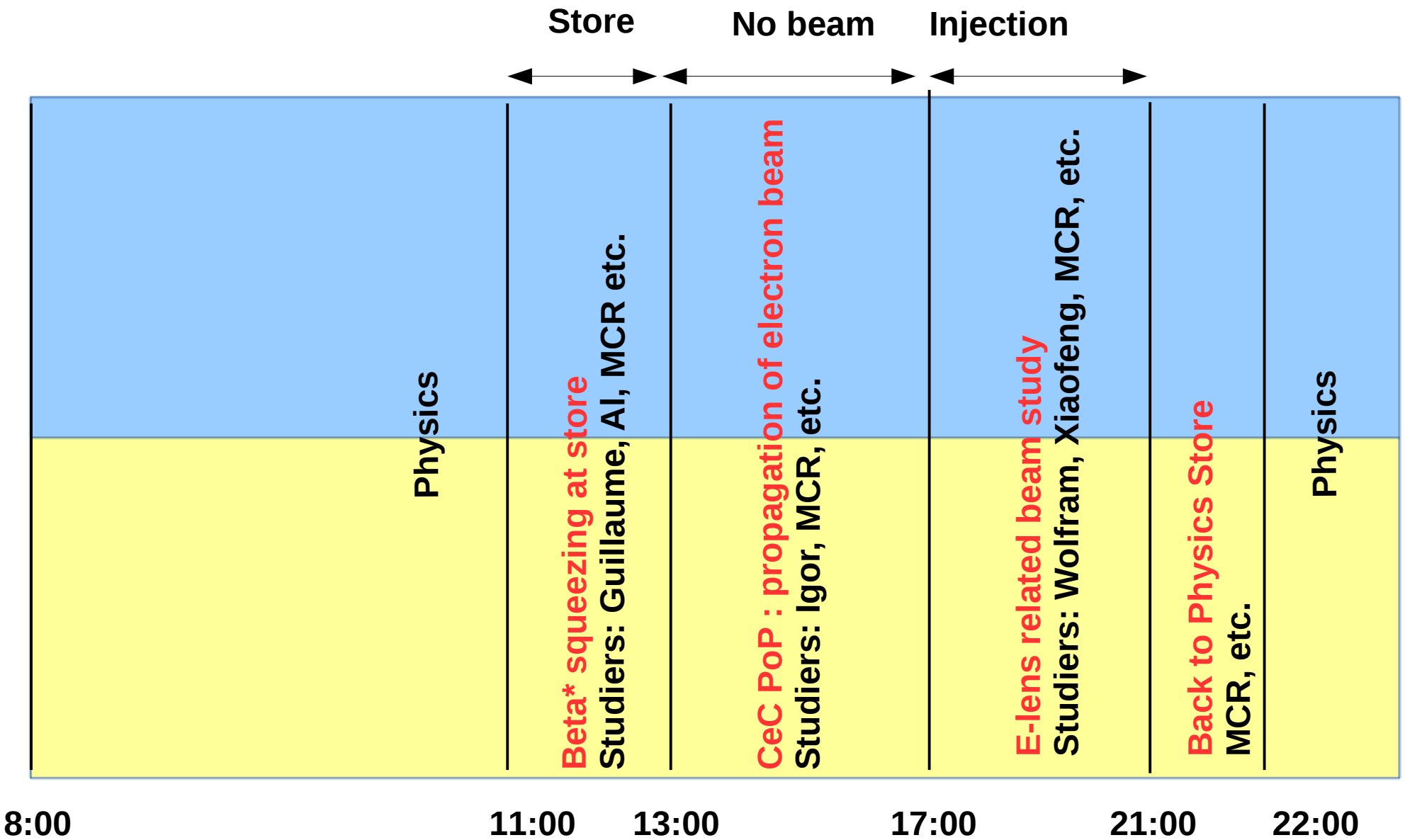
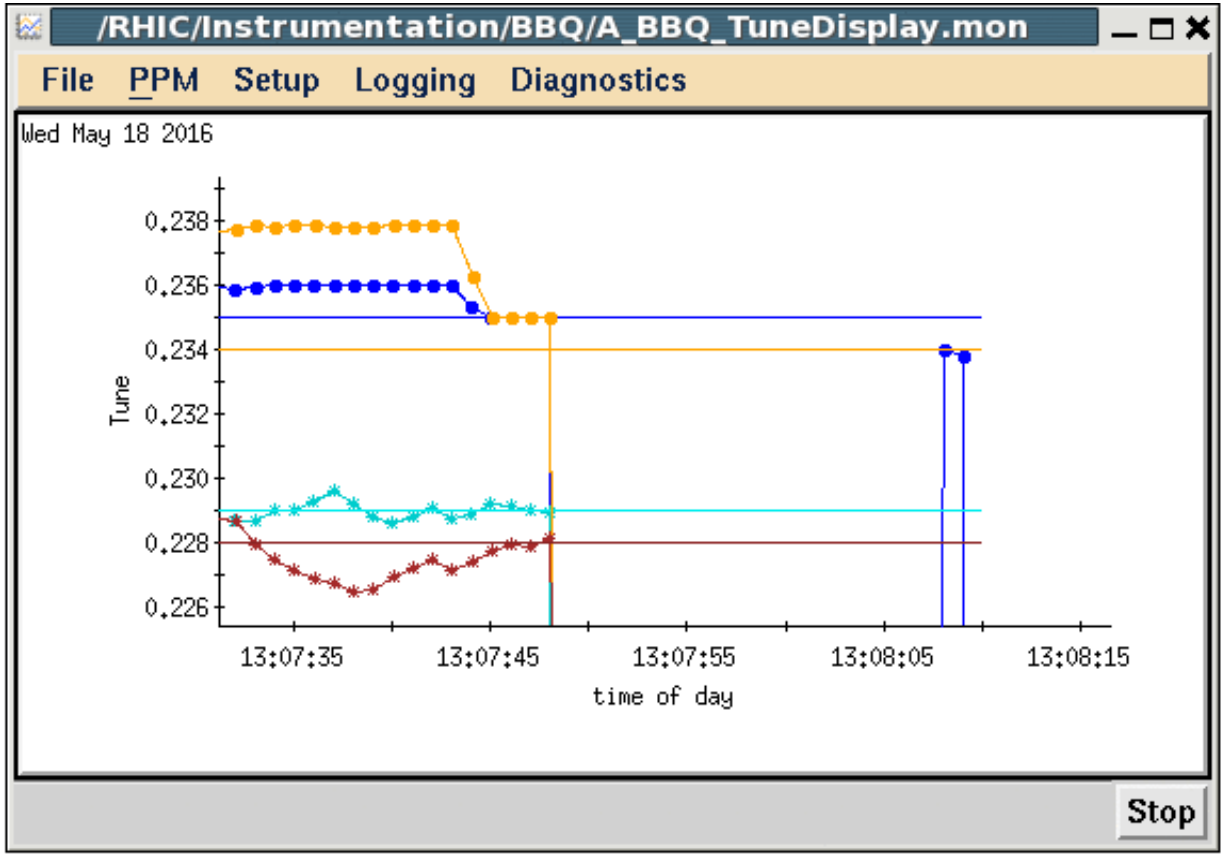
APEX Schedule for May 18, 2016



Beta* Squeezing Experiment: GRD



For safety, this team gave up dynamic beta* squeezing at the end of store.
For another ramp with 28*28, they planned to squeeze beta* from 2m.
Unfortunately beam lost during engaging feedback (before ramping the power supplies).

Propagation of Electron Beam: Igor

Later we observed
7.65 MeV beam

First synchronized gun and 704 MHz cavity.
Beam image observed before entering IR2 common section.

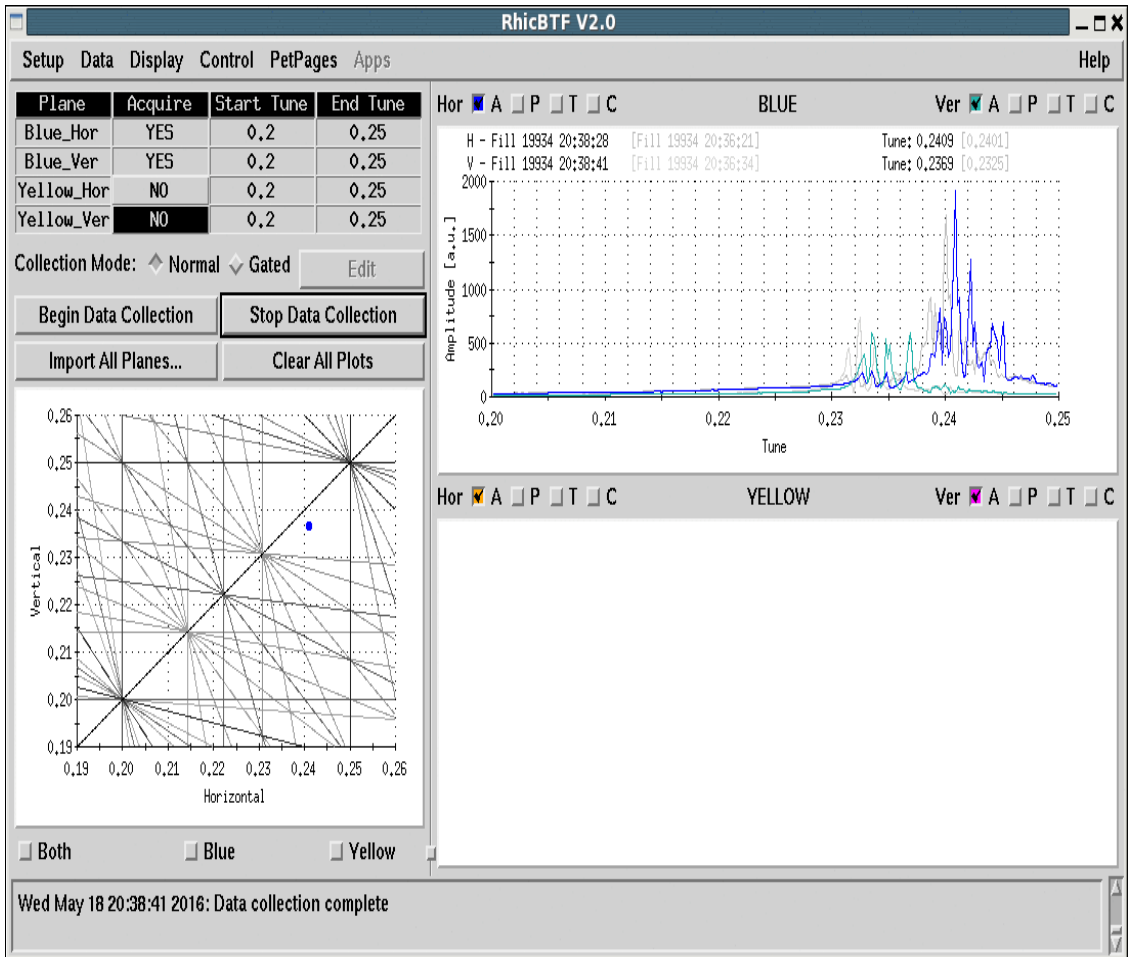
Results

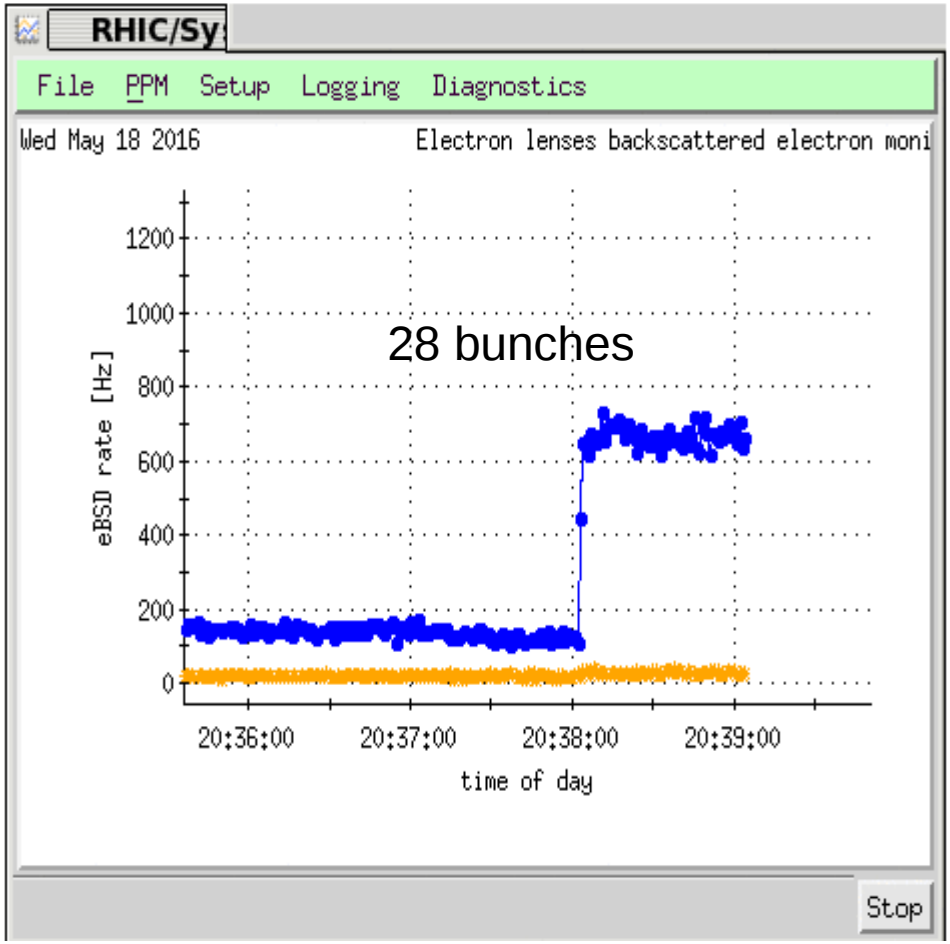
- We were not successful in propagating beam into the common beam line
  - access to the ring tunnel required lowering current in the RHIC magnets and we spend about an hour on restoring orbit
  - there was weird BPM malfunction when data were displayed with about 30 seconds delay
- But we developed set-up good for operation while RHIC is at low energy
- We would like to try to propagate beam into the common section during breaks in RHIC operation

E-lens Related Beam Study

Wolfram, Xiaofeng, Peter T., etc.

This experiment was performed at injection energy.
eBSD was used to align electron beam and ion beam.
Unfortunately the readings from eBSD not responding.





æ May 18 20:48 cp Wolfram (Xiaofeng, Al, PeterT) [2 edits]

Summary of e-lens studies.

1. Ramped up super-conducting solenoids.
2. Ramped up Blue normal-conducting with d and Au beam and orbit/tune feedback.
3. Established Blue e-lens current of 500 mA.
4. Installed IR10 orbit bump of 0.32 mrad for Blue beam.
5. Could see eBSD signal.
6. Used BPMs to bring beams in proximity. However, scanning the beam position and angle did not produce a eBSD signal proportional to the overlap. eBSD signal was clearly correlated to beam loss rate.
7. Did observe change in BTF with e-lens current.