

# Fine Decoupling Test for EIC

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## **Hadron Storage Ring of EIC:**

- 1) design tunes (0.228, 0.210) for proton with e-p collision
- 2) H/V emittances are about 10 and 1 nm at 275GeV ( unnormalized )

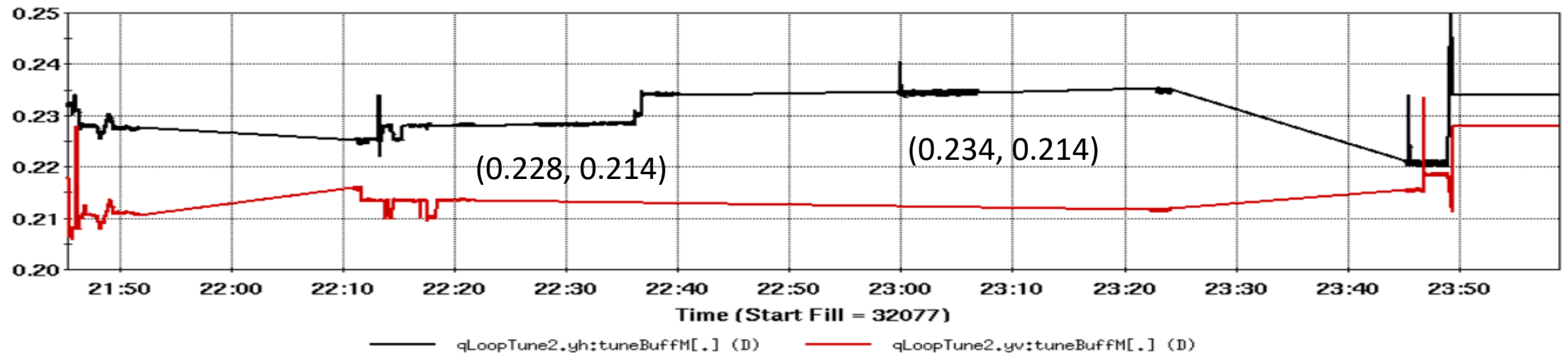
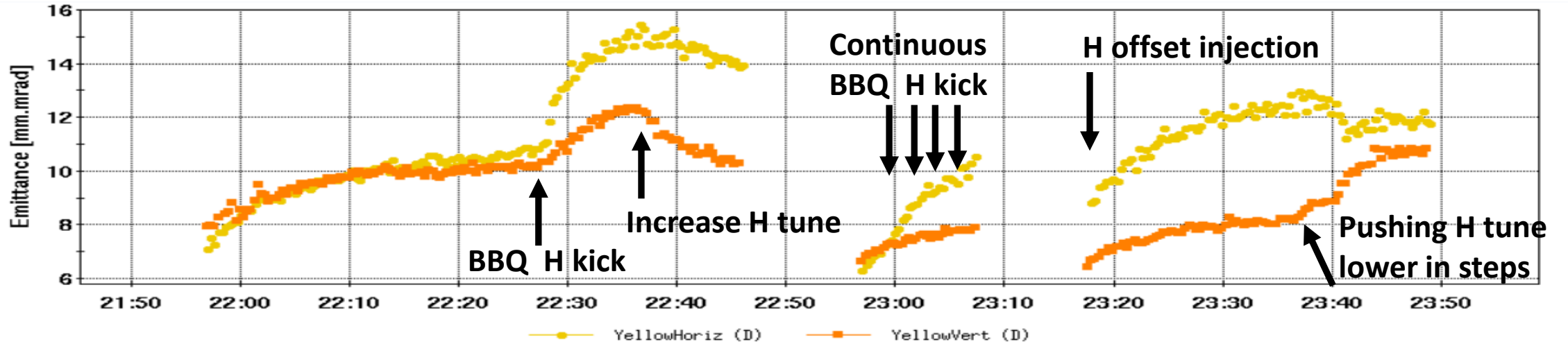
## **Experimental Goal:**

- 1) demonstrate large ratio of H/V emittances
- 2) test if current RHIC decoupling measures are sufficient for EIC

## **Experiment Plan:**

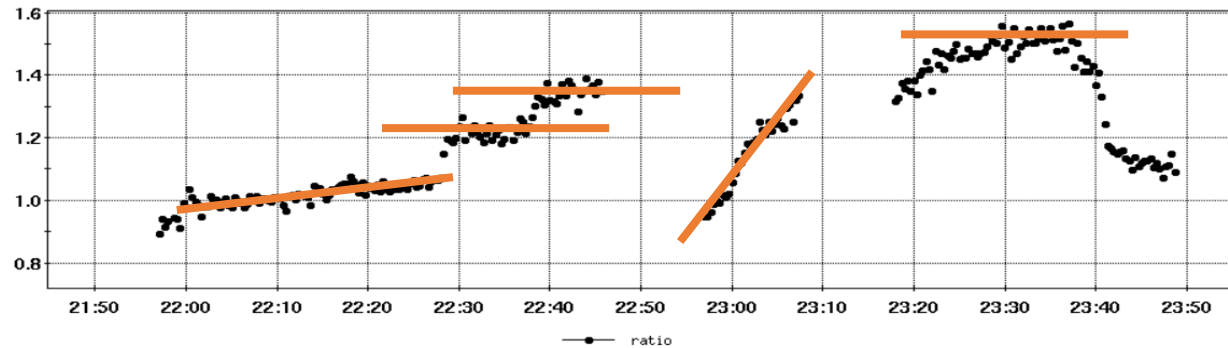
- 1) Originally planned doing this exp. at store with stochastic cooling
- 2) This year have to do this exp. by blowing up one plane emittance

# Experiment on May 26, 8:30-11:30pm



# Summary

Ratio of H/V emittance



- 1) With (0.234, 0.214), generated H/V emittance ratio up to 1.4:1
- 2) With (0.228, 0.214) and (0.234, 0.214), observed both H/V emittances increasing, even though H emittance grew faster than V emittance.
- 3) When pushing tune closer by 0.005 from (0.234, 0.214), immediately observed emittance exchange between H/V emittances.

