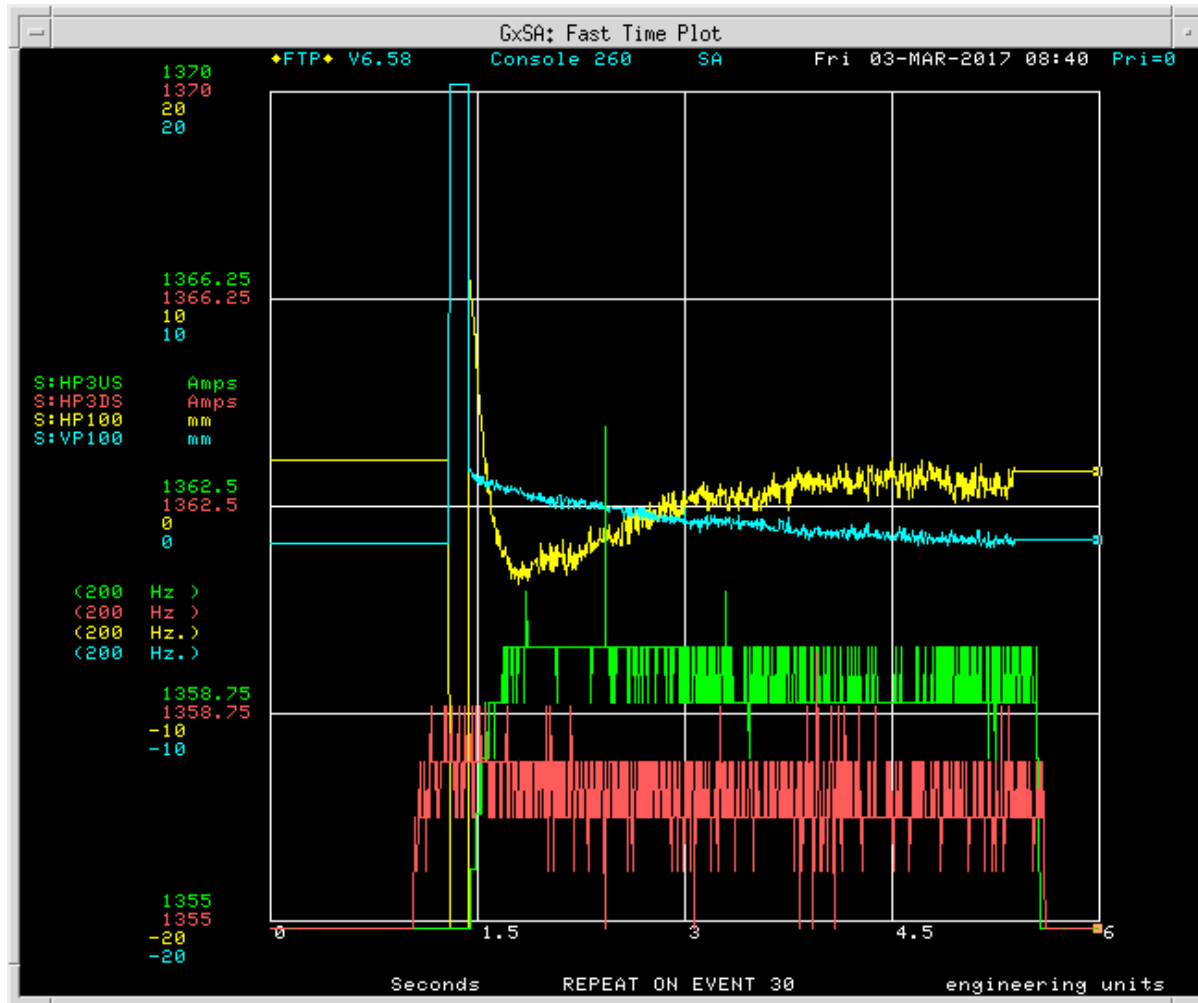




# HP3US slow ramp with \$32 pre-pulse

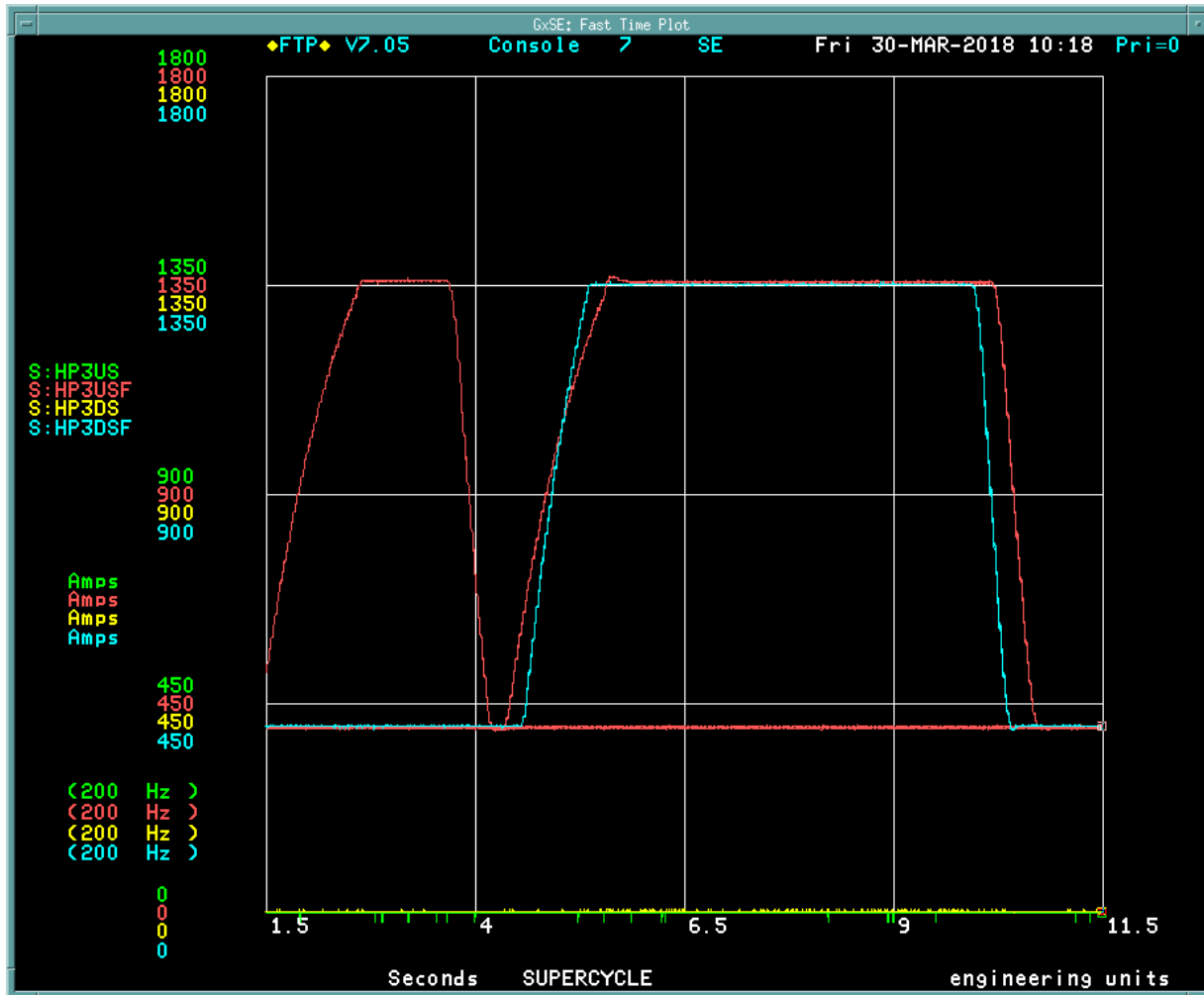
Adam Watts  
Friday AD 0900 Meeting  
April 2016

# HP3US ramping too slow



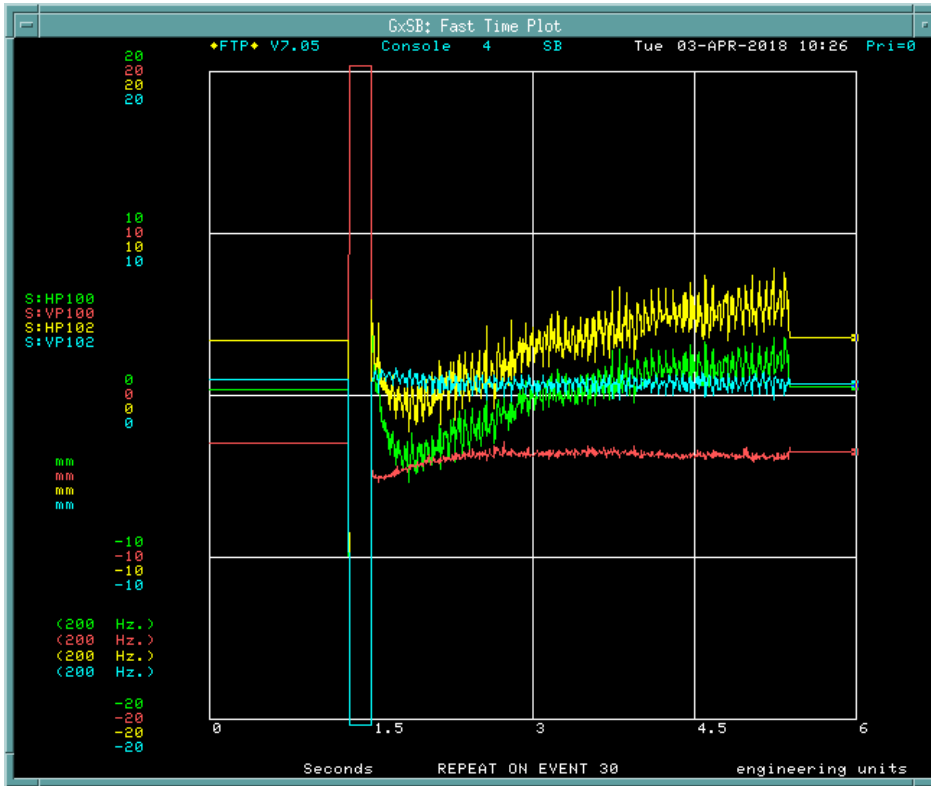
Limited voltage to provide  $Ldi/dt$  slewing quickly enough to reach flat-top before start of spill, leads to beam position swinging (“beam roll”).

# \$32 pre-pulse ramp to give HP3US more time

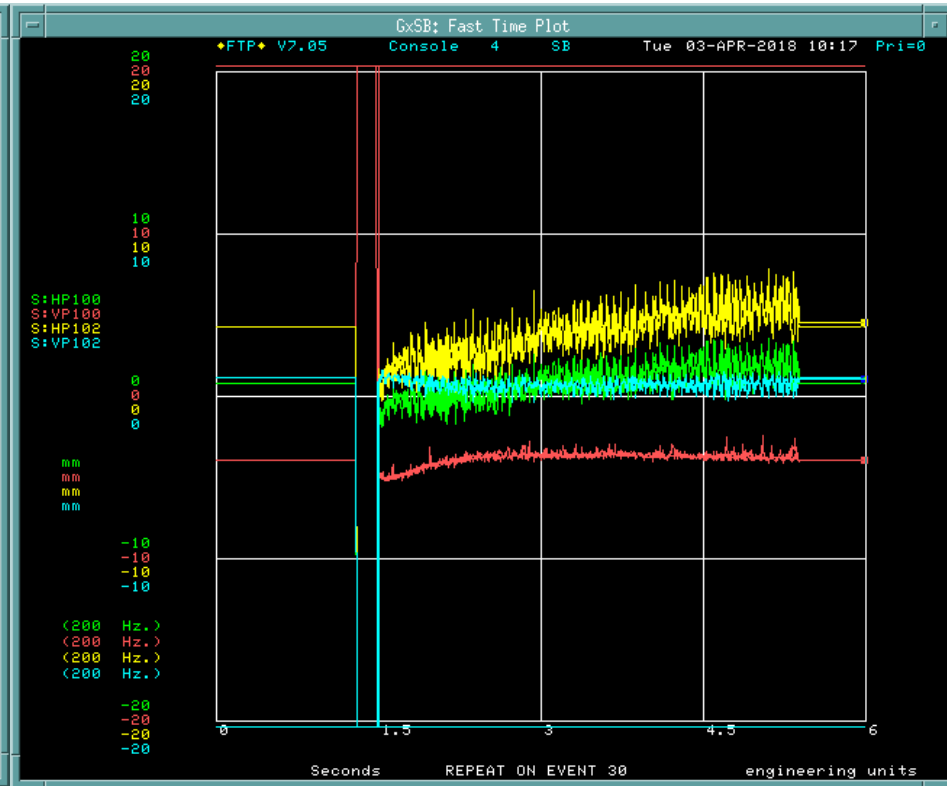


Pictured here, we're testing a re-purposing of the \$32 fast-spill event to act as a pre-pulse for SY. Then Steve Hays built a long and slow ramp triggered on the \$32.

# Resulting beam roll reduced!



Before



After

Remaining beam roll after this change is reduced and much more linear, making it much easier to compensate with trim ramps.

# Thank you!

**EE support  
Controls  
Operations  
Instrumentation**