

OSC Updates

- Correct 1 GeV lattice chromaticity to match 6 GeV case
- ADTS – no worse than CHESS-U
- Bypass optimization of cooling rate

Chromaticity Correction

	CHESS-U	Old 1 GeV	Chromaticity-Corrected 1 GeV
X Chromaticity	1.4502	1.4170	1.4525
Y Chromaticity	0.3933	0.2626	0.3915

Amplitude-Dependent Tune Shifts

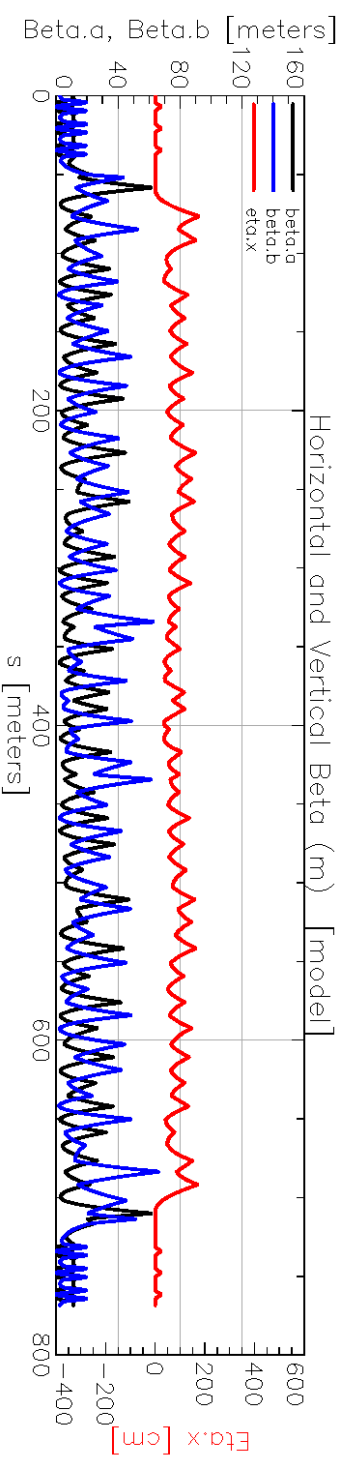
Quadratic Fit Results	CHESS-U	New 1-GeV	Chromaticity -Corrected 1-GeV	Old CHESS	Old 1 GeV
ADTS_x	11.1457	14.1288	14.513	-2.79227	-161.411
ADTS_y	119.573	161.543	159.011	7.64246	1650.79

Maximize Cooling Rate

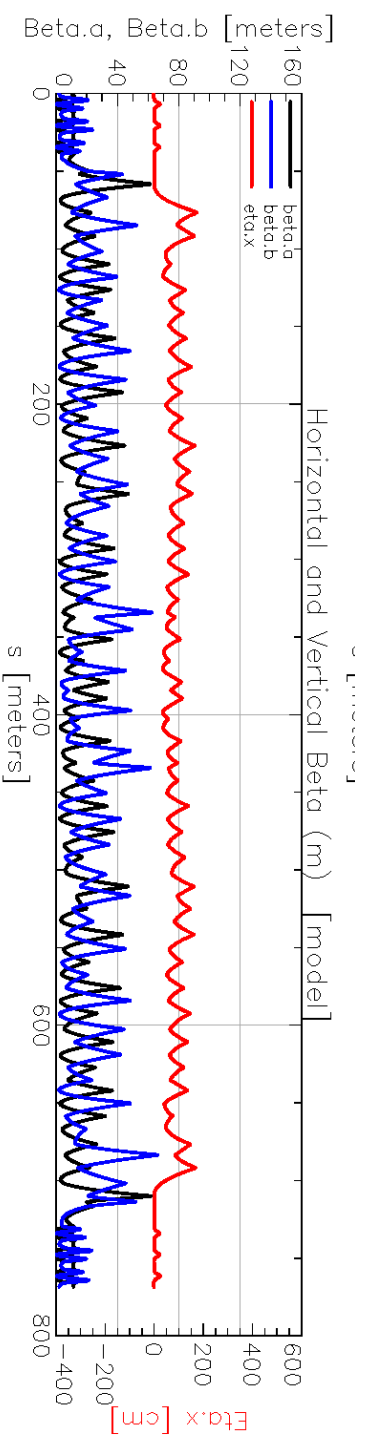
- Hard to adjust without harming acceptances
- Old optimization gives -1.18e-6 cooling rate, 6.82 emittance ratio, 0.99% momentum acceptance
(2.77 nm emittance, 18.8 nm emittance acceptance)
- Can get -1.26e-6 cooling rate at cost of 5.81 emittance ratio, 0.84% momentum acceptance
(5.87 nm emittance, 34.1 nm acceptance)

Backup Slides

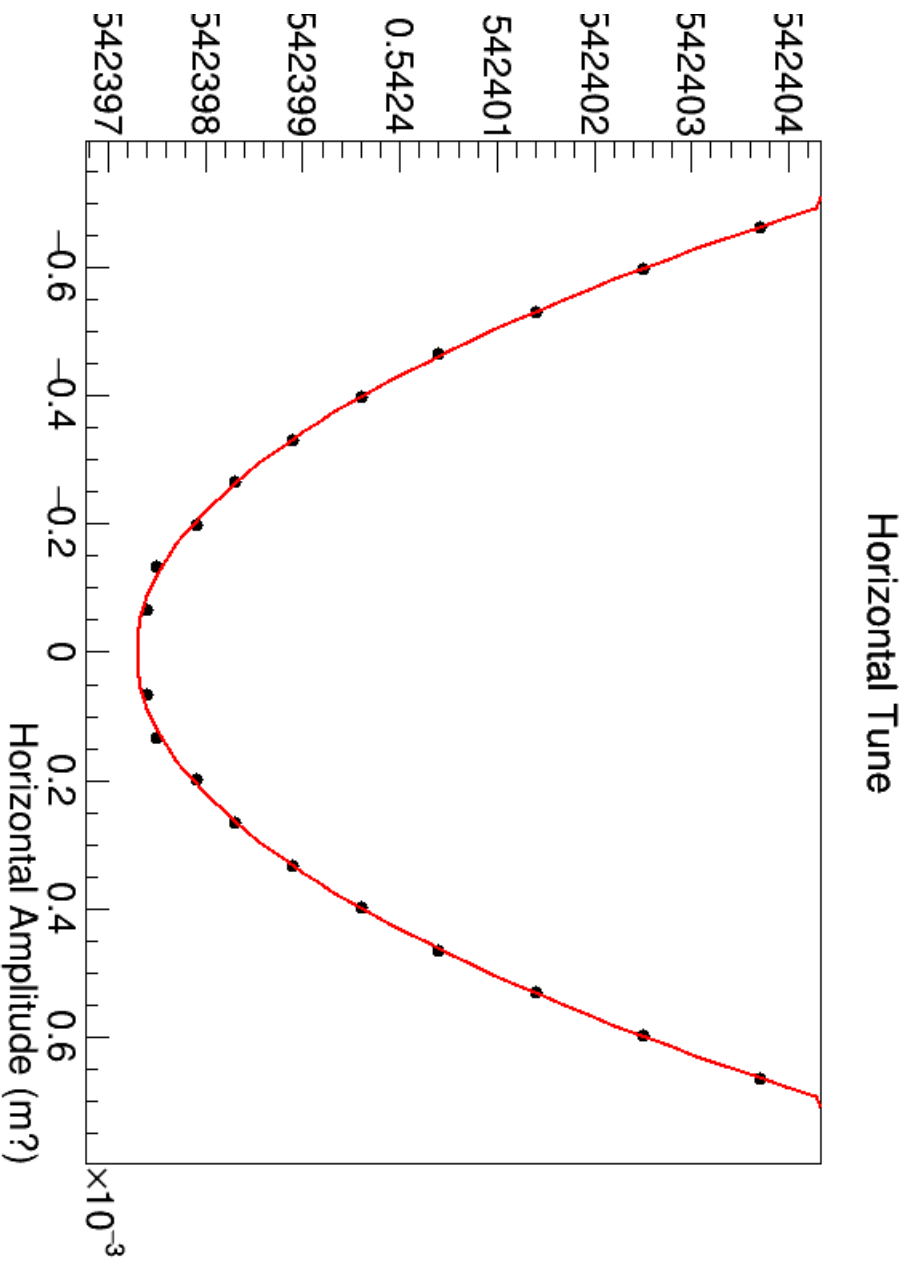
CHESS-U Optics



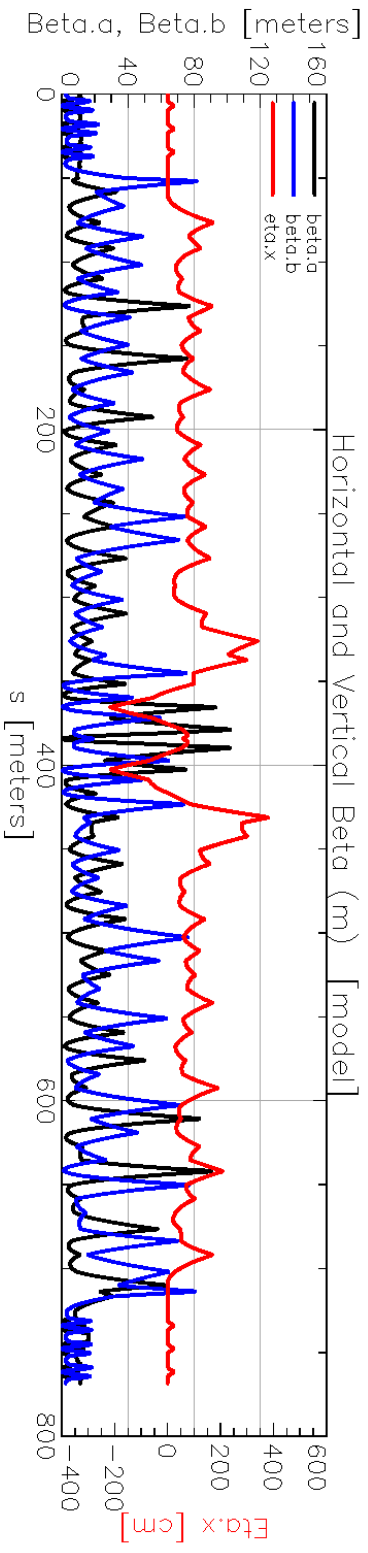
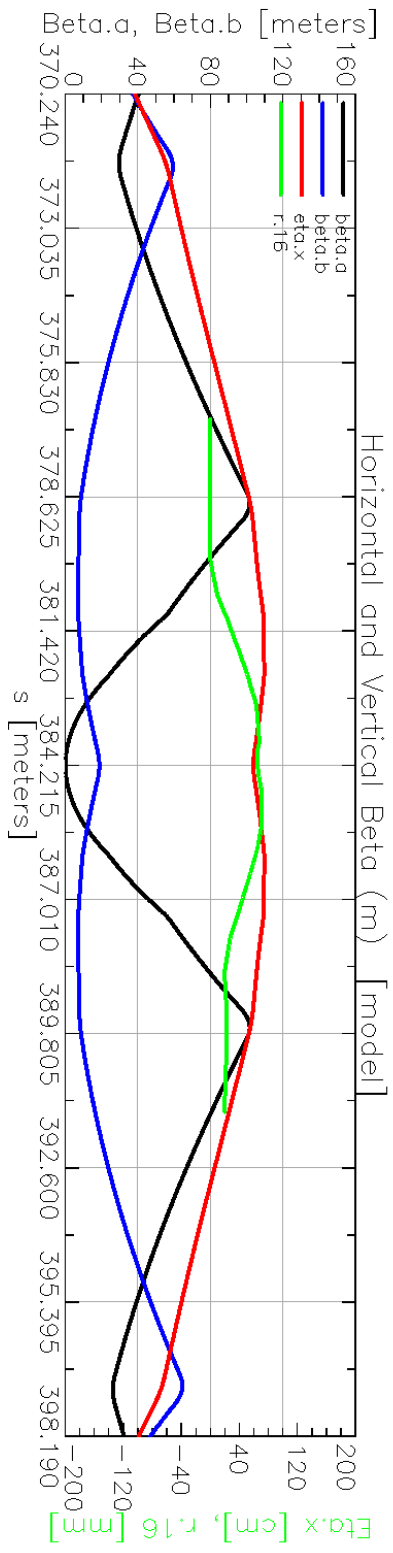
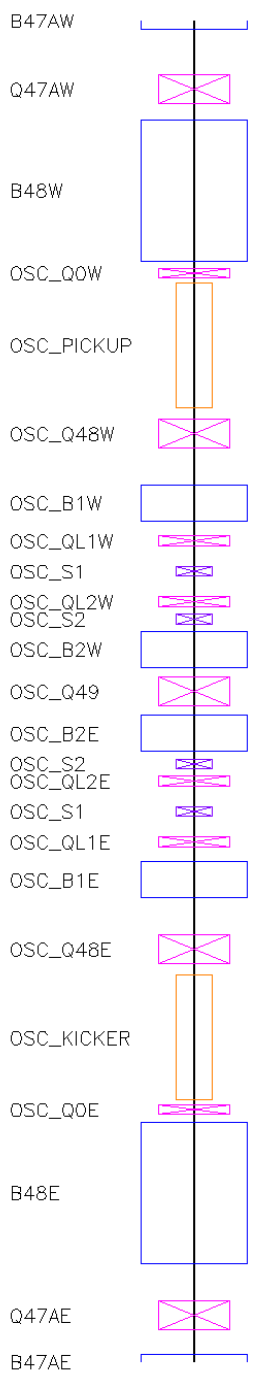
1 GeV Optics (Chromaticity-Corrected)



1 GeV Chromaticity-Corrected ADTS_X



Bypass Optimized w/o Cooling



Bypass Optimized for Cooling

