parallel LCW Circuits	2	12	4	4	4					
LCW dP (psi)	230	230	230	230	230					
LCW Flow (gpm)	1.1	6.1	2.1	2.1	3.9					
Flow Velocity (ft/s)	14.2	13.3	13.5	13.5	9.0					
LCW dT (deg C)	10.1	5.3	1.3	0.2	9.6					

MAGNET PARAMETERS

	QE-M Quad	QF Quad	CB Dipole	KC Dipole	SB Dipole	QE-M Corrector	CB Corrector	KC Corrector	3D4 Corrector	SB Corrector
LCW Circuit Length (ft)	56	67	65	65	250					
LCW Hole Diameter (in)	0.125	0.125	0.125	0.125	0.210					
Number of Turns	36	184	96	96	80	156	40	40	1012	168
Conductor Length (ft)	112	798	258	258	1000	231	108	108	1684	1422
Conductor Area (in ²)	0.0215	0.0215	0.0512	0.0512	0.525	0.00563	0.0089	0.0089	0.00563	0.0089
Conductor Material	Cu	Cu	Cu	Cu	Al	Cu	Cu	Cu	Cu	Cu
Rho (ohm-in) @ 20 C	6.65E-07	6.65E-07	6.65E-07	6.65E-07	1.11E-06	6.65E-07	6.65E-07	6.65E-07	6.65E-07	6.65E-07
Rho (ohm-in) @ op	7.32E-07	7.32E-07	7.32E-07	7.32E-07	1.22E-06	6.65E-07	6.65E-07	6.65E-07	6.65E-07	6.65E-07
Computed R (ohm)	0.046	0.326	0.044	0.044	0.028	0.327	0.097	0.097	2.387	1.275
Computed / Measured R	0.98	0.98	1.01	1.03	1.02	1.05	1.03	1.02	1.00	0.97

MAGNET POWER SUPPLIES

Power Supply Type & Rating	# of PS Needed	# of PS Ordered	Current Required	Magnet System	A.C. Requirements	Voltage at the Load	Controller	Camac Modules
30V/33A, EMS	1	2	30A	Bucking Coil (SOLN 0305)	1 phase, 208VAC, 6.9A	20V	LVC	IDIM, IDOM, DAC, SAM
20V/250A, EMS	1	1	250A	SOLN 0327	3 phase, 208VAC, 20.8A	10V	LVC	IDIM, IDOM, DAC, SAM
25V/400A, EMS	1	1	400A	SOLN 0341	3 phase, 208VAC, 35A	16V	LVC	IDIM, IDOM, DAC, SAM
80V/700A, EMHP	1	1	700A	SOLS 0360	3 phase, 440VAC, 119A	30V	SLC Controller	PSC-2
130V/700A, EMHP	3	4	700A	SOLS 0362 to 0408	3 phase, 440VAC, 180A	120V	SLC Controller	PSC-2
100V/600A, EMHP	4	4	550A	SOLS 0410 to 0476	3 phase, 440VAC, 119A	86V	SLC Controller	PSC-2
60V/165A, EMS	5	6	160A	QF	3 phase, 208VAC, 35A	38V	LVC	IDIM, IDOM, DAC, SAM
20V/125A, EMS	21	22	125A	QE-M	3 phase, 208VAC, 13.5A	5V	LVC	IDIM, IDOM, DAC, SAM
20V/250A, EMS	7	8	250A	QE-M	3 phase, 208VAC, 20.8A	10V	LVC	IDIM, IDOM, DAC, SAM
40V/250A, EMS	1	2	125A	Chicane Bends	3 phase, 208VAC, 35A	28V	SLC Controller	PSC-2
30V/600A, EMHP	1	1	600A	Spectrometer Bend	3 phase, 440VAC, 44A	17V	SLC Controller	PSC-2
10V/100A, EMS	1	1	50A	Kicker Compensator	1 phase, 208VAC, 6.9A	3V	LVC	IDIM, IDOM, DAC, SAM
HCORs	6 chan.		12A	Bend Trim Cor's		<24V		DAC, SAM
HCORs	1 chan.		12A	Lens (SOLN 0311)		<24V		DAC, SAM
30V/100A, EMI	2	2			3 phase, 208VAC, 22A			
SCORs	18 chan.		6A	Injector Wrap-Around Cor's		<12V		DAC, SAM
SCORs	56 chan.		6A	QE-M Cor's		<12V		DAC, SAM
SCORs	6 chan.		5A	3D4 Cor's		<12V		DAC, SAM
30V/100A, EMI	10	11			3 phase, 208VAC, 22A			

MAGNET POLARITIES

DEVICE NAME	TERMINAL 1	TERMINAL 2
QUAD 0480	+	-
QUAD 0530	-	+
QUAD 0560	+	-
QUAD 0575	-	+
QUAD 0590	+	-
BNDS 0610	+	-
QUAD 0630	-	+
QUAD 0650	+	-
QUAD 0670	-	+
BNDS 0690	-	+
QUAD 0710	+	-
QUAD 0730	-	+
QUAD 0750	+	-
QUAD 0850	+	-
QUAD 0870	-	+
QUAD 0890	+	-
BNDS 0910	-	+
QUAD 0930	-	+
QUAD 0950	+	-
QUAD 0970	-	+
BNDS 0990	+	-
QUAD 1030	+	-
QUAD 1070	-	+
QUAD 1110	+	-
QUAD 1130	-	+
QUAD 1250	+	-
QUAD 1350	-	+
QUAD 1450	+	-
QUAD 1550	-	+
QUAD 1650	+	-
QUAD 1760	-	+
QUAD 1810	+	-
BEND 1850	+	-
QUAD 1870	-	+
QUAD 1920	+	-
QUAD 2010	-	+
QUAD 2030	+	-
QUAD 2050	-	+
BNDS 2110	+	-

QE-M QUADS

CAMAC CRATE TA01-07														
SERIAL NUMBER	DEVICE NAME	FORMAL DEVICE NAME	POWER SUPPLY TYPE	CONTROLLER	SLOT	ADDRESS	SLOT	ADDRESS	IDIM & IDOM SLOT AND CHANNEL ASSIGNMENTS					
									IDIM J1 SLOT 4	IDIM J2 SLOT 4	IDIM J2 SLOT 5	IDIM SLOT 4	IDIM SLOT 5	
00	QUAD 0480	QUAD:TA01,0480	20V/125A ESS	LVC #1	2	DAC J1	3	SAM J3	CH16	PS ON	CH24	PS ON	CH24	IDIM SLOT 4
01	QUAD 0530	QUAD:TA01,0530	20V/125A ESS	CH1	2	CH1	3	CH16	CH17	PS ON	CH24	PS ON	CH24	IDIM SLOT 5
11	QUAD 0560	QUAD:TA01,0560	20V/125A ESS	CH2	2	CH2	3	CH17	CH18	PS ON	CH25	PS ON	CH25	SEE NOTE #2 IDIM/IDOM CONTROLLER ASSIGNMENTS
12	QUAD 0575	QUAD:TA01,0575	20V/125A ESS	CH3	2	CH3	3	CH18	CH19	PS ON	CH26	PS ON	CH26	
13	QUAD 0580	QUAD:TA01,0580	20V/125A ESS	CH4	2	CH4	3	CH19	CH20	PS ON	CH27	PS ON	CH27	
14	QUAD 0630	QUAD:TA01,0630	20V/125A ESS	CH5	2	CH5	3	CH20	CH21	PS ON	CH28	PS ON	CH28	
15	QUAD 0650	QUAD:TA01,0650	20V/125A ESS	CH6	2	CH6	3	CH21	CH22	PS ON	CH29	PS ON	CH29	
16	QUAD 0670	QUAD:TA01,0670	20V/125A ESS	CH7	2	CH7	3	CH22	CH23	PS ON	CH30	PS ON	CH30	
17	QUAD 0710	QUAD:TA01,0710	20V/125A ESS	LVC #2	2	DAC J1	3	SAM J3	CH24	PS ON	CH8	PS ON	CH8	IDIM J1 SLOT 4
18	QUAD 0730	QUAD:TA01,0730	20V/125A ESS	CH1	2	CH1	3	CH24	CH25	PS ON	CH9	PS ON	CH9	IDIM J1 SLOT 5
20	QUAD 0750	QUAD:TA01,0750	20V/125A ESS	CH2	2	CH2	3	CH25	CH26	PS ON	CH10	PS ON	CH10	SEE NOTE #1 IDIM/IDOM CONTROLLER ASSIGNMENTS
21	QUAD 0850	QUAD:TA01,0850	20V/125A ESS	CH3	2	CH3	3	CH26	CH27	PS ON	CH11	PS ON	CH11	
22	QUAD 0870	QUAD:TA01,0870	20V/125A ESS	CH4	2	CH4	3	CH27	CH28	PS ON	CH12	PS ON	CH12	
23	QUAD 0880	QUAD:TA01,0880	20V/125A ESS	CH5	2	CH5	3	CH28	CH29	PS ON	CH13	PS ON	CH13	
24	QUAD 0890	QUAD:TA01,0890	20V/125A ESS	CH6	2	CH6	3	CH29	CH30	PS ON	CH14	PS ON	CH14	
25	QUAD 0950	QUAD:TA01,0950	20V/125A ESS	CH7	2	CH7	3	CH30	CH31	PS ON	CH15	PS ON	CH15	
26	QUAD 0970	QUAD:TA01,0970	20V/125A ESS	LVC #3	6	DAC J1	3	SAM J2	CH0	PS ON	CH24	PS ON	CH24	IDIM J2 SLOT 9
27	QUAD 1030	QUAD:TA01,1030	20V/125A ESS	CH1	6	CH1	3	CH0	CH1	PS ON	CH25	PS ON	CH25	IDIM J2 SLOT 8
28	QUAD 1070	QUAD:TA01,1070	20V/125A ESS	CH2	6	CH2	3	CH1	CH2	PS ON	CH26	PS ON	CH26	SEE NOTE #2 IDIM/IDOM CONTROLLER ASSIGNMENTS
29	QUAD 1110	QUAD:TA01,1110	20V/125A ESS	CH3	6	CH3	3	CH2	CH3	PS ON	CH27	PS ON	CH27	
30	QUAD 1130	QUAD:TA01,1130	20V/125A ESS	CH4	6	CH4	3	CH3	CH4	PS ON	CH28	PS ON	CH28	
31	QUAD 1250	QUAD:TA01,1250	20V/250A ESS	LVC #4	6	DAC J1	3	SAM J2	CH8	PS ON	CH8	PS ON	CH8	IDIM J1 SLOT 9
32	QUAD 1350	QUAD:TA01,1350	20V/250A ESS	CH1	6	CH1	3	CH8	CH9	PS ON	CH9	PS ON	CH9	IDIM J1 SLOT 8
33	QUAD 1450	QUAD:TA01,1450	20V/250A ESS	CH2	6	CH2	3	CH9	CH10	PS ON	CH10	PS ON	CH10	SEE NOTE #1 IDIM/IDOM CONTROLLER ASSIGNMENTS
34	QUAD 1550	QUAD:TA01,1550	20V/250A ESS	CH3	6	CH3	3	CH10	CH11	PS ON	CH11	PS ON	CH11	
35	QUAD 1650	QUAD:TA01,1650	20V/250A ESS	CH4	6	CH4	3	CH11	CH12	PS ON	CH12	PS ON	CH12	
36	QUAD 1760	QUAD:TA01,1760	20V/250A ESS	CH5	6	CH5	3	CH12	CH13	PS ON	CH13	PS ON	CH13	
37	QUAD 1810	QUAD:TA01,1810	20V/250A ESS	CH6	6	CH6	3	CH13	CH14	PS ON	CH14	PS ON	CH14	
NOTE #1								NOTE #2						
BIT 01	DC ON		BIT 01	PS INTLK				BIT 01	CH16					IDIM
BIT 02	REM RESET	CH10	BIT 02	MAG INTLK				BIT 02	CH17					CH16
BIT 03	ENABLE	CH11	BIT 03	MAG INTLK				BIT 03	CH17					CH17
BIT 04	POL SW.	CH2	BIT 04	SYS RBY				BIT 04	CH18					CH18
BIT 05		CH3	BIT 05	DC ON				BIT 05	CH19					CH19
BIT 06		CH4	BIT 06	POL NORM				BIT 06	CH20					CH20
BIT 07	DAC 0	CH6	BIT 07	REM/LOC				BIT 07	CH22					CH21
		CH7	BIT 08	GND FLT				BIT 08	CH22					CH22
				PPS										CH23

SPECTROMETER BEND

DEVICE NAME	FORMAL DEVICE NAME	POWER SUPPLY TYPE	CONTROLLER	CAMAC CRATE TAO1-07		
BNDS 2110	LGPS:TA01,2110	EMHP 30V/600A	236-213	PSCII	SLOT 22	
TOLS	2.5E-03	2.5E-03	5.0E-03	5.0E-03		NSCY 3 4000
IMMS	20	600	20			ATOL 1 3000
IMMO	1.E-02	600				SETL 0 109
IVA	0	100				DVI 0 109
						RAMP 4
MAGS	BNDS 2110					
	1 (AMPS) = C0 + C1*B^1 + C2*B^2 + C3*B^3 for B in KG-m					
RAMP	C0	C1	C2	C3	BMAX	
UP	-2.714e+0	6.046e+1	-2.774e-1	2.43E-02	10.03	
DOWN	-2.915e+0	5.987e+1	-3.283e-1	3.52E-02		
	ASSOCIATED MAGNETS					
	Z (M)	LEFF	KMOD	IVBU & IVBD	BMAX	
BNDS 2110	68.09	1.076	0.83	SAME AS LGFS 2110	10.03	

QE-M CORRECTORS

SERIAL NUMBER	DEVICE NAME	FORMAL DEVICE NAME	POWER SUPPLY TYPE	CONTROLLER	CAMAC CRATE TAO1-06				IVBU			IVBD			MLCTA NOTE 19.4	
					DAC	SAM	IDIM	RAMP UP C0	RAMP UP C1	RAMP DOWN C0	RAMP DOWN C1	BMAX	GLOBAL Z COORDINATE (METERS)	GLOBAL Z COORDINATE (INCHES)		
00	XCOR 0480	XCOR:TA01,0480	PARTIAL (2 ea) 30V100A ESS	SCOR #1 (PARTIAL) CH14 CH15	DAC: SLOT #2 (PARTIAL) CH14	SAM SLOT #4 (PARTIAL) CH14	IDIM SLOT 11 (PARTIAL (CH0,CH1) (TEMP INTX))	RAMP UP C0	RAMP UP C1	RAMP DOWN C0	RAMP DOWN C1	BMAX	GLOBAL Z COORDINATE (METERS)	GLOBAL Z COORDINATE (INCHES)		
00	YCOR 0480	YCOR:TA01,0480			CH15	CH15			0	-179.4	0	-179.4	0.033	31.889	1255.457	
01	XCOR 0630	XCOR:TA01,0630	(2 ea) 30V100A ESS	SCOR #2 CH0 CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8 CH9 CH10 CH11 CH12 CH13 CH14 CH15	DAC: SLOT #3 CH0	SAM SLOT #4 CH16		0	178.7	0	178.7	0.034	32.901	1295.315		
01	YCOR 0630	YCOR:TA01,0630			CH17	CH17			0	-178.5	0	-178.5	0.034	32.901	1295.315	
11	XCOR 0660	XCOR:TA01,0660			CH18	CH18			0	178.0	0	178.0	0.034	33.494	1318.673	
11	YCOR 0660	YCOR:TA01,0660			CH19	CH19			0	-178.6	0	-178.6	0.034	33.494	1318.673	
12	XCOR 0675	XCOR:TA01,0675			CH20	CH20			0	178.0	0	178.0	0.034	33.886	1334.093	
12	YCOR 0675	YCOR:TA01,0675			CH21	CH21			0	-178.5	0	-178.5	0.034	33.886	1334.093	
13	XCOR 0690	XCOR:TA01,0690			CH22	CH22			0	179.2	0	179.2	0.033	34.387	1353.033	
13	YCOR 0690	YCOR:TA01,0690			CH23	CH23			0	-178.8	0	-178.8	0.034	34.387	1353.033	
14	XCOR 0630	XCOR:TA01,0630			CH24	CH24	(CH2,CH3) (TEMP INTX)		0	179.0	0	179.0	0.034	35.288	1389.293	
14	YCOR 0630	YCOR:TA01,0630			CH25	CH25			0	-178.3	0	-178.3	0.034	35.288	1389.293	
15	XCOR 0650	XCOR:TA01,0650			CH26	CH26			0	178.8	0	178.8	0.034	35.564	1400.140	
15	YCOR 0650	YCOR:TA01,0650			CH27	CH27			0	-178.3	0	-178.3	0.034	35.564	1400.140	
16	XCOR 0670	XCOR:TA01,0670			CH28	CH28			0	178.8	0	178.8	0.034	35.839	1410.987	
16	YCOR 0670	YCOR:TA01,0670			CH29	CH29			0	-178.5	0	-178.5	0.034	35.839	1410.987	
17	XCOR 0710	XCOR:TA01,0710			CH30	CH30			0	178.0	0	178.0	0.034	36.650	1442.921	
17	YCOR 0710	YCOR:TA01,0710			CH31	CH31			0	-179.5	0	-179.5	0.033	36.650	1442.921	
18	XCOR 0730	XCOR:TA01,0730			(2 ea) 30V100A ESS	SCOR #3 CH0 CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8 CH9	DAC: SLOT #5 CH0	SAM SLOT #7 CH0		0	178.8	0	178.8	0.034	37.041	1458.281
18	YCOR 0730	YCOR:TA01,0730	CH1	CH1					0	-178.3	0	-178.3	0.034	37.041	1458.281	
20	XCOR 0750	XCOR:TA01,0750	CH2	CH2					0	178.9	0	178.9	0.034	37.430	1473.621	
20	YCOR 0750	YCOR:TA01,0750	CH3	CH3					0	-178.7	0	-178.7	0.034	37.430	1473.621	
21	XCOR 0850	XCOR:TA01,0850	CH4	CH4					0	178.7	0	178.7	0.034	38.623	1520.579	
21	YCOR 0850	YCOR:TA01,0850	CH5	CH5					0	-178.0	0	-178.0	0.034	38.623	1520.579	
22	XCOR 0870	XCOR:TA01,0870	CH6	CH6					0	178.6	0	178.6	0.034	39.012	1535.909	
22	YCOR 0870	YCOR:TA01,0870	CH7	CH7					0	-178.5	0	-178.5	0.034	39.012	1535.909	
23	XCOR 0890	XCOR:TA01,0890	CH8	CH8			(CH4,CH5) (TEMP INTX)		0	178.4	0	178.4	0.034	39.401	1551.239	
23	YCOR 0890	YCOR:TA01,0890	CH9	CH9					0	-178.4	0	-178.4	0.034	39.401	1551.239	
24	XCOR 0930	XCOR:TA01,0930	CH10	CH10			0	178.8	0	178.8	0.034	40.214	1583.208			
24	YCOR 0930	YCOR:TA01,0930	CH11	CH11			0	-177.2	0	-177.2	0.034	40.214	1583.208			
25	XCOR 0950	XCOR:TA01,0950	CH12	CH12			0	178.7	0	178.7	0.034	40.489	1594.056			
25	YCOR 0950	YCOR:TA01,0950	CH13	CH13			0	-178.2	0	-178.2	0.034	40.489	1594.056			
26	XCOR 0970	XCOR:TA01,0970	CH14	CH14			0	178.0	0	178.0	0.034	40.765	1604.903			
26	YCOR 0970	YCOR:TA01,0970	CH15	CH15			0	-178.2	0	-178.2	0.034	40.765	1604.903			
27	XCOR 1030	XCOR:TA01,1030	(2 ea) 30V100A ESS	SCOR #4 CH0 CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8 CH9	DAC: SLOT #6 CH0	SAM SLOT #7 CH16		0	178.9	0	178.9	0.034	41.716	1642.377		
27	YCOR 1030	YCOR:TA01,1030			CH17	CH17			0	-177.9	0	-177.9	0.034	41.716	1642.377	
28	XCOR 1070	XCOR:TA01,1070			CH18	CH18			0	177.4	0	177.4	0.034	42.183	1660.751	
28	YCOR 1070	YCOR:TA01,1070			CH19	CH19			0	-177.0	0	-177.0	0.034	42.183	1660.751	
29	XCOR 1110	XCOR:TA01,1110			CH20	CH20			0	177.5	0	177.5	0.034	42.723	1681.991	
29	YCOR 1110	YCOR:TA01,1110			CH21	CH21			0	-177.0	0	-177.0	0.034	42.723	1681.991	
30	XCOR 1130	XCOR:TA01,1130			CH22	CH22			0	177.3	0	177.3	0.034	43.178	1699.931	
30	YCOR 1130	YCOR:TA01,1130			CH23	CH23			0	-177.0	0	-177.0	0.034	43.178	1699.931	
31	XCOR 1250	XCOR:TA01,1250			CH24	CH24	(CH6,CH7) (TEMP INTX)		0	177.2	0	177.2	0.034	46.362	1825.271	
31	YCOR 1250	YCOR:TA01,1250			CH25	CH25			0	-176.7	0	-176.7	0.034	46.362	1825.271	
32	XCOR 1350	XCOR:TA01,1350	CH26	CH26			0	177.3	0	177.3	0.034	48.881	1924.453			
32	YCOR 1350	YCOR:TA01,1350	CH27	CH27			0	-177.0	0	-177.0	0.034	48.881	1924.453			
33	XCOR 1450	XCOR:TA01,1450	CH28	CH28			0	177.0	0	177.0	0.034	51.400	2023.635			
33	YCOR 1450	YCOR:TA01,1450	CH29	CH29			0	-176.7	0	-176.7	0.034	51.400	2023.635			
34	XCOR 1550	XCOR:TA01,1550	CH30	CH30			0	177.0	0	177.0	0.034	53.920	2122.817			
34	YCOR 1550	YCOR:TA01,1550	CH31	CH31			0	-176.6	0	-176.6	0.034	53.920	2122.817			

QE-M CORRECTORS

SERIAL NUMBER	DEVICE NAME	FORMAL DEVICE NAME	POWER SUPPLY TYPE	CONTROLLER	CAMAC CRATE TAO1-06			IVBU		IVBD		NCTA NOTE 19.4	
					DAC	SAM	IDIM	RAMP UP C0	RAMP UP C1	RAMP DOWN C0	RAMP DOWN C1	BMAX	GLOBAL Z COORDINATE (METERS)
35	XCOR 1650	XCOR:TA01,1650	(2 ea) 30V/100A ESS	SCOR #5	DAC SLOT # 8	SAM J2 SLOT 10	IDIM SLOT 11	0	177.3	0	177.3	0.034	2221.999
35	YCOR 1650	YCOR:TA01,1650		CH0	CH0	CH0	CH0	0	-176.6	0	-176.6	0.034	2221.999
36	XCOR 1760	XCOR:TA01,1760		CH1	CH1	CH1	CH1	0	177.0	0	177.0	0.034	2329.066
36	YCOR 1760	YCOR:TA01,1760		CH2	CH2	CH2	CH2	0	-176.7	0	-176.7	0.034	2329.066
37	XCOR 1810	XCOR:TA01,1810		CH3	CH3	CH3	CH3	0	178.8	0	178.8	0.034	2376.356
37	YCOR 1810	YCOR:TA01,1810	CH4	CH4	CH4	CH4	0	-178.5	0	-178.5	0.034	2376.356	
			COMMON DB VALUES	CH5	CH5	CH5							
	DVI	32768											
	LEFF	0.126	5481										
	IYA	0	1										
	TOLS	3.E-05	0	6.0E-05	0								
	IMMS	-6	6	0									
	IMMO	-6	6	0									
	NSCY	0	0.1										
	ATOL	0.1											
	SETL	1000											

3D4 CORRECTORS

SERIAL NUMBER	DEVICE NAME	FORMAL DEVICE NAME	POWER SUPPLY TYPE	CONTROLLER	CAMAC CRATE TAO1-06				IVBU		IVBD		MLCTA NOTE 18.4	
					DAC	SAM	IDIM	RAMP UP C0	RAMP UP C1	RAMP DOWN C0	RAMP DOWN C1	BMAX	GLOBAL Z COORDINATE (METERS)	GLOBAL Z COORDINATE (INCHES)
			(PARTIAL)	SCOR #5 (PARTIAL)	DAC SLOT # 8 (PARTIAL)	SAM J2 SLOT 10 (PARTIAL)	IDIM SLOT 11 (PARTIAL)	RAMP UP C0 I (AMPS) = C0 + C1 * B (KG-m)	RAMP UP C1	RAMP DOWN C0	RAMP DOWN C1	BMAX	GLOBAL Z COORDINATE (METERS)	GLOBAL Z COORDINATE (INCHES)
15	XCOR 1885	XCOR:TA01,1885		CH6 (PARTIAL)	CH6 (PARTIAL)	CH6 (PARTIAL)		0	28.58	0	28.58	0.070	82.211	2449.269
14	YCOR 1895	YCOR:TA01,1895		CH7 (PARTIAL)	CH7 (PARTIAL)	CH7 (PARTIAL)		0	28.59	0	28.59	0.070	82.496	2460.461
13	XCOR 1940	XCOR:TA01,1940	(2ea.) 30V/100A ESS	CH8 (PARTIAL)	CH8 (PARTIAL)	CH8 (PARTIAL)	CH0,CH1 (TEMP INTK)	0	28.53	0	28.53	0.070	83.355	2494.311
12	XCOR 1990	XCOR:TA01,1990		CH9 (PARTIAL)	CH9 (PARTIAL)	CH9 (PARTIAL)		0	28.54	0	28.54	0.070	84.909	2555.481
11	XCOR 2020	XCOR:TA01,2020		CH10 (PARTIAL)	CH10 (PARTIAL)	CH10 (PARTIAL)		0	28.63	0	28.63	0.070	85.799	2590.509
10	YCOR 2040	YCOR:TA01,2040		CH11 (PARTIAL)	CH11 (PARTIAL)	CH11 (PARTIAL)		0	28.56	0	28.56	0.070	86.671	2624.856
COMMON DB VALUES														
	LEFF	0.152												
	IVA	0	1											
	TOLS	3.0E-05	0	6.0E-05	0									
	IMMS	-2	2	0										
	NSCY	0	0											
	DVI	32768	5461											
	IMMO	-2	2											
	ATOL	0.1	0.1											
	SETL	3000												