MEBT Lattice Comparison Table

Compiled by Morteza, 30th May 2012

Element	Mike's Lattice	Ciprian's Lattice	Difference
quadrupole	Q1 quadrupole("wcs", "z", 0.180, 0.070, 15.6)	Q1 Quadrupole ("wcs","z",0.180, 0.07, 16.615)	Strength of quadrupoles Relative diff=0.065
quadrupole	Q2 quadrupole("wCs", "z", 0.310, 0.070, -19.0)	Q2 quadrupole("wcs", "z",0.310, 0.07, -21.1054)	Strength of quadrupoles Relative diff=0.11
RF cavity	trwcell("wcs", "z", 0.470, -4.40e6, 3.960, 2.03575e9, 0.0215); V=94.6 kV	map1D_TM("wcs","z", 0.47-0.08,"100kV_cavity.gdf", "Z","Ez",SCALE1,PHASE1, CAVITY_ANGULAR_FREQUENCY) SCALE1 = 0.81530; PHASE1 = 5.645;	0.08 Shift in Position
quadrupole	Q3 quadrupole("wcs", "z", 0.630, 0.070, 20.5)	Q3 Quadrupole("wcs", "z",0.630, 0.07, 20.7556)	Strength of quadrupoles Relative diff=0.012
quadrupole	Q4 quadrupole("wcs", "z", 0.760, 0.070, -17.9)	Q4 quadrupole("wcs", "z",0.760, 0.07, -17.0637)	Strength of quadrupoles Relative diff=-0.047
Scatterplate(scraper) erect drift	Chopper1 (Fast chopper)		
RF cavity	trwcell("wcs", "z", 1.475, -3.8e6, 0.044, 2.03575e9, 0.0215) V=81.7 kV	map1D_TM("wcs","z",1.475- 0.08,"100kV_cavity.gdf", "Z","Ez",SCALE2,PHASE2, CAVITY_ANGULAR_FREQUENCY) SCALE2 = 0.78506; PHASE2 = 2.00;	0.08 Shift in position
quadrupole	Q5 quadrupole("wcs", "z", 1.650, 0.07, 6.56)	Q5 quadrupole("wcs", "z",1.650, 0.07, 7.24668)	Strength of quadrupoles Relative diff=0.10
scattercone drift	Dump1		

quadrupole	Q6 quadrupole("wcs", "z", 2.490, 0.07, -7.2)	Q6 quadrupole("wcs", "z",2.490, 0.07, -7.82506)	Strength of quadrupoles Relative diff=0.087
Scatterplate(scraper) erect drift	Chopper2(slow chopper)		
RF cavity	trwcell("wcs", "z", 3.205, -3.2e6, 3.51, 2.03575e9, 0.0215) V=68.8 kV	map1D_TM("wcs","z",3.205-0.08,"100kV_cavity.gdf", "Z","Ez",SCALE3,PHASE3, CAVITY_ANGULAR_FREQUENCY) SCALE3 = 0.47850, PHASE3 = 5.93;	0.08 shift in position
quadrupole	Q7 quadrupole("wcs", "z", 3.38, 0.07, 6.4)	Q7 quadrupole("wcs", "z",3.380, 0.07, 7.69487);	Strength of quadrupoles Relative diff=0.20
scattercone drift	Dump2		
quadrupole	Q8 quadrupole("wcs", "z", 3.990, 0.07, -16)	Q8 quadrupole("wcs", "z",3.990, 0.07, -16.32)	Strength of quadrupoles Relative diff=0.02
quadrupole	Q9 quadrupole("wcs", "z", 4.120, 0.07, 16.8)	Q9 quadrupole("wcs", "z",4.120, 0.07, 17.14)	Strength of quadrupoles Relative diff=0.020
RF cavity	trwcell("wcs", "z", 4.28, -2.50e6, 6.20, 2.03575e9, 0.0215); V=92.02 kV	map1D_TM("wcs","z", 4.280-0.08,"100kV_cavity.gdf", "Z","Ez",SCALE4,PHASE4, CAVITY_ANGULAR_FREQUENCY) SCALE4 = 0.43031, PHASE4 = 2.633;	0.08 Shift in position
quadrupole	Q10 quadrupole("wcs", "z", 4.440, 0.07, -10.4)	Q10 quadrupole("wcs", "z",4.440, 0.07, -10.6)	Strength of quadrupoles Relative diff=0.039
quadrupole	Q11 quadrupole("wcs", "z", 4.57, 0.07, 8.8)	Q11 quadrupole("wcs", "z",4.570, 0.07, 8.98);	Strength of quadrupoles Relative diff=0.0020