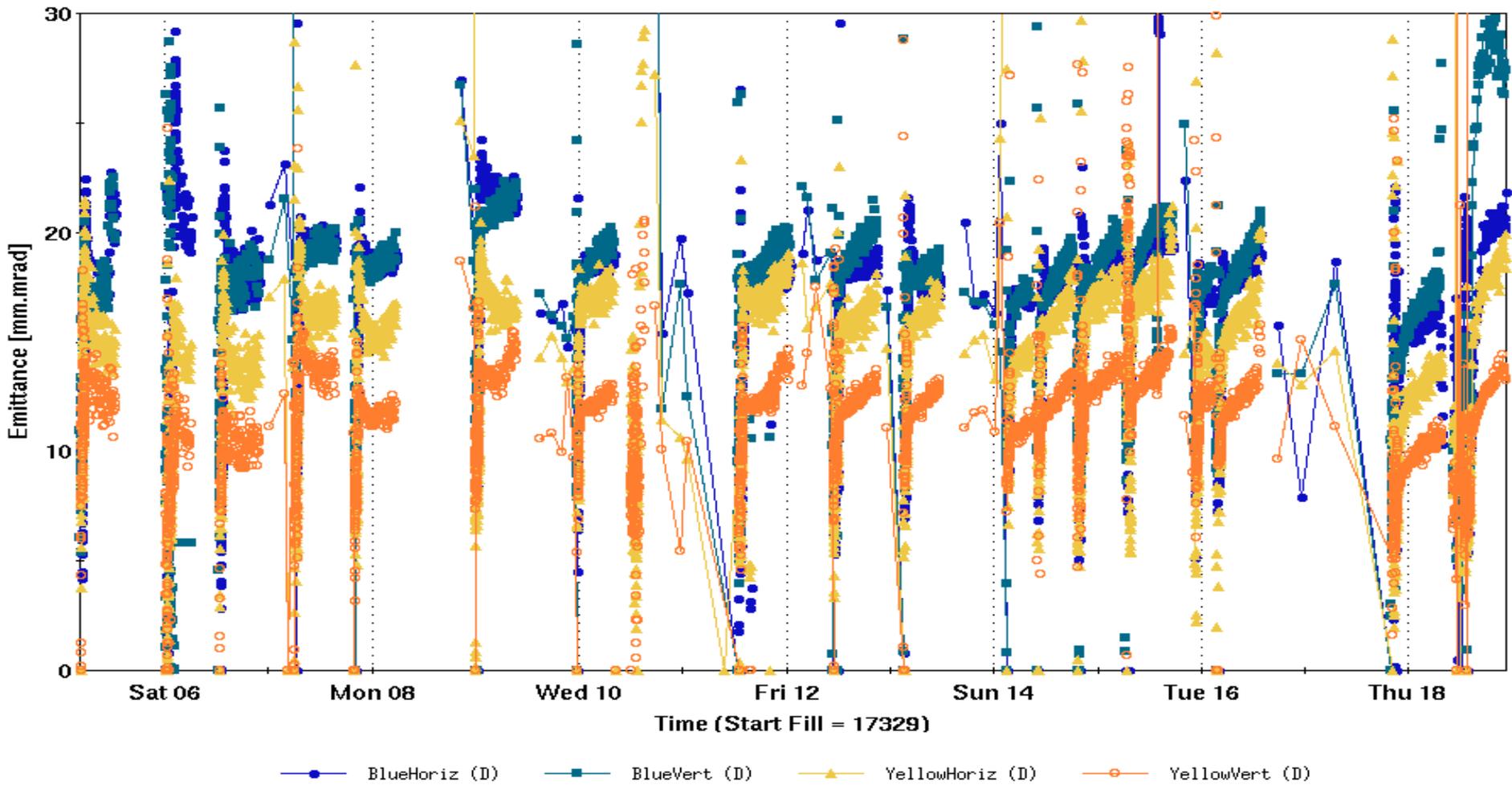


# RSC Meeting April 19th

- FY12 lattice:
  - Polarization Losses dominated by large emittance
  - Spin Tune Shift Due to Star Bump

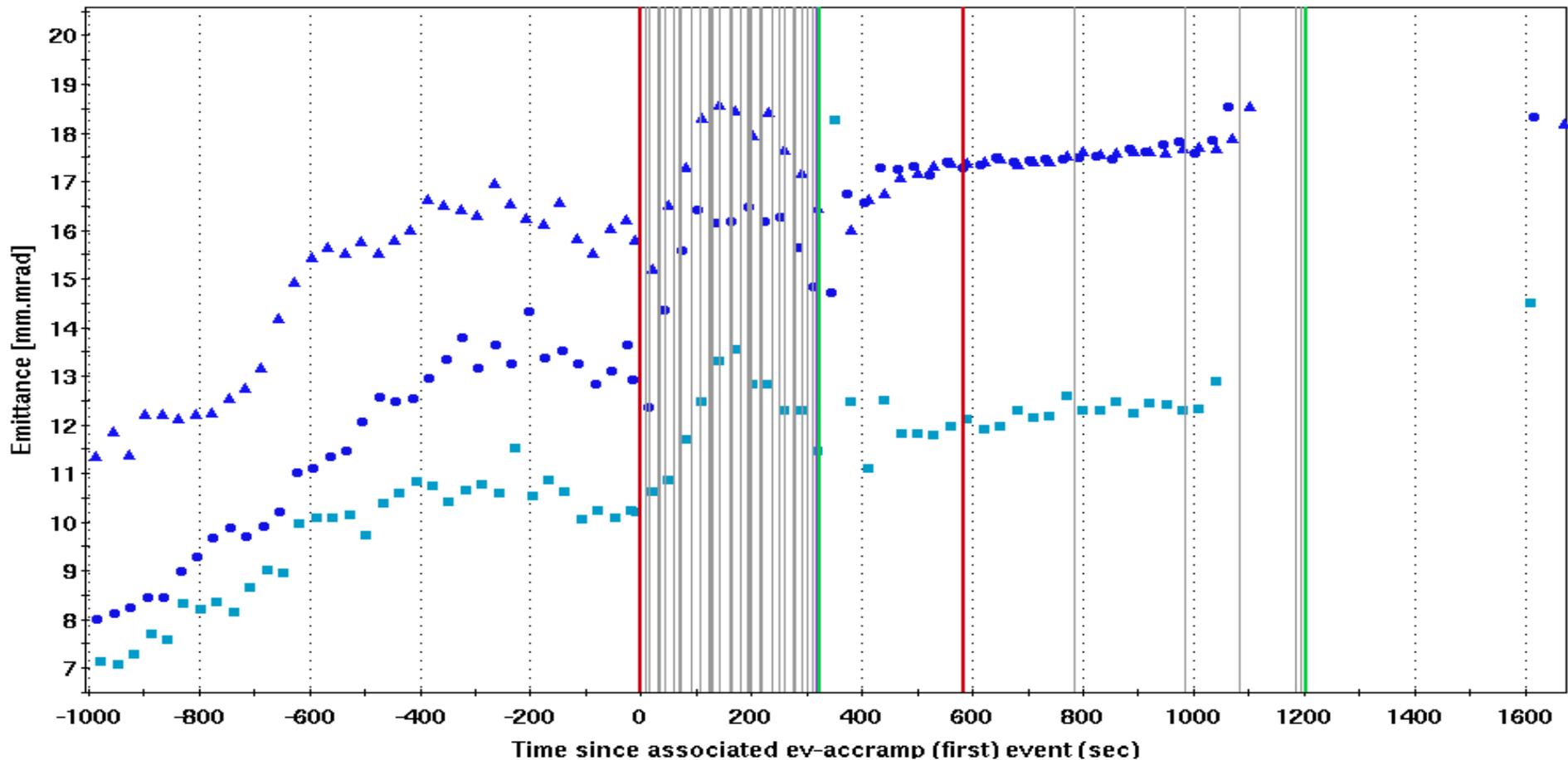
# Emittance Story



# Horizontal Blue Emittance blow up

RHIC/Instrumentation/IPM/An\_IPM\_EmittanceDisplay.togreq 04/09/2013 09:41 - 04/18 22:55

File Window Markers Analysis

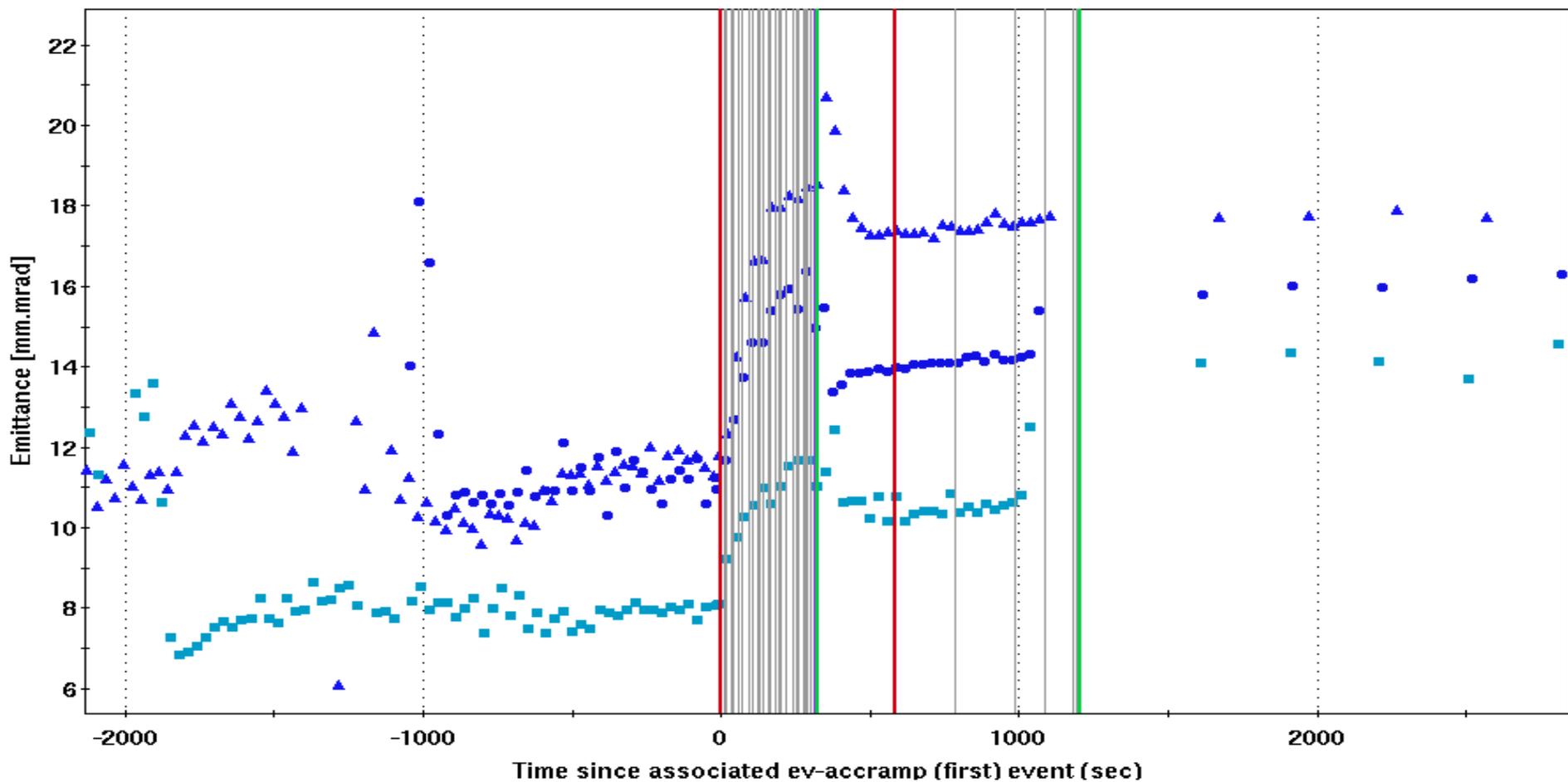


BlueHoriz:17367 BlueHoriz:17394 BlueHoriz:17396 ev-accramp  
ev-stone ev-flattop ev-endramp

# Vertical Blue Blow Up

RHIC/Instrumentation/IPM/An\_IPM\_EmittanceDisplay.logreq 04/09/2013 09:41 - 04/18 23:13

File Window Markers Analysis



BlueVert:17367

BlueVert:17394

BlueVert:17396

ev-accramp

ev-stone

ev-flattop

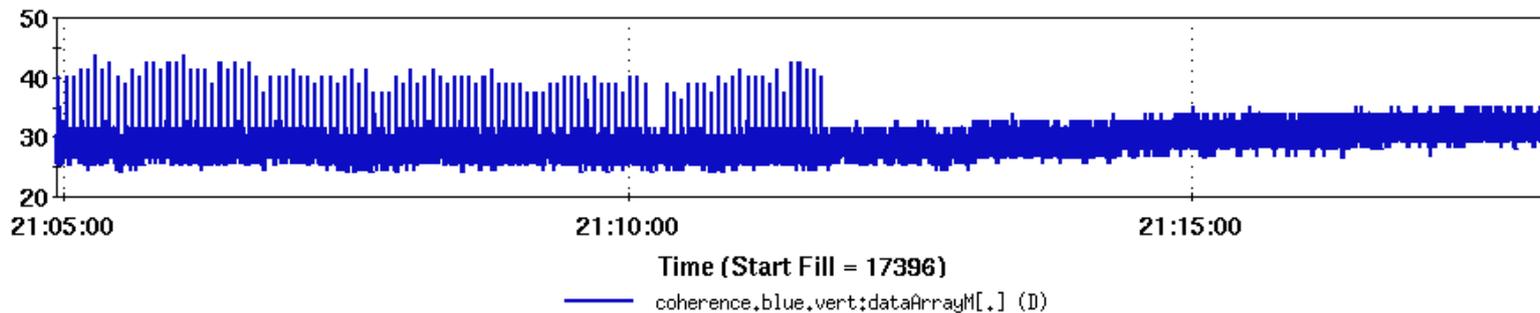
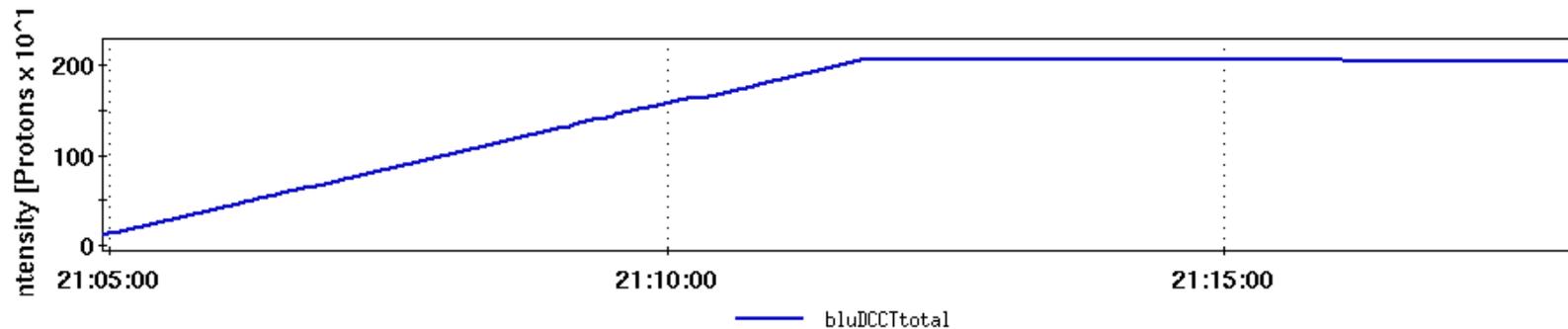
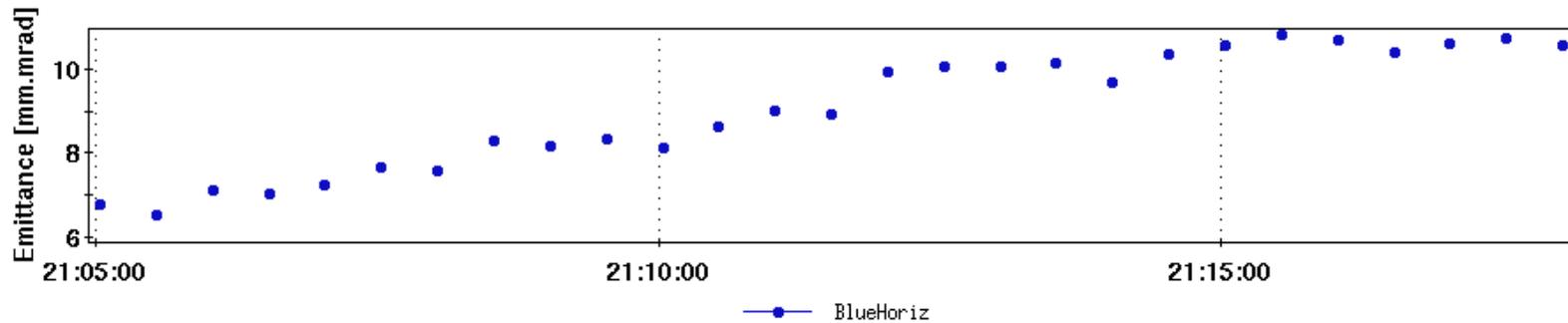
ev-endramp

# Cause of large emittances

- Injection with Large emittance from AGS
  - Mismatch in Booster to AGS
  - Blow up during Transition
- Blow Up during RHIC injection
  - Horizontal blow up during fill
  - After fill blow up from:
    - Polarization measurements
    - Tune movement
- Blow Up during Rotator Ramp
  - Driven by peak current
    - If transverse instability → cure with tune spread
    - If e-cloud → cure with more scrubbing
  - Possibly BBQ feedback

# Blow up during fill

Window Menu **ow** Markers Analysis



# Spin Tune at Store

- Measured Spin Tune at Store:
  - Yellow 0.475
  - Blue 0.49
- Removal of Star Bump at Store:
  - Yellow 0.495
  - Blue needs to be measured