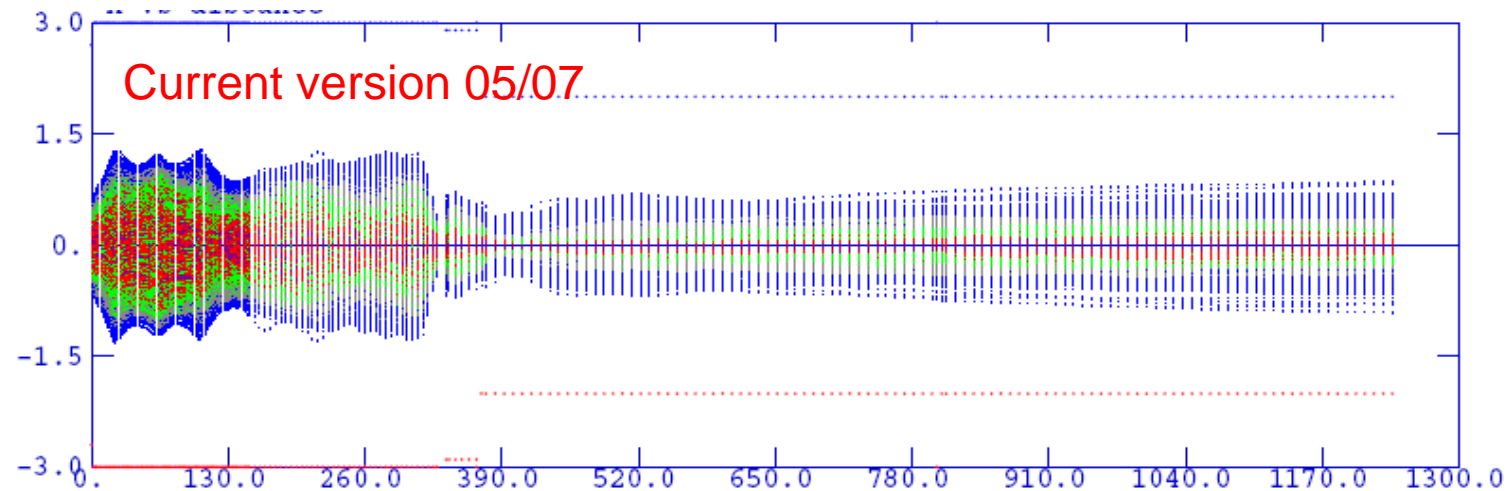
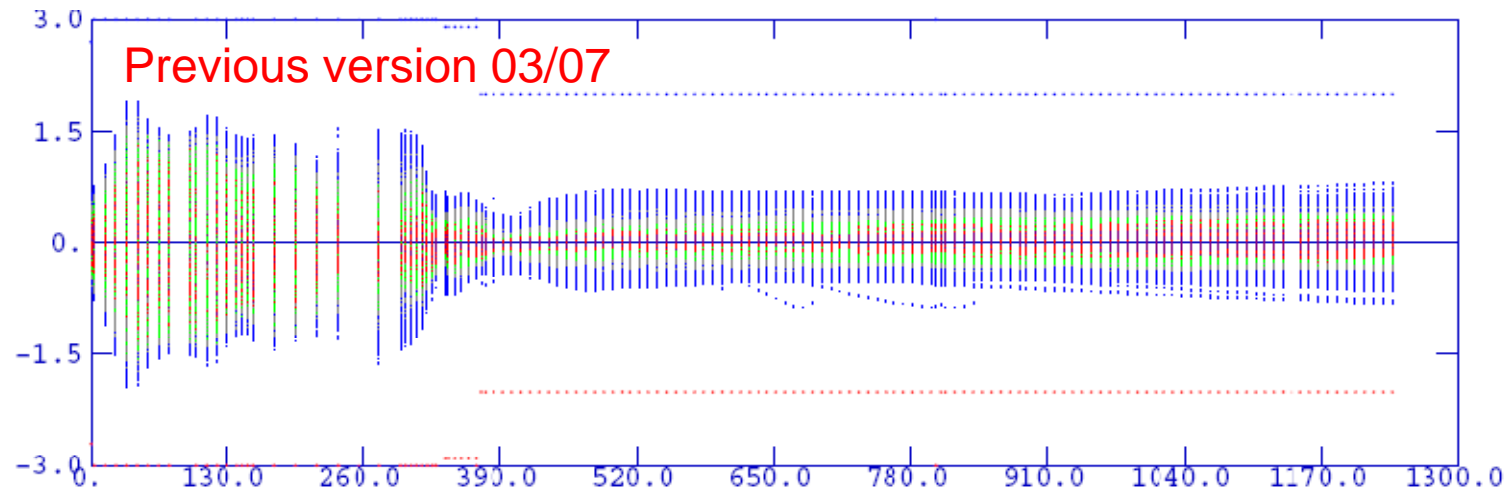


# Reducing beam size in the bunching system

- Optimized the lens to reduce the edge beam size from  $\pm 2\text{cm}$  to  $\pm 1.5\text{cm}$
- Kept 6-D phase spaces constant (emittance, energy spread, bunch length)
- Expect further optimization to be integrated with engineering design

# Beam size comparisons



# Lenses and solenoid field

